

Foreword by His Excellency Dr. Abdul Hussain Bin Ali Mirza
Minister of Electricity and Water Affairs, Bahrain

ALLEEM SUSTAINABLE DEVELOPMENT GOALS



DR. RASHID ALLEEM
GCC Happiness & Peace Ambassador

ALLEEM SUSTAINABLE DEVELOPMENT GOALS



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PRAISES FOR

Alleem Sustainable Development Goals



"Alleem Sustainable Development Goals, is an insightful book with well-thought-out ideas. It provides practical advice on sustainable developments in technology related to effective management of resources in a manner that encourages an innovative approach to deploying such solutions."

Eddy Cheah, CEO,
Malaysia Status Company, Malaysia

"The 18th-century Irish statesman Edmund Burke once said, "Education is the cheap defense of nations." But how to make the culture of education sustainable is well understood by Dr. Rashid Alleem, who dexterously delves into the need for creative education in his book. That his instincts are innovative is aptly proved by the flawless objectivity of his writing. The book is like a bible for those practicing and seeking to innovate education to meet the needs of the changing human values of the modern society."

Rajen Kumar, Chief Editor,
SME World, New Delhi, India

"Dr. Rashid Alleem understands the urgent need for development that is sustainable and cost-effective yet workable. His ideas reflect a deep understanding of the issues at hand, and he draws examples from his rich personal experiences and from many sources around the globe. His analysis is based on a practical, real-world understanding of the unique and often competing challenges that lie ahead. He foresees a world that is pleasantly livable and sustainable and an environment that raises the quality of life for all. His eye is always on the present, while also keeping future generations in mind. A very lucid, easy-to-read, and perceptive book on sustainable development indeed."

Stephen Lee Head, Business Continuity Management,
Risk Management Singapore Exchange, Singapore

"In his new book, *Alleem Sustainable Development Goals*, Dr. Rashid Alleem displays once more his sharp insights into today's societal challenges. In his previous book, *Sustainability: The Fourth Wave of Economy*, he pleads that the gloomy prospects of climate change and environmental degradation, especially in the water sector, could be turned into an economic and cultural renaissance by embracing education and innovation.

In his latest book, Dr. Rashid takes his ideas even one step further. In his characteristic optimistic approach, he states that everyone is gifted and can be creative. He confronts lateral and critical thinking, and where other famous thinkers tend to keep them separated, Dr. Rashid shows how the two can be happily married, if only one takes the courage to dream big."

Dr. Walter J. R. Buydens, CEO,
VITO Middle East LLC, Doha, Qatar

"In Dr. Rashid Alleem's books, *Sustainability: The Fourth Wave of Economy* and *Alleem Sustainable Development Goals*, he reflects his deep interest and passion for a sustainable globe. The books are a direct correlation

of how sustainability affects our lives and shapes our future. Dr. Alleem is a pioneer in sustainability for the region. The world needs exceptional leaders like him to further the sustainability agenda in the Middle East and beyond."

Satyapal Singh, Director and Vice President,
GE3S Environmental Consultants, Abu Dhabi, UAE

"This book is a must read for educators, administrators of schools, colleges, and universities, and discusses case studies of education turnaround in Shanghai, China, and Singapore; the Swiss model of education; and the contributions of Dubai Cares. The Alleem Knowledge Center and Qatar Foundation are worth reading."

Jawad Ahmad Siddiqui, Chancellor,
Al-Falah University, Faridabad, India

"As I read through Dr. Alleem's outstanding book, *Alleem Sustainable Development Goals*, I was struck by the wide-ranging and in-depth discourse on education, especially the concept of quality education. It is, in fact, the way we have modeled our own system in Singapore. Dr. Alleem has been able to capture numerous examples from multifaceted dimensions in making a very strong and committed case for how we can look at development in a sustainable way. I strongly recommend this highly readable book to students and professionals alike."

Sung Pei Yew, Assistant Chief Executive,
International Enterprise Singapore

"Dr. Rashid Alleem's book, *Alleem Sustainable Development Goals*, contains 21 global goals. Two of these goals are quality education and creativity and innovation. Dr. Alleem stresses that creativity and innovation form the cornerstone of progress. He provides an in-depth analysis of how

the two are differentially defined and then explains why it is imperative that modern-day organizations encourage creativity and innovation. They should work toward what he terms as the “landscape view” (big-picture thinking), and he outlines how this can be done. He then goes on to give a plethora of inspiring examples, both historical and contemporary.”

Dr. Refaat Hassan Abdel Razek, Prof of EngG Management
College of Engineering, University of Sharjah, UAE

"HE Dr. Rashid Alleem has a very special talent to mix his own business experience and the golden rules/recipes of world-renowned business leaders and institutions into a workable process to achieve sustainability and excellence. The book is very insightful and written in a way that touches every reader's heart and mind. Let us all be “jugaadus.”

The humble way of expressing his leadership style certainly makes me want to be part of the team!"

Alexander Stramrood, Senior Manager,
SHEQ, Sustainability Group, Johannesburg

"I do believe that it is a stroke of genius that weaves together the delicate yet strong threads of innovation, education, knowledge, creativity, experience, and passion, producing a fabric of wisdom that is brightly colored with hope. This final product brings out the best of not only the writer but the reader as well. The work is a collector's item that should be in every person's library."

Ken Aim, CEO,
SOWO, Kenya

"In reviewing Dr. Rashid Alleem's book, I am in high praise of his numerous commitments to the improvement of the conditions and wellness that

positively affect not only his people but also humanity as a whole. His steadfast involvement in “Education” at all levels is not only admirable but also a true benchmark of a visionary leader.

One event may not change the world, but the actions and conviction of one visionary can."

Mario Caggiano, President-CEO,
CAEST, Canada

"I had the chance to meet Dr. Alleem at the Power and Energy Expo in South Africa, where I was amazed by his leadership skills and his principles on sustainability. This book provides an extremely effective approach to how sustainable development goals can have a big impact on our society in the near future. The long-term goals set by the United Nations are a milestone in the global era that can contribute and have an impact on reducing inequalities across the globe.

This book is a must read!"

Nelson Muchine, Operations Manager,
Ridge Tech Global Trading, South Africa

"In this a must-read book, Dr. Rashid Alleem shares his extensive experience with a number of leading international educational institutions and their inspiring methods that encourage understanding rather than indoctrination.

What is impressive though is seeing that Dr. Alleem personally went further to implement what he noted by establishing the SEWA Academy, an institution to be proud of, where you refine, develop, and stimulate creativity and innovation.

I invite everyone to read the book and try to embrace the same message in his or her own way."

Talal Shawwa, Regional Director,
MENA, Oracle Utilities Global Business Unit, Dubai, UAE

"Truly inspirational and attainable goals. Dr. Alleem is really a man with a vision, and I wholeheartedly enjoyed the two chapters I have read. I am looking forward to obtaining a copy of the book as soon as it is available. I also like the fact that Dr. Alleem focuses on education in the workplace, thereby empowering employees to better themselves. This book will truly inspire everyone."

Rizah Allie, Senior Sales and Marketing Executive
SZZT South Africa

"Dr. Rashid Alleem is a cosmopolitan, committed participant, and charismatic preacher of the fourth industrial revolution. His new book consolidates the wisdom of proven political and social paradigms with quality education, creativity, and innovation, among others. From Singapore to Switzerland and from Sheikh Mohammed Al Maktoum to Malala, Dr. Alleem is drifting among different cultures, eras, and systems in a fascinating manner. A visionary realist who proves that day-to-day management and critical performance of a vital utility like SEWA can combine with the social impact of the Alleem Knowledge Center, which he both inspires, primarily through his example and philosophy."

Stelios Antellis, Head of Suntech Power Trading FZE
Dubai, UAE

"This book is a great opportunity to draw upon Dr. Rashid's personal learnings and experiences. His personal travels and global interactions offer an inclusive view on how education and innovation can uplift societies, trans-

form cultures, and accelerate the speed of economic progress. One of the key ways to embrace change in this volatile world is to ensure that we are continuously receptive to new learnings and open to implementing them in our surroundings."

Dr. Dalya Al Muthanna, President and CEO,
GE Gulf region, Dubai, UAE

"Continuous learning and knowledge sharing are the main wealth and investment in the human race and add value to the efficiency and productivity of human capital resources. HE Dr. Rashid Alleem has presented the importance of learning and knowledge and emphasizes the role of inspiration and innovation of the human race, which will be reflected in the satisfaction and happiness of our community. The book presents excellent international and regional case studies, as well lessons learned from previous experiences."

Maged Farouk Hanna, Managing Director,
SELEM DMCC, Dubai, UAE

"Dr. Rashid Alleem's book is a roadmap to happiness and success in the corporate world. He takes us through a plethora of ideas, where the reader can easily pick the approach that suits him best. In addition, Dr. Alleem's review of education and innovation is an eye-opener to a lot of us who are faced daily with real-life challenges. He gives solutions to our problems in a very subtle way by giving examples, whether it be the education system in Singapore or the Think Week of Bill Gates or the Jugaad Innovation in India."

Berj Tossounian, Branch Manager,
Bank of Sharjah, UAE

"A platform for the future based on practical solutions addressing the world's most pressing concerns: energy, education, healthcare, and sustain-

ability. While natural resources are limited, the opportunity for creativity and innovation is infinite. This book provides cutting-edge ideas on how individuals and companies can deliver new innovations that will help society achieve its goals."

Michel Madi, CEO,
Networked Energy Services Corporation, Middle East, Africa, & India

"Sustainable Development Goals usually sound complex. The initiative by Dr. Rashid Alleem to spread them with simplicity is a great effort. It is different and, more importantly, has both dimensions (i.e., conceptual grasps and practical implementations). Truly, Dr. Rashid is a modern-day visionary leader and an asset to my proud country. I am confident that the message has now a wider audience with a better direction for its implementation."

Khalid Ali Moosa Al Naqbi, Executive Vice President,
Emirates Islamic Bank, Dubai, UAE

"Reading this book on sustainability was wonderful, given that education was emphasized as playing a pivotal role. One can derive from this book that education serves as the springboard to changing one's life, collectively improving society as numerous minds now work hard to advance mankind in various fields, from science to medicine, and help break down barriers that want to hinder free thinking for those considered not worthy of education, as in the case of Malala."

Samer Tamimi, CEO,
United Arab bank, Sharjah, UAE

"In times of rapid change and a delicate environment for the world climate and economy, Dr. Rashid Alleem outlines in his unique way how adoption of the sustainable goals as a business and as a person creates an opportunity

to strive for excellence, building a better tomorrow not only for oneself but for humanity."

Christopher Benedikt Pilscheur, Regional Director,
Green Business Norway, Gulf region, Dubai, UAE

"Dr. Rashid Alleem could not have chosen a better topic than the Alleem sustainable development goals. Like a modern-day Ibn Battuta, Dr. Alleem traveled the corners of the world to bring us the best practices in education and innovation and further elevates them with his own contributions.

He has truly mastered the art of harvesting mankind's best experiences and presents them in a clear and concise manner. In his ability to surge above any particular function or discipline, he provides us with universal truths, which are a joy to read, which promote progress, and they are therefore a valuable investment of your time."

Karel De Winter, General Manager,
Alsa Solar Systems LLC, Dubai, UAE

"As individuals and as a society, we must take a proactive approach toward sustainability and cannot depend on others to save our planet. The initiative of researching and writing the book exemplifies this proactive and intellectual approach. There is no doubt that education is the very foundation of the progress of any society that, with the correct environment and leadership, would lead to creativity and innovation. The book provides a focused approach and presentation of the fundamental issues that lead to sustainability."

Shams Dabbagh, General Manager,
Lootah BCGas, Dubai, UAE

"There is no better way to get to know the unique and extraordinary personality of my friend HE Dr. Rashid Alleem than to read this inspirational and very much-needed book. A synthesis of the author's profound sense of humanity and in-depth understanding of the true underlying needs of today's world, it not only reflects Dr. Alleem's personal beliefs and efforts in his knowledge ambassadorship but also lays out the path that every organization and business should set toward building a more ethical and prosperous world of tomorrow."

Jovan Vujasinovic, Cofounder, President, and CEO,
Meter&Control, Serbia

"What an inspiring book that HE Dr. Rashid Alleem offers us again. Education is indeed the cleanest energy in the universe! It is able to enlighten any dark mind. It has the seeds of wisdom to grow healthy generations for a peaceful and better global world."

Dr. Nabih Cherradi, Chief Technology Officer,
Desert Technologies, Kingdom of Saudi Arabia

"Dr. Alleem, a social and economic thinker in his own right, has touched upon three very important areas of socioeconomic growth and development in this book—education, creativity, and innovation—that will create a difference among communities, societies, and nations. While education is a basic human right of everyone on earth, it is the quality of education that will also make or break a nation. Quality of education then leads to creativity and innovation—which will differentiate between winners and losers."

Saifur Rahman, Senior Journalist and Former Associate Editor,
Gulf News, UAE

"An extensively researched page turner providing a rather unique yet welcoming global perspective to innovation across borders. A wealth of information is packed and presented in the simplest manner for a reader of any age to be able to relate and implement outlined findings at ease."

Abdelaziz Fikri, Senior Manager,
Al-Sajaa, Sharjah, UAE

"A vision is the first step to understanding a mission. A clear objective with enabling objective(s) helps reach the required and measured standard(s), as an objective addressing energy and providing the "peak hour energy saving" measure that has resulted in 40 MW of saved energy, as reported by Dr. Alleem. Clear engagements with the community of WHY will help to HOW subsequently to WHAT. Highlighting best practices will help in this sustainable approach."

Zack H. Abdi, Managing Director,
Provectus, Toronto

"A thought-provoking read! Dr. Alleem has a unique ability to match theory with practicality because he has taken action in his life with respect to the issues he passionately cares about. Reading this book makes one appreciate the importance of the sustainable development goals Dr. Alleem has set out and motivates an individual to take action. Congratulations, Dr. Alleem, on yet another enlightening book!"

Farhad Bayati, CEO,
mBELLAb Power Solutions LLC, Dubai, UAE

"I have known Dr. Alleem for two years or so. He is a thinker and a doer. He is also a visionary. Dr. Alleem's "Sustainable Development Goals" book brings into focus the key priorities that leaders must consider to achieve success with a positive social impact.

Education, creativity, and innovation are the foundations of sustainability and success. Adopting CRITRAL, a new action word coined by Dr. Alleem by combining “critical” and “lateral” thinking, will bring the change that is required in today’s world. Truly, innovation is a growth multiplier.

Richard Menezes, Executive Vice Chairman and MD,
Utico Group, RAK FTZ, UAE

"It is one thing to set out a series of goals that will make the world a better place, but every business person knows that writing goals is the easy part. Communicating these goals so that they are understood by all is the biggest challenge, as without good understanding, there is no possibility of implementation. Dr. Rashid Alleem’s writing, along with its many illustrations and examples from his own experiences, reflects his passion for the subject matter and gives the reader an insight into how actions can be taken by all of us to move closer toward these goals, which are so important for a sustainable future."

Jon Vail, CEO,
Ducab HV, Dubai, UAE

"This is a brilliant must-read book by HE Dr. Rashid Alleem. It is a manifesto fuelled by his passion to share his wisdom and philosophy for sustainable development. This book will allow readers to have an incredible insight into Dr. Alleem’s concept of CRITRAL thinking, which is the product of both critical and lateral thinking. The concepts shared in this book also empower the readers to be creative and innovative, dream big, act fast, and turn dreams into realities."

Nicholas Lee, Principal Consultant,
Carlo Solutions Consultancy and Training Services, Singapore

"It is not only what is written but also how it is written that gives an outstanding look to a book. The brightest highlights of the book *Alleem Sustainable Development Goals*, are the examples of people, movements, and economies that survived, sustained, and grew in spite of an adverse environment. Young Malala was in her early teens when she was shot by the Taliban. She chose not to remain a pity figure seeking sympathies and stood up and continued her studies and became an inspiration to thousands of girls. How Shanghai, Singapore, and Hong Kong clinched the first, second, and third spot for their highest education standards is a wonderful case study for the rest of the world's educationists and parents. A dynamic book meant not only for browsing and reading but also for studying and implementing."

Nisar Yusuf Nadiadwala, Maroof Consultancy
AFZ,UAE

"It gives me great pride to see that in this selfish world, there are still amazing people who work hard to transfer knowledge. Dr. Alleem is an awesome example! While reading, I admired his outstanding passion to share learning, provide successful examples from both the international and local stage, and create systems for knowledge transfer.

What a great model to follow! This is the essence of true leadership. When the leader finishes the work, the followers say, "We have done it . . ."

Dr. Antoine Eid, CEO,
Leadership Consultants Group, Cambridge, UK

"As an enlightened walk-the-talk leader, he has been relentless in contributing to the improvement of humanity, identifying critical areas that would drive a sustainable future. His heartfelt book collated and highlighted se-

lected success stories, from education systems to innovative companies' secrets, exalting them as enablers of world improvers."

Joyce Lau, Director, Bachelor of Architecture,
Apprize Trading LLC, Dubai, UAE

"A very meaningful endeavor by Dr. Alleem that highlights the cornerstones of sustainable development. As a visionary with a genuine concern for progress that benefits all segments of society, Dr. Alleem has penned the essence of his own experience as well as of those iconic leaders and organizations that have made long-lasting contributions in critical areas of economic and social development. This is a quintessential handbook for leaders in the public and private sector."

Shahid Kazi, Chief Executive Officer,
ValuStrat, Dubai, UAE

"In this context, we should pay tribute to Dr. Rashid's valuable and remarkable efforts in gathering all these experiences and information that help readers around the world learn about the issue of sustainable development. I also urge the United Nations to adopt this book and translate it into all languages to make the best use of it and be a contribution to the achievement of the sustainable development goals adopted by the United Nations to build a beautiful world that protects the environment. A world that is aware of all its issues, sustains its resources, and cares for its people who contribute to building a modern society."

Dr. Eng. Khaled Mohamed Eldestawy, First Undersecretary,
Head of the Minister Office Sector, Ministry of Electricity and Renewable
Energy, Arab Republic of Egypt

"I was deeply enthralled by Dr. Rashid Alleem's speech at the Water Leaders Forum at the seventh IWA-ASPIRE Conference. I can see that he immerses himself fully in a sustainable life, not only through his words and books but also through his deeds, and I conclude that he moves toward a sustainable life with his brain and heart. As a water expert, I judge this book's value based on his passionate achievement in developing countries such as Bangladesh and India, which have a poor population. In this book, I can see that sustainable life has shifted from hardware such as water, air, and infrastructure to an invisible world that could be more important, that is, education and creativity. I am deeply enthralled and surprised again when I read the different education systems in both Eastern and Western countries. I encourage the readers to explore the treasures inside this book."

Dr. Yang Shu-Qing, Cofounder,
International Association for Coastal Reservoir Research, Australia

"HE Dr. Rashid Alleem has done brilliantly by taking different experiences from around the world, from the Far East or some Arabian countries or some other foreign countries, in addition to explaining the difference between creativity and innovation in his book. He was able to give examples of some scientists and creative thinkers and innovators."

Dr. Isa S. Qamber, Professor,
University of Bahrain

"It was a pleasure and privilege to meet Dr. Rashid Alleem in Hong Kong at the Forbes Global CEO annual meeting and learn firsthand about his contribution to transformational leadership. Good leaders grow organizations, but great leaders transform them into a sustainable future.

Dr. Alleem's new book on "Sustainable Development Goals" is yet another feather in his cap as, among other things, he covers two important aspects

that are close to my heart education and creativity/innovation—values that are critical for modern leaders.

Alleem Sustainable Development Goals, is a must read for all leaders who want to build immortal organizations."

Amor Roska, Executive Assistant,
CMA Investment Holdings, UAE

"This book offers once-in-a-lifetime breaking strategies for pointing out strategies that will help us take ownership of our sustainable development goals. We all need role models, and I know I have become a better person by having learned such priceless lessons from Dr. Rashid Alleem's *Alleem Sustainable Development Goals*. Because we are all humans who essentially have the same needs, this book should benefit anyone who feels that there is a need to live a purpose-driven life."

Mahboob Hussain and Safiya Hussain
Hypno-Life Coach and Behavioural Therapist, OFI Centre
Dubai, UAE

"I have had the good fortune of reading Dr. Rashid Alleem's book on sustainable development goals. Dr. Alleem's book offers a comprehensive account into the most common trends and prospects on how to achieve sustainable individual development goals from both a realistic and theoretical methodology. The book addresses fundamental building blocks for individual sustainable development such as education and creativity, and applies them in both a local approach and a universal one. I am definitely looking forward to the next book to be published by Dr. Alleem."

Rashed Al Blooshi, Chief Executive,
Abu Dhabi Securities Exchange, UAE



OTHER BOOKS BY DR. RASHID ALLEEM

The SEWA Way

Is Success a Sin?

My Green Journey in Hamriyah

New Year Resolutions

My Leadership Secrets

Successful Marketing Plan

Inspirational Stories

The 13 Critical Traits of Team Dynamics

I Am Committed to the 17 Global Goals

Sustainability: The Fourth Wave of Economy

*I'd like to dedicate this book to the
hundreds of millions who have not seen the benefits of
sustainable development and inclusive growth.*

CONTENTS

<i>Acknowledgments</i>	01
<i>Foreword</i>	02
<i>Introduction (story behind the book)</i>	05
<i>About The Goals</i>	17
PART 1: ALLEEM SD GOALS	
Chapter 1:	
Quality Education	24
Chapter 2:	
Creativity and Innovation	42
Chapter 3:	
Technology Research and Development	100
Chapter 4:	
Peace and Security	112
Chapter 5:	
Tolerance	126
Chapter 6:	
Happiness	142
Chapter 7:	
Good Health and Well-Being	152
Chapter 8:	
Water Sustainability	168

Chapter 9:	
Affordable Energy	192
Chapter 10:	
Environment and Natural Resource Security	218
Chapter 11:	
Climate Change	232
Chapter 12:	
Financial and Economic Crises	248
Chapter 13:	
Competitiveness	276
Chapter 14:	
International Trade and Investment	286
Chapter 15:	
Children's Rights	298
Chapter 16:	
Food Security	310
Chapter 17:	
Extreme Poverty	322
Chapter 18:	
Women Empowerment	340
Chapter 19:	
Employment Skills and Human Capital	362
Chapter 20:	
Sustain Inclusive Growth	378

Chapter 21:	
International Cooperation	396
<i>About the Author</i>	413

*"Leave your mark. Be ashamed to die
without leaving a legacy and winning
some victory for mankind."*

Dr. Rashid Alleem

ACKNOWLEDGMENTS

I truly believe that no one ever creates success alone. Everyone needs a positive team with supportive people at his or her side. I am thankful to have been blessed with truly amazing people on my sustainability journey and throughout the writing of this book. I would like to express my gratitude to the many people who saw me through this book and to all those who provided support, talked things over, read, wrote, offered comments, allowed me to quote their remarks, and assisted me in the editing, proofreading, and design of this work.

Above all, I want to thank my family, who supported and encouraged me in spite of all the time I spent away from them. It was a long and difficult journey for them as well. Without them, I would not be the man I am today. I love you.

I would like to thank my team at Alleem Research and Development Center. You have given of your spirit to do your work with a true vision—much gratitude for your commitment to transforming lives in different parts of the world. You have been the wind beneath my wings.

And special thanks to my research and development senior officer, Shabih Fatima, who has worked tirelessly to make sure that this book was completed on time.

Last and not least, I ask for the forgiveness of all those who have been with me over the years and whose names I have failed to mention.

FOREWORD

This is the year 2017 and we see that the GCC countries are witnessing a remarkable transition in their stride to adopt the principles of sustainable energy and its associated roadmap. This book is a great addition to the field of sustainability, and I wish to commend the author, Dr. Rashid Alleem, for his commitment and ongoing research to raise awareness through this book and his many other previous works and publications in this field. Current and future energy leaders will greatly benefit from the insights provided in Dr. Alleem's book, and I encourage readers to follow Dr. Rashid's inspiring messages.

From our perspective, we believe that investing in sustainable development is no longer just a luxury for well-off societies, but is, in fact, an essential global survival tool for both the present and the future generation. In another context, sustainability is the art of mastering a simple yet complicated equation between human activities and the natural world.

The sustainable development goals in this book are the global compass for nations' collective efforts toward a sustainable future, through an integrated approach in addressing economic, environmental, and social issues, while avoiding the overconsumption of key natural resources.

Sustainable development is achieved through many avenues, and one key avenue to consider when setting future development strategies is to advance the conservation of our natural resources by progressively changing the ways in which we develop and use technologies to evolve our societies, economies, and lives overall.

- His Excellency Dr. Abdul Hussain bin Ali Mirza
Minister of Electricity and Water Affairs, Bahrain



INTRODUCTION



*"The best way to become acquainted
with a subject is to write a book about it."*

Benjamin Disraeli

What Makes this Book Unique?

This is my fourth book about sustainability and the importance of including inclusive growth in any sustainability module. I have proved in practice that a clean and green economy is surely possible when you apply the three pillars of sustainability: environment, society, and economy. However, sustainable development has existed throughout the ages, albeit with limited concern, and has gained popularity in recent years, with journalists, philanthropists, and development workers frequently invoking the term.

This book contains real stories and best practices from around the world and is universal in its approach to a sustainable tomorrow. Most of its characters are not famous but rather from different backgrounds with distinct issues—what unites them is their dedication and approach towards achieving a sustainable future. The purpose

of this book is not to praise a few men or women, but rather, to call attention to the role of a particular type of people who propel social changes and learn through their experiences.

My Sustainability Journey

In 1992, I led a humanitarian mission to Bosnia and Herzegovina. The Bosnian War was characterized by bitter fighting, the indiscriminate shelling of cities and towns, ethnic cleansing, and the systematic mass rape of Muslim Bosniaks. During that time, my mind was filled with challenging thoughts about why humans seemed to be losing their basic values and fundamentals and could not accept each other because of their religion, belief system, color, and race. No matter how much I searched, no answer would satisfy me. These thoughts kept coming, and I felt I needed to do something at the global level to improve communication among the world's people and bring peace and prosperity. Since then, I have believed that humanitarian aid can play a significant role in reducing conflicts and creating a better tomorrow.

Unfortunately, the Bosnian war was not the only issue challenging global leaders in those days. Civil wars, famine, and UN military and humanitarian interventions could be found in almost every corner of the globe. I decided to be a history maker and global shaper by dedicating the rest of my life to serving the causes of humans around the world. I was driven by Roy T. Bennett's saying, "If you have a strong purpose in life, you don't have to be pushed. Your passion will drive you there." So, I decided to focus my efforts on African countries, such as Somalia and Sudan, as well as Asian ones, such as Pakistan, Bangladesh, and Myanmar.

Rwandan Genocide

While writing this paragraph, one of the most shocking incidents that came to mind was the Rwandan genocide, known officially as the genocide against the Tutsi. This mass slaughter of the Tutsi people in Rwanda by members of the Hutu majority government killed an estimated 500,000 to one million Rwandans during the 100-day period spanning April 7 to mid-July 1994, amounting to approximately 70 percent of the Tutsi population, and 20 percent of Rwanda's total population. The genocide and widespread slaughter of Rwandans ended when the Tutsi-backed and heavily armed Rwandan Patriotic Front, led by Paul Kagame, took control of the country. An estimated two million Rwandans, mostly Hutus, were displaced and became refugees.

During that time, I was serving as a volunteer in the role of general manager of Sharjah Charity International, where we created a small camp in Rwanda for almost 100 children who had lost their parents and had no identity at all. What a horrible memory!

Government Administrator

On March 11, 2000, I was appointed by His Highness Sheikh Dr. Sultan bin Muhammad Al-Qasimi, a member of the Supreme Council of the United Arab Emirates, the Ruler of Sharjah, as director general of a newly-founded organization called Hamriyah Free Zone, which is owned by the Sharjah government. The main objective of the Hamriyah was to attract foreign direct investment to Sharjah city by promoting its services and incentives at the local, regional, and global levels. I remember those early days when we had only 68 companies, mainly local small and medium-sized businesses.

I am a believer that the most peaceful language on earth is the language of business. I was quoted several times by media as saying, “If we want to bring peace, prosperity, and love, we must first create business.” I worked hard and smart, both day and night, to promote Hamriyah Free Zone and attract local and multinational companies without compromising sustainability principles.

In mid-2001, I discovered an article about the eight Millennium Development Goals, which are stated as follows: to eradicate extreme poverty and hunger; to achieve universal primary education; to promote gender equality and empower women, to reduce child mortality; to improve maternal health; to combat HIV/AIDS, malaria, and other diseases; to ensure environmental sustainability; and to develop a global partnership for development. I was so inspired by these eight goals and their time-bound objectives and quantified targets for addressing extreme poverty in its many dimensions (income poverty, hunger, disease, lack of adequate shelter, and exclusion) while promoting gender equality, education, and environmental sustainability. They are also basic human rights—the rights of each person on the planet—to health, education, shelter, and security.

The eighth goal, “Develop a global partnership for development,” is worth a special mention. This goal particularly attracted my attention and it was through this goal that I believed the Free Zone could best be marketed.

I was highly successful in my role as director general, and on April 22, 2014, I was transferred by His Highness to chair Sharjah Electricity and Water Authority (SEWA). I left Hamriyah Free Zone a legacy of more than 6000 companies, a workforce of 45,000 people from 159 countries, and investments exceeding \$25 billion. That

was possible because we prioritized purpose over profit and were able to strike the right balance among what we called the Triple Ps: people, planet, and prosperity.

I summarized my journey in Hamriyah in a book called, *My Green Journey in Hamriyah*. It was my first book about sustainability, in which I emphasized that, with authentic leadership, we can make a difference and create a brighter tomorrow.

2009 | The Economic Meltdown

On September 15, 2008, Lehman Brothers filed for bankruptcy. With \$639 billion in assets and \$619 billion in debt, Lehman's bankruptcy filing was the largest in history, as its assets far surpassed those of previous bankrupt giants, such as WorldCom and Enron. Lehman was the fourth-largest US investment bank at the time of its collapse, with 25,000 employees worldwide.

Lehman's collapse was a seminal event that greatly intensified the 2008 economic crisis and contributed to the erosion of close to \$10 trillion in market capitalization from global equity markets in October 2008—the largest monthly decline on record at the time.

During the collapse of the global financial market I, like millions of others, wondered why it failed. A bank with 158 years of operational experience had failed and gone bankrupt in such a short space of time. We thought it was “Too big to fail, too small to shake the whole world financial market.” We were wrong!

People were panicking about what to do. During that tough time, I had the idea to organize an event inviting thought leaders and local

and regional speakers from the financial market to talk about the crisis, to educate the community about its impact, and how to be prepared for such crises in the future. I prepared a small plan for the event and emailed all my friends, colleagues, and business partners to get their support and feedback. To my surprise, almost all of them advised me to focus on and speak about sustainable development and inclusive growth.

I was overwhelmed by the quick feedback and support. Good friends and colleagues wanted to speak in the program, and they were ready to travel at their own expense, so I decided to flesh out my idea and named it the Sustainable Development Conference. But after deeper thought, I chose to call it the Sustainable Development Congress because a congress is a large formal meeting of representatives from countries or societies, at which great ideas are discussed and information exchanged.

I began by sending complimentary invitations to over 500 executives and business leaders to invite them to attend the congress. Again, I was overwhelmed by the response, with over 200 confirmed participants planning to attend and more than 32 executives wanting to speak.

With this number of speakers and such a large audience, one day would not be enough; therefore, I had to pursue a two-day program. We held the event on February 22–23, 2009, and it was so successful and well received by all 250 participants that the top recommendation that emerged from the Congress was to make it an annual event.

As the saying goes; “Success Breeds Success.” The first Sustainable Development Congress was a great opportunity for me and I was later invited by many local and regional organizations to speak

and share my experience regarding the three pillars of sustainability through keynotes, presentations, and workshops about sustainability and inclusive growth.

THE NEW WAVE OF ECONOMY

My second book, entitled *Sustainability: The Fourth Wave of Economy*, has gained popularity and acceptance with sustainability leaders across the globe. It is worth mentioning here that the foreword of the first edition of the book was written by the former president of the Comoro Islands, H.E Ahmed Abdallah Mohamed Sambi. It is also worth mentioning that the foreword of the second edition was written by the late S.R. Nathan, former president of the Republic of Singapore, who left a great legacy behind him as a dear friend and Singapore's longest-serving President.

The book explains that the world economy has witnessed a transition from the first wave—of mere survival of mankind through agriculture—to the second wave—of technology and industrialization. The recent and third economic wave has witnessed new highs of application of information technology with astounding ease of accessibility, timeliness, and networked information.

I, as a visionary and futurist, have foreseen a new and very important fourth wave of economy. I call it the Green Economy, with an overarching concept of sustainable development. In this phase, there is a paradigm shift toward more inclusive growth and sustainability that stems from the depletion of natural resources and the expected increase in demand from the teeming millions across the nations.

In the book, I spoke about my experiences in countries where I saw abject poverty and my conviction that the best investment is not in gold or real estate but in people, who should be central to any attempt at sustainability, keeping in mind the fact that there is no alternative to inclusive growth.

MUCH MORE TO DO

The work necessary to meet the Millennium Development Goals is far from complete, and we need to be even more ambitious about the post-2015 framework, in which the next set of development goals will be implemented. Continued financial support for institutions, such as the Global Fund and the World Bank's IDA fund, is a key way to help countries build systems that can deliver universal health coverage and is the best way to end the scandal of unnecessary deaths. In the book, I wrote that in order to have sustained societies, the eight Millennium Development Goals are not enough; thus, we need to include additional goals and expand the list. My opinion was supported by other leading organizations and media houses, who questioned, "What have the millennium development goals achieved?" The question was not asked for the sake of debating; it was meant to find solutions to more pressing global challenges.

17 Un Global Goals

On September 25, 2015, the UN member countries adopted a set of goals to end poverty, protect the planet, and ensure prosperity for all as part of a new sustainable development agenda. Each goal has specific targets to be achieved over the next 15 years.

For the goals to be reached, everyone needs to do their part—governments, the private sector, civil society, and people like you. Yes, you!

My third book on sustainability, *I Am Committed To the 17 Global Goals*, outlined my full commitment to the latest publication of the UN's 17 Sustainable Development Goals. I am happy that the UAE Minister of Economy, H.E Sultan Bin Saeed Al Mansoori, who is passionate about sustainability, was kind enough to write the foreword for the book. The book summarizes the 17 global goals with facts, figures, and targets for each goal and highlights the contributions made by the Alleem Foundation and Alleem R&D for each goal.

My Legacy

This book, *Alleem Sustainable Development Goals*, is a complement to the three aforementioned books, which are the fruit of my 25 years of experience in charity, government, and semi-government agencies, which has allowed me to travel to more than 60 countries around the world preaching sustainability and inclusive growth. My experience and life philosophy helped me while working on the ground in those countries led me to see that there is more work to be done. The 17 sustainable development goals (SDGs) are great, though they are not enough to overcome the global challenges, and I felt important goals needed to be focused on and added, such as happiness, tolerance, children's rights, and more. You will learn more about these as you read on.

Through the Alleem R&D Center, I came up with a list of 21 new goals that support the UN 2030 vision of the new 17 SDGs to make the world a better place.

What Makes My Goals Unique?

My 21 goals support the 17 SDGs and the UN's 2030 vision, yet their foresight goes beyond 2030. Foresight is the act or power of foreseeing, prevision, or prescience.

Drawing on examples from a number of countries, this book includes many success stories about the world's most influential companies, smart governments, cities, and foundations that lead, innovate, and outperform the demonstrated track record of successfully leveraging sustainability opportunities to achieve corporate, organizational, and national competitive advantages and regularly win prestigious awards and recognition.

I have chosen to take a global focus because sustainable development is an essential and global phenomenon. The book teases out the diverse but intersecting domains of sustainability and emphasizes strategies, organizational characteristics, and personal qualities for action. This book possesses powerful ideas, and encouraging and instructive stories to solve problems, while it also acts as a boon for people whose dream it is to make a positive change on a large scale. Additionally, business people and nonprofit managers will see how sustainable development serves large markets without depleting natural resources. Policymakers will discover problem-solving models with a vision of national development. Professors, teachers, and students will discover stories as useful case studies for a range of courses that can inspire young people.

Through this book, I have sought broad changes and showcases detailed strategies for how those changes actually take place. It is my wish that this book may contribute to a better understanding of the degree of our responsibility toward *our own planet, our own people*.

Maybe my words will express the sentiments of many others who think and feel as I do, but who find it more difficult to speak out publicly.

Happy Reading!

Rashid Alleem
Sharjah, UAE
November 2017



ABOUT THE GOALS

Alleem Sustainable Development Goals

I came up with 21 Alleem sustainable development goals three months after the recent oil price collapse, although the ideas of these goals had been in my mind for a long time. The stunning slump in oil prices, dropping from a peak of \$115 per barrel in June 2014 to below \$35 by the end of February 2016, gave me considerable worry because I knew it would delay most of the development programs in underdeveloped and developing countries. The challenge is still big—about 1 billion people still live with less than \$1.25 a day (the World Bank’s measure of poverty), and more than 800 million people do not have enough food to eat. Women are still fighting for their rights, and millions of women still die during childbirth.

I am a big supporter of the UN’s 17 global goals released on September 25, 2015, and I am fully committed to them. The SDGs are a universal set of goals, targets, and indicators that UN member states are expected to use to frame their agendas and political policies over the next 15 years. The SDGs follow and expand on the millennium development goals (MDGs), which governments across the globe agreed upon in 2001.

WHY DO WE NEED ANOTHER SET OF GOALS?

In my opinion, the 17 SDGs missed a number of very important goals. The goals made no mention of children's rights, tolerance, and happiness, while the Alleem Sustainable Development Goals did specifically address inclusive growth. Therefore, I came up with 21 goals, most of which are included in the 17 SDGs. I came up with the rest of the goals, which fit into my bold mission: to work with individuals and innovative organizations to improve social, economic, and environmental living conditions worldwide to improve the quality of life for the hundreds of millions who have not yet seen the benefits of sustainable development and inclusive growth.

WHAT ARE THE PROPOSED 21 GOALS?

1. Quality education
2. Creativity and innovation
3. Technology research and development
4. Peace and security
5. Tolerance
6. Happiness
7. Good health and well-being
8. Water sustainability
9. Affordable energy
10. Environmental and natural resource security
11. Climate change

12. Financial and economic crises
13. Competitiveness
14. International trade and investment
15. Children's rights
16. Food security
17. Extreme poverty
18. Women empowerment
19. Employment skills and human capital
20. Sustained inclusive growth
21. International cooperation

HOW WERE THE GOALS CHOSEN?

These goals are unlike the SDGs. As for the SDGs, the UN conducted the largest consultation program in its history to gauge opinion on what the SDGs should include.

Being passionate about sustainability and its principles, I followed the first Rio summit in 1992, and the outcome of the Rio+20 summit in 2012, which mandated the creation of an open working group to come up with a draft agenda.

The open working group, with representatives from 70 countries, had its first meeting in March 2013, and published its final draft, with its 17 suggestions, in July 2014. The draft was presented to the UN General Assembly in September 2014. Member-state negotiations followed, and the final wordings of the goals and targets, as well as the preamble and the declaration that came with them, were agreed in August 2015.

Alongside the open working group discussions, the UN conducted a series of “global conversations,” which included 11 thematic and 83 national consultations and door-to-door surveys. The UN also launched an online survey entitled “My World,” which asked people to prioritize the areas they would like to see addressed in the goals. The results of the consultations were fed into the working group’s discussions.

Way Forward

Problems are not confined to one country, nor can they be tackled in isolation. The UN is the prime organization with the reach, remit, and legitimacy to forge solutions. They work with experts and practitioners to find new ways to tackle the challenges we face.

Because some issues associated with most of the goals are so severe and very complicated and can never be achieved by individuals or organizations in a short time, the world must come together as one to solve them; otherwise, this endeavor would be both a waste of time and resources.



Alleem SD Goals



"We have to redefine how we wish to live our lives and be remembered after we leave this earth. There is philanthropy, and then there is sustainable development. Aiming and working towards the latter makes more sense for it is more grounded and long-term. Further, it is more defining and embodies the indomitable spirit of mankind."

Dr. Rashid Alleem



*"Education is the most powerful weapon
which you can use to change the world."*

Nelson Mandela

QUALITY EDUCATION

There is no doubt that education is such an important tool for life that I felt compelled to start my sustainable goals list with quality education. Learn, and once you have learnt, teach others in turn, because education is the source of real happiness. Let us open the door of happiness with some of the knowledge that I feel necessary to share with the world.

Prevalence of Education

On March 15, 2016, I had the privilege and honor of meeting His Excellency the late S. R. Nathan, former president of Singapore, in his office at the Singapore Management University, where he had served as a distinguished senior fellow at the School of Social Sciences. There, we had a long discussion on how to make the world a better place to live in by applying the principles of sustainability by focusing mainly on quality education. The two of us agreed with Nelson Mandela's quote: "Education is the most powerful weapon which you can use to change the world." That education, however, must be quality education.

To illustrate the point, let me remind you of the real-life story of a very young girl who has become an inspiration to the entire

world owing to her passion, patience, and persistence in pursuing education.

I Am Malala

I Am Malala is a book written by Malala Yousafzai, who is considered one of the most inspiring ladies of the present time and will always remain so because of her brave efforts to champion the right to education for girls. *I Am Malala: The Girl Who Stood Up for Education and Was Shot by the Taliban*, is the story of eleven-year-old Malala, who risked her life and took a stand against the Taliban to fight for the freedom of education for girls, which was being denied in Pakistan. Malala's book tells a remarkable story of a family who experienced the heat of global terrorism in the fight for girls' education; a story of a father, a teacher, who encouraged his daughter to learn and be an independent woman; and a story of brave parents with an extreme love for their daughter in a society that praises sons!

When Malala was born in 1997, her father named her after an audacious woman who led troops into battle against the British in 1880. Malala's parents come from a very remote area in Pakistan called Shangla, who later moved to Mangora, a small town in the Swat Valley district (just a hundred miles away from Afghanistan). Though her mother is illiterate, her father is a teacher and a great speaker. He opened a school for both girls and boys with his friends and business partners at a time when most women in the region were illiterate. Things were going well before the arrival of the Taliban, who completely changed the picture in the region. They started misguiding people by telling them to burn their books, CDs, and other study materials to keep the girls away from the schools. During

this time, Pakistan had just been affected by a terrible earthquake, floods, and many other natural disasters. Many people believed that they were being punished by God, and so they started listening to the Taliban. However, Malala and her father continued to promote education and women's rights in their speeches. In early 2009, at the age of 11, she wrote a blog for the BBC website describing life under the rule of the Taliban.

Despite receiving numerous threats and seeing people killed every day by the Taliban, her father continued to encourage his daughter; in turn, Malala continued using her voice. Because of her sincere efforts, she was nominated for the International Children's Peace Prize in 2011 and was awarded Pakistan's National Youth Peace Prize. During the time that her efforts were being recognized everywhere, the Taliban, of course, did not favor her awards. Unfortunately, on Tuesday, October 9, 2012, she was shot by the Taliban while on her way home from school, and very few people expected her to survive. She was taken to the local hospital, but her condition deteriorated, so she was sent to Queen Elizabeth Hospital in Birmingham, UK to have surgery and recover from her wounds. By God's grace, Malala recovered from her injuries, and together with her father, founded the Malala Fund, which promotes the right to education for females around the world. Since then, she has given many speeches at the UN and other international organizations to promote women's right to education. In addition, she has won the Sakharov Prize for Freedom of Thought and received an award from the European Parliament, and in 2014, at the age of 17, she became the youngest person ever to receive the Nobel Peace Prize. She spent her prize money on education by building a secondary school for girls in Pakistan.

There is no doubt that she has brought about a positive change to the world with her peaceful yet enthusiastic approach in the field of education for girls. Her organization's next goal is to provide 12 years of free, safe, quality education to every child. What a wonderful goal!

Education Vogue

As we all know, education is the most important thing in most nations' agendas, especially for students at an early stage; hence, the Program for International Student Assessment (PISA) is a worldwide study of 15-year-old school pupils' scholastic performance in mathematics, science, and reading, conducted by the Organisation for Economic Co-operation and Development (OECD) in member and non-member nations. Conducted in 2000, this was the first study of its kind, and since then, it has been repeated every three years with a view to improving education policies and outcomes. The study measures problem-solving and cognition in everyday life. According to the OECD's 2012 report, Shanghai, China, is ranked number 1; Singapore is number 2; and Hong Kong, China, number 3, in a survey of educational standards in 65 countries.

SHANGHAI-CHINA

According to the *Asia Society*, a non-profit organization that focuses on educating the world about Asia; Shanghai, the largest city in China, was the first to achieve 100 percent primary and junior high school enrolment and was also one of the first to achieve an almost-universal secondary school attendance. Furthermore, if students want to attend a certain type of higher education, they are easily able to do that as well.

China has implemented numerous changes to its education system as of late; however, it has struggled to move away from the exam-based system that drives the curriculum, which requires memorizing an array of facts just to pass the test. In 1985, Shanghai began a process of reform and introduced exams that test the application of real-life skills. This has also captured the interest of students. As a result, multiple-choice questions no longer appear on the exams. An estimated 80 percent of students attend night and weekend “cram schools” to ensure that they pass. This comes alongside nightly homework and extracurricular activities, thus making the life of a Chinese student overwhelming. The central Chinese government is aware of this nationwide problem, and its new 2020 reform efforts call for a reduction in student workload. Additionally, Shanghai is working towards improving students’ education experience so that they will learn to learn, as opposed to merely learning a series of facts. An updated curriculum is at the center of this process.

Beginning in 1985, in an attempt to move away from the high-pressure exam system and increase the quality of education, Shanghai began to allow students to take elective courses, which led to new textbooks and materials. Implemented in 2008, a renewed effort to encourage student learning rather than knowledge accumulation led to eight curricular “learning domains:” language and literature, mathematics, natural science, social sciences, technology, arts, physical education, and practicum.

Schools were then encouraged to create their own curriculum, and outside groups such as museums became partners in education. Part of the new curriculum includes an emphasis on inquiry-based education. Students independently explore their research topics of interest to promote social well-being, creative and critical thinking, and again, learning to learn.

To support the new changes in education, certification processes for teachers were implemented. Teachers' professional development requirements also increased—teachers in Shanghai must now complete 240 hours of professional development over the course of five years. An online database provides help with design and implementation of the curriculum, research papers, and best practice examples. Teachers are now encouraged to allow time for student activities in classrooms, rather than relying solely on presentations.

One interesting strategy employed in Shanghai to improve weak schools is the commissioned education program. Under this scheme, top-performing schools are assigned a weak school to administer. The “good” school sends a team of teachers and a principal to lead the weak school and improve it. This, as well as an exchange program for poor rural schools, has been implemented in the city. Such a system assists the poor schools and benefits Shanghai schools by allowing them to promote teachers and administrators.

In Shanghai, there is a clear awareness that education needs a transformation to keep pace with the rate of change in society—and not just the current change. Hence, a conscious effort has been made to take into account the future of society, the economy, and education.

EDUCATION IN SINGAPORE

Singapore is one of the countries I most enjoy traveling to. I love the way the education system is shaping the nation to be among the best in knowledge and talent. According to the PISA 2016 report, Singapore has the highest-achieving students in the international education rankings, with its teenagers topping tests in maths,

reading, and science. For more than a decade, Singapore has been at or near the top of international league tables that measure children's ability in reading, maths, and science.

In light of the above, the strategies followed in Singapore that made them achieve the number one ranking constitutes a matter worthy of discussion. In Singapore, the education sector is managed by the Ministry of Education, which formulates and implements education policies on education structure, curriculum, pedagogy, and assessment. It oversees the management and development of government-funded schools, the Institute of Technical Education, polytechnics, and universities. The Ministry of Education aims to help students discover their talents, make the best of these talents and realize their full potential, and develop a passion for learning that lasts a lifetime.

According to *The Conversation*, an independent source of news from the academic & research community; Singapore's institutional arrangements are characterized by a prescribed national curriculum. It consists of national, high-stakes examinations at the end of primary and secondary schooling that stream students' based on their examination performance and essentially prompt teachers to ensure coverage of the curriculum and the test. The alignment of the curriculum, assessment, and instruction is exceptionally strong.

On top of this, the institutional environment incorporates top-down forms of teacher accountability based on student performance (although this is changing) that reinforces curriculum coverage and teaching to test. Major government commitments to educational research (\$137 million between 2003 and 2017) and knowledge management are designed to support evidence-based policy making.

Finally, Singapore is strongly committed to capacity building at all levels of the system, especially in the selection, training, and professional development of principals and teachers.

In addition, parents, students, teachers, and policy-makers share a highly positive but rigorously instrumentalist view of the value of education at the individual level. Further, students are generally compliant and the classrooms orderly. Importantly, teachers also broadly share an authoritative vernacular or “folk pedagogy” that shapes understandings across the system regarding the nature of teaching and learning. These include the fact that “teaching is talking and learning is listening,” authority is “hierarchical and bureaucratic,” assessment is “summative,” knowledge is “factual and procedural,” and classroom talk is teacher-dominated and “performative.”

Clearly, Singapore’s unique configuration of historical experience, instruction, institutional arrangements, and cultural beliefs have produced an exceptionally effective and successful system.

SWISS EDUCATION

Even though education in Switzerland was ranked ninth in the PISA list, I would like to highlight some important information and facts about Swiss education. Education in Switzerland has a multilingual focus and is very diverse because the constitution of the Swiss delegates’ authority on the school system mainly to the cantons.

Through the research I came across an online news portal *Expatica*, which helped me out to find the strategies followed in Switzerland that have led the country to rank high in the field of education. Let us have a look

I am glad to mention that most students in Switzerland attend local schools that provide free and high-standard education. State education is free, but students may be asked to pay for school supplies, books, and school trips. However, foreign families may consider enrolling their child in an international school so that he or she will find it easier to continue his or her education in a familiar language and curriculum. There are no school uniforms in Switzerland.

The Swiss constitution sets the foundations for education; namely, that primary school is obligatory for every child and free in public schools, and that the confederation can run or support universities.

Although the rules on education are set by the individual cantons, they are supposed to be different based on the individual canton's education requirements. Generally, some children start their compulsory education at the age of 5 or 6, lasting until about 15, as nine years of school education is compulsory for all children in Switzerland. As I mentioned above, most students attend the local school, so students from different backgrounds, sometimes including linguistic backgrounds, come together. Only about 5 percent of Swiss children go to a private school.

The school year in Switzerland starts between mid-August and mid-September and has two terms or semesters and around 12 weeks' holiday (holiday dates vary depending on the canton). Cantons set their own timetables. However, most cantons and municipalities follow the core times—around 8:30 a.m. until 11:30 a.m., and then from 1:30 p.m. until 4:00 p.m. Primary school days are shorter than secondary ones.

I appreciate the strategies followed in Switzerland and respect their constitution for understanding the value of education.

Dubai Cares

Dubai Cares is a charity whose mission is to increase children's access to quality primary education in 45 developing countries, and this mission is accomplished through integrated programs which eliminate the underlying obstacles that prevent children from going to school and learning. They build and renovate schools and classrooms; improve water facilities, sanitation, and hygiene; and provide school meals, early childhood education, teacher training, curriculum development programs, and many other supportive programs.

I really appreciate and thank them for their efforts, as they are continuously doing an outstanding job in the field of education, especially in Africa.

DUBAI CARES IN MALAWI

Thank you, Dubai Cares, for helping the teenage girls in Malawi go back to school. School re-enrolment rates have doubled in six months since Dubai cares launched its pilot project to help teenage girls in Malawi. The charity's fund, amounting to \$490,000, was expanded across the region in October 2016, as part of a two-year education project by the UAE charity. The program not only helps teenagers but also older women who have not finished their studies because of ill health, poverty, and so on. Dubai Cares funds a local NGO, Engaging Communities and Schools in Support of Adolescent Girls in Malawi. "The launch of two Early Childhood Development (ECD) programs by Dubai Cares in Tanzania and Zanzibar could change the face of the country's education system," says Cecilia Baldeh, chief of education at the United Nations Children's Fund (UNICEF)—Tanzania. Apart from funding, Dubai Cares personally encourages families to allow the pursuit of education.

Alleem Knowledge Center

It gives me great pleasure to write about my experience in the field of quality education—it is the Alleem Knowledge Center, my brain-child. For more than a decade now, Alleem Knowledge Center, which is based in Sharjah and was founded by me, has been at the forefront of the real-world application of cutting-edge thinking in organizational development, leadership, innovation, and change.

PROFESSIONALS CLUB

The seeds of Alleem Knowledge Center were sown in 2001, when I felt the need to bridge the communication gap in business matters between the UAE business leadership and almost 200 business expatriates with different nationalities living in the UAE, by bringing them together in a common platform. The Professionals Club was a platform that met once a week on Tuesday evenings after work hours, where local managers and leaders exchanged thoughts and ideas and shared knowledge, which served as the basis on which the Alleem Knowledge Center was founded. The center now hosts more than 100 nationalities, deliberating and debating on various management-and-leadership-related issues.

Today, the institution is the UAE's most respected nonprofit center for cutting-edge thinking, best learning practices, and research on advanced business management and attracts the brightest and most influential minds in academia and business.

Qatar Foundation

The Qatar Foundation for Education, Science, and Community Development is a semiprivate chartered nonprofit organization

in Qatar founded in 1995 by the then emir Sheikh Hamad bin Khalifa Al Thani and his wife, Moza bint Nasser. In addition to private funding, it is government supported, and in some ways it is government funded. The Qatar Foundation (QF), which is chaired by Sheikha Moza bint Nasser, has spearheaded Qatar's endeavours in establishing itself as a leader in education, science, and cultural development on both the regional and the global scale. The QF has stated its aim "to support Qatar on its journey from a carbon economy to a knowledge economy by unlocking human potential."

The organization's initiatives are oriented towards education, science and research, and community development. It has solicited a number of international universities to establish campuses in Qatar as part of its goal to develop a youth population with the necessary expertise to sustain a knowledge economy. Its main science and research agenda is developing Qatar's technological capacity by researching new technologies which can be successfully commercialized. In addition to diversifying the economy, this strategy also helps achieve Qatar's aim of becoming a research and development hub. The foundation's social development programs aim to preserve Qatar's culture, "foster a progressive society," and confront pressing social issues.

International Institute for Management Development

Here, I would like to shed light on the education scenario at the International Institute for Management Development (IMD) business school; it solely provides executive education, it is determinedly not part of a university, and there are no academic departments, except for one integrated multidisciplinary faculty. The system followed for the faculty is that professors do not have a permanent

academic tenure and instead work under a one-year contract and a performance-based pay package. Interestingly, the faculty consists of 60 full-time members with 23 different nationalities.

IMD has a strong focus on training and developing general management and leadership skills. It selects experienced candidates for both the Master of Business Administration (MBA) (average age 31) and the Executive MBA (average age 41). Its other focus is to have a broad international group of participants attending open programs to ensure that no nationality dominates, and every year, some 8,000 executives representing over 98 nationalities attend one of the programs.

Harvard Business School

One of the most consistently recognized leading business schools in the world, Harvard Business School (HBS), is worthy of mention. HBS, founded in 1908, is the graduate business school of Harvard University in Boston, Massachusetts, United States. It was ranked first in the United States by US News & World Report in 2016. In 2015, Harvard's MBA program was ranked first in the United States by Bloomberg and second in the world by the Financial Times.

HBS offers dual degrees with several Harvard schools, including the law school, the medical school, and the Kennedy School of Government. The list of Harvard alumni includes some of the most powerful people in America: Jamie Dimon, CEO of JPMorgan Chase; Michael Bloomberg, billionaire former mayor of New York City; Jeffrey Immelt, CEO of General Electric; George W. Bush, former US president; Robert Kraft, owner of the New England Patriots; and

Sheryl Sandberg, Facebook COO. It makes me feel so good seeing such great outcomes in the aforementioned schools, which are of course because of group effort. Keep it up!

SEWA A

As part of my continued effort to provide for my over 5,000 employees and give them a top-quality education that covers both technical and nontechnical subjects, I wanted to establish a training and development dynasty, where employees could be rigorously trained/coached to be upbeat, friendly, and customer focused and create “the happiest place on earth.” SEWA Academy, or SEWA A, as I love to call it, emerged from this idea. My emphasis was on running SEWA-style leadership and customer service programs/ workshops that would create super-engaged employees whose a positive outlook would extend to all customer interactions. I started developing in-house training programs that breathed a mission into SEWA A: *edutain and innovate*.

LEADERS DEVELOPING LEADERS

I wanted SEWA A to offer curricula that would support functional managers/employees in improving their skills in a variety of leadership and management disciplines, from business planning and strategic thinking to operations and people development, ultimately empowering my employees to self-manage, manage teams, and lead organizations. Below are the initiatives (that later on turned into mandates) embraced by SEWA A:

- Every SEWA hire needs to attend SEWA A training programs/workshops.

- The programs should be oriented around the SEWA Way 15 principles.
- The end result of all the programs ought to produce '*happy and delighted customers*'.
- Encourage co-opetition (a healthy mix of cooperation and competition) among employees.

I remember on the inauguration day of SEWA Academy I began my speech with the following words: "*Budgets, contracts, meetings, reports, and the never-ending things that eat up your time are of no value unless they end up producing a happy, delighted customer.*"

Passion to Win

On February 16, 2017, I was invited by Al-Falah University, which is about an hour's drive from Delhi City Center in the National Capital Region, Faridabad, Haryana, India, to address over 500 students and faculty from different universities under the theme of Alleem Sustainable Development Goals. Although an industrial and prosperous state of India, Haryana is the location of one of the most deprived regions in the country. Mewat was divided into the three states of Haryana, Rajasthan, and Uttar Pradesh. Home to a predominantly Muslim community, it is socially, economically, and literally categorized a backward district.

Way back in 1995, the educationist Jawad Ahmed Siddiqui decided to venture into this area to promote literacy and educational awareness. Inspired by the motto "Give a man fish and you feed him for a day, teach him how to fish and you have fed him for life," he started an engineering college in Dhauj Village in Mewat District, Faridabad City. The college initially operated in an industrial shed in

Gurgaon in 1997 with an intake of 180 students. Then, it moved to its permanent campus in 1998 and began its journey of transforming the sleepy hamlet. After a few years, it was observed that the benefit of the college was still not fully trickling down to the community because of the unavailability of a secondary education in the area. Then, Siddiqui decided to launch a 6 to 12 months skill based program. This was the turning point for the community. More facilities were introduced, and the caravan grew. In 2014, the Legislative Assembly of Haryana recognized it as a private university for Muslim ministry community. This brought momentum and gave the impetus for growth. After that, facilities for science, arts, commerce, management, and education were added. After constructing a 350-bed hospital, the university is now at an advanced stage of establishing a medical school. The hospital is charging \$0.15 for consultation and nominal fees for surgery, resulting in inclusive growth in health care for the masses.

Sharjah, World Book Capital for 2019, By UNESCO

Sharjah has become a major cultural hub as it attracts huge crowds to its literary festivals. The Sharjah International Book Fair has grown to become one of the largest book fairs in the world, with 1,500 publishers and thousands of delegates attending. In addition, Sharjah Children's Reading Festival holds some 2,000 events every year. It really feels good to be appreciated, and I am proud to write here that on June 26, 2017, Sharjah achieved global recognition as it was named as World Book Capital 2019 by United Nations Educational, Scientific, and Cultural Organization (UNESCO). UNESCO has described Sharjah's bid to be host city as "very innovative, com-

prehensive . . . with a community-focused activity program containing creative proposals to engage the very large migrant population.”

With the slogan “Read—You Are in Sharjah,” the program focuses on six themes: inclusivity, reading, heritage, outreach, publishing, and children.

These worldwide recognitions generate positive energy and promote reading as a culture. As Sheikha Bodour bint Sultan Al Qasimi, president of the Emirates Publishers Association and head of Sharjah’s World Book Capital Organizing Committee stated, “We are so proud to have been recognized on a global scale for literary excellence and of having our name put on the same platform with some of the world’s frontrunners in the world of books and reading.”



2 CREATIVITY AND INNOVATION



"There is no doubt that creativity is the most important human resource of all. Without creativity, there would be no progress, and we would be forever repeating the same patterns."

Edward de Bono

CREATIVITY AND INNOVATION

What is Creativity?

Creativity is the use of imagination or original ideas to create something. It is characterized by the ability to perceive the world in new ways; do something unpredictable, original, and unique; and find something which is truly by one's own thought. The created item can be anything; it can be *intangible* (such as an idea, a scientific theory, a musical composition, or a joke!) or a *physical* object (such as an invention, a literary work, or a painting).

According to Robert Sternberg, creativity is the production of “something original and worthwhile.” A good definition of creativity that I like comes from Rollo May, who described it as “the process of bringing something new into being. Creativity requires passion and commitment. It brings to our awareness what was previously hidden and points to new life.”

What is Innovation?

Innovation is an act of implementing something new, or it can simply be defined as “creativity into reality.” It is a process of transforming

unique, creative ideas into new realities, which may turn into greater benefits, depending on their impact on the business organization, government, and society.

Innovation is a growth multiplier. Millennial companies have claimed that innovation is definitely a driver of rapid and profitable revenue growth. In fact, they consider it a “competitive necessity” for their organization. According to PwC’s recent study “Unleashing the Power of Innovation,” 74 percent of CEOs regard innovation as equally important to the success of their company as operational effectiveness, if not more. This is the first time in recent history that innovation has been on a par with operations in the C-suite.

A misconception is that innovation is generally considered introducing a new product only. However, it is not restricted to products; we can innovate our customer services, partnerships, business models, marketing methods, and many more. Innovation can be done in many things and in many ways. So, stop restricting yourself and let your ideas come into reality, will you? The world is in search of creative and innovative people.

What is the Difference Between Creativity and Innovation?

I am always asked in most of my presentations and workshops about the difference between creativity and innovation. People sometimes get confused between creativity and innovation. Let us start with a very simple definition of both, which can help us easily differentiate between the two.

Creativity is the ability to think of something new, whereas innovation means executing creative ideas or implementing something new.

Bearing in mind this basic difference, we can further differentiate the two using an example: suppose you are in a meeting and you come up with a new idea. That is creativity (the ability of your mind to think and create some new ideas), but it is not an innovation until it gets implemented.

Creativity is generating some unique ideas, whereas innovation could be introducing something better into the market. There is no risk in creativity because it is a virtual process, whereas there is always risk in innovation because it is reality.

Creativity is Not Innovation

I am used to reading the *Harvard Business Review*, quite often to keep myself up-to-date with “what’s going on out there in business.” This time, I found something that totally justifies and throws light on my above-mentioned philosophy: “Creativity is not innovation.”

Harvard surveyed thousands of executives in Fortune 500 companies to rate their companies’ innovation skills on a scale of 1 to 10: 1 being poor and 10 world-class. The survey participants overwhelmingly believed that their companies were better at generating ideas (average score of 6) than at commercializing them (average score of 1). So, which is more effective: improving your (already good) creativity score from 6 to 8, or increasing your (very poor) execution score from 1 to 3?

It is no contest. Companies tend to focus far more on improving the front end of the innovation process—creativity. But the real leverage is in the back end.

Ideas will only get you so far. Consider companies that struggled even after a competitor entered the market and made their great idea

transparent to all. Did Xerox stumble because nobody noticed that Canon had introduced personal copiers? Did Kodak fall behind because they were blind to the rise of digital photography? Did Sears suffer a decline because they had no awareness of Walmart's new everyday-low-price discount retailing format? In every case, the ideas were there. It was the follow-through that was lacking. In fact, their research found that innovation initiatives face their stiffest resistance *after* they show hints of success, begin to consume significant resources, and clash with the existing organization at multiple levels—that is, long after the idea generation stage.

Managers seem to be enamored with the Big Idea Hunt for three reasons: First, coming up with an idea does not create tension with the core business. Second, idea-proffering is cool, while execution is long, drawn out, and boring. Third, companies think they are good at execution. But generally, they are good at execution in their *core businesses*; the capabilities making that possible are poisonous for innovation.

Thomas Edison, the greatest innovator of all time, put it well: “Innovation is 1 percent inspiration and 99 percent perspiration.” Reflect on how much time your organization spends on inspiration versus perspiration. What are the barriers to execution? How are you attempting to overcome them? You will get to know them through further reading. I would like to mention what IBM Global Business Services mentioned as five barriers to innovation: inadequate funding, risk avoidance, siloing, time commitments, and incorrect measures.

UAE Innovation Week

The UAE Innovation Week Festival is held annually during the month of November, and it includes more than 100 activities in each

emirate to celebrate innovation across the UAE from the spectrum of government and private sectors, as well as from the public. The festival also attracts various segments of society, such as students and youth, citizens, residents, visitors, and government employees. During the launch of the Innovation Week, His Highness Sheikh Mohammed bin Rashid Al Maktoum, vice president and prime minister of the UAE and ruler of Dubai, said, "Innovation offers a new method of functioning for UAE's vital sector. We will assess the progress achieved in the adoption of this method through the UAE Innovation Week. We have multiplied our investments in innovation, especially in terms of equipping and training our national cadres, because keeping pace with the rapid changes taking place in the world requires innovative cadres and an environment that supports innovation." He also added, "Our government agencies are racing to come up with creative ideas as part of the UAE's approach of innovation."

Sheikh Mohammed stated that the UAE government has gone through phases of development by establishing quality and excellence criteria and performance evaluation and providing online and smart services in every field. He highlighted the importance of innovation, saying that "if the government succeeds in providing the best innovation environment for its staff, we can provide a better future for our citizens."

Sheikh Mohammed has launched a fund worth \$545 million to finance innovation. The Sheikh Mohammed bin Rashid Al Maktoum Fund to Finance Innovation is designed to provide financing solutions for innovators across various sectors within the UAE and support them in transforming ideas and suggestions into innovation projects, which will contribute to the country's national innovation strategy and achievement of the UAE Vision 2021.

I feel fortunate enough to be a citizen of this great country, which promotes innovation in almost every possible area.

CRITRAL Thinking

F. Scott Fitzgerald said, “The true test of a first-rate mind is the ability to hold two contradictory ideas at the same time.” This maxim has become a daily reality for organizations worldwide. My philosophy rests on my self-coined term of thinking called “the CRITRAL thinking”—it is a unique blend of “critical and lateral” thinking.

The human mind is burgeoning with ideas all the time; critical thinkers analyze the *nitty-gritty* of any issue on the basis of facts and figures. On the other hand, lateral thinkers, or better called creative thinkers, look beyond the face value and delve deep into the subliminal layers of any particular thing and come out with solutions which are not mundane. The big question is, what happens when you put the right-brain thinkers together with the left-brain thinkers? Collisions.

The way I see it, both are *equally* imperative in this era. One just needs to know how to strike the right balance between both and achieve a *synergy* between *analysis and artistry*. Bombard your mind with new/various experiences, and then connect the dots by answering the five “W” and one “H” questions. What are the five Ws and one H? They are who, what, why, when, where, and how. The five Ws are questions whose answers are considered basic in information gathering or problem solving.

- **What** happened?
- **Who** is involved?
- **Where** did it take place?

- **When** did it take place?
- **Why** did that happen?

Some authors add a sixth question, how, to the list, although how can also be covered by what, when, or where.

- **How** did it happen?

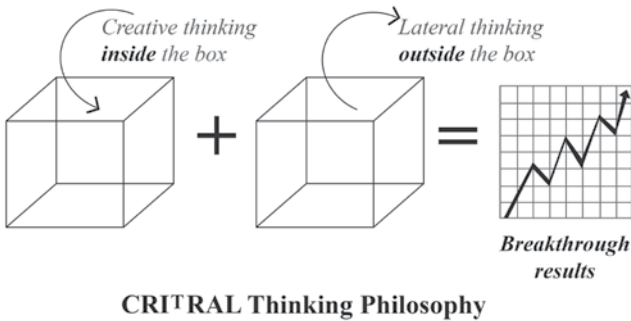


The 5 Ws And One H Questions

Each question should have a factual answer—facts necessary to include for a report to be considered complete. Importantly, none of these questions can be answered with a simple “yes” or “no.”

The result is outstanding and breakthrough thinking. From the perspective of innovation, this is critically important to understand and

will help you get the best from yourself, your colleagues, and your boss. The following infographic summarizes my **CRITRAL** thinking philosophy;



CREATE A 'WHOLE-BRAINED' TEAM

As a leader, it is your challenge to find your own thinking style and those of your other team members to enable you to solve a problem or actively manage the innovation process because innovation takes place when different people present different ideas, perceptions, and judging information. The so-called left-brain thinkers tend to approach a problem not in an emotional but in a logical, analytical way. The right-brain thinkers rely more on intuitive approaches. And companies that effectively collect, synthesize, and “collide” them have a higher probability of success.

WHOLE BRAIN DEVELOPMENT

The big question here is, can a person use both thinking styles at the same time? The answer is yes. But that takes a lot of training and practice. The left brain is also referred to as the digital brain; it

controls reading and writing, calculation, and logical thinking. The right brain is referred to as the analog brain. It controls the three-dimensional sense, creativity, and artistic senses.

Everyone is Gifted

At times, I ponder, what is so fantastic about being creative? Are we creative by choice or by chance? Creativity is definitely that extra factor that adds a spark to your persona and distinguishes you from the rest. It could be the way you talk, the way you dress up, the way you cook, or the way you perceive any situation in life. I believe *everyone* is creative and gifted. It is the environment which either helps it to proliferate or nips it in the bud. The world is jam-packed with people who would raise eyebrows at your creative endeavor, but you cannot deny the fact that there are plenty of options to showcase your creativity too.

The key is to focus on perception. Latest neuroscience studies have plenty to say. Novelty comes when we perceive things differently. Interestingly, the human mind has an innate tendency to slip into routine shortcuts. Bombarding new perceptions or recalibrating our brain requires effort and soaks up a lot of energy. Have you not felt completely drained out mentally when you try to be creative or innovate a bit? Certainly, yes.

Fresh, creative insights are invaluable. But creativity is not a trait reserved for the lucky few. Once you conquer the initial challenges, creativity comes easily to you.

There is no doubt that innovation is inherently risky, and getting the most from a portfolio of innovation initiatives is more about managing risk than eliminating it. Since no one knows exactly where

valuable innovations will emerge, and searching everywhere is impractical, do not push yourself too hard—the best ideas show up when you are relaxed and aiming for excellence. That is it!

The following quote of Tom Watson gives me encouragement: “A minute! You achieve excellence by promising yourself right now that you will never again knowingly do anything that is not excellent—regardless of any pressure to do otherwise by any boss or situation.”

Innovation Promotion System (IPS)

In a friendly discussion with my PhD advisor, Mohammed Arif, my professor for sustainability and process management during my years of studies at the University of Salford, Manchester, UK, the idea and concept of IPS was born. We knew that most great ideas remain dormant because people do not have the courage, resources, time, or money at their disposal to take action. Innovation sits in a lonely place because few people have the courage to dream big with their radically different ideas. And for those who take action, most of them are unprepared and take the plunge without weighing up the pros and cons, eventually draining out their valuable time and energy.

Hence, as an advocate of “**CRI**TICAL thinking,” I instituted an idea management system called innovation promotion system, which is my contribution towards a more innovative society. The idea and concept behind the innovation was very well received and implemented by so many organizations in the UAE.

Some of the recommendations of Professor Mohammed Arif included writing a book on my idea management system. His other

suggestion was to summarize my thesis in an audio and visual aid (DVD), which could act as a source of reference and inspiration for individuals and organizations who are keen on practicing and improving their idea management system. Let us have a quick look at the variables and elements of this idea management system.

IDEA GENERATION

This part of the process deals with providing staff with the motivation to look at innovative ideas and come forward with some proposals. The idea generation part of the suggestion systems should be able to provide participants with some sort of structure for their ideas and help them think of ways to implement them effectively. It should also help them analyze the benefits and compare them with existing practices.

IDEA SUBMISSION

This part of the system is the interface, either IT or paper based, that people need to navigate to submit their ideas. The interface should be easy to use and should provide easy access to all the areas needed for submission. The submission portal also needs to have an effective tracking system.

IDEA EVALUATION

The rubric for evaluation should be clearly defined. The evaluation system should not be merely an accept/reject system and should give participants the impression that their ideas are treated fairly. If possible, this system should provide good, constructive feedback and maybe an opportunity to resubmit the participants' suggestions after revision.

IDEA REWARDING

The reward for the idea being accepted does not need to be financial; it could be just a recognition. However, whatever it is, it should be publicized company-wide so that employees are encouraged to participate more. Some organizations use a proportion of the benefit, but it does not have to be that. It could be gifts or maybe additional annual leave.

IDEA IMPLEMENTATION

Idea implementation should be well-publicized within the organization and the benefit monitored and audited. The implementation process should also look at lessons learned about things that were considered and ignored while proposing the idea. Also, the implementation should be discussed in team meetings to improve the quality of ideas for the future.

MANAGEMENT MOTIVATION

Motivation is key to attracting suggestions and keeping people interested. Oftentimes, people do things that top management likes. They also want to trust management in that they would be treated fairly and recognized for their ideas. In some companies, where their suggestion system is successful, you will find that the CEO personally discusses and mentions it in the briefing. The CEO, or someone very high up in the organization, is present during the awarding ceremonies and the events that are used to promote suggestion systems.

Competition in today's business environment is so fierce that it has become difficult for companies to survive. To sustain their competitive advantage, organizations are recognizing creativity and innovation as key elements for workers. By promoting innovation, or-

ganizations can find new ways to optimize how work is done and achieve profitability.

Creativity is a fundamental human capability which, to some extent, is found in everyone. A suggestion system primarily consists of administrative procedures and the infrastructure for collecting, judging, and compensating ideas, which are conceived by the employees of the organization. Research indicates that several suggestion systems fail to attract sufficient participation.

Three process variables are important in making a suggestion system work: the process of conceptualization of ideas, the mechanism and its associated administrative processes for the submission of ideas, and feedback and its associated reward to encourage the submission of high-quality ideas.

To achieve complete success in a suggestion system, it is very important to analyze the following elements:

- **INNOVATION** – In an interactive process perspective, innovation activities are interactions between the individual determinants and organizational characteristics. Therefore, to generate valuable ideas from individuals, it is important that the organization forms a support system that encourages employees to innovate and submit more suggestions.
- **PROCESS FOLLOWED** – There are key variables that affect the overall success of the suggestion system.
- **REWARD AND FEEDBACK** – Rewards in a suggestion system and the perceived value could be both financial and nonfinancial.

The suggestion system is influenced by many factors, such as supervisory support, support of colleagues, ease of use, rewards, feed-

back, clarity of scope, training, publicity, social networking, goal setting, resources, anonymity, trust, autonomy, and the challenge of problem solving.

To achieve a healthy work environment in an organization, we need to adopt the proper system support factors according to prioritization: supervisor support, colleague support, social networking, deadline/ goal setting, and resources.

IPS | IMPLEMENT

When I was appointed by His Highness to chair SEWA, one of the first steps I took towards IPS was to create a fully independent department called the Excellence Department, within which a section was created and named I Am Creative, which is dedicated to collecting ideas and suggestions from the nearly 5,000 employees of SEWA. The employees come from different backgrounds and intellects and are definitely a hub for innovative thought processes. The creative team is responsible for collecting and evaluating ideas, and reward good ones on a timely basis.

Creative Thinkers and Innovators

Here, I think it is important to mention some of the famous thinkers who created a difference and made the world a great place to live in.

AL-KHWARIZMI: The word algorithm is derived from his name. He was a Persian mathematician, astronomer, and geographer. His algebra treatise *Hisab al-jabr w'al-muqabala* gives us the word algebra and can be considered the first book to be written on algebra. AlKhwarizmi's algebra is regarded as the foundation and cornerstone of the sciences. The book, which was twice translated into

Latin by Gerard of Cremona and Robert of Chester in the 12th century, works out several hundred quadratic equations through both analysis and geometrical example.

THOMAS EDISON: One of the most significant innovators and inventors in American history, Edison is perhaps best known for inventing the first long-lasting, commercially practical, incandescent light bulb. He was also the father of many other breakthroughs, including the first phonograph and the motion picture camera; and he was influential in developing the first economically viable way of distributing light, heat, and power from a central station.

NIKOLA TESLA: A great inventor, engineer, and futurist, Tesla helped develop the AC electrical delivery system. Infamous for his wild experiments and colorful personality, Tesla did creative work regarding the production and transmission of power, which was far ahead of his time.

BENJAMIN FRANKLIN: One of the founding fathers of the United States, Franklin was a brilliant polymath, inventor, political theorist, scientist, statesman, and writer. He had a prodigious scientific mind and his interests varied widely; however, in addition to politics, he is perhaps best known for his experiments with lightning and electricity.

LEONARDO DA VINCI: The original “Renaissance man,” da Vinci is best known for his paintings (*The Last Supper*, *Mona Lisa*), but he was also a philosopher, engineer, and inventor. He left behind him a collection of extraordinarily prescient drawings depicting future technologies (helicopter, tank, solar power).

I have always been amazed by the skills of Leonardo da Vinci, an Italian polymath and one of the greatest geniuses of all time. He excelled in many and varied areas including invention, painting, sculpting, architecture, science, music, mathematics, engineering, literature, anatomy, geology, astronomy, botany, writing, history, and cartography.

I personally feel very much inspired by his wide area of interest and wonder how come he managed to excel in all these distinct fields. Well, *learning never exhausts the mind!* This is what he believed. I would like to share a brief with my dear readers about a book titled *How to Think Like Leonardo da Vinci*, written by Michael J. Gelb. It has two parts, and Part 1 gives a short review of Leonardo's accomplishments. Although it is hard to overstate Leonardo da Vinci's brilliance, recent scientific research reveals that you probably underestimate your own capabilities. You are gifted with virtually unlimited personal potential for learning and creativity. Part 2 is the heart of the book and contains seven principles of Leonardo drawn from an intensive study on his methods.

SEVEN PRINCIPLES DISCUSSED IN THE BOOK

1. **CURIOSITA:** An insatiably curious approach to life and an unrelenting quest for continuous learning. All of us come into the world curious. Leonardo's inquisitiveness was not limited to his formal studies; it informed and enhanced his daily experience of world around him. Da Vinci studied everything with the same rigor.

Great minds go on asking confounding questions with the same intensity throughout their lives. Leonardo's childlike sense of wonder and insatiable curiosity, his breadth and depth of interest, and his willingness to question accepted knowledge never abated.

He suggested keeping a journal or “notebook” with questions, observations, thoughts, contemplations, notes, pictures, drawings, jokes, fables, and so on covering as many topics as possible.

2. **DIMOSTRAZIONE:** A commitment to testing knowledge through experience, persistence, and willingness to learn from mistakes. Exercises are grouped, such as: examine your experience, check your beliefs and sources, learn from mistakes, create affirmations, and learn from anti-role models.

3. **SENSAZIONE:** Sight, sound, touch, taste, and smell are keys to doors of experience. Da Vinci believed that the secrets of *dimostrazione* are revealed through the senses. “The five senses are ministers of the soul.” Leonardo sadly reflected that the average human “looks without seeing, listens without hearing, touches without feeling, eats without tasting, moves without physical awareness, inhales without awareness of odor or fragrance, and talks without thinking.”

4. **SFUMATO:** A willingness to embrace ambiguity, paradox, and uncertainty. As you awaken your powers of *curiosita*, probe the depths of your experience, and sharpen your senses, you come face-to-face with the unknown. Keeping your mind open in the face of uncertainty is the single most powerful secret of unleashing your creative potential. And the principle of *sfumato* is the key to that openness.

5. **ARTE/SCIENZA:** The development of the balance between science and art, logic and imagination. Seekers of balance are invariably drawn to a study of Leonardo. He is considered a supreme “whole brain” thinker. Leonardo urged scientists and artists to “go straight to nature” in the search of knowledge and understanding. Perhaps the most amazing natural system of all is right inside your skull.

Under this secret, the rules of mind mapping were briefly covered as follows:

- Take a blank piece of paper and write the question you are considering at the top.
- In the center of the page, draw a symbol that represents both the left and the right side of the brain.
- Next, print the key words that come to mind on lines that radiate out from the central image. Print one key word per line, with each line being the same length as each key word.
- For each key word that you have drawn, draw lines out from there, listing the ideas that flow from that key word. Give each of these second-generation words their own line, going outwards from the parent key word.
- Keep going without censoring what you are doing. Write down whatever comes to mind for each of the key words.
- Once you have generated enough material, stop and look at your map. Look for major themes—ideas that have been expressed in a few different variations. Number the themes you can identify.
- Connect ideas that are related to arrows, or use colors to connect these different themes.
- Now, redraw the mind map with every theme grouped together.

Keep refining it until you feel you have completely exhausted the subject.

6. CORPORALITA: In addition to cultivating an ability to think clearly, logically, and creatively, da Vinci was in exceptionally good physical health. He taught (and exemplified) the idea that smart people should also take good care of their physical health and well-being if they expect to remain productive throughout their lives.

I completely agree with this secret. Therefore, health and well-being is in my 21 list, and a full chapter is written on the importance of health.

7. CONNESSIONE: A recognition of and appreciation for the interconnectedness of all things and phenomena. Systems thinking.

ABU AL-HASAN: The scholar Alhazen (Abu al-Hasan) from Basra was the first person to describe how the eye works. He conducted experiments with reflective materials and proved that the eye does not sense the environment with “sight rays,” as scientists had believed up until then. He also discovered that curved glass surfaces can be used for magnification.

His glass “reading stones” were the first magnifying glasses. It was from these that glasses were later developed. Furthermore, Alhazen wrote important scholarly texts on astronomy and meteorology.

GALILEO GALILEI: The legendary Italian genius whose breakthrough ideas helped usher in the scientific revolution in the 17th century, Galileo is often called the father of modern science. Forced to defend his views of heliocentrism against the Roman inquisition, and spending most of his life under house arrest for heresy, Galileo has become an icon of scientific integrity in the face of religious dogmatism.

ALEXANDER GRAHAM BELL: A Scottish inventor and engineer, Bell was awarded the US patent for the telephone in 1876. His work on telecommunications, aeronautics, and many other areas (he invented the metal detector) earned him a reputation as one of the great figures of the 19th century.

ABU AL-QASIM: The Andalusian-born doctor Albucasis (Abu alQasim) was one of the most significant medical figures of the middle ages. Over more than 30 volumes, the 10th-century Arab scholar described how important a positive patient-doctor relationship is and argued for the same standard of medical care for all, regardless of social class.

He also invented methods for surgically treating diseases of the urethra, the ear, and the oesophagus, and was the first person to describe an ectopic pregnancy. His ideas shaped modern surgery.

SANDFORD FLEMING: A Scottish-Canadian innovator and inventor, Fleming used his engineering, surveying, and mapmaking skills to help build the transcontinental railways of the 19th century. He was also the inventor of worldwide standard time and the standard time zones used today.

MARIE CURIE: The first female winner of the Nobel Prize in 1903 (she won it twice in both physics and chemistry), Curie was a pioneering physicist and chemist who is known for her breakthrough ideas in radioactivity and her discovery of its two elements.

WRIGHT BROTHERS: Orville and Wilbur Wright invented and flew the world's first successful airplane in 1903. Their persistence, experimentation, and work on the principles of flight made them legendary

inventors and innovators. Wilbur finished four years of high school, but the family moved from Richmond, Indiana, to Dayton, Ohio in June 1884, before he could receive his diploma. Orville, although intellectually curious, dropped out of high school before his senior year to launch a printing business with his elder brother. Together, the Wright brothers published a four-page weekly: *West Side News*. It was the first time they introduced themselves as “the Wright brothers.”

Now let us focus on some of the very recent innovators who have made a big difference to the modern world, and, in turn, influenced billions of lives.

BILL GATES: One of the greatest businessmen and philanthropists of the last century, Gates founded and built Microsoft, an unrivaled mammoth software company, before leaving to set up the Bill and Melinda Gates Foundation, a multi-billion-dollar philanthropic enterprise, that works to enhance global healthcare and reduce poverty.

BILL GATES THINK WEEK

Think Week is a great way to move forward in life. It is a week taken by Bill Gates twice a year to go for a retreat and spend some time to ponder the future of Microsoft and the industry. The vision of Think Week is to give strategic direction to Microsoft to embrace the future; it attracts and benefits people through their new insights. Bill Gates said, “Twice a year, I get out of the office, breaking from my normal routine, for much-needed “Think Weeks.” By actively disconnecting and looking at everything from 50,000 feet, I am able to effectively reflect, reset, and clearly rethink my goals and aspirations. For each “Think Week,” I create a life to-do list, do a

lot of research, and think through big ideas and challenges deeply. Going through this process has been enlightening.”

LARRY PAGE: Co-founder and current CEO of Google, Page is leading one of the most innovative and successful companies in the world, perhaps in recent history.

Google’s 10x thinking ideology is worth mentioning here. They have been beautifully incorporating this ideological tool at their workplace and made them one of the globally recognized innovative organizations.

Just to make things easier for my dear reader (and to save time), I have provided a summary of my findings about the 10x thinking tool in the following section.

10X THINKING

1. IT’S HUMAN

This 10X thinking is a distinctly human process rooted in the fundamental and enormous potential of the human condition to persistently dream in new directions.

2. IT’S A MINDSET

This 10X thinking is a mindset that sees every opportunity as a possibility and every possibility as an opportunity.

3. IT’S BOUNDLESS

This 10X thinking is boundless and moves beyond traditional containers and boundaries to extend thought and ideation in multiple directions and tangents. There are no limitations, and this degree of

freedom opens the mind to question in considering and being open to ideas in all directions. Hence, 10X thinkers are willing to bravely step through a threshold from the traditional and expected to the bold and unknown.

4. IT'S ABOUT DISTANCE

How far can an idea travel? What is its arc of impact? And beyond a distance, what are the depths and breadths of an idea?

5. IT'S A LANGUAGE

How people communicate their ideas matters. Do you have a language that supports how people talk about ideas? Do you have a language capable of supporting a mindset of 10X thinking?

6. IT'S EVERYWHERE

The next 10X idea is only a click away. It is in the next conversation. It is in a photograph. It is in the next sentence. It is in the morning at 3:00 a.m. It happens in a glance. It is in the next idea. It is in a day-dream, and it can be anywhere. Learn to recognize 10X ideas when they present themselves because they will.

7. IT'S ABOUT URGENCY

These 10X thinkers put things into play now and get better at them. Education does not have time to wait; bold ideas are needed now.

8. IT'S ABOUT DESIGN

This 10X thinking requires incubation, and then acceleration. Acceleration causes collisions. And collisions set in motion new trajectories that lead to new insights and thinking beyond the traditional and expected.

9. IT'S A CHOICE

This 10X thinking is a conscious choice. It is about giving yourself permission to think in a new way.

10. AND MOST IMPORTANTLY, IT'S ABOUT CULTURE

10X thinking is about the capacity and willingness to rethink everything together and share the responsibility of thinking boldly and leading boldly. It is about a cultural value of risk-taking and creating the conditions for nurturing and incubating big thinking and big ideas. It is about accepting being wrong and the expectation of the relentless pursuit of righteousness, whichever way right is defined.

Further, 10X thinking is about the willingness to express ideas and the expectations that others will have that you do. It is about a culture of willingness and the capacity for creating this type of thinking in everyone, and in the process, creating the cultural conditions for making everyone leaders in their own right.

Thank you, Google, for teaching me something new, and thank you for conducting a great workshop on November 24, 2015, titled Creative Skill for Innovation for over 100 SEWA family members. It was a delight seeing how my people benefited from it. It was very enlightening and fun! The Google way!

MARK ZUCKERBERG: What else is there to say about Facebook? Arguably, Facebook is the most influential start-up business in recent years. Likes, shares, and friend requests have all become words that we have grown to know worldwide. The popularity of Facebook has led many books to be written about the many facets of the website and organization, including this particularly interest-

ing book entitled, *Facebook Nation: Total Information Awareness*.

Facebook has enabled people all over the world to connect at the click of a button in a world where communication with loved ones overseas was once a hassle. Amazing! Mark Zuckerberg, the creator of Facebook, has done this all through his creative thinking ability.

THINK LIKE ZUCK

Think Like Zuck, a book written by Ekaterina Walter, examines the five principles behind Facebook's meteoric rise, presented in actionable lessons anyone can apply—in any organization, in any industry. What follows are the five business secrets of Facebook's improbably brilliant CEO, Mark Zuckerberg.

PASSION — Keep your energy and commitment fully charged at all times by pursuing something you believe in.

PURPOSE – Do not just create a great product; drive a meaningful movement.

PEOPLE – Build powerful teams that can execute your vision.

PRODUCT – Create a product that is innovative, that breaks all the rules, and that changes everything.

PARTNERSHIPS – Build powerful partnerships with people who fuel imagination and energize execution.

The following are Facebook's operational highlights as of September 30, 2016:

- **Daily active users (DAUs)** – DAUs were 1.18 billion on average, an increase of 17 percent year over year.

- **Mobile DAUs** – Mobile DAUs were 1.09 billion on average; an increase of 22 percent year over year.
- **Monthly active users (MAUs)** – MAUs were 1.79 billion; an increase of 16 percent year over year.
- **Mobile MAUs** – Mobile MAUs were 1.66 billion; an increase of 20 percent year over year.

BECOMING FACEBOOK

I strongly recommend that people who look for success stories to go through the book *Becoming Facebook* by Mike Hoefflinger, who writes about the journey of Facebook from a Harvard dorm room to the globe with nearly 2 billion monthly users. It is a well-written, well-organized how-to book that pulls valuable lessons from the company's short but consequential history. The book consists of three metrics that led to the jump-start of Facebook's growth.

North Star Metric: This would be engagement, which would measure not only people who signed up but also people who actually found enough value to use Facebook on a regular basis. The exact calculation of engagement would evolve over the years, but the goal would remain the same: getting people active on Facebook.

Magic Moment: The moment people are hooked on a product as quickly as possible. According Hoefflinger, the team understood that for people to be active users, they needed to reach the *magic moment*.

“After getting people hooked via your magic moment, you have to deliver the day-in-and-day-out value that earns loyalty from your users,” Hoefflinger writes. This is where the third metric, *Core Product Value*, comes in.

Becoming Facebook is not only about how Zuckerberg's company became Facebook, but how, perhaps, your company can also strive to become a Facebook.

SNAPCHAT

Like other networking sites, we are also very familiar with Snapchat, an image messaging and multimedia mobile application created by Evan Spiegel, Bobby Murphy, and Reggie Brown, former students at Stanford University, and developed by Snap Inc. Dear readers, you must also know that one of the principal concepts of Snapchat is that pictures and messages are only available for a short time before they become inaccessible, which is completely different from Facebook, and this leads to a point of comparison between the two.

FT BIG READ | SNAP

On March 3, 2017, the *Financial Times*, covered news about two very famous applications, Facebook and Snapchat, going public. Facebook was a profitable company when it went public, unlike Snapchat, which lost more money last year than it generated in revenue. However, the investors, who pushed Mr. Spiegel's company to a market value of more than \$28 billion by the end of trading on March 2, 2017, were clearly hoping that Snapchat could dent Facebook's dominance in online advertising, especially with young users. If Snap wants to take on Facebook, which is now worth nearly \$400 billion, the question of comparison is very much expected.

Mr. Spiegel invited a comparison with Facebook, acknowledging that Snapchat could not match the social network's daily active user base of 1.2 billion. Instead, he insisted that a smaller, more selective

audience—Snapchat has 158 million users a day—is a virtue. Justifying this, Snapchat relentlessly focused on ensuring that users carefully choose whom they add, hoping that people would spend more time in the app because it is for communicating with their close friends. Its principle of disappearing photo messages allows people to chat with pictures, comfortable with being themselves rather than creating a profile for posterity. On the other hand, Facebook believes that the more friends or followers you have, the better your life is. Let us wait and watch who is going to win this race, which is completely based on being creative and innovative.

STEVE JOBS: The iconic American entrepreneur and founder of Apple will go down in history as arguably one of the world's greatest innovators. As CEO of Apple in the 1980s and again in the late 1990s and 2000s, Jobs played a central role in the personal computer revolution and in developing its key products, including the Macintosh, the iPod, and the iPhone. It is wise here to highlight *The 7 Innovation Secrets of Steve Jobs*. The following are the seven secrets:

THE 7 INNOVATION SECRETS OF STEVE JOBS

“The cure for Apple is not cost cutting; the cure for apple is to innovate its way out of its current predicament.” This was the bold, clear statement by Steve Jobs when he came back to Apple after a long absence of 12 years.

Readers, do you recall the hard times of Apple when it was close to bankruptcy? What happened next? Steve Jobs began launching innovations one after another and created a tremendous transformation in computers, telecommunications, and many other fields. People started looking at things in different ways; there was entertain-

ment, music, fun, retail, and a lot more with just a few easy steps. Yes, it was all possible because of his innovative ideas. The seven innovative principles of Steve Jobs, which could lead you towards success in any field, are as follows:

1. DO WHAT YOU LOVE – Passion is everything. Innovation does not happen without it. Dig deep to identify your true passion. Steve Jobs was not passionate about computers; he was passionate about building tools to help people unleash their potential. One of the most profound remarks Jobs ever made was made at the end of one of his last major public presentations. Jobs said, “It’s the intersection of technology and liberal arts that makes our hearts sing.” Ask yourself, “What makes your heart sing?” Follow the answer. You will definitely achieve success.

2. PUT A DENT IN THE UNIVERSE – Passion fuels the rocket; vision directs the rocket to its ultimate destination. In the mid-1970s, personal computers were largely limited to hobbyists who assembled parts from kits. Jobs and co-founder Steve Wozniak had a vision to “put a computer in the hands of everyday people.” A bold, specific vision inspires evangelists and sets forces in motion. Jobs once said, “The role of a leader is to hire the best people and to keep them aligned towards achieving the vision.” Keep your team focused on the big picture.

3. CREATIVITY IS CONNECTING THINGS – Steve Jobs believed that a broad set of experiences leads people to conclude something that others might have missed. He was on to something. Harvard researchers spent half a decade studying the world’s greatest innovators’ to “associate” ideas from different fields and apply them to the product or service they were working on. Those researchers could have

saved themselves a lot of time by simply interviewing Steve Jobs, who used experiences to inspire his best ideas. Jobs did not always know where the dots would connect, but he tried his best to connect them too, correctly. Jobs took calligraphy in college; a course with no practical application in his life; however, it all came back later with Macintosh, the first computer with beautiful typeface, fonts, and calligraphy. This is how he connected things. So, bombard your mind with new experiences completely outside of your chosen field. Think beyond the box, but never forget the box. Remember the critical thinking philosophy.

4. SAY NO TO 1,000 THINGS – “Innovation comes from saying no to 1,000 things,” said Jobs. When Jobs returned to Apple, he dramatically reduced the number of products the company made. When he introduced the iPhone in 2007, he pointed out that while other smartphone makers were adding features and buttons, the iPhone would remove them, making it simpler, cleaner, and user-friendly. One can visit the Apple website to confirm their philosophy that when the company introduces a new product, it does not add the product image and content to a cluttered home page. Instead, it removes clutter, focusing on the product it wants to highlight. So, sometimes it is good to say no.

5. CREATE INSANELY GREAT EXPERIENCES – Steve Jobs innovated the customer experience by benchmarking the very best model against customer service. He did not choose to look at his competitors; he had a bigger vision of what a consumer experience might look like in a retail store selling computers. So, create exceptional experiences for every customer, every time.

6. MASTER THE MESSAGE – Steve Jobs was a master as a storyteller. At this point, I must pen a fact that you can have great ideas, but if you

do not have talent to convey it properly or convince people to opt for it, those ideas will not turn into innovation. So, refine your story, and master your message.

7. SELL DREAMS, NOT PRODUCTS – Ultimately, Steve Jobs was successful because he sold dreams, not products. When he opened the first Apple Store in 2001, he said that the store was not meant to “sell computers.” Instead, it would “enrich lives.” Readers, let me tell you that, actually, no one cares about the product; everyone cares about himself or herself. People look for the added value of the product. So, we should always focus on creating something that can make others’ lives easy as pie.

A few other very trendy networking sites have set their mark in the competitive era through their creative and innovative ideas.

YAHOO!

Yahoo!, founded in 1994 by two Stanford PhD candidates, Jerry Yang and David Filo, is a guide to digital information discovery, focused on informing, connecting, and entertaining through its search, communications, and digital content products. They follow a very innovative, user-friendly trend for end users. Yahoo! was one of the pioneers in the early Internet era in the 1990s. It was globally known for its web portal and search engine Yahoo! Search and related services, including Yahoo! Directory, Yahoo! Mail, Yahoo! News, Yahoo! Finance, Yahoo! Groups, Yahoo! Answers, advertising, online mapping, video sharing, fantasy sports, and its social media website. According to a third-party web analytics provider, a California based company, Alexa, as well as similar providers, Yahoo! was the highest-read news and media website, with over 7 billion views per month, the sixth most visited website globally in 2016. According to

news sources, roughly 700 million people visited Yahoo! websites every month. Yahoo! itself claimed that “it attracted more than half a billion consumers every month in more than 30 languages.”

TWITTER

Twitter, created in March 2006, by Jack Dorsey, Noah Glass, Biz Stone, and Evan Williams, is a prevalent online news and social networking service that has rapidly gained worldwide popularity. In 2012, more than 100 million users posted 340 million tweets a day, and the service handled an average of 1.6 billion search queries per day. In 2013, it was one of the 10 most visited websites and has been described as “the SMS of the Internet.” As of 2016, Twitter had more than 319 million monthly active users. On the day of the 2016 US presidential election, Twitter proved to be the largest source of breaking news, with 40 million tweets sent by 10:00 p.m. (Eastern time) that day.

UAE’s Most Recognized Child Inventor

Eleven-year-old Emirati inventor Adeeb Al Balushi is on a mission to save and improve people’s lives through innovation. From a very early age, he has been getting recognition for his awesome inventions. It was a trip to the beach that sparked Adeeb’s inventing career, when his father, who had suffered from polio, could not go swimming because of his prosthetic leg. Adeeb, then six, made his father a waterproof alternative using an enhanced medical wax coating. That was his very first invention, and then, soon after, he created a small vibrating robot to help his mother clean small spaces. Awesome job! His inventions did not take much time before they grabbed the attention of the media, which led the Dubai government to subsequently contact him.

With the government's supervision and funding, Al Balushi has come up with more inventions since then, including a seat belt that monitors a passenger's heart rate and alerts the authorities when it is too high or low, a fireproof helmet with a camera system to help the person see during emergency, and a smart wheelchair for the disabled. At a very young age, he is doing so much in the field of innovation, which is truly worth appreciating.

In November 2014, he addressed 3,000 delegates at an ITU conference in Busan, Korea. He is one of the youngest inventors in the world and was given the Hamdan bin Rashid Al Maktoum Award for Distinguished Academic Performance. Adeeb was also featured on CNN for his wonderful inventions.

Last year, I had the chance of meeting and recognizing Adeeb during our monthly progress meeting at SEWA under the theme of *innovation for a better tomorrow*. I saw great motivation and inspiration in his personality to make a difference in people's lives through innovation. During the gathering, he was with his parents, who commented that Adeeb, since his early childhood, loves to make and break the toys they give him to create something new out of them.

Since April 2014, he has been on an international scientific tour with the Emirates Institution for Advanced Science and Technology, which has had him attending academic conferences, meeting with researchers, and even attending a space camp at the US Space and Rocket Center in Alabama. He was quoted as saying, "I've learned a lot, but most importantly, I'm having fun while doing it."

On April 4, 2017, a UK university honored Adeeb and his younger sister Dana, 11, for their scientific achievements in the fields of medical sciences and space sciences.

Dana was recognized for being the youngest Emirati to experience training at the US-based National Aeronautics and Space Administration (NASA).

Adeeb and Dana are the first and youngest students to discuss scientific research on full-scale projects at the National Graphene Institute at the University of Manchester, impressing the institute's management for their considerable research, logic, and scientific qualities.

First Emirati Female Inventor

I am proud to write about the first female Emirati inventor, Reem Al Marzouqi, who received a bachelor's degree in architectural engineering from United Arab Emirates University and has a US patent for her original invention, a "lower extremity vehicle navigation control system." Her invention is basically a car that can be driven without hands, and the idea for this system came into her mind when she was watching an interview with the world's first licensed armless pilot, Jessica Cox, where she mentioned the difficulties that she faces when driving cars for long distances using only her feet.

Dr. Haik, a professor at the College of Engineering, said, "Reem has realized the difficulty faced by people who suffer from either temporary or permanent disabilities. Further, she has provided them with an option to drive with a steering lever, acceleration lever, and a brake lever to enable the car to be controlled solely with the driver's feet with a high level of control and flexibility. The machine was tested in a parking area, and the results were interesting and encouraging." She said, "The car fitted with the system is not only beneficial for those with disabilities but can also be used in peacekeeping operations, industrial situations where the driver is required to use hands for other operations, or for military exercises."

So, Reem, together with her team, designed a system for a good cause. I must say that it also is a remarkable step towards humanity through creative and innovative thinking. Well done, Reem. Keep challenging tomorrow. See you at the top always. God bless you!

Five Skills Innovative Leaders have in Common

Going through the *Harvard Business Review*, an article published on December 20, 2016, caught my attention. I found something stupendous about innovative leaders, which is really good to share with my readers. It talks about the five skills that innovative leaders have in common and states some strategies/behaviors that CEOs need to adopt to have these skills:

1. MANAGE RISK

Innovative leaders scored 25 percent higher than their non-innovative counterparts on managing risk. Innovative leaders are bold when it comes to experimenting with new approaches.

To develop better risk management behaviors, CEOs need to do the following:

- List a minimum of eight ideas for new initiatives. Benchmark best practices for each and identify at least five opportunities that can be implemented immediately within the organization.
- Identify, document, and plan for risks as part of developing strategic alternatives.
- Shift your approach from thinking things through thoroughly to getting started without knowing all the answers and adjusting as needed.

- Set a time limit for analyzing a particular situation to avoid overthinking decisions.
- Stop and look at the downside risk of every decision. If you can live with the consequences of a decision, then stop analyzing and go ahead and make a decision.

2. DEMONSTRATE CURIOSITY

Innovative leaders also scored higher in terms of demonstrating curiosity. They exhibit an underlying curiosity and desire to know more. These leaders actively take the initiative to learn new information, which demonstrates their engagement and loyalty to company goals.

To develop and demonstrate curiosity, CEOs need to do the following:

- Evaluate their current knowledge and skills. Examine how these skills will help achieve long-term goals and identify what other skills or knowledge would move you in this direction.
- Create a learning environment or community to encourage the free flow of new knowledge and perspectives.
- Stimulate new thinking by examining mistakes and setbacks as opportunities for learning.
- Make time for developmental activities, such as taking classes and participating in workshops.

3. LEAD COURAGEOUSLY

Innovative leaders are proactive and lead with confidence and authority. They turn tough circumstances into prime opportunities to

demonstrate their decisive capabilities and take responsibility for difficult decision making. These leaders are sure to engage and maintain audience attention in high-stakes meetings and discussions, and they do not avoid conflicts and differences of opinion.

CEOs who wish to lead more courageously need to develop the following behaviors:

- When facing a tough decision, consider the alternatives, identify and confront risks, and prepare to deal with other people's reactions.
- Look for an opportunity to share your feelings and opinions with clarity and conviction despite any resistance you may experience.
- Think about the difference between being assertive and being aggressive. Identify situations or people who fall into both categories. Being assertive is a good and effective option for win-win solutions as it is about sharing your views but not forcing them.
- Learn to recognize and appreciate leadership qualities in others as well as in yourself.

4. SEIZE OPPORTUNITIES

Innovative leaders score higher in seizing opportunities. They are proactive and take initiative and ownership for success but avoid overanalysis. They push for personal performance and are able to work independently for extended periods with minimal support, while they are also able to change direction quickly to take advantage of new opportunities when they come up.

CEOs who wish to become more adept at seizing opportunities need to do the following:

- Examine the setbacks and problems related to creating new opportunities and competitive strategies within your own company. Learn to see advantages in changing situations and new developments.
- Consider past opportunities that you declined. What do these opportunities have in common? What intimidated you about them?
- Remember that you do not need to undertake opportunities alone. Make it a collaborative effort by asking valued employees to help you out.

5. MAINTAIN A STRATEGIC BUSINESS PERSPECTIVE

Lastly, the research found that innovative leaders score higher when it comes to maintaining a strategic business perspective. These leaders demonstrate a keen understanding of industry trends and their implications for the organization. They thoroughly understand the business, the marketplace, and the customer base, and are adept at identifying strategic opportunities or threats to the business.

To develop a strategic business perspective, CEOs need to do the following:

- Create and/or participate in a cross-functional committee.
- Perform a knowledge-based SWOT (strengths, weaknesses, opportunities, and threats) analysis, comparing your organization's knowledge with that of its competitors and with the knowledge required to execute your organization's own strategy.

- Start by defining what your organization knows about competitively important factors (e.g., why do customers buy your product or service?). Proactively create learning opportunities around these factors.
- Involve people throughout the organization in the strategic planning process.
- Develop a multiyear strategy that includes steps for you and your staff to take to grow the business. Analyze where your successes have been and how they will likely apply in future trends.

As I discussed the skills that innovative leaders have in common, there is also a competency that innovative leaders perform more poorly than less innovative leaders; namely, maintaining order and accuracy. For this reason, organizations need to supplement innovation initiatives with people who are strong in project management or provide tools and training to help innovators manage the details more effectively.

Innovation in Education

On January 17, 2017, His Highness Sheikh Dr. Sultan bin Muhammad Al Qasimi, member of the Supreme Council and ruler of Sharjah and president of American University of Sharjah (AUS), met with Kai Mykkänen, the minister for foreign trade and development of Finland at the ruler's palace in Sharjah. I was personally invited to attend the meeting, the purpose of which was to discuss the future development plans of the university and the establishment of the Research, Technology, and Innovation Park by AUS Enterprises adjacent to University City and the signing of a Memorandum of Understanding (MoU) between AUSE and the Council of Oulu

Region (Northern Ostrobothnia, Finland). The five-year agreement was signed to facilitate mutual cooperation in the fields of research and development; improvement of innovation in education, trade, science and technology, business; and industrial development in Sharjah and the Oulu region with both party administrations sharing experiences.

Hussain Al Mahmoudi, CEO of AUS Enterprises (AUSE) said, “His Highness the ruler of Sharjah discussed with the visiting minister several ways of collaboration that would enable Sharjah and Finland to benefit from the expertise and knowledge of the other, whether it be in research and development or business and commerce. Some of the ideas that were discussed were potential partnerships between private sector entities in the fields of technology and entrepreneurship and the potential establishment of a Finland innovation center at the Research, Technology, and Innovation Park.”

I must say that it is a great effort taken by both parties, which could foster a significant and positive change to traditional education through innovation.

Pilot Pen

Most of you may have heard about Pilot Pen, but how many of you have heard about their continuous innovation strategies? Let us find out more.

Because of their continuous innovation, Pilot Pen has been acknowledged multiple times as a Reader’s Digest Trusted Brand at both the platinum and the gold level. It has a range of well-designed, high-performance products for all writing needs, from oil-based, gel, and liquid ink pens to markers and mechanical pencils.

Benjamin Teh, Pilot Pen's general manager, says, "Pilot strongly believes in continuous innovation, research, and development to create the most revolutionary of pens, such as the new Pilot Permanent Marker SCA 100 and 400 series." He adds that, "the SCA 100 and 400 series markers have a newly-developed control surface properties ink, which is wear-resistant and prevents the ink dispersing when it's scratched."

I like the way Mr. Teh arise proceeding with his work through innovations because it is the development that meets new needs in unique ways.

Accelerating Performance

John Ray, president and CEO of the Center for Creative Leadership, wrote a white paper about "five leadership skills you and your organization can't do without" under the title "Accelerating Performance." One of the skills was skill 2: innovation and creativity, which is outlined as follows:

IBM recently asked 1,500 CEOs from around the world the following question: what is the most important leadership skill for these complex times? Their answer was: creativity. As Harvard Business School professor John Kotter has found, organizations used to expect one large-scale change a year. These changes—a merger or perhaps entering a new market—brought their own challenges. Now, we live in a world of continuous large-scale changes. The recent global recession offers a perfect example. In these conditions, creativity, or the ability to innovate, can be the key to thriving instead of merely surviving, or worse. Innovation is the cornerstone of growth, and it rarely results from solitary thinking or having a eureka moment. The eureka moment refers to the common human experience of suddenly

understanding a previously unsolvable problem or concept. Some research describes it as a memory advantage, however, conflicting results exist as to where exactly it occurs in the brain, as it almost always arises from collaborative creativity. But do we unlock it in our organizations?

In facing new and complex challenges, we often turn right away to traditional business thinking, which is based on deep research, formulas, and logical facts. Certainly, that approach has its value. It also has its limits. This is a quote from an executive who said this about the cost of failing to come up with new thinking or new results: “The more you drive over a dead cat, the flatter it gets!” To get different and better results, we need to complement business thinking with innovative thinking, which imagines a desired future state and figures out how to get there. It is about embracing ambiguity and exploring numerous possibilities and asking, “What if?”

We can all develop innovating thinking skills. One way of doing this is by getting inside the heads of our customers. Do not exclusively conduct market research—go out and watch how they live and use your products. While at Procter & Gamble, design guru Dan Buchner had members of his team spend time in people’s homes observing how they cleaned them. The result was the Swiffer line of sweepers, mops, and dusters. Would they have gotten that idea from an online survey? Another way of thinking innovatively is rapid prototyping. Cut through endless analysis and chatter by building and testing new products and services quickly. Sure, there will be some failures, but there will also be successes, and you will have shaved months or even years off the time it takes to reach them.

My Experience

One of my dreams for my city, Sharjah, is to position it as *the city of conservation* by reducing the energy and water demand by 30 percent through the 2020 vision, which I released back in April 2014. One good thing we did as a great team under the theme “Change Is Good” was to visit the flats, villas, and houses to observe people’s behavior towards day-to-day energy and water usage. We spent days, weeks, and months observing. The result is that we came up with energy efficiency and water control devices. We partnered with international companies and globally-recognized brands in the field of energy and water, and the results were overwhelming. In some cases, the devices saved up to 40 percent of energy and water usage.

Guinness World Records’ Rising Star

I would like to share a very inspiring story of Rafael dos Santos Silva, a 29-year-old resident of the Brazilian state of Minas Gerais. Rafael has built a model of Belo Horizonte out of electronic waste material and old computer parts and is now on his way to becoming a Guinness World Records’ rising star.

RankBrasil, the company registering Brazilian records, rewarded the young inventor with a prize and a certificate. Rafael Silva has already built nine models out of used materials and old computer parts. He gets his supply from stores that sell old equipment.

Rafael described the model’s layout in an interview: “In Belo Horizonte, we have a power substation, a factory, and an airport. The city dimensions are 1.70 meters to 1.20 meters, while its scale is 1:200. I used copper to make trees, and cardboard, sawdust, and grass for roads. The airport’s platform is made out of old rusty floppy disks.”

To put all pieces together, Rafael had to go back to the basics of computer science and computational mathematics. He said, “I combined my knowledge of both architecture and computer science to build Belo Horizonte’s models. That is why I used electronic waste.”

Rafael plans to create a nonpermanent exhibition of his models, as well as promote the idea of intelligent disposal of electronic waste by recycling materials. All the best and keep it up, Rafael!

Jugaad Innovation

On February 15, 2017, I visited India to deliver a keynote speech for the seventh Annual Petroleum Gas and Coal Congress, when I had the chance to visit the New Delhi City Center. While I was walking around the center, I came across a library and found a book titled *Jugaad Innovation*. The book’s title attracted my attention as to what the word jugaad means. It is a great book written by three authors: Navi Radjou, the executive director of the Center for India and Global Business at the Judge Business School at the University of Cambridge; Jaideep Prabhu, the Jawaharlal Nehru professor of Indian Business and Enterprise and director of the Center for India and Global Business at the University of Cambridge; and Simone Ahuja, the founder and principal of Blood Orange Media, a vertically integrated media company based in Minneapolis, USA.

The authors articulate how jugaad (a Hindi-Urdu word that means an innovative fix or an improvised solution born from ingenuity and cleverness) is leading to dramatic growth in emerging markets, and how Western companies can also adopt jugaad as a helpful tool to succeed in the hypercompetitive world. *Jugaad Innovation*, contends that the West must look to places like India, China, and Africa for a new bottom-up approach to frugal and flexible innovation.

According to the authors of this informative book, leading companies around the world, such as GE, Google, PepsiCo, Philips, Renault-Nissan, Siemens, Facebook, Suzlon, Tata Group, and Yes Bank are practicing various principles of *jugaad* or frugal innovation and are learning from grassroots innovators in emerging economies such as India. These principles are also being adopted by many NGOs and governments around the world. Let us have a quick glance at these principles.

1. SEEK OPPORTUNITY IN ADVERSITY

Jugaad entrepreneurs perceive harsh constraints as an invitation to innovate. As demonstrated under this principle, Mr. Kanak Das lives in a remote village in Northeast India and got tired of riding his bicycle on roads full of potholes and bumps. Rather than complaining, he turned it into an advantage by retro-fitting his bicycle with a device that would convert the shocks it receives into acceleration energy, allowing him to ride his bicycle faster on bumpy roads.

2. DO MORE WITH LESS

Jugaad innovators are highly resourceful in the face of scarcity. The *jugaadu* (one who does *jugaad*) works with what he or she has and has a good understanding of adjustment. This frugality principle can teach us to optimize the use of scarce financial and natural resources while delivering high value.

3. THINK AND ACT FLEXIBLY

The *Jugaad* innovator's flexible mindset constantly questions the status quo, keeps all options open, and transforms existing products, services, and business models.

4. KEEP IT SIMPLE

Jugaad is not about seeking sophistication or perfection through engineering products but rather about developing a “good enough” solution that gets the job done.

5. INCLUDE THE MARGIN

While everyone often has a prime focus on serving the mainstream, jugaad entrepreneurs intentionally seek out the marginal, under-served customers and pull them into the mainstream.

6. FOLLOW YOUR HEART

Jugaad innovators do not rely on focus groups or formal market research to decide what products to make, nor do they worry how the investors will react to their new product strategies. They know their customers and their products intimately, and ultimately, they trust and follow their heart.

To give a precise definition, I can say that being a jugaadu is a new mantra for success, which I think anyone can easily and happily opt for.

Frugal Innovation

After *Jugaad Innovation*, the authors Navi Radjou and Jaideep Prabhu came up with another interesting book for innovation-oriented people: *Frugal Innovation: How to Do Better with Less*. As the title elaborates, the book discusses a way for companies to create high-quality products with limited resources. In this “age of scarcity,” Western companies are now seeking ways to fulfil and satisfy the demands of cost-conscious and environmentally aware consum-

ers at home. With an estimated trillion-dollar global market for frugal products, and with a potentially huge cost savings to be gained, frugal innovation is revolutionizing business and reshaping management thinking. This book explains the principles, perspectives, and techniques behind frugal innovation, enabling managers to profit from the great changes ahead. Here are the six principles of frugal innovation:

1. **ENGAGE AND ITERATE (E&I).** Rather than using insular research and development departments that rely on educated guesses about customer needs, E&I starts with customers and observing their behavior in their natural environment, and then considers how products can be made as relevant as possible, going back and forth between the customer and the lab to refine designs.
2. **FLEX YOUR ASSETS.** As customers are becoming even more demanding, new tools (such as robotics and 3-D printers) and approaches (such as social manufacturing and continuous production) can help operations and supply chain managers “flex” their production, logistics, and service assets to satisfy demanding customers better and more cheaply.
3. **CREATE SUSTAINABLE SOLUTIONS.** R&D and manufacturing managers can develop self-sustaining solutions that help both businesses and the environment, such as “cradle-to-cradle” (where components and materials are repeatedly recycled.)
4. **SHAPE CUSTOMER BEHAVIOR.** Companies can influence consumers to behave differently (for example, driving less or more safely) and feel richer while consuming less.

5. CO-CREATE VALUE WITH PROSUMERS. Consumers, especially the tech-savvy millennial generation (those born between 1982 and 2004), are evolving from passive individual users into communities of empowered “prosumers,” who collectively design, create, and share the products and services they want. As a result, R&D and marketing leaders are working with do-it-yourself (DIY) and crowd-sourcing pioneers, such as TechShop and Quirky, to bolster and harness the collective ingenuity and skills of consumer communities.

6. MAKE INNOVATIVE FRIENDS. You can develop frugal products, services, and business models more efficiently by collaborating with diverse external partners (such as suppliers, universities, venture capitalists, and start-ups) than by working alone.

Uber: Riders with Drivers through a Click

Uber Technologies Inc. is an online transportation network company founded in 2009 as UberCab by Garrett Camp and Travis Kalanick. It is headquartered in San Francisco, California, at present, with operations in 528 cities worldwide. It operates the Uber software application, which allows consumers to request car transportation or food delivery via the Uber mobile app or the Uber mobile website.

Uber drivers use their own cars, although they can rent a car to drive with Uber.

On January 11, 2017, Dubai became one of the 528 cities to have a service that links riders with drivers through a click; Uber signed an agreement with the Roads and Transport Authority (RTA) of Dubai.

The deal involves deploying about 14,000 vehicles around the city, of which 9,841 are taxis and 4,700 are limousines. The deal was

signed at the RTA headquarters by the director general and chairman of the Board of Executive Directors of RTA, Mattar Al Tayer, and the regional manager of UBER in the Middle East, Anthony Khoury, in the presence of senior officials from both sides.

TRIZ

A Russian acronym for *Theoria Resheneyva Isobretatelskehuh Zadach* (theory of inventive problem solving), TRIZ is more than just a theory; it is a practical toolkit, a method, a set of processes, and even a bit of philosophy to help you understand and solve problems in very creative and clever ways. One can think of TRIZ as another way of lateral thinking. TRIZ is based on two basic principles:

- Somebody, sometime, somewhere has already solved your problem or one similar to it. Creativity means finding that solution and adapting it to the current problem.
- Do not accept contradictions. Resolve them.

AMOCO

During my service with the American Oil Company (AMOCO) as a gas plant superintendent, we created our own group problem-solving models based on five steps.



The Group Problem Solving Model

STEP 1 - DEFINE THE PROBLEM

Define the nature and scope of the problem. A summary problem statement which identifies and clearly defines the problem.

STEP 2 IDENTIFY THE ROOT CAUSES

Determine what factors are causing the problem.

STEP 3 DEVELOP A SOLUTION

Generate alternative solutions, and then evaluate these alternatives to determine the “optimal” solution.

STEP 4 IMPLEMENT AN ACTION PLAN

Put the solution into practice. Establish a system for measuring the impact and effectiveness of the solution.

STEP 5 EVALUATE

Monitor and evaluate the impact and effectiveness of the solution using the measurement system developed in step 4.

Agile Business

Building the Agile Business, a book written by Neil Perkin, a renowned blogger, details how agile approaches are far more than a process and capture a far broader opportunity for operating effectively as leaders and organizations in the modern world. Dan Ward, a specialist in defense acquisition, has a lovely way of capturing this approach. FIST stands for “fast, inexpensive, simple, and tiny.” He developed this framework to describe a new approach for acquisi-

tions and system development building on an original concept from NASA. FIST defines an approach that uses a small team of talented people working with tight time and resource constraints, adhering to a particular set of principles and practices.

Like most great concepts, FIST has a much broader application and a lot in common of course with lean and agile.

Fist: Fast, Inexpensive, Simple, Tiny

In 2003, the acronym FIST (fast, inexpensive, simple, tiny) was coined to describe the US military's approach to high-speed, lowcost innovation. This method uses constraints to foster creativity and, through a thoughtful application of speed, thrift, simplicity, and restraint, has a track record of producing best-in-class and first-class technologies. Over the next decade, the idea was refined in a series of journal articles and conference presentations, and the approach was implemented in half-a-dozen projects. Along the way, a wider network was built that used FIST methods and techniques to build everything from spacecraft to software.

FIST to FIRE

When it seemed a reboot was in order, a new acronym emerged: FIRE (fast, inexpensive, restrained, elegant). While FIST aimed to reduce the time, cost, and complexity associated with developing new military gear, FIRE extends these methods to applications beyond the battlefield. The idea was to take the concept from the profession of arms and bring it to the marketplace. Let us have a close look.

F is for FAST

The F in FIRE stands for fast, which means that it is important and good to have a short schedule. It is about defining a project objective that can be satisfied on a short timeline, not one that we know full well will require 20 years to accomplish. The precise definition of “short timeline” will naturally vary from context to context. As a general rule, speed is good, whereas being slow kills. Speed fosters stability within a program and reduces our exposure to the forces of change.

I is for INEXPENSIVE

The I in FIRE stands for inexpensive, which means that it is important to have a small budget. Inexpensive does not mean simply picking the low bidder or settling for an inadequate component. Being inexpensive is about designing our organizations and processes with thrift in mind and solving problems with intellectual capital *instead* of financial capital. It is about setting program goals that can be satisfied on lean budgets and finding thrifty ways to perform even the most expensive-sounding functions. The key is to treat the budget as a constraint, not a starting point to be expanded later.

R is for RESTRAINED

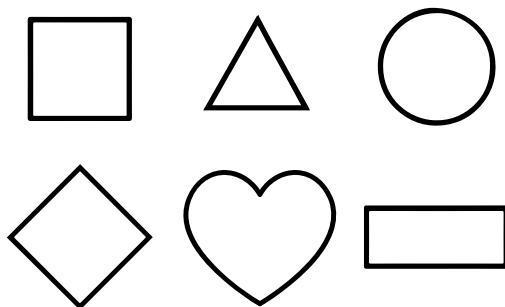
The third letter of FIRE stands for *restrained*. This is the common thread that runs through the whole FIRE concept. It is a preference for self-control, for tight budgets and small teams, and for short schedules, short meetings, and short documents. Yes, there is a point at which an organization is not large enough to do the work and a point at which a document or briefing does not convey all the necessary information. As a general rule, we could get a lot closer to that boundary than we typically do.

E is for ELEGANT

The E in FIRE stands for elegant in the sense of “pleasingly ingenious and simple.” Simplicity is an ironically complex topic. Embracing elegant simplicity means designing our organizations and processes with simplicity in mind. It is about stating our goals clearly and incorporating mature, proven technologies into our designs. True sophistication, true design maturity, and true process maturity are shown through deep simplicity, not through brain-meltingly complex diagrams and structures. For simplicity to be elegant and virtuous, it needs to improve the project’s quality, performance, or usability.

Six Frames: For Thinking About Information

Today, we are surrounded by information and big data. It is quite normal to be stuck with them but tough to highlight the useful things from the mass of information everywhere. *Six Frames: For Thinking About Information*, is a book written by Edward de Bono. The author explains the simple and effective “six frames” technique that acts as a key to extracting real value from the masses of facts and figures. I am very sure that it can help change the way you interpret information. The six frames are described here:



Six Frames for Thinking about Information

TRIANGLE: PURPOSE

The triangle frame emphasizes the importance of being clear, laying out the exact basis of your need for information, and interaction with information. This makes our use of information more effective. We need to be clear about what we want from all that information.

SLAB: OUTCOME

The slab frame is for the outcome and conclusion. It requires a deliberate effort to lay out the conclusion for yourself. It is no longer enough to assume that everyone faced with the same information comes to the same conclusion. There is a need to present the conclusion in a clear and deliberate manner.

DIAMOND: VALUE SUMMARY

The diamond frame is a value summary and overview: “What has been the value of this information?” There are different types and levels of value. The diamond frame is all about the clarification of these values through direct attention.

CIRCLE: ACCURACY

The circle frame invites us to direct our attention specifically to the accuracy of the information. The value of that information directly depends on the accuracy assessment and prompts us and others to look directly at the fundamental accuracy of the information.

SQUARE: POINT OF VIEW

The square frame examines the point of view, bias, and agenda. Is the information balanced or biased? It is useful and important to spell out the nature and strength of any bias. Without such clarification, it is difficult and dangerous to use that information.

HEART: INTEREST

When using information to answer a need, that need is strong enough to search for the information. But there is more information than the satisfaction of the need of the moment. The heart frame directs attention to matters of interest. “Interest” may seem an intangible area, but it is very important. Over time, sensitivity to interest builds up a large store of background that can become useful in many situations.

DJ Focus

During the Power and Electricity World Africa conference held at the Sandton Convention Center on March 28–29, 2017, in Johannesburg, South Africa, I had the chance to meet Kelvin Doe, also known as DJ Focus, a Sierra Leonean engineer. It really felt great listening to his journey of success. He is known for teaching himself engineering at the age of 13 and building his own radio station in Sierra Leone, where he plays music and broadcasts news under the name DJ Focus. He was one of the finalists in GMin’s Innovate Salone idea competition, in which Doe built a generator from scrap metals. He constantly uses discarded pieces of scrap to build transmitters, generators, and batteries; an amazing way of recycling things! As a result of his accomplishment, he received an invitation to the United States and subsequently became the youngest person to participate in the Visiting Practitioner’s Program at MIT. The documentary of his accomplishment was done by @radical.media, which went viral, and was also picked up by CNN, NBC News, and the Huffington Post.

Doe subsequently became a speaker at TEDxTeen and lectured to undergraduate engineering students at Harvard College. In May

2013, Doe signed a \$100,000 solar project pact with the Canadian high-speed service provider Sierra WiFi.

Today, Kelvin Doe is one of the most respected young African inventors. He has had the opportunity of meeting various leaders of the world, including former US Secretary of State Hillary Clinton and Ghanaian President Nana Akufo-Addo. He has also been able to speak to young people in Africa on different platforms.

Keep it up, Kelvin! It was nice meeting you and seeing the positive energy within you to make a difference in Africa. See you at the top always. God bless you!



3 TECHNOLOGY RESEARCH AND DEVELOPMENT



"Engineering is not merely knowing and being knowledgeable, like a walking encyclopedia; engineering is not merely analysis; engineering is not merely the possession of the capacity to get elegant solutions to nonexistent engineering problems; engineering is practicing the art of the organizing forces of technological change. Engineers operate at the interface between science and society."

Gordon Stanley Brown

TECHNOLOGY RESEARCH AND DEVELOPMENT



Technology as a Boon

Imagine, for a moment, life without the evolution of technology. No e-mails, no smartphones, no computers. How would you find it? For me, life would seem quite toilsome and operose because nowadays we have made ourselves so dependent on technology that it has become a very important part of our life and one of the key ingredients for the survival of mankind in this fast-moving world. I am sure you will agree with me on this. The development of new technology helps people in many aspects these days, and has grown so big that we cannot imagine our life without it. It saves lives, helps people make work easier, and makes the world a better place to live in. Let us discuss some of its importance in diverse fields.

IMPORTANCE IN EDUCATION

Education is developing as time passes by. And now education has been integrated with technology. It acquires innovations that were uncommon in the past. Today, teachers use projectors as their teaching tools—no more blackboard with chalk. Yes, this is innovation. It is the time of smart screens, laser pointers, and e-mail communications with students. As we all know, learning and adopting some-

thing is easier when we visualize it rather than only listen. Visual presentations through technological devices have lessened the load of work for professors and allow them to make learners easily understand. Thanks to technology for making education easy and interesting.

ONLINE DEGREE COURSES

It is a boon for employers to have online education. Going back to school is an appealing option for many people, but they cannot afford to quit their jobs to be a full-time student and drive to campus to attend classes. If this sounds familiar, an online or distance learning program is a solution that allows you to learn a subject in depth and have the flexibility to fit your studies around your work life by following your own schedule.

While all of this sounds alluring, there are a few things to consider before starting online classes. How long will it take to earn a degree? How often and how much will students interact with the instructor and other students? How much will it cost? How do I know whether a school is accredited? And most importantly, how will employers perceive it? Students who wish to take online courses should do their homework in advance to ensure that the time, effort, and money they spend provide them with maximum benefit. Do consider these things and breathe easy by opting for online degree courses. Further, enjoy top-class teaching and benefit from the convenience that comes with studying online.

IMPORTANCE IN HEALTH

Technology has a lot of use on the medical front. Nowadays, it has become easier for doctors to treat critical diseases and operations using technology. In the past, when technology was not so developed,

it was very difficult for doctors to identify diseases; however, now technology is helping enough to not only identify them but also cure them. There are still many diseases without a cure, and there are still many treatments for diseases that need to be improved. That is why scientists are also trying to discover different kinds of medicines and supplements that can help our body fight diseases.

BRAVO AL QASIMI HOSPITAL

Surgeons at Al Qasimi Hospital in Sharjah successfully saved Emirati Salem Mohammad's life by operating on his heart without opening his chest cavity, believed to be a first in the UAE, thanks to the pinpoint precision provided by robotic surgeries (da Vinci Surgical System).

We used to see and hear about such surgeries on TV and documentary programs, but now such procedures have become a reality, thanks to the hospital leadership for making use of such technology and innovation.

According to the *Gulf News*, the 62-year-old UAE national from Fujairah was suffering from chest pain because of a total blockage of his left anterior descending artery. This artery branches off to the left coronary artery in the heart and supplies blood to the front-left side of the heart.

Dr. Arif Al Nouriani, cardio consultant and head of the Cardiac Catheter Unit and CEO of Al Qasimi Hospital, told *Gulf News*, "The patient had had an angioplasty [procedure used to open blocked or narrowed coronary arteries] done two months ago. He was referred to us for further examination and action."

The patient was operated on Thursday, November 27, 2014, using the da Vinci Surgical System. Dr. Rafiq Abu Samra, head of the Car-

diac Surgery Unit at Al Qasimi Hospital, collaborated with a team of surgeons from Belgium for the surgery.

Dr. Al Nouriani said, “Currently, the patient is well. He was having breakfast the next day after the operation. He was mobile, and without any big scar in his chest. He can go home on the third or fourth day.” He also added that the surgery’s success is significant because it increases the success rate of the patient’s recovery. The procedure also allows patients to recover quickly without having to suffer pain through an open-heart surgery. Besides no ugly scars, the patient can quickly go back to his normal life, and proudly I say that this type of procedure for UAE nationals is shouldered by the government. The same surgery costs \$82,000–140,000 abroad.

IMPORTANCE IN TRAVEL

Technology is everywhere. Even when we are traveling, we are using technology. Travel booking, hotel reservation, and transportation are some of the greatest developments in our technology—from a bicycle comes a car, a train, a ship, and a plane. Without these developments, life would have been very tough, and traveling from one place to another would have wasted a lot of our time.

Use of technology has no end. There are a lot of technologies that still need to be invented. Let us keep challenging tomorrow!

Alleem Research and Development

The Alleem R&D center was established on November 17, 2015, under the theme Keep Challenging Tomorrow with the mission “To work with individuals and innovative organizations to improve social, economic, and environmental living conditions worldwide, thus helping to improve the quality of life for hundreds of millions

who have not yet seen the benefits of sustainable development and inclusive growth.” The Alleem R&D center focuses on Alleem sustainable development goals (ASDGs): quality education, creativity and innovation, technology research and development, peace and security, tolerance, happiness, good health and well-being, water sustainability, affordable energy, environment and natural resource security, controlling climate change, overcoming financial and economic crises, competitiveness, international trade and investment, children’s rights, food security, ending extreme poverty, women empowerment, employment skills and human capital, sustainable inclusive growth, and international cooperation.

Emirates Mars Mission | Hope

Space opens up for women with talent and ambition. The 29-year-old Sarah Amiri works as Emirates Mars Mission science team leader at the Mohammed Bin Rashid Space Center (MBRSC). It gratifies me to write that on February 10, 2016, His Highness Sheikh Mohammed bin Rashid Al Maktoum, vice president and prime minister of the UAE and ruler of Dubai, appointed her as chairperson of the UAE Council of Scientists. They aim to launch the unmanned spacecraft “Hope,” which is the first-ever Arab step to another planet. According to His Highness Sheikh Mohammed bin Rashid, the name “Hope” was chosen because “it sends a message of optimism to millions of young Arabs.” No doubt that optimism, confidence, and ambition can deliver the greatest achievements no matter where.

“Hope” will be launched in the summer of 2020 and is scheduled to reach Mars in 2021 for the 50th anniversary of the UAE. The aim is to understand the seasonal changes that are occurring on Mars. The “Hope” spacecraft will advance human knowledge about the

atmosphere and climate on Mars, about which very little is known. This mission will produce the first truly global picture of the Martian atmosphere and will study how the lower and upper layers of the atmosphere interact with each other. It will also search for connections between today's Martian weather and the ancient climate of the Red Planet (Mars).

Speaking of her selection, Amiri told *Gulf News*, "I take this as a strong indication that the UAE has a dynamic, sustainable government and a leadership that has a great vision on how to take the country forward and understand the challenges of moving in a fast-paced world and not being worried about change, but actually embracing the change. When it comes to science and technology, the leadership understands that we need to move towards a knowledge-based economy, and one of the foundations of this economy is science and technology, which we need to build upon, and the government sector is one of the cornerstones of that economy. The other cornerstones are the private and academic sectors. This brings different sectors to the table. This is a new era for the UAE. We're always at the cutting edge of change in the region, and that's what we hope to see moving forward."

ISRO

One of Asia's good examples of excelling R&D is the Indian Space Research Organisation (ISRO). ISRO, the space agency of the Indian government, is headquartered in the city of Bangalore. Given impetus by the vision of Vikram Sarabhai (considered the father of the Indian space program), the ISRO has the prime objective to "harness space technology for national development." As Vikram Sarabhai said in 1969, "There are some who question the relevance

of space activities in a developing nation. To us, there is no ambiguity of purpose. We do not have the fantasy of competing with the economically advanced nations in the exploration of the moon or the planets or manned spaceflight. But we are convinced that if we are to play a meaningful role nationally, and in the community of nations, we must be second to none in the application of advanced technologies to the real problems of man and society.” Following Sarabhai’s vision, ISRO established a number of projects, with one notable example being the Geosynchronous Launch Vehicle (GSLV), which is used to launch Indian national satellites (INSAT). The operation was successfully executed on April 18, 2001, when they launched their first flight, GSLV-D1/GSAT-1, as well as 11 satellites of India’s GSLV. What a success!

The recent launch was that of the rocket GSLV-F09 (i.e., the 11th flight) on May 5, 2017, at 4:57 p.m., carrying the GSAT-9 (also known as the South Asia Satellite) from the second launchpad of the Satish Dhawan Space Center at Sriharikota, the spaceport of India. This satellite, equipped with modern instruments, is meant to provide communication and disaster support and connectivity among countries in the South Asian region. Its mission life will span 12 years.

Seven UK Universities

Let us take a look at one of my experiences at SEWA on April 24, 2016, when the organization received a delegation from seven UK universities; namely:

- University of Salford
- Swansea University

- London South Bank University
- University of Huddersfield
- University of Central Lancashire
- De Montfort University
- Nottingham Trent University

A discussion was held regarding the universities' cooperation in the field of scientific research. SEWA was selected for the visit, by reason of its stature as THE BEST model in the region in the field of sustainable development and environmental conservation. Moreover, SEWA is the first among the Arab electricity and water authority bodies to procure ISO 50001 – energy management certification.

I briefed the visitors about the various initiatives that SEWA has undertaken in the field of research and energy studies, water management, renewable energy, and the environment. They also learnt about the SEWA way of energy efficiency and SEWA's effort in the application of the 15 winning principles in all its endeavors.

All in all, it was a prestigious occasion, and I swelled with pride because they had chosen SEWA and my sustainability model for their research studies. "Pat yourself on the back, Rashid!" I said to myself.

The Mirror Project

There was a time when, tucked in between steep mountains, the Norwegian town Rjukan was mostly shrouded in shadow for almost six months a year, with residents having to catch a cable car to the top of a nearby precipice to get a fix of midday vitamin D.

However, October 30, 2013, was a special day for the Rjukan people, as faint rays from the winter sun reached the town's market square for the first time owing to a system of gigantic mirrors set up on the mountain to give Rjukan a sunlight boost.

Actually, 100 years ago, Sam Eyde, an industrialist and the town's founder, had suggested putting mirrors on the mountains to beam sunlight down, however, because of the absence of modern technology, that idea did not come to fruition until 2005, when local resident and artist Martin Andersen launched the Mirror Project.

Rising in silver splendor over the mountains that enfold their little town, the mirrors cast a pool of bright light around them. In the new morning, they cast shadows on the town square. Real shadows at last!

Energy Investment Forum and Solar Expo Begins in Bahrain

On September 17, 2017, the electricity and water affairs minister of Bahrain, Dr. Abdul Hussain bin Ali Mirza, inaugurated the first Energy Investment Forum and the Solar Technology Energy & Environment in Bahrain Expo 2017 (STEEB) at the Bahrain International Exhibition and Convention Center. It was a three-day forum, and I am glad to write here that I was one of the keynote speakers on day one of STEEB, one of the most important international exhibitions and conferences on renewable energy.

This is a platform to showcase the latest energy and services of the solar energy industry equipment, which is also developing international relations and creating new job opportunities. STEEB 2017 attracted many professionals, project developers, investors, exhibi-

tors, solution providers, and pioneers to address challenges and opportunities related to reducing energy consumption and production.

In his keynote speech, Dr. Mirza said the Bahraini established the Sustainable Energy Unit in 2014, which is a testimony to the leadership's resolve to diversify energy sources. He outlined the unit's achievements, pointing out the benefits to be drawn from renewable energy.

I learnt a lot over there during the discussions, developments on new renewable energy technologies, innovations, and happenings around the world, as STEEB 2017 brought together some of the biggest and brightest names in the renewable energy industry sector and investment communities from all over the world.

Future Science Prize

The Future Forum, a nonprofit organization, gathers a group of like-minded elite scientists, businessmen, and government leaders. Together, they jointly initiated the Future Science Prize. On January 17, 2016, at the Future Forum Annual Conference, China announced the launch of the Future Science Awards, touted as their own version of the Nobel Prize. It aims to recognize scientific breakthroughs and innovations in science and technology in the Greater China region. The Future Forum views the prize as an innovative way to bring more private funds to promote fundamental scientific research in China and to use innovative and scientific spirits to influence China, the world, and the next generation.

The winners go through rounds of procedures to win the awards, including nomination, professional appraisals, reviews from inter-

national experts, and a secret ballot from the judging panel. Li Kai, a computer science professor from Princeton University and a member of the Future Science Prize Committee, said, “The founding of the awards is aimed at encouraging more young scientists to work out of their curiosity and be dedicated to fields which require long-term efforts.”

Recently, on Saturday, September 9, 2017, the second edition of the Future Science Awards was held in Beijing, awarding the deserving laureates, along with a US\$1 million cash prize. The award categories were the Life Science Prize, the Physical Science Prize, and the Mathematics and Computer Science Prize.



4 PEACE AND SECURITY



*"Peace cannot be kept by force, it can only be
achieved by understanding."*

Albert Einstein

PEACE AND SECURITY

On April 3, 2014, I was recognized as “Goodwill Ambassador for Peace, Care, and Relief in GCC Countries, Middle East, and North Africa” by the International Organization for Peace, Care, and Relief, and as a member of the Economic and Social Council of the United Nations. It really is a huge honor for me to get such recognition from such a big organization. It really encourages me to do more in my field and spread the message of peace all over the world.

Global Peace Index

The Global Peace Index (GPI) is an attempt by the Institute for Economics and Peace (IEP) to measure the relative position of nations’ and regions’ peacefulness. The list was launched in May 2007, and is updated on an annual basis by consulting the international panel of peace experts from peace institutes and think tanks with the data collected and arranged by the Economist Intelligence Unit. GPI is claimed to be the first study ever done to rank countries around the world on the basis of peacefulness. At present, it ranks 163 countries, while in 2007, it ranked 121. A great progress!

This study is the brainchild of the Australian technology entrepreneur Steve Killelea, founder of Integrated Research, and is endorsed by individuals such as Kofi Annan, the Dalai Lama, Archbishop Desmond Tutu, Finland's President Sauli Niinistö, Nobel laureate Muhammad Yunus, economist Jeffrey Sachs, former president of Ireland Mary Robinson, current deputy secretary-general of the United Nations Jan Eliasson, and former US president Jimmy Carter.

The index delineates global peace using three major areas: the extent of domestic and international conflict, the level of safety and security in society, and the degree of militarization. Factors are both internal, such as levels of violence and crime within the country, and external, such as military expenditure and wars. The updated index is released annually at events in London, Washington DC, and the United Nations Secretariat in New York.

HIGHLIGHTS OF THE 2016 GPI

The following are some highlights I captured from the 2016 GPI report, which I felt was good to share with the readers:

- The world became slightly less peaceful in 2016, with the average GPI country score deteriorating by 0.53 percent.
- Over the past year, 81 countries improved their peacefulness, while 79 countries deteriorated. The average deterioration was larger than the average improvement, accounting for the global drop in score.
- The societal safety and security and ongoing conflict domains both deteriorated, while militarization recorded a slight improvement.

- The largest improvement was recorded in the UN peacekeeping funding and security officers and police indicators, while the largest deterioration occurred in terrorism impact and political instability.
- The international community's requirement for, and commitment to UN peacekeeping funding reached record highs in early 2016.
- The security officers and police rate decreased in 44 countries and increased in 29, with the biggest reductions occurring in Kazakhstan, Moldova, and France.
- Violent crime improved in 13 countries and deteriorated in only five. The largest absolute change occurred in Libya.
- The impact of terrorism deteriorated in 77 countries, while improving in 48. Only 37 of the 163 countries measured had no impact of terrorism. The largest deterioration in this indicator was in the Middle East and North Africa.

Trends in Peace

Now I stress my concentration on the very bitter fact that the world has become less peaceful since 2008, with a deterioration of 2.44 percent in the average country GPI score. Is this not a matter to worry about? Yes, it is!

Studying the report over the last decade, it has been observed that the fall in peacefulness was unevenly distributed around the globe; 77 countries actually became more peaceful over this period, and 85 deteriorated further. Mainly the deterioration was noticed in four areas: the Middle East and North Africa, northern sub-Saharan Afri-

ca, Central America, and the countries dividing Russia and Europe, particularly Ukraine. Among these four areas, the Middle East and North Africa had the largest average deterioration on seven of the 23 GPI indicators. On average, internal indicators deteriorated while external indicators improved.

Syria is in “Complete Meltdown”

Syria is in complete meltdown, and civilians are paying the price. According to the recent BBC report, more than 250,000 Syrians have lost their lives in four and a half years of armed conflict, which began with anti-government protests before escalating into a full-scale civil war. More than 11 million others have been forced out of their homes. By June 2013, the UN said that 90,000 people had been killed in the conflict. By August 2015, that figure had climbed to 250,000, according to activists and the UN. A total of 6.5 million people are internally displaced in Syria, and 1.2 million were driven out of their homes in 2015 alone.

The UN says that it will need \$3.2 billion to help the 13.5 million people, including 6 million children, who required some form of humanitarian assistance in Syria in 2016. About 70 percent of the population is without access to adequate drinking water, one in three people are unable to meet their basic food needs, more than 2 million children are out of school, and four out of five people live in poverty.

Positive Peace

Positive peace is defined as *peace with justice for all*. Oftentimes, “peace” is mistaken simply as the absence of some negative force,

such as violence. But according to Martin Luther King, “peace is not only the absence of tension, but the presence of justice,” which I totally agree with.

IEP’s Eight Key Pillars for Positive Peace

The following eight pillars by the Institute for Economics and Peace (IEP) are so important that I think they should be taught at schools to young children to create a perfect tomorrow full of love and passion.

1. **WELL-FUNCTIONING GOVERNMENT** – A well-functioning government delivers high-quality public and civil services, engenders trust and participation, demonstrates political stability, and upholds the rule of law.
2. **SOUND BUSINESS ENVIRONMENT** – The strength of economic conditions, as well as the formal institutions that support the operation of the private sector, determine the soundness of the business environment. Business competitiveness and economic productivity are associated with the most peaceful countries, as is the presence of regulatory systems that are conducive to business operations.
3. **EQUITABLE DISTRIBUTION OF RESOURCES** – Peaceful countries tend to ensure equity in access to resources, such as education and health, as well as, although to a lesser extent, equity in income distribution.
4. **ACCEPTANCE OF THE RIGHTS OF OTHERS** – Formal laws guaranteeing basic human rights and freedoms and the informal social and cultural norms that relate to the behaviors of citizens serve as proxies for the level of tolerance between different ethnic, linguistic, religious, and

socioeconomic groups within the country. Similarly, gender equality and workers' rights are important components of societies that uphold acceptance of the rights of others.

5. GOOD RELATIONS WITH NEIGHBORS – Peaceful relations with other countries are as important as good relations between groups within a country. Countries with positive external relations are more peaceful and tend to be more politically stable, have better functioning governments, are regionally integrated, and have lower levels of organized internal conflict. This factor is also beneficial for business and supports foreign direct investment, tourism, and human capital inflows.

6. FREE FLOW OF INFORMATION – Free and independent media disseminates information in a way that leads to greater openness and helps individuals and civil society work together. This is reflected in the extent to which citizens can gain access to information, whether the media is free and independent, and how well-informed citizens are. This leads to better decision-making and more rational responses in times of crisis.

7. HIGH LEVELS OF HUMAN CAPITAL – A skilled human capital base reflects the extent to which societies educate citizens and promote the development of knowledge, thereby improving economic productivity and care for the young, enabling political participation, and increasing social capital. Education is a fundamental building block through which societies can build resilience and develop mechanisms to learn and adapt.

8. **LOW LEVELS OF CORRUPTION** – In societies with high rates of corruption, resources are inefficiently allocated, often leading to a lack of funding for essential services. The resulting inequities can lead to civil unrest and in extreme situations can be the catalyst for more serious violence. Low levels of corruption can enhance confidence and trust in institutions.

In a Fragile World

On August 28–31, 2000, 2,000 of the world's preeminent religious and spiritual leaders representing many faith traditions gathered at the United Nations for the Millennium World Peace Summit of Religious and Spiritual Leaders. The outcome of the summit was the signing of a Commitment to Global Peace, in which religious leaders accepted religious diversity, condemned all violence perpetrated in the name of religion, and committed themselves to fostering mutual respect among their communities.

World Council of Religious Leaders

The World Council of Religious Leaders (WCRL), launched in Bangkok on June 12–14, 2002, at Buddhathon and at UNESCAP (United Nations Economic and Social Commission for Asia and the Pacific), is an independent body that works to bring religious resources to support the work of the United Nations in the common quest for peace. The WCRL is not an official part of the United Nations, nor does it have any status within the United Nations. The formation of the WCRL was one of the stated goals of the Millennium World Peace Summit. The summit aims to create a forum in which several hundred preeminent leaders of all the world's great religious

and faith traditions can come together at the United Nations for the first time in history to pledge a commitment to take concrete actions for the achievement of world peace. This commitment has been embodied in the Declaration for World Peace that the participants signed and that has specified actions to be taken.

The objective of this council is to serve as a resource to the United Nations and its agencies around the world, nation states, and other international organizations, offering the collective wisdom and resources of the faith traditions towards the resolution of critical global problems. The participants of the world council adopted a charter that outlines key areas in which religious leaders can play an active role in reducing conflict and addressing the critical needs of humankind.

The WCRL aims to serve as a model and guide for the creation of a community of world religions. It seeks to inspire women and men of all faiths in the pursuit of peace and mutual understanding. It will undertake initiatives that will assist the United Nations and its agencies by providing the spiritual resources of the world's religious traditions in the prevention, resolution, and healing of conflicts and in addressing global social and environmental problems. By promoting the universal human values shared by all religious traditions and uniting the human community for times of world prayer and meditation, the council seeks to aid in the development of the inner qualities and external conditions needed for the creation of a more peaceful, just, and sustainable world society.

The world council encourages the religious traditions and the United Nations to work in closer cooperation in building a community of the world's religions to work for the benefit of the global family. In a fragile world that grows increasingly violent, WCRL are coming

together to further dialogue and build a foundation of trust so that religious leaders can be an effective and powerful vehicle for peace.

Religious Harmony

On February 2, 2017, according to the *Straits Times*, a daily broadsheet newspaper based in Singapore, the S. Rajaratnam School of International Studies signed agreements with six religious institutions in a move to promote greater understanding of different religions in Singapore.

The school's Studies in Inter-Religious Relations in Plural Societies (SRP) program will work closely with the institutions to develop postgraduate courses on religion and conduct research into the religious lives of the diverse communities in Singapore, among other things.

The six institutions are the Buddhist College of Singapore, the Hindu Center, Muis Academy, the St. Francis Xavier Major Seminary, the Taoist College, and Trinity Theological College.

SRP head of studies Mohammad Alami Musa said, "We can see the divisiveness in other parts of the world and how religions and beliefs are tearing society apart. Here, we work very hard to bring all our people together. We want to interact and exchange our experiences, our knowledge. With this, it will make our social bonds much stronger."

The SRP program covers modern inter-faith relations and conflict in plural societies. Such efforts to enhance religious harmony and expand the common space in Singapore come amid growing polarization along the religious lines in the region and rising anti-Islamic sentiments around the world.

Emirates Red Crescent

The Emirates Red Crescent is a volunteer humanitarian organization founded on January 31, 1983, to support the official authorities in peacetime and wartime, in accordance with the provisions of Article (26) of the first Geneva Convention in 1949. Later, in 1986, it was internationally attested as a member in the International Federation of Red Cross and Red Crescent Societies.

I really thank them from the bottom of my heart for such a gigantic and kind effort for mankind. Many countries, such as Iraq, Syria, Afghanistan, and Palestine face considerable suffering owing to several conflicts, and authorities like the Red Crescent work like a boon for them. What a great job. Now, let us have a quick look at the situations in Afghanistan, where the UAE Red Crescent is doing an outstanding job.

AFGHANISTAN

During the third quarter of 2016, the security in Afghanistan remained precarious and deteriorated in many areas. Recent violent clashes between government forces and the armed opposition have forced thousands of families to flee their homes, and medical facilities have struggled to cope with the influx of wounded civilians and fighters.

In this complicated and tough environment, the UAE Red Crescent is trying hard and smart to help and secure food, basic needs, and medicine for the civilians.

SAD DAY

Since the beginning of October, the ICRC (International Committee of the Red Cross) has redoubled its efforts to remind all parties of

their obligations under international humanitarian law to underline the need for them to do all they can to protect civilians and ask them to guarantee safe access to health care and clean water. Sadly, on January 10, 2017, five Emiratis carrying out humanitarian work were killed in a terrorist bomb attack in Afghanistan. The UAE ambassador to Afghanistan, Juma Al Kaabi, was also severely injured in the explosion in Kandahar. He was there to lay the foundation stone for the UAE-funded Khalifa bin Zayed Al Nahyan orphanage and to sign an agreement with Kardan University for the UAE to offer scholarships there.

Mourning the deaths, President Sheikh Khalifa called for flags to be lowered to half-mast for three days at all ministries, government departments, and institutions to honor those killed. Sheikh Mohammed bin Rashid, vice president of UAE and ruler of Dubai, said, “It is with pride that we mourn today the martyrs of Emirati humanitarian work in Afghanistan. Five martyrs have given their lives while striving to serve the weak, the children, and the needy. There is no humane, moral, or religious justification behind the explosion and the killing of those who seek to help others. May Allah grant mercy on their souls. The Emirati people are proud of their sons who work in the humanitarian field, and the country raises its head up high today for the martyrs who fell in the name of humanity unknown to those terrorists.”

It is really sad to mention here that while I was writing this paragraph, we received breaking news from our news agency that the UAE ambassador to Afghanistan, Juma Al Kaabi, passed away after suffering from his explosion injury. What sad news.

Nobel Peace Prize

The Nobel Peace Prize is one of the five Nobel Prizes created by the Swedish industrialist, inventor, and armaments manufacturer Alfred Nobel, along with the prizes in Chemistry, Physics, Physiology or Medicine, and Literature. Since December 1901, it has been awarded annually (with some exceptions) to those who have “done the most or the best work for fraternity between nations, for the abolition or reduction of standing armies and for the holding and promotion of peace congresses.”

The 2016 Nobel Peace Prize was awarded to the president of Colombia, Juan Manuel Santos “for his resolute efforts to bring the country’s more than 50-year-long civil war to an end, a war that has cost the lives of at least 220,000 Colombians and displaced close to six million people.”



5 TOLERANCE



*"In the practice of tolerance, one's enemy is
the best teacher."*

Dalai Lama

TOLERANCE

Ministry of Tolerance

On January 15, 2017, at Zayed University, UAE, I had the privilege of meeting Her Excellency Sheikha Lubna Al Qasimi, the president of Zayed University and the UAE Minister of State for Tolerance. We discussed her unique role in the ministry and its importance for society.

As Sheikha Lubna asserts, “the UAE is one of the greatest examples of tolerance.” The UAE’s tolerance is reflected in the weave of society—both nationals and foreign residents in that “everything reflects tolerance.” She previously held four ministerial portfolios and was the UAE’s first woman minister with the portfolio of Economy. Talking about her new job as Minister of State for Tolerance, she explained that the UAE had service ministries, such as social welfare; ministries with international roles, such as foreign affairs; policy-making ministries; and two new and “odd” ministries—“Happiness” and “Tolerance.” “But these reflect the values that are integral to all of us. Tolerance is acceptance—accepting and rejoicing differences. We have to be interactive with the community. It is a challenging job, but an exciting ministry. Hopefully, we will see great results,” she said. Yes, seeing the constructive ministry plans, I am

truly expecting to see great results too. All the best, Sheikha Lubna, and I appreciate you for your dedication.

UAE National Tolerance Program

His Highness Sheikh Mohammed Bin Rashid, vice president of the UAE and ruler of Dubai, made the announcement in a meeting at the Presidential Palace in Abu Dhabi on Wednesday, June 8, 2016, in that the country would continue to promote the principles of tolerance set by His Highness Sheikh Zayed, the founding father. His Highness Sheikh Mohammed said, “Tolerance is a key value of our ancestors and our founding fathers. The UAE has succeeded in spreading it throughout the Arab region and the world.”

He said that the holy month of Ramadan is “a great opportunity to spread the spirit of tolerance and show the real image of moderation, and respect for others.” He added, “Tolerance is the basis for building societies and promoting values of peaceful coexistence. Today, we need to be more tolerant and united to face the changes happening around us.”

According to the report of Emirates News Agency, the program would involve collaborating with federal and local entities under five main themes: strengthening the government’s role as an “incubator” of tolerance, consolidating the family’s role in nation building, promoting tolerance among youth and steering them away from extremism, enriching scientific and cultural content, and integrating international efforts to promote tolerance.

UAE Global Initiative for Tolerance

A landmark global initiative for tolerance was launched on October 8, 2016, in the UAE by His Highness Sheikh Mohammed bin Rashid

Al Maktoum, vice president and prime minister of the UAE and ruler of Dubai, to build up the UAE as a capital for tolerance and promote openness in the region.

The Mohammed Bin Rashid Tolerance Award is also introduced to honor global personalities who promote tolerance. The award includes five categories, three of which will be dedicated to human intellect, literary creativity, and aesthetic arts, and the other two will be related to organizing innovative contests in youth projects and modern media.

International Institute of Tolerance

Sheikh Mohammed has also launched the International Institute for Tolerance, which is first of its kind in the region, to provide necessary consultations and experiences to consolidate the values of tolerance among peoples across the world.

The institute is launched with intense objectives: it will produce and publish tolerance-related research, work with other cultural institutions in the Arab region, and teach the new emerging generations about the values of tolerance. It will conduct social studies to delve into the root causes of intolerance, isolation, and sectarianism; it will also organize a series of programs that aim to nurture distinguished young people and provide them with appropriate and healthy environments to deepen their awareness on some issues related to tolerance and help them bring their ideas to fruition.

These steps are to sow the seeds of tolerance in the region and condemn extremism among peoples, and I am sure that very soon our nation will be glorified with their profound approaches.

In the UAE Every Single Day is a Tolerance Day

The date November 16, is the International Day for Tolerance. In 2016, on this occasion, Mohammed bin Rashid Al Maktoum, prime minister of the UAE, tweeted, “What makes us proud is not the height of our buildings, but rather the openness and tolerance of our nation.” Celebrating the day at Zayed University in Abu Dhabi, Sheikha Lubna bint Khalid Al Qasimi, the UAE’s Minister of State for Tolerance, described the occasion as a “renaissance, a moment of celebrations, which reflects cohesion and a feeling of being together.” She also said that unity, tolerance, and coexistence are the hallmarks of the nation; and while November 16, is the International Day for Tolerance, “in the UAE, every single day is a tolerance day.”

Sense of Belonging

I feel sick at heart knowing the hates swelling in people for others because of petty reasons, or else questioning their sense of belonging. A middle-aged white man in Kanas City shot and killed an Indian-American engineer after shouting, “Get out of my country!” How can a person kill someone after questioning his belongingness to a nation? One thing I would like to suggest is that for the ease of people to manage and justify things properly, we are separated by different states and countries; it is not about a particular region from where we belong. We all belong to the same world, which we should try to make a better place to live, not only for us but also for others.

Do We Belong Here

The news featured in the *Financial Times* on March 4, 2017, about an Indian-American *victim of hate crime* tells much about suffering.

The fatal attack in Olathe, Kansas in the United States reverberates in the tidy Virginian suburb of office parks and strip malls, about 35 miles northwest of the White House. Adam Purinton, 51, allegedly shot two Indian-American Garmin engineers who were enjoying an after-work drink, believing they were Iranians, according to police. Mr. Purinton is on trial and accused of killing Srinivas Kuchibhotla, 32, and wounding both his friend, Alok Madasani, 32, and Ian Grillo, 24, who tried to tackle the gunman. Sunayana Dumala, one week after her husband's killing, asked on Facebook, "The question that is in every immigrant's mind: Do we belong here?" It is really very painful seeing the intense hate in people instead of love and peace for others. Need to stop!

Ban on Cow Slaughtering

With much grief, here, I write about the complications people are facing in India, as perhaps no issue today is more nationally divisive than that of cow slaughter. The majority of the community wants to have the cow declared the national animal and a countrywide ban on the killing of all cows imposed. In Hinduism, the cow is thought to be sacred, or ought to be deeply respected. According to Hindu belief, the cow is a maternal figure; hence, Hindus are strictly against the slaughtering of cows and call them as *gaurakshak*.

According to the *Times of India*, just eight of India's 29 states permit the slaughter of cows. Although on January 27, 2017, India's top court rejected a petition seeking a nationwide ban on cow slaughter, still people face violence regarding the same. Some states have in recent years pushed for tougher penalties, including 10-year jail terms for those convicted of cow slaughter or possession or consumption of beef. The banning of beef is going to be troublesome

for poor people as goat and other meats are far more expensive than cow meat.

The *Times of India*, reports that on March 29, 2017, Raman Singh, the chief minister of Chhattisgarh (a state in India) stated that anyone found killing cows in Chhattisgarh would be hanged. Do you understand the extremism in the order? The state of Gujarat, on the other hand, has adopted the toughest law against cow slaughter in the country; the crime is punishable by 14 years of jail and carries a provisional fine of up to \$7,757 and not less than \$1,550.

Intolerance on the Rise | A Sense of Deep Disquiet

A diverse country, India is home to many expats in the Gulf. I myself used to have a wonderful experience visiting there, but issues like people clamoring for intolerance have really upset me a lot. On June 13, 2017, I was reading the *Times of India*, and a news title got my attention: “Intolerance on the rise, defend the spirit of Constitution.” After reading further, I learned that 65 former bureaucrats in India, who have worked with central and state governments for decades, wrote an open letter stating that they decided to speak out in view of “a sense of deep disquiet at what has been happening in India” and had no political affiliation. They issued a direct appeal to public authorities and constitutional bodies to take corrective action to defend the spirit of the Constitution.

The former officers lamented a “growing climate of religious intolerance that is aimed primarily at Muslims,” tracing it to the prime minister’s controversial remarks about “burial grounds and cremation grounds” and power supply during religious festivals in different communities. The letter also pointed out that banning slaughterhouses targets the livelihoods of minorities besides breeding communal violence.

I know it is hard to be patient; I can only wish to lessen intolerance not only in India but all over the world.

I Forgive You

There is no shortage of hate stories and victims of hate crime in the world, but going through the hardship and still having the courage to forgive is something that happens very rarely. On October 30, 2015, Jama, a Muslim of Somali descent, who came to Minnesota from Kenya in 2000 and is a US citizen, was attacked by Jodie Burchard-Risch, 44, of Ramsey, for speaking Swahili (the first language of the Swahili people) to her family.

According to a criminal complaint, Burchard-Risch was dining at Minnesota Applebee's in Coon Rapids when she overheard Jama. Burchard yelled at Jama to either speak English or go back to her country and then refused to leave when a restaurant employee tried to step into the matter. Without any provocation, Burchard-Risch threw a drink at Jama, grabbed a glass beer mug, and smashed it in the woman's face before fleeing. The attack left Jama with a deep bloody gash on her lip that required 17 stitches, as well as cuts to her nose and right eye.

Jama came face-to-face with her attacker in court and offered the woman her forgiveness. On December 20, 2016, at the Anoka County Court, Jodie was sentenced to 180 days in jail followed by five years of probation, along with alcohol monitoring and counseling.

At times holding back tears, Jama said she still carries the trauma of the attack with her, but she bears Burchard-Risch no ill will. "My religion, Islam, teaches me to forgive so I can get on with my life. In front of everybody here, I do forgive you, and I hope that you choose love over hate . . . I just want you to understand at the end of

this that we are all the same,” Jama told Burchard-Risch. I am proud of you, Jama, for showing such an act of kindness and forgiveness, which is not so easy, especially as you suffered a lot and are still going through the same.

Racism Towards Africans in India

On April 3, 2017, while reading the *Financial Times* newspaper, my eyes caught this heading: “Racism towards Africans in India.” Although I visited India many, many times and felt a good and warm welcoming environment over there, reading this news about a statement given by a student from Nigeria who had just finished a three-year course from an educational institution there shocked me. Mr. Orji’s time in India had been characterized by persistent low-level racial discrimination and intimidation. Maxwell Orji said he had been laughed at, spat on, and verbally abused on the streets of Greater Noida, which is close to New Delhi. Actually, the situation became harsher after the death of Manish Khari, a local teenager whose family had accused their Nigerian neighbors of supplying him with drugs. During a candle march, a protest against the youth’s death, the crowd was so angry that when they encountered four African students with no known links to Khari’s death that they attacked them so badly that all the students required hospital treatment.

According to the Association of African Students in India, the country has about 25,000 African students, about a fifth of whom live in Greater Noida, a new city 30 kilometers away from New Delhi. Racism is one of the most severe diseases of human society in this age. Racism is for what! The fact of the matter is that superiority is not by birth or color or blood but by righteousness. We are all human beings and should always maintain and strive for peace.

Human Trafficking

Human trafficking is the fastest-growing crime in the world. Once I was reading the *Financial Times* newspaper, I came to know something about the word which made me more curious to search the topic. The easiest way to explore any field these days is through Google, so I started Googling and got to its official site which says that it is a \$150 billion industry, with millions of people estimated to be bought and sold every year.

However, the reality is that it is impossible to know exactly how many people fall victim to this crime across the world. Human trafficking and modern slavery networks are highly organized, powered by technologies, and completely clandestine.

Therefore, if we are ever to defeat these crimes, we need to shed some light on how and where they are taking place. What is more, we need to generate systemic disruption on a global scale to not only disrupt trafficking networks but also predict and prevent them.

We need to harness the power of such networks, being more innovative and creative in our solutions, and build resistance to human trafficking and modern slavery throughout the world.

STOP APP

To end modern slavery and human trafficking, we can all work together. Just download the STOP APP. The STOP APP is the first of its kind in combining community empowerment, big data management, and anti-trafficking expertise to disrupt, combat, and prevent this global issue. This groundbreaking app can be downloaded on smartphones around the world, and it will allow individuals to report what they have seen and what they know about human trafficking, whether it is in their communities or elsewhere. If you see or hear

anything that you believe to be linked to these crimes, capture the incident and report it with the help of the app. The STOP APP empowers every person with a smartphone in their hand and equips them to take action. Together, we can shed some light on modern slavery and human trafficking and stop them.

CNN is taking vital steps to amplify the voices of the victims of modern-day slavery, by highlighting success stories and helping unravel the tangle of criminal enterprises trading human life.

You Change My Life

I truly believe that your good deeds can inspire others to also be good. Here is a true story that I picked from CNN based on the same philosophy. It was December 2, 2009, when Mohammad Sohail, a store owner at Shirley, New York, got a \$50 bill with a thank-you letter for saving a shoplifter from a life of crime. The story began in May 2009, when Sohail was closing his shop, *Shirley Express*, at night, and the CCTV showed that a man with a baseball bat came to his store demanding money. Sohail somehow managed to have his rifle ready and aimed it directly at the robber's face, forcing the man to drop his bat and lie on the ground. Unbeknownst to the man, Sohail never loaded his gun.

According to Sohail, the man immediately started to plead with him, tearfully saying, "I'm sorry, I have no food. I have no money. My whole family is hungry. Don't call the police. Don't shoot me."

"When I saw him crying, I really felt bad for him. I said, 'Oh man, this is something different,'" said Sohail.

Sohail made the man pledge to never rob anybody ever again, and then gave him \$40 and a loaf of bread. Sohail, who is from Pakistan, said the man then wanted to be a Muslim like him, so he recited an

Islamic oath and gave the would-be robber the name Nawaz Sharif Zardari. Sohail went to get some milk, but when he returned, the man had fled with the money and food. He thought the story had ended.

But the envelope that arrived on December 2, 2009, came as a surprise. Postmarked November 11, without a return address, it enclosed a \$50 bill and a note apparently from the would-be robber. The typed letter began, “You changed my life,” and went on to say that the man was sorry for his actions six months ago.

“At the time, I had no money, no food on my table, no job, and nothing for my family. I know that it was wrong, but I had no choice. I needed to feed my family. When you had that gun to my head, I was 100 percent sure that I was going to die,” read the letter.

The letter said Sohail’s acts inspired him to become a “True Muslim” and that his life had changed dramatically. “I’m very happy that somebody got to change his life,” Sohail said.

Really even a small act can have a great impact on someone’s life. I am glad that someone’s life has come to light from darkness.

King Philippe of Belgium Shared Iftar

On Monday, June 12, 2017, the headlines of the Belgian media stated that King Philippe of Belgium shared Iftar with a Muslim family in the city of Ghent. The media published the king’s pictures while saluting the family members and eating Moroccan meals with them.

According to the Belgian media, the king wanted to partake in a Ramadan meal. The king chose a regular family, the Benhaddous, who live in Evergem near Ghent, the Dutch-speaking region of Belgium.

Khalid Benhaddou, one of the eight sons in the family, said, “This is a very honorable event for which we are very grateful.” King Philippe joined three generations of the family for the event, which Benhaddou views as a sign of coexistence and commitment.

The king took his time to meet all the family members and hear them explain the meaning of Ramadan. The conversation also touched on the various social challenges facing the Muslim community in Belgium.

This is the beauty of humanity; irrespective of religion, caste, and background, one can share the best time together, promoting peace and love.

Al-Aqsa Mosque

On Friday, July 14, 2017, following a shoot-out around Al Haram Al Sharif, Israeli-occupied authorities (IOA) closed off the holy shrine Al-Aqsa and prevented Muslims from performing Friday prayers there for the first time since the occupation of Jerusalem. Two days later, on July 16, 2017, Sunday morning, the occupation reopened the holy site, but the Muslim worshippers were outraged when they found out that they had to enter their holy shrine through metal detectors.

According to various media sources, the e-gate installation was done to tighten search and inspection procedures for all Palestinians wishing to enter the mosque. IOA took the keys of the Asbat gate to facilitate entry of its cars into the courtyards of Al-Aqsa and refused to return them to the Jordanian Awqaf (endowments).

According to the Palestine Red Crescent Society, 18 Palestinians sustained injuries. Four Palestinians were also arrested. The report further said that Israeli forces conducted inspections inside the mosque, inflicting damage on the place. They broke the locks of the drawers and safes under the pretext of inspecting the mosque.

The Arab League condemned the Israeli authorities' use of violence and other arbitrary measures against the Palestinian residents of occupied Jerusalem, especially in the vicinity of Al-Aq-sa Mosque.

The Arab League secretary-general, Ahmed Aboul Gheit, called on the Israeli authorities to immediately cease all practices and procedures and fully respect the sanctity of Al-Aqsa Mosque. It causes me deep sorrow to see such a holy place turning into a battlefield.

Genocide of Myanmar's Muslims

On September 4, 2017, tens of thousands of people gathered in the streets in the capital of Chechnya to protest the "genocide of Muslims" in Myanmar. More than 400 people were killed last week during clashes between the Rohingya Muslim minority and Myanmar's military.

The majority of Myanmar's population are Buddhist. The Muslim minority are descendants of Muslim immigrants from India, Bangladesh, and China, as well as descendants of earlier Arab settlers and the recognized Kamein minority and the Rohingya people (Indo-Aryan people from Rakhine State), intermarried with the local races in Myanmar. According to Human Rights Watch, the Myanmar government has denied citizenship to Rohingya people who cannot prove that their ancestors settled in the country before 1823, the beginning of the British occupation of what is now Rakhine State.

According to the news posted by *The Guardian* on September 5, 2017, the United Nations secretary-general, António Guterres, appealed to Myanmar to end the violence that led more than 120,000 Rohingya people to flee in the last two weeks, which he warned was “creating a situation that could destabilize the region.”

The unrest has raised fears of a humanitarian crisis in overstretched border camps; another 400,000 of the Muslim ethnic minority are estimated to be trapped in conflict zones in western Myanmar since more “clearance operations” by security forces in Rakhine State began last month.

Malala Yousafzai, the youngest person to win the Nobel Peace Prize, also urged Myanmar’s leader, a fellow Nobel laureate, Aung San Suu Kyi, to condemn the violence against the Rohingya minority.

During the annual UN Human Rights Council held in Geneva in 2017, Zeid Ra’ad Al Hussein, the top United Nations human rights official, denounced the “brutal security operation” against the Rohingya. Zeid said, “I call on the government to end its current cruel military operation, with accountability for all violations that have occurred, and to reverse the pattern of severe and widespread discrimination against the Rohingya population. The situation seems a textbook example of ethnic cleansing.”



6 HAPPINESS



"Happiness exists on earth, and it is won through prudent exercise of reason, knowledge of the harmony of the universe, and constant practice of generosity."

Jose Marti

HAPPINESS

Smiling City

The slogan, “Smile, you are in Sharjah.” was printed on a signboard installed in the main street of Sharjah, named Al Arouba Street by late His Highness Sheikh Khalid bin Mohammed Al Qasimi, ruler of Sharjah, back in 1971, and his wish was to see a smile on the face of everyone who lives or comes to Sharjah. This has positioned Sharjah in the whole region as the smiling city, and when His Highness Dr. Sheikh Sultan took over in 1973, he supported the idea by laying down a bed of roses with “Smile, you are in Sharjah” engraved on it right next to the two largest bridges in the city.

Thank you, Your Highness, for positioning Sharjah as the city of smile and happiness. I strongly believe that smile is the most peaceful yet powerful language on earth which does not need any medium of translation to be conveyed. Max Eastman’s quote, “A smile is the universal welcome,” sums up my view; and as far as my personal contribution is concerned, I have pledged to spread peace and serenity around my every walk of life. And for this, on the eve of the March 20, 2013— International Day of Happiness—the United Nations recognized me as one of a hundred UAE nationals who contributed immensely to the “happiness” of the UAE and created a

motivational work environment. I am so glad to share with my dear readers that the 2017 Voice of Kerala (VOK), on the grand finale of their music festival Middle East Super Duet, recognized me as the Ambassador of Peace and Happiness in the Arab World.

THE UAE STRIVES FOR HAPPINESS

Happiness is the enjoyment of life, also called “subjective well-being” or “life satisfaction.” An enjoyable life is not always a good life, though it is still something worth striving for. The United Arab Emirates has declared that they want to become the world’s happiest country in 2021. They took one more step towards that goal by announcing that Ohood Al Roumi would be the Minister of State for Happiness on February 10, 2016. In her new role, she created and enforced laws and regulations to improve the well-being of the population. His Highness Sheikh Mohammed bin Rashid Al Maktoum, prime minister, ruler of Dubai, and vice president of the UAE tweeted: “National happiness isn’t a wish. Plans, projects, programs, indices will inform the work of our ministries to achieve happiness.”

HOW AND WHY NURTURE A HAPPY WORKPLACE

While it may seem elusive to some, happiness in the workplace is far from fantasy. On the contrary, it only takes a glance at initiatives, such as Great Places to Work, Dubai Parks and Resorts’ employee happiness fund, to realize that many companies and individuals are helping create offices where happiness is a key aim. Research shows that laughter can help solve problems by making it easier to think, and a lighter mood leaves a lot of room for that eureka moment.

Pursuit of Happiness

With the International Day of Happiness being celebrated around the world on March 20, Gulf Business examines how countries across

the Gulf are striving to make themselves among the happiest places on earth. The following are their studies:

But what exactly can businesses and, more specifically, the people working in them, do to create happier workplaces?

Here are the top tips for a happier office by Linda Chaccour, founder and happiness consultant at Emerge Coaching, Lebanon.

- **FIND MEANING:** To make work more enjoyable, regardless of your circumstances, seek and create meaning and pleasure in the workplace. Creating the right conditions at work lies within you— identify the tasks and activities that are meaningful to you and make you happy and focus on doing them first.
- **ACTS OF KINDNESS:** Offer a helping hand to coworkers and passers-by. Most of us assume that being kind and doing or saying nice things to others is for their benefit, however, research shows that acts of kindness are a powerful way to increase your own happiness.
- **MINDFULNESS:** Mindfulness is the basic human ability to be fully present, aware of where we are and what we are doing, and not overly reactive or overwhelmed by what is going on around us.
- **GRATITUDE:** Recent studies suggest that gratitude is linked to well-being and happiness. Grateful people are happier, healthier, and optimistic, and are able to positively cope with the changes, challenges, and difficulties they experience in life.

Dubai South | Happiness: The Building Blocks of the Future

Dubai South has been billed the “city of happiness” built around the needs and desires of the people. The acting CEO of Dubai South,

Ahmed Al Ansari, explains why and how the city has become a model for cities of the future.

What if there is a dynamic new city, fundamentally different from any other place else on earth? A city centered on the human and designed around you? A values-driven, community-based city rather than a product-driven one. A city that understands the way you live, work, commute, and do business?

Dubai South is the first master-planned city in the world that is centered around happiness and purposely built as the *city of you*.

Rooted in the overarching social themes of Dubai Plan 2021, at Dubai South they are reinventing the urban ecosystem and experience, offering a city primarily designed for the happiness and well-being of its people, with the aim of providing solutions for everyday living. Ultimately, it aims to host a population of one million, as well as create half a million jobs and numerous investment opportunities. And for those living, working, or operating within Dubai South, happiness has been placed at the core of the city's development and core offerings.

“The battle for the shape and soul of cities is reaching critical mass,” said Al Ansari. “We are rewriting and reorganizing the systems that hold cities together and rewriting the rules that dictate the shape and function of our processes and offering.”

A manifestation of the government's happiness agenda, Dubai South promises to be an example of how happiness, well-being, and prosperity can converge in a thriving urban environment.

UAE Ranked No. 1 for Happiness

Really, it makes me feel good to hear that the UAE has been ranked the happiest Arab country in the world in a recent 2017 United Na-

tions report, and 14th happiest overall. The World Happiness Report, released by Columbia University's Earth Institute, found that "the world has become a slightly happier and more generous place over the past five years."

The report considers multiple factors to look into nations' level of happiness by studying people's mood and overall life satisfaction. The study found that six factors affect people's well-being: per capita GDP, life expectancy, having someone to count on, freedom to make life choices, generosity, and freedom from corruption.

WAM (official news agency of the United Arab Emirates), quoted HH Sheikh Mohammed bin Rashid Al Maktoum, vice president and prime minister of the UAE, as saying, "Our goal is to achieve the happiness of our people, and their satisfaction is the gauge of our success. All development plans that we approved, all initiatives that we launched and all the government policies and laws, have one common goal—achieving the happiness of our people. Countries can only be built with happy and satisfied people. Happiness of individuals is only the start for a stable, productive, and safe society."

An Emirati Awarded as Happiness Promoter

Global Happiness Organization (GHO) is a major partner of the United Arab Emirates in achieving the country's happiness goals. GHO is a nonprofit organization that implements scientific approaches to promote happiness across the world. The organization is based in the United States, Germany, Sweden, Portugal, and the UAE.

GHO presented the Happiness Promoter Award to the Emirati philanthropist Muna Harib on March 22, 2016, for launching and

managing different humanitarian initiatives, including her latest initiative, Breathing Numbers. The annual award recognizes individuals for their contributions in spreading happiness and for their positive impact on the community. “Muna Harib is definitely a worthy winner. Her work is aligned with our mission to spread happiness across the globe,” said Ludvig Lindstrom, president of GHO.

Muna Harib, a 38-year-old Emirati from Dubai, launched Breathing Numbers in 2013 to document the lives of Syrian refugees at the Al Za’atari camp in Jordan. The initiative successfully helped a number of refugees to settle their medical bills and provided them with material and moral assistance.

Commenting on the Happiness Promoter Award, Muna Harib said, “I’m honored to be awarded. I learnt so much about happiness and how it can be achieved. I’m always willing and eager to apply my knowledge to my community and spread those stories through my work. I’m grateful that the UAE recognizes the importance of happiness for its society. I look forward to sharing my findings and experience for a happier UAE.”

Success and Happiness

Further, contrary to the popular belief that success brings happiness, I believe it is the other way around; it is happiness that brings success. This means that if we wait to be happy, we delay our success. As simple as that. So just be positive and optimistic, and then success will follow. This view of mine is based on research studies conducted around the globe. One such research conducted by Shawn Achor, stated, “When the human brain is positive, you’re three times more

creative, intelligence rises, and productivity rises by 31 percent.” So let us reframe our way to happiness at work (at home too!).

Bhutan Happiness

The Kingdom of Bhutan has taken the happiness of its population as its growth policy. Instead of GDP, they have GNH (Growth National Happiness). It is their way of showing commitment to building an economy that would serve Bhutan’s culture based on its spiritual values.

Happy India

The latest announcement made by Chief Minister Shivraj Singh Chouhan on July 15, 2016, made Madhya Pradesh the first state in India to set up a Happiness Department. He said that the department would work to ensure “happiness in the lives of common people,” a concept borrowed from Bhutan, which uses a “happiness index.” He also added, “Besides the basic necessities of *Roti, Kapda aur Makaan* [food, clothing, and shelter], people need something more to be happy in their lives.”

The aim of the new department is to encourage citizens to take up yoga, spirituality, and meditation in a bid to combat stress. “Normally, happiness is measured with the economic growth rate, which is not entirely correct as our country has otherwise believed. There is something more which can bring happiness in the lives of the people,” the chief minister said. He believes that happiness will not come into the lives of the people merely through materialistic possessions or development but rather by infusing positivity into their lives so that they do not take extreme steps, such as suicide.

Delhi Laughs

In one of my visits to New Delhi last year as chief guest speaker in the global summit on MSMEs (micro, small, and medium enterprises), I came across the Laugh Out Loud program in almost every part of the city. The objective for this was to infuse positivity in and around the people, and of course, the health benefits of a hearty laughter are undeniable.

Ukraine Happiness

I am happy to see that the UAE model for happiness implemented through the Ministry of Happiness has received regional and global acceptance. The Ukrainian government has decided to employ a minister for happiness, a move that was spearheaded by Valentina Matviyenko, chairwoman of the upper chamber of Russia's parliament, who visited the United Arab Emirates. Matviyenko told Russian news agencies on April 13, 2016, that it was a concept worthy of a study for Russia. "The idea is that you have to make each person happy, to build happy schools, to provide services to the population in order to make each person happy," she was quoted by TASS (Telegraph Agency of the Soviet Union), a major news agency in Russia.

So, we see that spreading happiness is a global agenda and not confined to a particular race, caste, color, or creed. I really appreciate these initiatives taken by the governments of different countries to make their place happy and welcoming.



7 GOOD HEALTH AND WELL-BEING



"Health is a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity."

World Health Organization

GOOD HEALTH AND WELL - BEING

Sharjah as the Healthiest City-According to WHO

Sharjah has officially been confirmed as the first healthy city in the Middle East by the World Health Organization (WHO), based on the new criteria set by the WHO Healthy Cities project. His Highness Dr. Sheikh Sultan bin Muhammad Al Qasimi, supreme council member and ruler of Sharjah, received WHO's Healthy City Adoption Citation from Dr. Ala Alwan, WHO regional director for the Eastern Mediterranean. Dr. Sheikh Sultan said, "The healthy city designation is part of a growing list of accomplishments for Sharjah, which has set up a seed bank, established natural sanctuaries to protect endangered species, and launched tourism projects that serve the biodiversity of the emirate, in addition to enacting laws to deal with environmental violations." According to WHO officials, for over a period of three years, Sharjah has been able to meet 88 percent of the 80 criteria for membership in the Healthy Cities project, where above 80 percent is the minimum requirement set by the WHO. Sharjah will also be a regional training center for other cities seeking an endorsement to join the program.

Sharjah has taken a lot of initiatives to improve the health, safety, and well-being of the people in the city. It has also upgraded its

transport infrastructure and embraced internationally-recognized standards for environmental practices and waste management.

Pledge to Fight

Together, let us pledge to fight preventable diseases in Afghanistan and Pakistan. His Highness Sheikh Mohammed bin Zayed Al Nahyan, the crown prince of Abu Dhabi, and Bill Gates, co-chair of the Bill and Melinda Gates Foundation, announced on January 25, 2011, that they would work together to provide life-saving vaccinations to children in Afghanistan and Pakistan. The foundation would purchase and deliver vital vaccines that would save Afghan and Pakistani children and prevent diseases throughout their lifetime. These vaccines protect children from the biggest killers of kids aged under five, including pneumonia, diphtheria, pertussis (whooping cough), tetanus, hepatitis B, and *Haemophilus influenzae* type B (HiB), which causes meningitis. The following are the words of Sheikh Mohammed Bin Zayed and Bill Gates regarding the subject:

As stated by Sheikh Mohammed bin Zayed, “Like all children, the children of Afghanistan and Pakistan deserve the quality of health and opportunities that childhood immunization can provide. The personal, community, national, and international benefits that will result from a generation growing up protected from preventable diseases have the potential to resonate for generations to come.”

Likewise, Bill Gates asserted that, “Vaccines protect children from many life-threatening childhood diseases, providing the best way to give a child a healthy start to life. This partnership is a powerful example of how collaboration by the global community can help build a healthier, more stable future for Afghan and Pakistani children, their families, and communities.”

Although the incidence of polio has decreased by 99 percent during the past 20 years across the globe, Afghanistan and Pakistan are the only two countries where polio transmission has never been stopped. Hence, children in these countries are especially vulnerable to preventable diseases, such as polio and pneumonia.

Hope

On December 7, 2015, the Heroes of Polio Eradication (HOPE) Awards were presented in Abu Dhabi by His Highness Sheikh Mohamed bin Zayed Al Nahyan and Bill Gates to recognize the incredible dedication of those who have worked tirelessly, even placing themselves in danger, to eradicate the disease around the world.

On this occasion, His Highness Sheikh Mohamed bin Zayed Al Nahyan said, “sharing the hope that all vulnerable children around the world will get equal opportunities in living and accessing treatment against diseases and epidemics, we meet today to recognize the efforts of a number of heroes who have created a new glimpse of hope for children in the world.”

The Big Heart Foundation (TBHF)

The Big Heart Foundation is a Sharjah-based humanitarian charity, which provides worldwide funding for people in need. The foundation believes in the need for community engagement in alleviating the suffering of refugees and underprivileged people.

TBHF started a medical clinic at the Za’atari camp in Jordan and seeks to provide Syrian refugees with 24-hour access to essential health-care services.

Mariam Al Hammadi, director of Salam Ya Seghar, a TBHF initiator, said, “The need to provide health-care facilities in the Zaatari camp is a pressing one as more than four years have passed since the camp was established, and maintaining people’s health is an important issue.”

The foundation has launched a fund-raising campaign to help Syrian refugees survive the harsh winter. Regarding this initiative, Mariam Al Hammadi said, “We launched this campaign as a collective initiative to support refugees. Charity and goodness are deeply rooted in the Emirati society, and this campaign provides an opportunity for all of us to contribute to helping refugees who are in even greater need during the bitterly cold winter months.”

Rashid Alleem Premier League (RPL)

I founded the Rashid Alleem Premier League back in 2016 as an enthusiastic approach towards the goal of good health and well-being. Also, as I mentioned in my book *The SEWA Way*, one of SEWA’s employees, Sayed Tousifur Rahman, Chief Technology Officer, came up with the idea of forming a cricket team with the aim of spreading positive energy and promoting a healthy environment in society. He very passionately explained to me that SEWA is home to amazing cricketers and believed that he would get a stunning response for this initiative. He sent out an e-mail on January 3, 2016, inviting interested candidates/cricket enthusiasts. Within 12 hours, he had received responses from over 100 employees who were interested in forming and play for the team. It was incredible! It is worth mentioning here that during this process, we got to know If-tikhar Ali, an unsung hero of SEWA. He has been donning the hat of a cricket umpire for 28 years (10 years in international cricket).

Quite a veteran! He has umpired several domestic and international cricket matches and has coached many budding umpires. I met him personally and was amazed to know that he has been in SEWA for 38 years, and he confessed that there had never been any extracurricular activity in our organization before. His words were, “I am lucky to have a chairman who recognizes such efforts.”

RPL is a platform that provides people an opportunity to cherish their interest with a mission of bettering society. The tournament’s first edition was held on June 30–July 3, and nine teams participated. RPL got a very good start with three government organizations (Hamriyah Free Zone Authority, SEWA Smile Team, and SEWA B Team), and six big corporations (Oracle, Developer Buildings, White Stallion Properties, Dubai Knights, Sharjah Cooperative Society, and Najmat Al Arab Tourism – Sultan CC).

The first match was held at the Sharjah Cricket Stadium in UAE, which was built in the early 1980s and very quickly became a regular host to tournaments as the popularity of one-day cricket matches rose. The date October 18, 2011, was a glorious day as the Sharjah Cricket Stadium entered the *Guinness Book of World Records*, for hosting the most one-day international matches in the world. His Excellency Abdul Rahman Bukhatir, a cricket enthusiast who brought international cricket to the desert by building the Sharjah Cricket Stadium, said, “It truly is a great honor to be a part of the Guinness World Record files. It means a lot to us, and we will keep doing our best to continue to add to that number over time. The Guinness award is a recognition for all who immensely contributed to the successful staging of the matches. It is an honor for the UAE, especially for the fans, who are our biggest supporters. We look forward to their enthusiastic response.”

It was indeed a privilege and a golden opportunity for me and my Alleem R&D Team to start with such a huge platform.

GAME ON, 16 TEAMS FIGHTING FOR A GOOD CAUSE

RPL returns with passion and enthusiasm to spread awareness of good health and well-being. The second edition of RPL was held on March 3–17, 2017, at the Sharjah International Stadium with 16 teams competing. I see very good progress in RPL as it draws a huge crowd, and I expect it to become one of the most remarkable sporting events in the UAE in the future. This time around, we had many partners supporting the event. For example, Delhi Nihari was our meal partner that served food to our players every day, and there was always an audience present during the matches. Red Bull served refreshing drinks to the audience present on the final match. Also, Caprice Watches and Huawei, one of the most recognized companies in China, presented gifts to lucky winners from the spectators. The RPL has received such a good response from corporate organizations that soft drink brand Sprite has also expressed the interest to take part in future tournaments and support this initiative.

While addressing the crowd on the first day of the second edition, I noticed that, aside from high-ranking officers in the corporations, some of the players were from the labor sector, who probably never thought of playing in the international stadium, and I saw the happiness in their eyes. At that moment, I felt that I was doing something good that could bring people together and make them feel content.

Receiving a lot of positive feedback for RPL has really been overwhelming, and I feel that people are getting more involved in the games, becoming more conscious about their health, and more sociable. At this point, I must say that sport makes you fit and demands effort from you. And this is our ultimate goal.

The Brainstorming Session

The UAE has always been running a lot of programs to promote the health and education of its citizens. In December 2013, His Highness Sheikh Mohammed bin Rashid Al Maktoum, vice president and prime minister of the UAE and ruler of Dubai, launched the largest-ever national brainstorming session through Twitter, calling on all UAE citizens and expatriates to participate in the session and give their best ideas and suggestions to develop the health and education sectors. Sheikh Mohammed said, “Should the UAE provide the healthcare and educational services today the way it did 10 years ago . . . we would go back by 10 years. So, new ideas must be generated.”

As part of the national brainstorming, the Ministries of Health and Education entered a ministerial retreat for two days, where they discussed the development of both sectors. The first day of discussion focused on education, while the second focused on health.

The suggestions and ideas were taken by a team of specialists, who focused on the following five broad categories for health on the second day of the retreat:

1. Raising the quality of health-care services for the public and private sector.
2. Raising the efficiency and competence of health-care staff and adding advantage to the career itself.
3. Developing specialized medical services across the country.
4. Providing suggestions for catalysing change in lifestyle patterns to improve general health.
5. Coming up with measures to limit the spread of diseases.

Pink Caravan

Pink Caravan is an initiative that aims to raise awareness of breast cancer. This initiative was launched under the directives of Her Highness Sheikha Jawaher Bint Mohammed Al Qasimi, wife of the ruler of Sharjah, founder and royal patron of the Friends of Cancer Patients Society (FoCP), international ambassador of the World Cancer Declaration for the Union for International Cancer Control (UICC), and international ambassador for childhood cancer for UICC. The following are the objectives, mission, and vision of the initiative:

VISION

To become a vehicle for change by engaging breast cancer-related NGOs to come together and unify efforts to support patients in the United Arab Emirates and offer breast cancer early detection screening.

MISSION

- Spread awareness of the importance of breast self-examination within the UAE community.
- Dispel myths associated with breast cancer in relation to the UAE community.
- Provide access to clinical breast examinations, mammography, and further breast cancer screening investigation for women and men within the UAE community.
- Lobby for the creation of the UAE's National Cancer Registry.
- Advocate amongst public and private medical bodies for the improvement of the standards of breast cancer screening and treatment within the UAE.

OBJECTIVES

- Purchase and operate a state-of-the-art mobile mammography unit to screen both women and men for breast cancer in the UAE and provide them the required services.
- Encourage and train Emiratis to specialize as technicians and radiologists who would operate the Caravan—Pink Caravan’s prospective mobile mammography unit.
- Ensure sustainability and access to breast cancer early detection and screening programs and patient support in the UAE community.
- Assist in upgrading and equipping breast cancer screening centers in the remote areas in the UAE.

Humanitarian Initiative

The Sharjah International Award for Refugee Advocacy and Support was launched on January 1, 2017, with the aim of recognizing and paying tribute to those who have made distinguished humanitarian efforts in support of refugees and displaced families in Asia, the Middle East, and North Africa. The award will be presented every year to a personality or entity during a special ceremony to be held in Sharjah, where they will receive a cash prize of \$100,000, along with a trophy and a certificate of appreciation.

The award was announced by Sheikha Jawaher Bint Mohammed Al Qasimi, who said, “The launch of the Sharjah International Award for Refugee Advocacy and Support is in line with our enduring commitment to ending the suffering of refugees and also to inspire individuals and organizations to contribute to improving the lives of those who have been displaced by wars and armed conflict.” She

further said that the program was set up as a continuation of the efforts to promote goodness and philanthropy as established by the UAE's munificent leaders and in appreciation of the role played by the emirate of Sharjah to support humanitarian initiatives at both the regional and the international level.

Fitbit Tracker

Fitbit is an American company headquartered in San Francisco, California. The company is known for its products that measure personal metrics in fitness, such as number of steps walked, heart rate, quality of sleep, steps climbed, and so on. It has won numerous awards, including a runner-up finish at TechCrunch50 in 2008, CES 2009 Innovation honors, and best in the health and wellness category award. Most recently, Fitbit ranked 37th out of 50 most innovative companies in 2016.

I frequently visit Singapore, and I am so glad to see that companies there are increasingly turning to fitness trackers in an effort to keep their staff healthy, reduce absences owing to sickness, and even boost productivity. Fitbit started pilot studies for its corporate program in Singapore two years ago and has since signed up four major corporations and 16 small and medium-sized enterprises with a total of 2,400 employees.

Camera maker Leica spent approximately \$4,000 on Fitbit products for its 27 employees in Singapore. Managing director Sunil Kaul, 46, said, "I need minimum absentee rates. I have some older, experienced technical repairmen, and if one is sick, I can't have a fresh person come in to do their work." At the end of 2015, computer giant IBM distributed wearable trackers—including Fitbit devices—to more than 500 staff members in Singapore.

Amy McDonough, Fitbit Wellness vice president, said, such programs could help companies save on future medical costs, making employees more productive in the workplace.

This is what makes me say that technology is a boon. These kinds of technologies make our life easier and simpler.

Ninety-One-Year-Old Knits a Lot

A 91-year-old called Morrie, knits for the homeless. He has also been featured on CNN for his knitting efforts. In a hospice bed in Grandville, Morrie Boogart has knitted 8,000 hats so far, which he donates to the homeless. He has been doing it for 15 years, and even at his advanced age, he still manages to finish a hat every two days.

“Why do I do it? It just makes me feel good,” he told CNN. A nonagenarian on bed rest, he refuses to waste his time. Instead, in his golden years, he thinks of others. “This has been the best thing that’s happened to me because I just stay in my room,” he says.

Boogart’s assisted living home, Cambridge Manors in Grandville, Michigan, is accepting yarn and handmade hat donations so Boogart can continue his good work. “I do it awfully slow,” he said. Novice knitters could only dream of that kind of productivity.

From My Heart

Sudhir Choudhrie is a good friend of mine who has built an international business empire that stretches across the globe, but he says that his greatest achievement is simply being alive. In January 1999, after years of suffering from ill health, he had a series of heart transplant operations just eight months after the death of his beloved

brother Rajiv, who also had a chronic heart condition. The family was scared and did not want to reveal the death of his brother, Rajiv, and find themselves in another sad situation. He wrote a book titled *From My Heart* to tell his story and share the message of courage he had received at a very critical time of his life and the huge support he had gotten from his family and doctors. And he was kind enough to give me a copy of his book on April 18, 2017. As soon as I got the book, I read it with full concentration. Here is a brief narration of his journey:

Sudhir learned of his heart problem at the age of eight, when his mother was planning to get him an insurance policy, for which he needed a medical examination, which was to be performed by the insurance company's doctor. The doctor placed a stethoscope over his heart, which was supposed to be over in a moment, but it took much longer. The doctor took the stethoscope, looked at it, listened at his heart again, and then said to his mother, "This chap has a missing beat in his heart." None of them expected this. So, while still in his childhood, he had known that the heart that he was born with would one day fail him. Along the way, he faced numerous health problems, including a very frightening period of temporary blindness, before he was finally given a new heart by the world-renowned surgeon Dr. Mehmet Oz in the USA.

But that was not the end of his ordeal. Sudhir had terrifying visions in the wake of his operation and was forced to undergo further therapy to rid him of the horrors that haunted him before he was finally able to resume his normal life.

Through it all, Sudhir's wife Anita was by his side, praying and fighting for her husband's health. This is a moving story of survival, hope, and second chances; a story told from the heart.

Record-Breaking Generosity

As part of my daily routine, I read global news and go through a number of blogs. It was April 18, 2017, and I was looking for something good to read when I found a page from the Bill Gates blog that contains a story of a record-breaking act of generosity, which was added to *The Guinness World Records* on January 30, 2017. Uniting to Combat Neglected Tropical Diseases, a coalition of drug companies, governments, health organizations, charities, and other partners who work to implement the London Declaration on Neglected Tropical Diseases (NTDs) that affect the world's poorest, including Guinea worm, river blindness, and elephantiasis, set a record for the most drugs donated in a 24-hour period. The total number of drugs was 207,169,292!

On January 30, they mobilized drug manufacturers, warehouse workers, delivery drivers, government officials, and health workers to deliver this historic number of donated drugs to four continents for distribution to people living in the remotest parts of the world. What is truly amazing is that the 207 million drugs donated on January 30, represent just a small amount of this group's generosity. Since 2012, when Uniting to Combat Neglected Tropical Diseases signed a declaration to control or eliminate 10 of the most neglected diseases, they donated 7 billion treatment products.

I sincerely thank the efforts of all the drug companies and their partners involved in such a nice act of generosity for the benefit of humanity, with their full devotion to helping people living in the remotest parts of the world to alleviate their suffering. May Allah bless them! And I hope that these neglected tropical diseases will be eradicated soon. Very soon!

In a Health Push

While I was writing this page during a business trip to Singapore in September 2017, I was so inspired by the recent action taken by Singapore's Prime Minister, Lee Hsien Loong, in a health initiative that began with an agreement with soda makers to reduce the sugar content of drinks sold in the country.

According to the Reuters (an international news agency), the PM has also urged people to drink water, eat wholemeal bread, and choose brown rice over white. The campaign is aimed at curbing the incidence of diabetes in the city-state, where the number of adults with the disease could grow to nearly a million by 2050 from 440,000 in 2014, according to the Ministry of Health.

"As a first step, we have got the soft drink producers to agree to reduce the sugar in all their soft drinks sold in Singapore," Lee Hsien said in his National Day Rally speech on Sunday, August 20, 2017.

Last year, the World Health Organization said that drinking less caloric sweet drinks is the best way to lose excess weight and prevent chronic diseases such as diabetes, although fat and salt in processed foods are also to blame.

Several countries, including the UAE, Britain, Belgium, France, Hungary, and Mexico, have either imposed or plan to impose some form of tax on drinks with added sugar. Some have also implemented warning labels on sugary drinks.

According to a report, Coca-Cola Co., the world's largest beverage maker, and its rival, PepsiCo Inc., have stepped up their efforts to reduce the sugar content in their beverages. Last year, Coca-Cola said it has 200 reformulation initiatives underway that would reduce

the sugar content of its drinks and is launching more sugarfree, low, and no-calorie products.

Last year, PepsiCo set a target that, by 2025, at least two-thirds of its drinks will have 100 calories or less per 12 ounces of serving, up from about 40 percent.



8 WATER SUSTAINABILITY



"And Allah has created from water every living creature: so of them is that which walks upon its belly, and of them is that which walks upon two feet, and of them is that which walks upon four; Allah creates what He pleases; surely Allah has power over all things."

The Holy Qur'an

WATER SUSTAINABILITY

Water scarcity has reached such a vulnerable level that googling it will take you to the official website of the UN, where it is mentioned in number 6 of 17 sustainable development goals that 2.6 billion people have gained access to improved drinking water sources since 1990, however, 663 million are still without access. Also, at least 1.8 billion people all over the globe use a drinking water source that is faecally contaminated.

Thank You, Water Leader Magazine

Water Leader is the official publication of the Global Water Leaders Group, and it is the foremost publication for water sector performance worldwide. The group aims to initiate this process through its common solution program. The magazine shares the stories of the sector's thought-leading and top-achieving CEOs and ministers, while it also reports the output of the group's CEO-level workshops, including the latest and most innovative leadership, management, and operational performance models. And I am glad to write that, according to the Global Water Leaders Innovation Survey 2016, I have been selected as one of the featured CEOs. Thanks very much for appreciating my efforts!

The magazine features my perspective of the matter under the heading “Prophesising the Future of Water.” The authors mentioned that the main forces that will shape the water industry by 2050 are threefold—demography, economics, and technology—and I feel the urgency of managing these forces and their associated challenges and opportunities. The following quote of mine sums up my views during my keynote speech in Abu Dhabi in April 2016, where more than 1,000 water leaders were present: “We are at a crossroads now. To have a water leader, you need sustainable leaders. We are trying to fight greenhouse gas emissions. In looking for innovative ideas and solutions, the world needs to come together. We need history-makers, not just game changers.”

At this point, I am recalling that moment in 2007 when I was honored and recognized with a Gold Medal by the mayor of Cannes, France, in appreciation of my water management and sanitation programs. I am very thankful that my efforts towards water sustainability were recognized.

Extreme to Exceptional Drought

It is worth mentioning here how critical water could be, and it could be a real challenge. The examples I would like to highlight here are the water scarcities in Maharashtra, Malaysia, and California.

CALIFORNIA

A lot of regions around the world are facing water shortages, and California is one of them. The Colorado River basin, which provides critical water supplies to seven states, including California, has been affected by a slow-burning catastrophe for the last 16 years. The seven states are Wyoming, Colorado, New Mexico, Utah, Nevada,

Arizona, and California. In those states, the Colorado River basin is an important water resource that sustains 40 million people in those states, supports 15 percent of the nation's food supply, and fills two of the largest water reserves in the country.

Because of the severe shortage of rainfall, the \$46 billion agricultural industry in California has been affected. Most parts of California are experiencing "extreme to exceptional drought", and the crisis has now entered its fourth year. Considering this serious situation, in June 2015, state officials announced the first cutback on farmers' water rights since 1977 and ordered cities and towns to cut down on their water use by as much as 36 percent. The condition is so serious that NOAA (National Oceanic and Atmospheric Administration) scientists said it will take several years of average or above-average rainfall before California's water supply can return to anything close to normal.

MAHARASHTRA

Drought has also affected sports in India. Owing to the severe drought in Maharashtra, India, all 2016 Indian Premiere League (IPL) matches scheduled there after April 30, 2016, were moved, in accordance with a ruling by the Bombay High Court. The ruling was passed after a public interest litigation, which questioned the hosting of matches in Mumbai, Pune, and Nagpur owing to the severe drought in Maharashtra. Moving the matches caused problems for both franchises and players, but it was necessary. The Mumbai Indians and the Rising Pune Supergiants, which are franchises based in Mumbai and Pune, respectively, had proposed to contribute 0.75 million to the Maharashtrian chief minister's drought relief fund and supply 4 million liters of water to drought-hit areas at their own cost.

MALAYSIA

Malaysia is known as a country with an abundance of water resources. The country's population has access to clean water almost every day, but the problem is that, nowadays, it is no longer enough. The requirement is more than the resources could provide. Malaysia uses 232 l/c/d (liters per capita per day). For reference purposes, the World Health Organization recommends 150 l/c/d under normal conditions, and 100 l/c/d is set as the minimum for drinking and hygiene purposes. Do you see the difference?

AGREEMENT FOR THIRST

Under the 1962 Water Agreement with Malaysia, which will end in 2061, the Public Utilities Board (PUB), which is a statutory board under the Ministry of Environment and Water Resources, and is the national water agency that manages Singapore's water supply, water catchment, and used water in an integrated way, is entitled to draw 250 million gallons of raw water per day from the Johor River. In turn, PUB is obliged to sell 5 million gallons of treated water per day to Johor. What I want to highlight here is that the condition there is so vulnerable that they have no other option than to depend on another country for clean water to fulfil their daily needs.

On July 17, 2016, Singapore started an additional supply of 6 million gallons of treated water per day for three days after Johor's water regulatory body made an urgent request to stabilize its supply system in Johor Baru, which has been affected by pollution in the Johor River, Singapore's PUB said in a statement. Currently, the republic already regularly provides 15 to 16 million gallons of treated water per day to Johor. As Benjamin Franklin said, "When the well is dry, we know the worth of water." We should always be conscious

of how important water is and how we should use it so that we never have to face the crisis that a lot of countries are facing today.

VITO

VITO is a leading independent European research and technology organization in the areas of clean tech and sustainable development, finding innovative and high-quality solutions for the large societal challenges of today. VITO's research agenda tackles the major societal challenges we are facing today. In so doing, it focuses on five different research programs: sustainable chemistry, energy, health, materials management, and land use. I congratulate them for their tremendous work in their programs.

On January 17, 2017, I had the chance to meet Mr. Dirk Fransaer, managing director, and Dr. Walter J. R. Buydens, CEO of Vito, at my SEWA office. We discussed the issues, challenges, and opportunities in water management and sanitation programs in Sharjah and worldwide. The purpose of their visit was to invite me to the Vito R&D Center headquarters in Belgium and to ask me to be a speaker at the Global Science, Technology and Innovation Conference on October 23–25, 2017, in Brussels, the capital of Belgium. It was really a great honor and privilege for me to work with such an organization for such a good cause.

During our discussion at SEWA, they highlighted the very critical challenge that the region and the Arabian Sea may go through because of the action taken by Iraq and Turkey in building dams and stopping the water flowing to the sea.

Dr. Walter was kind enough to share his white paper and his opinion regarding the Arabian Gulf waters, which he also shared at the

UNESCO-IHE at Delft as a guest lecturer. The report is titled “Can Man’s Interference with the Hydrological Cycle Be Blamed for the Increasing High Salinity Content in the Arabian Gulf Waters?”

The Arabian Gulf can be best viewed as a shallow semi-enclosed basin that is 900 kilometers long and has a width ranging from 50 kilometers at the Strait of Hormuz to 340 kilometers at its widest stretch and an average depth of 30 meters. It has a surface area of about 240,000 square kilometers. The Indian Ocean waters get pulled in through the Strait of Hormuz and flow counterclockwise and on top of the heavier (owing to its higher salinity content) Gulf water.

The average seawater salinity is 35 grams of salt per one litre of water, whereas the salinity in the Arabian Gulf is a whopping 45 ppt. Scientifically, this phenomenon is called hypersalinity. The reason behind it can be explained by the disparity between the evaporation flux, which is up to 200 centimeters per year on the one hand, and sparse rainfall at a maximum of 10 centimeters per year, combined with incoming “freshwater” flux from the Shatt al-Arab River. The Shatt al-Arab River is formed by the confluence of the Tigris, Euphrates, and Karun Rivers. It used to be the main source of freshwater in the Gulf, though it no longer “freshens” the waters in the Gulf.

The term freshwater must, unfortunately, be taken with more than a pinch of salt since large-scale upstream dams and irrigation projects in Turkey, Syria, and Iraq have triggered both low water flows and severe salinization in the lower reaches of the Tigris and Euphrates. As a matter of fact, owing to continually declining water flows, we now observe the reverse infiltration of saltwater from the Arabian Gulf into the Shatt al-Arab River in Iraq for nearly 150 kilometers inland, a phenomenon that has forced many local farmers to migrate.

To make matters worse, the wetlands of the Mesopotamian marshes have virtually lost their ecological function as “kidneys” cleaning the delta waters. First came the drainage of parts of the marshes in the 1950s to drill for oil and expand agriculture. This had a severe environmental impact, but it was nothing compared with the deliberate deathblow in the 1990s, when the then Iraqi leadership retaliated for local uprisings by hydraulically destroying the marshes and reducing them to 1/10 of their size. This culminated in one of the world’s greatest environmental disasters, as described by the UN. Since 2003, there have been efforts to restore these age-old ecosystems, which, although successful in the first years, it ultimately ended in mixed results as recent warfare levies its environmental toll up to this day. The Mesopotamian marshes, once epitomized as the Garden of Eden, are still in an apocalyptic state.

What about the other man-made water inflows, rejects, and withdrawals in the Arabian Gulf? The desalination of seawater is of paramount importance in meeting the needs of the growing human population in the Arabian Gulf countries, which is also compounded by the increase in human consumption. At the time of writing, approximately 70 percent of desalination plants are located in the northern, western, and southern part of the Arabian Gulf. The Gulf States plan to double the capacity of desalination systems by 2030.

What are the impacts? The salinity of reject streams in desalination plants is up to 2.5 times as high as the intake water. Brine increases the salinity by up to 55 ppt in the vicinity of the desalination plants—up to almost 60 percent higher than that of average seawater. Besides the concentration of salt, chemical discharges, air pollution, and GHG, emissions are a concern in the operation of desalination plants.

One can only sympathize with the fate of hawksbill sea turtles, dugongs, dolphins, a myriad of bird species, coral reefs, and mangrove coastal area species. Even seagrass habitats, which are indispensable in the marine food chain, have been depleted by more than 35 percent by the combined effect of salinity, oil spills, and heavy metal pollution from industrial effluents. However, economically speaking, a challenge is rising as higher salt content means ever more expensive desalination.

All stakeholders indiscriminately seek gains from using the water—the quintessential “free or common good.” The flip side of a free or common good is that by seeking their self-interest in this open-access resource, stakeholders are dispersing the cost and environmental burden of the increasing salinity to the community at large.

Those dwelling at the bottom of the dam cascades suffer the highest impact amounting to unsustainable living conditions. Countries on the southern coast of the Arabian Gulf are the most at risk of being affected by the salinity and oil spills as the main sea current is flowing counterclockwise, starting at the Strait of Hormuz, and then along the coast of Iran to the north and going back south along the UAE to the Strait of Hormuz. Along the path of the sea streams, increasing salt content and pollution is picked up, part of which is released into the Oman Sea.

But who will foot the bill for this large-scale environmental degradation? Will it be the farmer or the household in Turkey who benefits from the hydropower and extra irrigation possibilities resulting from the ongoing large-scale dam construction? Will it be the desperate refugee or warrior in Syria, or rather the Marsh Arab downstream in Iraq? Will it be the fisherman from Bahrain, the Saudi oil companies, or the nature conservationists in Ras al-Khaimah? These unanswered questions painfully illustrate the well-known economic

externality phenomena of the tragedy of the use of a common good the likes of free water. Also, it may well become a serious problem, or rather a tragedy that could spill far beyond the hydrographic basins of Tigris-Euphrates and the Arabian Gulf waters.

It is not enough to enumerate the root causes of the problems. It is high time we started to look for enduring solutions as the Arabian Gulf is heading gradually toward becoming a saltwater lake instead of a normal sea. At this moment, only the broad brush approaches can be suggested.

At the political level, for the Tigris-Euphrates basin, the discussion of fair water distribution should involve more countries than just Turkey, Syria, Iran, and Iraq. Indeed, all countries bordering the Arabian Gulf, as well as Oman, are affected stakeholders and should be consulted in an intergovernmental water management body. Extra dams may be constructed only after careful negotiations and the modeling of the environmental impacts downstream is completed, including the waters of the Arabian Gulf. At the technical level, regarding desalination: caution needs to be exerted as to the location of new desalination plants, the treatment of the reject brine, the use of chemicals and heavy metals in the processes, and the study of the location and flux of reject brine streams. On top of this, the observation of oil spills and red algae bloom is critical in preserving the marine environment of the Gulf.

At the scientific level, the situation needs to be monitored closely both by water measurements and by drone and satellite imagery. The effects of climate change need to be addressed and predicted. At the same time, more fundamental hydrodynamic research is needed on the inflow-outflow characteristics at the Strait of Hormuz and the dynamics of the water currents in the Gulf.

As we cannot foretell the future, I finally suggest that an expert panel take into account all of the above and consider a wide range of future scenarios, answer the many “what-if questions” to be timely prepared, and come up with sustainable strategies to save the Arabian Gulf waters.

Reverse Osmosis Plant at HFZ

Alpha Utilities (AU) was established in February 2005, by the C&C Alpha Group Limited in the UK in response to the growing demand for power and water from both the domestic and industrial sectors in the UAE. At that time, I was the director general of the Hamriyah Free Zone (HFZ) and was fortunately able to support them to become an institute inside the Hamriyah Free Zone. C&C Alpha has a comprehensive background as an independent power producer (IPP) in the state of Haryana, India.

At that time, the unit price of water inside the free zone was \$0.05/gallon, supplied by water tankers, which I found expensive. However, we had no choice because the network was under construction and the water supply from SEWA was much less than the demand. The initial plan was to build a combined cycle gas-based power plant that could cater to and support the HFZ investors and balance the power to SEWA Grid by and in collaboration with SEWA. Unfortunately, even after two years of hard work, owing to some internal and external pressures, it did not push through. On the other hand, I was keen to reduce the burden of the HFZA and its investors and attract more investors. Hence, I suggested the Alpha Utilities build a Reverse Osmosis (RO) plant inside the free zone based on the Build–Operate–Transfer (BOT) concept.

In 2007, the implementation and bulk water purchase contract was signed by AU and HFZA with a production capacity of 500 m³/day, which would cater to the needs of the HFZ investors and the labor camp.

During my term as DG, through my initiatives and intensive supervision, the investors inside the free zone continued to increase every year, resulting in an increased demand for water. Eventually, AU expanded its production capacity to 1,000 m³/day in 2011, 2,500 m³/day in 2013, and 4,000 m³/day in 2014, with a unit price that was equal to the SEWA price. This was a great success for the company as not only had this reduced the water price, but we were also able to address the scarcity of water inside the free zone. Now, water prices are \$0.28 by pipeline, while water tank prices dropped to as low as \$0.02 per imperial gallon.

The AU company has come a long way from a three-unit containerized plant to a well-built, state-of-the-art, 5,000-square-meter production unit and has successfully evolved into a major potable water producer inside the free zone. Currently, their production capacity is 1 million gallons per day with an actual production of 700,000 to 800,000 gallons per day. Further, expansion for an additional 2,500 cubic meters per day is currently ongoing, the operation of which may commence by the end of this year. This is for the production of industrial water to cater to the needs of both industrial and domestic sectors' water requirements, including ships and other marine vessels. It is a great project, especially in Sharjah, where most of the industrial water comes from outside of the emirate, such as Ras al Khaimah, Dubai, and Abu Dhabi.

Skyline University

In 2017, I was invited by Skyline University as a chief guest on international water day. On this visit, our aim was to spread awareness, carry the flag of water conservation, and march to the Sharjah lagoon. I was so overwhelmed as I also received recognition from the university for my plan of 30 percent reduction by 2020 as part of water conservation efforts.

I addressed 100 students aged 6-14 and discussed the importance of the water day, and students wanted my e-mail so they could share their experiences, and I would like to quote one of them here. Seven-year-old Dharitri Rauta also spoke in the event about the importance of wastewater and was keen on sharing this message with me personally.

She said that last year the UN's priority was to create more jobs, while this year, the UN's policy focuses on wastewater and its various uses. It was great to listen to her as, at only seven-years-old, she showed a good understanding of climate change, population growth, and economic development demand in relation to finding a sustainable solution to secure the world's future.

She clearly explained the methods we can use to purify waste-water, such as primary wastewater treatment using the screening and sedimentation process to remove solid particles from liquid, as well as secondary treatment using biological filters.

Bank Al Miyah

I am very pleased with Bank Al Miyah's policies. Al Miyah is an Arabic word meaning "water." The bank is a virtual water bank that

encourages people around the world to save water at home, school, the office, or any other workplace. It promotes water-saving habits in the community, creates awareness of the importance of water in life, and encourages people to open an account with Bank Al Miyah to save water. As an incentive, they offer gifts, such as water-saving home appliances, as an award for those who support this campaign and save water. How they work is explained below.

SAVE WATER AND WIN WATER-SAVING HOME APPLIANCES!!

Save water at home, school, the office, or any other workplace and win many fabulous prizes every month. Simply open an account with Bank Al Miyah. The bank organizes a raffle draw every month for account holders, and to claim his or her prize, the winner must submit a three-month water bill (current and the previous two months). The current bill should be 5 percent less than the average of the previous two months' bills. What a great idea!

UAE to Tow Icebergs from Antarctica

While water is a renewable resource, it is also a finite resource. Keeping this in mind, we should make adequate use of water, as only 3 percent of the world's water is fresh and about one-third of it is inaccessible. Many countries in the world are facing huge water scarcity, and the UAE does not want to suffer the same problem. Since the UAE is located in the desert, it has a very small amount of underground water, little rain, and no rivers. Because of that, the government has to rely on other water resources, like desalinated seawater. The average daily water use per capita in the country has been estimated at about 550 liters a day, more than twice the global average of 200 liters.

I completely agree with what Professor Gunel wrote in *The Infinity of Water: Climate Change Adaptation in the Arabian Peninsula*: “People must use less water and other sources must be found for irrigation and nourishing gardens.”

Now, the UAE has a new plan to fight water scarcity. According to *Gulf News*, an Abu Dhabi-based eco-firm plans to tow icebergs to the UAE from Antarctica in early 2018 to harvest ice for pure drinking water.

Abdullah Al Shehi, managing director of National Advisor Bureau Limited, headquartered in Masdar City, said, “Our simulator predicts that it will take up to one year [to tow an iceberg to the UAE]. We have formulated the technical and financial plan and found that towing is the best method. We will start the project in the beginning of 2018.” An average gargantuan iceberg contains more than 20 billion gallons of water, enough for one million people for over five years, and Antarctica is the world’s southernmost continent, which is said to contain up to 70 percent of earth’s freshwater.

UAE to Save Water by the Millions of Gallons

Being chairman at SEWA is a huge responsibility, and the continuous efforts that I am putting into water conservation at SEWA stem from my own sustainable vision. It really makes me happy when these works get regional and global appreciation. On July 27, 2017, the world-renowned *Forbes* magazine, wrote about SEWA’s ways of water conservation and its utilities. SEWA aims to increase the emergency storage and the availability of freshwater from 100 million to 500 million gallons over the next five years and save 17 million gallons of water per day from being wasted. *Forbes* highlighted the tool “smart water-storage tanks and utility tracking software.”

These tools help in managing the level and quality of freshwater, monitor consumption, and then assist the city's more than 1 million residents in cutting down their water use. Forbes's team visited our desalination plant to observe its operation.

GOING WITH THE FLOW

SEWA's water storage system consists of numerous tanks fitted with sensors that analyze the levels and the quality of freshwater. Signals are sent from the sensors via digital transmitters to an online instrumentation panel, which pumps chemicals into the tank to treat the water for impurities. The final product is pumped into clean water tanks, fed into the water main, and then distributed to homes and businesses.

The cost to operate this sensor-based system is much less than the cost of traditional desalination, which now accounts for more than 90 percent of the UAE's total water supply and costs the country about \$3 billion per year. Desalination requires significant energy to pump the seawater through special filters and boil it to remove the salt. The resulting brine is then dumped back into the Arabian Gulf, making the seawater even saltier and requiring additional energy to desalinate it again.

FIXING THE SPIGOT

SEWA has also launched a digital platform to pinpoint the biggest water users among its 450,000 household and business customers, as well as identify sources of excessive water waste. Sensors attached to metering devices scan SEWA's 2,200-mile water network, looking for early signs of wasted water caused by damaged pipes, broken fixtures, or sudden spikes in household use.

Data captured from the sensors are mapped to customer account records in SEWA's Oracle Utilities Customer Care and Billing application, where they are then analyzed and used to generate invoices, estimate service needs, and take steps to stem consumption or waste.

Hence, now we can quickly view our customers' water usage histories, identify anomalies, and the application also escalates a service request before an issue becomes a crisis.

Election to Singapore's World Water Advisers Council

With great delight, I would like to share with my dear readers my election to Singapore's World Water Advisers Council for my continuous efforts in the field of sustainable development. The council will benefit from my expertise in water resource management to develop a road map that would effectively contribute to sustainable global development. The council is composed of 12 members, who are the world's leading experts and specialists, and receives various visitors from international organizations, as well as government bodies, universities, and research centers in various aspects of international water policy. It is headed by Tan Ji Bo, the chairman of the Water Authority of Singapore.

International Water Association Singapore

On September 11–13, 2017, I addressed the discussed issues as a keynote speaker at the seventh annual International Water Association (IWA) conference in Kuala Lumpur. IWA is headquartered in London, with a global secretariat based in the Hague and offices in Beijing, Bangkok, Nairobi, and Singapore.

It is a nonprofit organization and knowledge hub for the water sector, with over 60 years' experience in connecting water professionals worldwide to find solutions to the world's water challenges. IWA traces its roots to the International Water Supply Association (IWSA), which was established in 1947, and the International Association on Water Quality (IAWQ), which was originally formed as the International Association for Water Pollution Research in 1965. The two groups merged in 1999 to form IWA, creating one international organization focused on the full water cycle.

IWA works across a wide range of issues covering the full water cycle with three programs—Basins of the Future, Cities of the Future, and Water and Sanitation Services—that work towards achieving the sustainable development goals and addressing the threat to sustainable water supplies posed by climate change.

Japan Water Works Association

Japan Water Works Association (JWWA), a public interest incorporated association, was established on May 12, 1932, with the aim to supply water in Japan and develop sound water supply technologies.

Besides water supply management, JWWA also provides various services, such as inspection and certification of water-supply related products to maintain a stable and safe water supply, which is indispensable in people's daily lives. In addition, JWWA actively lobbies and makes recommendations to the government to resolve water-utility-related issues in Japan for sustainable water in the future.

During my trip to Kuala Lumpur for an IWA conference, I had the chance to visit Tokyo Waterworks International (TWI), which was founded on April 11, 2012.

Tokyo is truly one of the world's global cities. Hundreds of years ago, it was often referred to as a water city, and today, the urban life of its citizens and most of its urban activities are still deeply connected with water.

They have awesome strategies in managing their water utilities and other related issues, which I feel are worth mentioning here.

1. DAILY STABLE SUPPLY—STABLE WATER SUPPLY 24 HOURS, 365 DAYS

To have a stable supply of tap water, TWI comprehensively controls the water volume and pressure through a centralized collection of information on water volume, pressure, and quality on a round-the-clock basis. By conducting such comprehensive water supply operations, from reservoirs to distribution pipes, TWI has achieved an efficient and stable water supply based on daily demand fluctuations. Also, with constant monitoring, TWI detects accidents and abnormalities in water quality early and promptly responds to these incidents.

2. PURSUIT OF SAFETY AND SECURITY—SUPPLYING SAFE AND TASTY WATER

As for water resources such as rivers, TWI has made efforts to check actual conditions and detect water abnormalities early through regular water quality monitoring and patrols. Also, at the purification plants, TWI conducts constant monitoring and water examination using water quality meters, thereby ensuring that they provide the appropriate water treatment. Moreover, TWI has carried out multiple water safety checks by installing automatic water quality meters within the water supply area and conducting regular detailed inspection (e.g., constant monitoring of the color, turbidity, and residual effect of disinfectants).

3. WORLD'S LOWEST LEAKAGE RATE—ATTAINED 3 PERCENT LEAKAGE RATE

As a result of a planned replacement of distribution pipes, early detection and repair of leakage and the securing of advanced technologies, TWI has now achieved the world's lowest leakage rate, which is about 3 percent. Leakage prevention measures have contributed to not only the efficient use of limited water resources but also the prevention of secondary disasters (e.g., poor water flow, sagging road, and inundation) and energy saving in the process of water purification, transmission, and distribution.

4. CULTIVATION AND MANAGEMENT OF WATER CONSERVATION FORESTS

As a member of the Tokyo Metropolitan Waterworks Bureau (TMWB) Group, TWI manages vast areas of water conservation forests located in the upper basin of the Tama River, which TMWB has been managing for more than 100 years already. On the other hand, there are many other private forests of approximately the same size, which are water conservation forests that are also located in the Tama River upper basin. Some of these forests have not been maintained well because of the decline of the forestry industry and other causes. Leaving these unkempt private forests may lead to soil erosion, and thus, may have a negative impact on the water quality of rivers and reservoirs. Hence, along with TMWB, TWI is working towards securing a stable river flow and conserving reservoirs.

5. EARTHQUAKE DISASTER PREPAREDNESS—KEEP SUPPLYING WATER EVEN AT THE TIME OF DISASTER

TWI has improved its backup functions, which allow it to supply water even when certain facilities are forced to stop operations because of an earthquake or an accident, by implementing duplexing of the conveyance and network of water transmission. Also, TWI

has reinforced the entire water system, from water intake to supply, to minimize damage to water facilities during earthquake disasters and secure water supply as much as possible.

6. LONG-TERM PERSPECTIVE MANAGEMENT—STABILIZED MANAGEMENT (ESTABLISHMENT OF A FIRM MANAGEMENT FOUNDATION)

A robust financial basis is essential to achieving sustainable management. This can be done by implementing a management cycle where water charges are collected from customers for the provision of water based on appropriate investments, and then the collected water charges are reinvested. Also, it is necessary to carry out service operations from a long-term perspective, such as by formulating management and facility development plans to concretize directions towards the future. TWI has also published these plans on the JWWA website (www.jwwa.net) to ensure accountability to the customers. Moreover, TWI has provided various payment methods for customers.

Meet the Challenge!

Four decades ago, Singapore's first prime minister, Lee Kuan Yew, arguably Asia's most well-known statesman, issued a challenge to the country's engineers. "Suppose we could capture every drop of rain in Singapore, could we become self-sufficient?" Lee asked the country's national water agency, PUB.

It was a tall order for Singapore, a tiny island with no natural resources or abundant water supply to boast of. But today, it has overcome all odds to not only achieve a sustainable water supply but also carve a global reputation as an innovative water leader, thanks to Lee's vision and determination to solve the country's water challenges.

Lee had a long-term vision: To become self-sufficient in water, the island needed to build its own capacity and knowledge in managing water. In 1971, he set up the Water Planning Unit under the Prime Minister's Office to study how to increase water catchment areas and explore unconventional sources like water reclamation and desalination.

This resulted in the nation's first Water Master Plan in 1972, which set out the strategy for developing diversified local water resources, including recycled and desalinated water. But even as the unit was drawing up strategies, the demands for water increased as the city rapidly expanded. As part of longer-term plans to harness every drop of water in Singapore, Lee challenged the Ministry of Environment to clean up the Singapore and Kallang Rivers, which had become heavily polluted in the 1970s.

LEE KUAN YEW'S CONTRIBUTIONS TO SINGAPORE'S WATER STORY

1. Made water a top priority on the government's agenda since Singapore's independence.
2. Ensured that the water agreements were legally written in Malaysia's constitution.
3. Set up the Water Planning Unit under the Prime Minister's Office, which drafted Singapore's first Water Master Plan in 1972.
4. Initiated the cleanup of the Singapore River in the 1970s–1980s.
5. Invested heavily in the water industry over the decades, which paved the way for high-quality drinking water, NEWater, which was produced from wastewater.
6. Envisioned the creation of the Marina Barrage in the 1980s, which became a reality in 2008.

Over the decades, Singapore's determination to find a solution to its water woes enabled the country to stand at the cutting edge of water innovation.

Thirty Percent Price Hike

According to PUB, the price of water in Singapore was changed on July 1, 2017, and it will increase again on July 1, 2018. Water prices in Singapore have remained unchanged since 2000.

Heavy investments in water infrastructure, coupled with rising operational costs, have made the increase in water price necessary. PUB is upgrading their water system to make it more resilient, especially in facing the challenges posed by climate change. The new water price will allow PUB, the national water agency, to cater to future demands, strengthen Singapore's water security, and continue to deliver a high-quality and reliable supply of water.

The new water price is geared towards meeting the cost of water treatment, reservoir operations, NEWater production, desalination, used water collection and treatment, and maintenance and expansion of the island-wide network of water pipelines. The price hike also includes the water conservation tax (WCT), which is imposed on the potable water tariff. The WCT reinforces the message that water is precious. It also aims to reflect the full incremental cost of producing more potable water (probably by desalination and NEWater) beyond PUB's present output so that consumers are conscious of the scarcity and value of the water they use.



9 AFFORDABLE ENERGY



"We can create a more sustainable, cleaner and safer world by making wiser energy choices."

Robert Alan Silverstein

AFFORDABLE ENERGY

Sharjah, the City of Conservation

The affordable energy team was created at SEWA with the objective of reducing the consumption of electricity, water, and gas in Sharjah by 30 percent over the next five years to position Sharjah globally as a city of conservation. However, this goal cannot be achieved without having partners who buy in and give full commitment towards energy efficiency and conservation building based on the principles in ISO 50001 energy management.

Usually, we meet once a month, whenever we have new suppliers and strategic partners joining us, to achieve our challenging conservation target of positioning Sharjah as a city of conservation.

IT PAYS OFF

Working closely with our suppliers and vendors made a big difference in positioning Sharjah as a city of conservation in the region, and we see the fruits of our work earlier than we anticipated, and I am happy to share with the readers that I was recognized by SACEM Industries in Tunisia and awarded a trophy and a certificate titled “Award for excellence in energy saving and reduction of CO2 emissions.”

PEAK HOUR

Some of the big challenges I have faced during my journey at SEWA are high consumptions of energy and water, aging equipment, and a weaker network with more frequent peaks. While I was trying to strategize to find solutions, an idea came into my mind. It was the peak hour. Looking at our load data, I noticed that a high demand occurs during summertime in July, especially in the first week, during which time the temperature reaches 50°C.

As per the recent surveys conducted by SEWA on the consumption trends during the last five years, July 1, registered the highest demand for energy and water owing to the high temperatures and humidity, particularly when such time coincided with the holy month of Ramadan. Therefore, such a peak time, July 1, from 02:30 to 03:30 p.m., has been selected as the hour for the launch of peak hour initiative every year to raise public awareness of the consequences of high power consumption and its adverse impact on SEWA systems and the environment.

I personally proposed the initiative to His Highness Sheikh Dr. Sultan bin Muhammad Al Qasimi, supreme council member and ruler of Sharjah, which he approved right away and instructed me to announce the peak hour on July 1 every year, between 02:30 to 03:30 p.m., with the aim of changing public behavior towards power and water consumption.

To spread awareness about this initiative, awareness messages are launched through the media to urge the community to avoid using appliances consuming more power during the peak hours to enhance the efficiency of power networks, save our natural resources, and reduce CO₂ emissions to preserve our environment. SMS messages are sent to encourage the people to contribute and participate in

this initiative. Messages offer tips on best practices, including this: “Changing the temperature of the AC just 1 degree can cut your energy use up to 10 percent.”

I am happy that the public is contributing and responding very well to this initiative. More than 500 staff members at Zulekha multidisciplinary hospitals in Dubai and Sharjah took part in this initiative by having posters placed throughout the facilities on behalf of SEWA to increase awareness of the peak hour initiative. On July 1, 2015, a major effort was made by all by using minimal lighting in the hospitals and switching off unused equipment and devices, as well as controlling the cooling system. The Zulekha Healthcare Group makes conscious efforts to select and procure energy-efficient medical equipment, mechanical equipment, and less-power-consuming LED lights within its hospitals. Thank you, Zulekha. Keep going green.

Promoting this initiative, Taher Shams, president of the Zulekha Healthcare Group, said, “As a responsible health-care provider, we recognized the importance of SEWA’s commitment to a sustainable lifestyle beyond the hour and willingly turned off any unused equipment and lighting on July 1, to mark the inaugural peak hour.”

MY GREEN DREAM

My dream is to reduce the energy demand during the peak hour by 30 percent. To achieve this smart goal, we do a lot of things and hold events. One significant event that I remember, which took place on June 30, 2016, is when the Conservation Department of SEWA took the challenge to their hearts, extended their awareness plan for the peak hour, and came up with an entertaining event at Mega Mall Sharjah. I expect this initiative to continue to draw a lot of cooperation from the public. Together we can bring great change!

We tell great success stories to attest that this initiative can achieve even a 50 percent energy reduction. Working with US energy utilities, Nest allows its owners to earn money or credit by reducing their energy use during peak hours. This setup has achieved an incredible 55 percent reduction in energy consumption at peak hours.

BBC Report

A BBC Radio 5 Live survey suggested that people in the UK support the use of clean energy and think that the government is not going green enough. However, during times of economic difficulty, people say that cheap energy is more important than reduced emissions. Do we have to choose between the two? The survey, which was conducted by ComRes, showed broad support for the harnessing of clean and green energy sources.

More than 60 percent of the people thought that the government was “not green enough when it comes to energy policy,” while only 36 percent stated that they were not bothered by where their energy came from. However, during times of economic difficulty, 60 percent said that it is more important to provide power as cheaply as possible than to reduce carbon emissions. Do we have to choose between cheap or clean energy or are the two compatible? Let us go through the opinions of several experts:

PROFESSOR STEVE THOMAS, ENERGY POLICY EXPERT AT THE UNIVERSITY OF GREENWICH

Stating the aims of an energy policy is easy: energy supplies should be reliable, affordable, and clean. Achieving them has never been harder when faced by the rapid rise in prices, the need to phase out fossil fuels to meet climate change goals, and the desire to replace

monopolies with competitive markets. Prices have rapidly increased in the past decade, with electricity prices doubling and gas prices increasing by even more. These increases are almost entirely accounted for by increases in world market energy prices, not by the introduction of cleaner sources. There is little expectation that renewable or nuclear sources will be anything but significantly more expensive than gas and coal, so if we want cleaner energy, there will be additional costs. Unless a really effective energy efficiency program is introduced, the number of households suffering from “fuel poverty”—about 25 percent at present—will increase further, leading to serious health and welfare problems, as the most vulnerable households face difficult choices of whether to eat or keep warm.

In a competitive market, reliability is achieved when just enough power stations are profitable to keep the lights on. Companies cannot be held responsible for the security of the supply, and if a power station loses money, it will be closed, even if the lights will go out as a result. Since 1990, this unlikely equation has never been tested because power companies have been so profitable.

PROFESSOR NICK PIDGEON, ENVIRONMENTAL PSYCHOLOGIST AT CARDIFF UNIVERSITY

Using the words “at a time of economic difficulty” makes the question very relevant at present, which we all know is very difficult for many people. It is different from the more generic question of where our energy should go in the future. Currently, in terms of people’s views on policy priorities, affordable power is ranked first, above dealing with climate change. However, in the long term, people are fully aware that compromises may have to be made in the short term. They understand that you have to be *pragmatic* and that you cannot deliver a green energy system overnight.

I do not think that holding those two positions is entirely contradictory. What we do know is that since the economic recession in the United States and the UK, concerns about the environment have become less salient for people. Also, the economy and finance have gained an increased importance, whereas the environment has gone down.

The economic recession has temporarily suppressed people's concerns about the environment. However, environmental concerns ebb and flow over time, so there is absolutely no reason to suggest that it will not come back. The "economic difficulty" question is being asked at a time when the environment is out of sight and out of mind.

A colleague talks about a "finite pool of worry;" however, there is only so much we can worry about. So if we are in dire straits to get the next paycheck, and many people are, then it is much more difficult to focus on other things. What was clear in the research is that the lowest cost is not necessarily what people are asking for. "Affordability" is a slightly different idea. Some people said that you might have a system with the lowest cost, but if it fluctuates a lot over time, then it will become unaffordable for some people. So, they said that there should not be a system which prices people out.

TONY LODGE, RESEARCH FELLOW AT THE CENTER FOR POLICY STUDIES

The so-called green energy technology has delivered higher bills (because of its need to be subsidized) and has consequently increased fuel poverty amongst the most vulnerable in society, as well as increased the industry's costs. Wind turbines do not turn on a windless freezing day in midwinter when energy demand spikes; it is coal, gas, and nuclear power which have delivered electricity when it is most needed.

The UK has decided to base the future of its electricity-generating industry on the burning of gas. Last year, the government unveiled its Gas Generation Strategy, which is designed to replace older coal and nuclear plants. The problem with burning more gas is that it will still be taxed by the new rising carbon price floor, and Britain will become more and more dependent on imports. Consequently, the UK must develop underground coal gasification technology which can better utilize the UK's untapped coal reserves, which are vast, while it should also support shale gas exploration and extraction. Relying on weather-dependent renewables, such as wind and solar power, is not viable, as these technologies cannot provide what is known as a baseload electricity supply, which is a steady flow of power regardless of the total power demand by the grid. Britain relied on coal last year to generate a significant 39 percent of electricity; this capacity will slowly be replaced by gas.

The UK energy policy is slowly undergoing a reality check as politicians realize that they need to deliver a new base-load-generating capacity to meet the growing electricity demand as the UK emerges from recession. The unveiling of the Gas Generation Strategy thus illustrates the failure of so-called green energy.

LEILA DEEN, ENERGY CAMPAIGNER AT GREENPEACE UK

There has been a lot of misinformation about renewables putting up our energy bills. The truth is that between March 2011 and March 2012, bills rose by around £150, and £100 of that was due to the increased wholesale cost of gas. Whilst offshore wind is expected to get cheaper as the industry grows, the cost of gas is set to increase due to a combination of rising fuel and carbon prices.

Our bills are likely to go up in all future energy scenarios, however, the government's own advisers say that the best way to limit that

rise is through increased renewable energy. So, why is the government set on building 40 new gas power stations? Their excuse is “the shale gas revolution.” However, the consumer benefits from shale gas, as claimed by David Cameron, are “baseless,” according to Lord Stern, as the price of UK gas is set on the European market.

Ofgem, Energy UK, and even Cuadrilla agree that any impact on bills will be insignificant, while DECC says that with the right policies, offshore wind may fall to the same cost as gas by 2020. There are technologies which can hugely reduce your energy bills and protect you from the volatile fossil fuel markets—energy efficiency and domestic renewables can cut your energy costs to such an extent that the electricity companies start to pay you.

Not everyone is in a position to install solar panels or a microturbine, but everyone can benefit from the most cost-effective energy technology there is: insulation.

ANGELA KNIGHT, CHIEF EXECUTIVE OF ENERGY UK

There needs to be a sensible, balanced energy mix, in which you’ve got renewables such as wind; however, resources such as carbon or coal will still be available for some time. I don’t think it’s an either/or because if you’ve got a lot of renewables, then you can’t be entirely sure what their output is going to be, as they’re weather-dependent. The bottom line is that the more renewables you build, the more you’ve also got to build in the way of backup, which is predominantly a gas-fired generation.

The way that renewable energy is now going to be financed is through a levy on today’s bill for tomorrow’s plant. The actual capital cost of renewables can be high, but its running costs can be quite low. At some point—perhaps as early as 2020—onshore wind may become

cost-competitive. However, there is no absolute in the answer. What we think is absolutely essential is that there is a clear public debate. Too often is the public told part of the story but not the entire story.

The public has been led to believe that you can actually replace existing fossil fuel generations with a few wind turbines—not that you needed both. Thus, you cannot say, “Do you want wind or gas?” You need wind *and* gas.

There’s a perfectly correct, reasoned, and right argument that we need to be careful with our resources, careful with our climate, careful with our planet—and that says that where we can, we need to use renewables, and we also need to use our fossil fuels advisedly. At the moment, we’re in a transition, and that needs to be part of the proper discussion, and it should not be either hijacked by a pressure group or compartmentalized, nor should the facts be distorted to make a point.

Sunshot

During my research, I found an article published in the newspaper The Daily Illini, on September 14, 2016, regarding the ongoing search for reliable renewable energy sources. Two university professors are working to develop a form of solar power technology that is more affordable. Mechanical science and engineering professors Kimani Toussaint and Placid Ferreira, along with researchers from the University of Michigan and the National Renewable Energy Laboratory, were selected to receive a grant from the US Department of Energy’s SunShot Initiative. This initiative, which is comparable to President John F. Kennedy’s Moon Shot initiative, aims to support research that will make renewable energy more cost competitive with traditional energy sources.

Toussaint and Ferreira's project involves developing a specific type of solar power technology called concentrating solar power collectors, which use reflective surfaces to focus light at the point of absorption and convert that energy into electricity. Although concentrating solar power has been in the industry for decades, it has not been able to compete with photovoltaics, the type of technology used in solar panels that creates an electric current when exposed to light. The team's goal is to reduce the cost of concentrating solar power so it can compete with solar panels and be a part of the broader renewable energy portfolio. "The challenge is that the cost of photovoltaic has become so inexpensive that the attraction to concentrating solar power is not as strong from a financial perspective," Toussaint said.

But concentrating solar power has specific advantages over photovoltaics. One of the main challenges with photovoltaics is storage, as it relies on the presence of sunlight to keep its battery charged. By concentrating solar power, heat can be stored for much longer periods of time and accessed during nighttime operations.

"When you want to have access to power where there is no more sunlight, concentrating solar power becomes extremely attractive," Toussaint said.

Ultimately, their goal is to create a new technology that can be put to market and used in the industry, and they hope to achieve this in a way that has not been done before. They proposed a flat structure for collecting sunlight, which is different from the traditional concentrating solar power collector that is curved like a bowl.

Making the structure flat not only uses less material but also brings about a new set of challenges; that is where Toussaint and Ferreira's expertise in nanotechnology comes in.

Toussaint, who leads a lab in photonics research of bio/nano environments, said that the lab has done a lot of work in nanotechnology, which deals with dimensions of less than 100 nanometers. In this project, they will use techniques from nanotechnology to attempt to focus over long distances. "Researchers have shown that you can take nanostructures and arrange them in such a way that you can focus over distances that are shorter than the thickness of human hair," he said. "No one has shown that you can do that over centimeters, or meter distances, much longer distances, so if we could pull that off, it would be a big deal, actually." Ferreira said that using nanotechnology in this manner is something that is not normally done. "This research is taking emerging technology, that's nanotechnology, and using our understanding of phenomena that occur at the nanoscale to address problems of the environment and energy, so that's kind of a rather challenging thing to do, and that's what makes it interesting and special."

"The multiple skill sets that they are using in this research are energy and energy conversion, manufacturing, and fabrication of materials; and in Toussaint's case, optics and nanotechnology are not usually used in collaboration.

The project is Toussaint's first foray into solar energy research, but he said that it is something he has always wanted to do. He hopes that this work will make solar power more viable in the face of a future that needs it. "We're a planet that has a sun. So, being able to access some of the energy from that sun in a waste-free way would be a huge plus," he said. "I think that it's only a matter of time that we don't have any choice but to embrace more renewable energy forms. And you can't talk about renewable energy without thinking about solar energy. Simply because we have sunlight."

Solar power has become more feasible over time, especially with the decreased cost of photovoltaics. Toussaint said that he does not expect concentrating solar power to completely replace solar panels, but he does expect the two technologies to become complementary with each other. “I think if we’re successful, it’ll point us in a certain direction that will allow us to harness phenomena at the nanoscale to actually increase the efficiency of energy conversion devices,” Ferreira said.

Toussaint’s ultimate hope is that this research will add to the vast amount of research in solar technology that has already been done.

“We’re hoping to be able to at least contribute to that body of work in a way that makes this a lot more viable,” he said. “If we’re successful, it’s not that it’s just good for concentrating solar power, it would be good for the entire solar industry.”

Affordable Housing

During his recent visit to Sharjah, I had the chance to meet Dr. Arif, professor at Salford University in the UK. He told me about his project, “Affordable Housing,” which sounded very interesting and made me write about it in this book. He was also featured on BBC, where he said, “Given what we are facing in terms of cost of housing, which has kicked an entire segment of the population out of the domain of home ownership, these houses have the capability to deliver houses faster, cheaper, and have a final product that is more energy efficient.”

One of the most common definitions of an affordable house is “a decent home for every family at a price within their means.” There is a significant shortfall of affordable housing all over the UK. The

growing gap between the supply and demand of affordable housing is taking away the ability to afford a house. Just to keep the gap between supply and demand and to ensure that the prices of houses don't get completely out of hand, a supply of 240,000 affordable houses is needed every year. The need for affordable housing has been at the top of the agenda for the UK Government for many years. Since coming to power, the current government has announced a new \$11.1 billion National Affordable Housing Program for England. This program endeavours to deliver 170,000 homes funded by the government over the next four years. Similar programs are underway in Scotland and Wales to meet the growing demand for affordable housing. The lack of affordable housing has taken a whole segment of the population away from their dream of home ownership. Newer technologies, such as prefabricated construction, have the potential to deliver affordable, higher-quality homes faster.

For the construction industry to respond to this growing need for affordable housing, it is important that it takes advantage of highly efficient, industrialized housing techniques. Industrialized construction offers benefits through a faster speed of construction, better quality, lower cost, and fewer workmen needed on-site. Industrialized construction technologies have proven to effectively address all the three dimensions of sustainability: environmental, economic, and social. On the environmental dimension, it addresses sustainability by reducing on-site waste and process waste throughout the supply chain, improving energy efficiency using materials such as structurally insulated panels (SIPS), and providing better structural integrity as well as improved air tightness. To address economic sustainability, industrialized construction can produce a more cost-efficient building method. Also, by influencing consumer affordability, it improves the profitability of producers because of potentially leaner operations and mass customization, resulting in economic

sustainability for producers and customers. Further, industrialized construction addresses issues related to social sustainability. As Burgen and Sansom (2006) highlighted, “Moving construction into the factory has social benefits for those involved—better and safer working conditions, greater investment in technology, and allied to this is more training of operatives and greater job security.” Providing better-quality affordable housing will also reduce the social divide and affect the social sustainability dimension.

Minister of the Year 2016

Dr. Abdulhussain bin Ali Mirza, the current minister of electricity and water affairs of Bahrain, continues to execute Bahrain’s objective of achieving a balanced energy mix through the implementation of sustainable projects, a cost-effective and affordable supply of energy to the country, to build a socially responsible and green economy.

Mirza’s objective of building networks and knowledge sharing platforms with partners across the global energy sector to help drive new and innovative solutions for affordable and clean energy is key to Bahrain’s aspiring targets of reducing its carbon footprint by 2030. He has wholly adopted the United Nations’ Global Compact and Sustainable Development Goals to ensure a thriving/burgeoning future for the kingdom’s energy sector.

On November 28, 2015 (in the presence of Mirza and other dignitaries), Bahrain Petroleum Company (BAPCO) and Aluminium Bahrain (ALBA) signed a high-profile agreement to build a floating liquified natural gas facility with a substantial capacity, and further, they also worked on a contract for a new enhanced-capacity oil pipeline project linking Bahrain to Saudi Arabia.

In line with Mirza's philosophy, energy policies and commitments to sustainable growth are the mainspring of national, regional, and global efforts to pursue long-term development and enduring relations. His commitment to global regulatory and governance standards, the promotion of greater accessibility to natural resources, and the understanding of pressures facing the oil and gas sector, have helped drive Bahrain's growth on the international energy stage over the course of time.

Solar LED

Solar street lighting systems are an efficient means of providing lighting without the need for standard utility power. Every system provides cost savings by eliminating the need to trench standard electric wires for installation and providing no electric bill for the life of the system. Solar street lights have been installed in Sharjah City for the first time under my direct instruction and supervision in different parts of Sharjah—on highways, freeways, neighborhood streets, rural roads, farms, and so on—to provide security, sustainability, and an overall green image.

Zayed Future Energy Prize

The Zayed Future Energy Prize is a fruit of the vision of the late ruler of Abu Dhabi and founding father of the United Arab Emirates, Sheikh Zayed bin Sultan Al Nahyan. In 2008, at the World Future Energy Summit, His Highness Sheikh Mohammed bin Zayed Al Nahyan, crown prince of Abu Dhabi, announced the Zayed Future Energy Prize to honor his father's legacy of environmental stewardship with a vision: to be the preeminent international prize that recognizes achievements in renewable energy and a catalyst for innovation in sustainability.

With the target of having the prize reach different key players in the industry, prizes are awarded annually to a large corporation, a small and medium enterprise, a non-profit organization, a lifetime achievement recipient, and up to five high schools from five different world regions that have made significant contributions to the global response to the future of energy. This annual award celebrates achievements that reflect impact, innovation, long-term vision, and leadership in renewable energy and sustainability.

The prize has become one of the most respected and appreciated awards in the world. It has attracted outstanding individuals and international organizations who have found solutions to the global challenges of climate change, energy security, and energy access. In addition, the prize encourages sustainable energy innovation in the current and future generations.

Energy for All

I would like to thank the Asian Development Bank (ADB) for their commitment to help all people in the Asia-Pacific region gain access to energy. Modern, affordable energy is an integral part of any development strategy and creates immediate and life-changing benefits for the poor. Increasing access to energy is a pillar of ADB's energy policy and part of their long-term strategy for inclusive regional growth. ADB's Energy for All Initiative supports the development and implementation of access to energy projects and builds ADB's internal capabilities to better meet the critical energy needs of its developing member countries.

America First Energy Plan

January 20, 2017, marked US President Donald Trump's first official visit to the Oval Office in the White House in Washington DC.

President Trump announced the America First Energy Plan just 24 hours after he took oath as America's 45th president:

- Make America energy-independent, create millions of new jobs, and protect clean air and water. Conserve natural habitats, reserves, and resources; unleash an energy revolution that will bring vast new wealth to the country.
- Declare American energy dominance a strategic economic and foreign policy goal of the United States.
- Unleash America's \$50 trillion untapped shale, oil, and natural gas reserves, plus hundreds of years in clean coal reserves.
- Become, and stay, totally independent of any need to import energy from the OPEC cartel or any nations hostile to American interests.
- Open onshore and offshore leasing on federal lands, eliminate moratorium on coal leasing, and open shale energy deposits.
- Encourage the use of natural gas and other American energy resources that will reduce emissions but also reduce the price of energy and increase their economic output.
- Eliminate all barriers responsible for energy production, creating at least a half million jobs a year, \$30 billion in higher wages, and cheaper energy.

Powering Everyone

Steve Bolze, the president and CEO of GE Power and a senior vice-president of GE, was kind enough to send me New Year greetings with kind words: "Thank you for all you have done this year to bring electricity to the world. Looking forward to more opportuni-

ties to power the world together in 2017.” I am really very pleased with the theme.

Their project stems from their objective: “This season, we’re celebrating making the world brighter—one village at a time.” To meet this objective and make it a reality, GE Power is collaborating with Global Himalayan Expedition (GHE) to bring electricity to several remote villages in the Ladakh region of North India. GE employees are volunteering to trek to these villages to provide light where none existed before. I appreciate their wonderful efforts and thank them again for their generosity.

GE AT WE WEEK

It was a pleasure hearing from Mr. Ayed Abdelfattah, the executive sales vice-president in the Gulf region for GE, as a keynote speaker at our second Annual Water and Energy Congress Week (WE Week). During his speech, he highlighted GE’s most efficient turbines in the world. During our speed network session, I had the chance to talk to Dr. Dalya Al Muthanna, president and CEO of GE in the Gulf region, who shared insights about the world’s most efficient combined-cycle power plant in France. The subject was so interesting that I googled it right after the closing session of the program, and I came to know that GE has been recognized in Guinness World Records for powering the world’s most efficient combined-cycle power plant based on the HA turbine, which has achieved an efficiency rate of up to 62 percent at the Bouchain plant in France. Thus, it represents a new era of power generation technology and digital integration.

While receiving the prestigious award, Steve Bolze, president and CEO of GE Power, commented, “We are thrilled to be acknowl-

edged by Guinness World Records for powering the world's most efficient combined-cycle power plant, and we are also very proud of the industry-leading flexibility and reliability this turbine provides to our customers. We look forward to continuing to work with EDF and providing services to ensure the ongoing high performance of the Bouchain plant in the years to come."

This innovative effort has surely raised awareness of using renewable energy to protect the environment. Bravo, GE.

Breakthrough Energy Ventures

Bill Gates, a billionaire philanthropist and investor, launched a \$1 billion fund called Breakthrough Energy Ventures (BEV) on December 11, 2016, as a spin-off from the Breakthrough Energy Coalition that was launched by Gates 12 months earlier to BEV, with a view to increasing investment in early-stage cleantech research.

In a post on his Gates Notes blog, Gates said that the fund will invest in scientific breakthroughs that have the potential to deliver cheap, reliable, and clean energy to the world. We need affordable and reliable energy that does not emit greenhouse gas to power the future; and to get it, we need a different model for investing in good ideas and moving them from the lab to the market.

By the middle of this century, the world will use twice as much energy as we use today. There is good news in this: more energy means better lives and stronger economies. However, it also means the world needs a new energy supply—one that does not contribute to climate change. Climate change is a serious threat, especially in the poorest parts of the world.

As reported in *Forbes* magazine, Gates has gathered a group of about 20 like-minded investors, including Silicon Valley venture capitalists John Doerr and Vinod Khosla, former hedge fund manager John Arnold, Amazon.com CEO Jeff Bezos, Bloomberg LP founder and former New York City mayor Mike Bloomberg, Alibaba founder Jack Ma, and a handful others, to join him in the fund. The group has spelled out five “grand challenges” which it says are the biggest contributors to greenhouse gas emissions around the world:

- *Electricity*: How can we deliver reliable, affordable zero-carbon electricity to the world?
- *Buildings*: How can we eliminate emissions from our homes, offices, hospitals, and schools?
- *Manufacturing*: How can we make everything we use without emitting greenhouse gases?
- *Transportation*: How can we get around our communities and the world without emitting carbon?
- *Food*: How can we feed the planet without contributing to climate change??

I truly admire the efforts of the people who are engaged in BEV’s commitment to excellence in energy. You have done such a great job! Keep it up.

LEAP

During my continuous research on energy consumption, I came across a very interesting term called LEAP (Long-Range Energy Alternatives Planning System) developed by Dr. Charles Heaps at the Stockholm Environment Institute. LEAP is a widely used soft-

ware tool for energy policy analysis and climate change mitigation assessment.

During my continuous research on energy consumption, I came across a very interesting term called LEAP (Long-Range Energy Alternatives Planning System) developed by Dr. Charles Heaps at the Stockholm Environment Institute. LEAP is a widely-used software tool for energy policy analysis and climate change mitigation assessment.

The tool has been adopted by hundreds of organizations in more than 150 countries worldwide. Its users include government agencies, academics, non-governmental organizations, consulting companies, and energy utilities. It has been used at many different scales, ranging from cities and states to national, regional, and global applications. LEAP is fast becoming the *de facto* standard for countries undertaking integrated resource planning and greenhouse gas mitigation assessments, which has generated an interest to learn more about its function and uses. Through my research, I got to know that LEAP is an integrated modeling tool that can be used to track energy consumption, production, and resource extraction in all sectors of an economy. It can be used to account for both energy sector and non-energy sector greenhouse gas (GHG) emission sources and sinks. In addition to tracking GHGs, LEAP can also be used to analyze the emissions of local and regional air pollutants, thus making it well suited for studies of the climate co-benefits of local air pollution reduction.

TED: The Technology and Environmental Database

Analysts often need ready access to comprehensive and up-to-date data describing energy technologies. Such data are spread across

a range of sources, which are not easily accessible, particularly to analysts in developing countries. To address this problem, LEAP includes a Technology and Environmental Database (TED) that describes the technical characteristics, costs, and environmental impacts of a range of energy technologies, including existing technologies, current best practices, and next-generation devices.

TED includes data on hundreds of technologies and referencing reports from dozens of institutions, including the Intergovernmental Panel on Climate Change (IPCC), the US Department of Energy, and the International Energy Agency. In addition to its quantitative data, TED also includes qualitative information pages that review the availability, appropriateness, cost-effectiveness, and key environmental issues for a wide range of energy technologies. TED's own core database of emission factors can be edited or supplemented by a user's own data. Emission factors and other information from TED can be automatically incorporated into LEAP analyzes, thus making it easy to create emission scenarios based on LEAP's energy scenarios and the emission factors in TED.

Waste-to-Energy Plant

On May 25, 2017, I signed a waste supply and power purchase agreement with the first waste-to-energy plant in the UAE. The project is located in Sharjah; it is a multifuel waste-to-energy facility which will treat, within its first phase, more than 300,000 tonnes of municipal solid waste each year and have a power capacity of around 30 megawatts.

Salim Al Owais, chairman of Bee'ah, said, "As we announce this state-of-the-art facility, it is no exaggeration to say that this is a his-

toric day, not only for Bee'ah and Masdar, but for the whole of the UAE. Together with our strategic partner Masdar, we have set the ambitious goal of making the UAE a beacon for best environmental practices in the Middle East.”

The new waste-to-energy plant has been designed to meet the strictest environmental standards, complying with the European Union's best available techniques, which are widely recognized as setting the worldwide standard. Its construction and the ratification of these agreements will serve to raise the UAE's profile as a world leader in sustainability and green technology, harnessing best practices and deploying them for the benefit of its citizens and that of the world.

Young Future Energy Leaders

The Young Future Energy Leaders (YFEL) program is a unique initiative led by Masdar Institute that helps mentor future leaders in the fields of renewable energy and sustainability by engaging them with the leaders of today. The program is a key element of the annual Abu Dhabi Sustainability Week (ADSW) and its central event, the World Future Energy Summit (WFES), addresses the interconnected challenges that affect the widespread acceleration and adoption of sustainable development and clean energy.

YFEL offers young professionals and students from the UAE and abroad an opportunity to become more engaged in finding solutions to the world's biggest challenges, including energy efficiency and climate change.

During the annual WFES, some of the world's brightest students and young professionals aged between 20 to 25 years, and fulfilling

other eligibility criteria to participate in the YFEL program, actively engage in debates and discussions about the future of energy and seek sustainable solutions to the challenges.

Today's Potential, Tomorrow's Energy

Bloomberg New Energy Finance (BNEF) has been a pioneer in the clean energy community since 2004. It is a research organization that helps energy professionals generate opportunities to navigate the energy transition. BNEF has contributed to discussions on the future of energy for more than 10 years. Leveraging the most sophisticated new energy data sets in the world, BNEF synthesizes proprietary data into clear narratives that frame the financial, economic, and policy implications of emerging energy technologies.

BNEFinance is available online, on mobile phone, and on the terminal. With the vision of “today’s potential, tomorrow’s energy”, BNEF’s premium research, long-term forecasts, and in-depth analysis cover the entire spectrum of energy technologies and sectors, including renewable energy, power and utilities, energy smart technologies and storage, transport, gas, carbon markets, and climate negotiations. Their wide spectrum of service towards energy transformation really proves what they believe in—“today’s potential, tomorrow’s energy.”



Richard Rogers

ENVIRONMENT AND NATURAL RESOURCE SECURITY

One of the world leaders I admire is His Excellency Dr. Mahathir Mohamad, the fourth prime minister of Malaysia, for his great efforts in creating a better world and his contributions toward preserving the environment and maintaining the greenery and landscape of Malaysia for so many years. I was overwhelmed when I was recognized and appreciated by him back in 2011 as an environmentalist during the GCC Malaysia trade summit in Kuala Lumpur.

Why Countries Go Green

In my recent official visit to Singapore, I had the chance of going around the city and seeing the great effort undertaken by the officials to find the right balance between city development and environmental conservation. It is a story that deserves to be shared.

The land-scarce Garden City, Singapore, is indeed fortunate to have many green spaces where people can come close to nature and soak up its beauty and tranquillity. This has not come about by chance. The continued enjoyment of nature in the midst of urban living is made possible by the intelligent and creative management and pres-

ervation of the precious natural heritage by the National Parks Board and the efforts of many nature champions in the community who care for the environment; one of them is HSBC, who joined in the collective effort of caring for the environment and promoting nature awareness and conservation in Pulau Ubin Island.

Their sponsorship, as well as their other facilities on Pulau Ubin, is their expression of commitment to efforts to conserve Pulau Ubin and, in particular, Chek Jawa for the benefit of the future generation.

What Drives Companies to Go Green?

Companies these days are promoting the “go green” theory because of the direct pressures from the natural world, such as water crisis, climate change, and many more. Increases in resource costs and the government’s tightening of standards are changing the strategic priorities of the people. A growing number of stakeholders, communities, employees, and customers care about climate change and other environmental problems. The following are some interesting stories.

SONY’S VERY EXPENSIVE CHRISTMAS

One of the old stories I remember is the “Sony PlayStation story” of Christmas 2001 when the Dutch government blocked PlayStation from being sold in the country. The media reported, “Christmas 2001 was very expensive as the Dutch government blocked 1.3 million boxes of the PlayStation console because the toxic element cadmium was found in the cables of the game controllers. In light of this, Sony rushed for replacements, and an 18-month search, which included 6,000 factories, resulted in a new supplier management system. The total cost of this problem was around \$130 million. This was a huge amount and became an expensive Christmas celebration for Sony.”

AUDI RECALLS CERTAIN DIESEL-DRIVEN CARS TO REDUCE EMISSIONS

July 21, 2017, many news agencies like—Business Live, and Express; stated that the German luxury car maker Audi, a Volkswagen subsidiary, issued a voluntary recall of up to 850,000 diesel vehicles with the aim to reduce engine emissions.

Vehicles with certain engines were to receive a free software upgrade that “will further improve their emissions in real driving conditions beyond the current legal requirements,” Audi added.

The recall affected cars fitted with six- and eight-cylinder diesel motors meeting the Euro 5 and 6 emission criteria, including some from the parent Volkswagen and the sister firm Porsche, which are fitted with Audi engines. It developed the offer “in close cooperation” with Germany’s Federal Motor Transport Authority, or KBA, it added.

Audi’s recall came days after Mercedes-Benz and Smart maker Daimler issuing a voluntary recall of more than 3 million diesel vehicles in Europe.

Pressure on car manufacturers in Germany and elsewhere has been growing steadily since Volkswagen’s admission in 2015 that it installed systems in 11 million diesel-fueled cars worldwide to defeat regulatory emission tests.

PLANT FOR THE PLANET

Yves Rocher is a worldwide cosmetics and beauty brand founded in 1959 by the French entrepreneur Yves Rocher. The company made an appeal to defend biodiversity, working under the campaign headed by the United Nations Environment Program “Plant for the planet 1 billion trees.” Yves Rocher committed to plant 50 million trees between 2010 and 2015. Well, I must say that this was a wonderful approach towards a sustainable environment and a better planet to live in.

APPLYING A GREEN LENS

Many global research studies conducted by reputed R&D centers found out that applying a green lens reduces the energy consumption of direct operations by 20 percent; it reduces CO₂ emissions by 20 percent, reduces waste output by 20 percent, and reduces water consumption by 10 percent.

DELL STRATEGIES

Dell has a very good strategy for its Software and Environmental Cleanup Project. For roughly \$25 per piece, Dell will come to you to take your used computers away. There are a few wonderful steps that they take. First is the “destructive data overwrite,” which they do to eliminate all digital information on the computer, and then they dismantle the machine.

Dell refurbishes and reuses some parts and recycles the plastics. In the end, just 1 percent of the old computer’s volume goes to the landfill. WOW! This is a truly effective strategy that other computer manufacturers can follow. So far, I recognize that if you value green strategies, it will have a positive impact on your *efficiency and profitability*! Let me share one of my recent green strategies with you:

SEWA GREEN BILL

SEWA is continuously upgrading its services to increase efficiency and customer satisfaction. Starting on January 1, 2017, SEWA stopped sending paper bills, issuing electronic ones (via SMS and e-mail) instead with the slogan “My bill is environmentally friendly,” which aims to push forward the UAE’s development in digital transformation to provide easier services in line with international standards. Also, the SEWA Green Bill intends to achieve sustainable development for future generations.

Currently, SEWA has 450,000 customers, which means that 450,000 pieces of paper are used for printing utility bills every month. As a result, the organization decided to stop sending paper bills and move to digitization. Seeing such an excessive use of paper every month, SEWA also decided to give back to the environment by planting 600 *Prosopis cineraria* trees across Sharjah.

Prosopis cineraria trees (or *ghaf* in Arabic) were chosen as it is an important part of the heritage of the UAE. The trees were used as a source of food, as well as to feed and give shade to animals during hot summer days. The ghaf is one of the most important feed species for desert livestock, contributing a major portion of their feed requirements.

In November 2017, during my monthly progress meeting, I announced that we will create a mini-forest comprising 600 trees to encourage and engage the employees to leave a legacy by planting trees. Each tree will carry the name of the employee who has helped save the environment in one way or other.

GSAS

The Global Sustainability Assessment System (GSAS), originally named as QSAS, is a green building certification system developed for Gulf Cooperation Council countries. This system was announced after QSAS (Qatar Sustainability Assessment System) was accepted by a number of GCC countries. Hence, the local system of QSAS was expanded to a regional scale and renamed GSAS.

GSAS was established in 2009 as a nonprofit organization by the Gulf Organization for Research and Development (GORD) in collaboration with the University of Pennsylvania in the USA. The

system considered well-known international green building codes, applied expert composition, and made some modifications to suit the Gulf Cooperation Council countries' climate and traditions. Subsequently, the system was recently adopted by the State of Kuwait and the Saudi Green Building Council.

Some of the good goals GASA is working hard to achieve are to lower operating costs, increase asset value, reduce waste sent to landfills, conserve energy and water, and promote a healthier and safer environment for occupants.

GORD Institute's Center of Excellence runs multidisciplinary scientific research programs through its own resources as well as its partnerships with local and international institutions. The aim is to foster innovation, advance knowledge, share experiences, and build networks to enhance the sustainable built environment.

GORD Institute's research activities are inspired by the development of GSAS. The themes of research projects include carbon and climate change; eco-materials; energy efficiency; environmental sciences; heating, ventilation, and air conditioning (HVAC) solutions; renewable energy, and water resources and technologies.

Eco Solutions

This is one of the good programs CNN produces, encouraging individuals and organizations worldwide to protect the environment and be engaged. According to a recent CNN report, almost 7.5 billion people share our planet, so it is time to think about how to deal with environmental challenges. One of the companies that CNN is featuring very frequently regarding this issue is Eco Solutions. Every month, the company meets the people who are looking for solutions to some of our green problems. While browsing the CNN website, I

found a number of pressing topics that Eco Solutions is dealing with, such as Why is the meat key in the climate change fight? Should I drink bottled water? Can a country run entirely on renewable energy?

ECO SOLUTIONS | HP ENVIRONMENT

HP produces low-carbon solutions and energy-efficient products, using safer materials and greener packaging to lower customers' environmental footprints. HP's design leadership and technical innovations in reducing the environmental impact of technology have been widely recognized.

Suzlon

Established in 1995, Suzlon Energy Ltd. is present in 19 countries across six continents. They are one of the leading renewable energy solution providers in the world and have installed around 15.5 GW of wind energy capacity globally. With a support network of over 8,000 employees of diverse nationalities, they house one of the largest in-house research and development setups with facilities in Germany, the Netherlands, Denmark, and India.

Suzlon Group is embarking on a global multiplatform sponsorship of Eco Solutions. "Delivering global insights into smart ecological innovations, Eco Solutions is an ideal property to align with Suzlon Group to raise awareness of its brand and core business activities amongst an engaged and relevant global audience. This campaign is specifically designed for Suzlon Group to harness both the scale and precise targeting of CNN's TV and digital platforms to reach the affluent CNN audience of business decision makers, policy makers, and C-suites," said Sunita Rajan, AdSales vice president, Asia-Pacific, CNN International.

I thank them for being so innovative in their ideas. I am sure this will bring massive changes in people's perception of the green planet.

Environment Public Authority, Kuwait

The Environment Public Authority in Kuwait has launched its electronic site, which aims to promote cooperation among organizations (the public and the private sector, as well as individuals: citizens, expats, business people, visitors). It also aims to provide efficient electronic services that are compatible with daily life requirements.

The Environment Public Authority is a public judicial authority and has an allocated budget for the general control of environment affairs in the state, and is affiliated with the council of ministers under the supervision of the Supreme Council for Environment.

The authority is concerned with undertaking all works and tasks to protect the environment in the country, especially the following:

- Setting and applying the general policy in the state and setting strategies and work plans to protect the environment, preserve the natural resources and natural systems, and achieve permanent development objectives, including the scientific, environmental, and health standard proper for man's living and for industrial and urban expansion and use of natural resources, thereby ensuring the preservation of environmental balance in general.
- Preparing and supervising the execution of comprehensive work plans, including all that is related to environmental protection on the short- and long-term, and for coordinating with concerned authorities in the state in light of the environmental policies.

India's Capital is Choking Under off-the-Charts Smog

One of my friends from Delhi told me about the pollution in the city; it can sometimes appear as if fresh air does not exist there anymore. International news agencies said that India's capital is choking under off-the-charts smog, with some parts of the city reporting pollution levels almost five times higher than what is considered "unhealthy" by the US Environmental Protection Agency.

On November 7, 2016, measurements taken at the US Embassy in Delhi rated the city's air quality index at 999, which is off the standard chart that rates the maximum "hazardous" level at 500.

Delhi's battle against air pollution started in 2001, when India's Supreme Court was appalled by the living conditions in the city. The court ordered public buses, taxis, and auto-rickshaws to switch from diesel power to compressed natural gas. The actions enforced by the Supreme Court, combined with new fuel standards, greatly improved the air quality in the city at that time; but it did not last long because now the trend has been reversed.

New Delhi is a sprawling metropolis, and the lack of efficient public transportation has fueled an explosion of cars. The city has 9 million vehicles, and new cars are being registered at a rate of 1,400 per day. To reduce the pollution, the Delhi government proposed the odd-even rule, wherein cars with odd-numbered registration plates would run on odd dates and those with even-numbered registration plates would do so on even dates. The idea is to reduce both congestion and pollution resulting from vehicular emissions.

Ozone Layer Depletion

The ozone layer, a belt of the naturally-occurring “ozone” gas, is 15 to 30 kilometers above the earth and serves as a shield from the harmful ultraviolet B (UVB) radiation emitted by the sun. Today, there is widespread concern that the ozone layer is deteriorating because of the release of pollution containing the chemicals chlorine and bromine. Such deterioration allows large amounts of ultraviolet B rays to reach the earth, which can cause skin cancer and cataracts in humans as well as causing harm to animals. Many countries are taking steps to control this deterioration and restore the thick protective layer. The Montreal Protocol, which I mention briefly below, is one of the most effective steps taken so far to address this environmental issue.

MONTREAL PROTOCOL

The Montreal Protocol on Substances that Deplete the Ozone Layer was agreed on September 16, 1987, and entered into force on January 1, 1989. It aims to reduce the production and consumption of ozone-depleting substances in order to reduce their abundance in the atmosphere, and thereby protect the earth’s fragile ozone layer. Because of its widespread adoption and implementation, it is often called the most successful international environmental agreement to date. Kofi Annan, a Ghanaian diplomat who served as the seventh secretary-general of the United Nations and a Nobel Prize winner, was quoted as saying that “perhaps the single most successful international agreement to date has been the Montreal Protocol.”

The 2006 scientific evaluation of the effects of the Montreal Protocol states, “The Montreal Protocol is working: there is clear evidence of a decrease in the atmospheric burden of ozone-depleting substances

and some early signs of stratospheric ozone recovery.” According to NASA’s 2001 report, the ozone over Antarctica had remained the same in thickness for the last three years.

The Montreal Protocol is also expected to have an impact on human health. A 2015 report by the US Environmental Protection Agency estimates that the protection of the ozone layer under the treaty will prevent over 280 million cases of skin cancer, 1.5 million skin cancer deaths, and 45 million cataract cases in the United States.

Record-Breaking Environmental Drive

On July 3, 2017, while I was reading news updates, I found some very exciting news from Madhya Pradesh state in India, where about 1.5 million people participated in a huge tree planting campaign and planted more than 66 million trees of 20 different species in just 12 hours along the banks of the river Narmada, which was a record-breaking environmental drive. Under the Paris Agreement, India has actually committed to expand its forests by 5 million hectares before 2030 to combat climate change.

Shivraj Singh Chouhan, the state’s chief minister, described the event as a “historic day.” He said that volunteers, including children and elderly, had planted 66.3 million saplings between 7:00 a.m. and 7:00 p.m. Then, he tweeted, “By planting trees, we are not only serving Madhya Pradesh but also the world at large.”

Tunza Eco-Generation

Samsung Engineering, one of the world’s leading engineering, procurement, construction, and project management (EPC & PM)

companies, established ecogeneration in 1996 as one of the largest environmental education programs for children and youth in Korea.

On September 27, 2011, Samsung Engineering, in cooperation with the United Nations Environment Program (UNEP), made steps to reach an international audience by launching Tunza Eco-generation (tunza.eco-generation.org). The word Tunza means “to treat with care or affection” in Kiswahili (a subregional language in Eastern Africa). The overall Tunza Concept, therefore, is built around this theme.

Tunza Eco-generation is a new interactive environmental website that serves as a platform for educating the community about the environment and creating eco-friendly initiatives. It is a dynamic social networking platform offering a range of possibilities for engaging children, their chaperones, and youth and sports organizations to advance their awareness, role, and commitment to environmental conservation and protection. The platform offers to enhance and facilitate information exchange, communication, and resource-sharing through the Internet, e-learning, videos, and other new technologies.

The Emirates Environmental Group (EEG)

EEG is a non-governmental professional working group founded in 1991 in Dubai, UAE. EEG is composed of corporate members, federal and local government agencies, reputable regional and international institutions, universities, colleges, and schools, as well as students, individuals, and families. With more than 2,000 volunteers from across the UAE, EEG is considered one of the most active environmental NGOs in the region. It is the first environmental NGO in the world to be ISO 14001 certified and has accredited status with the United Nations Convention to Combating Desertification (UNCCD) and UNEP.

The overall objective of EEG is to positively contribute to the advancement of sustainable development in the UAE by acting as a focal point for people of all nationalities and ages concerned with environmental protection and responsible waste management.

Since the 2000s, Nokia has teamed up with EEG to recycle mobile phones as they contain harmful materials like plastic, copper, and aluminium. The mobile phones collected by EEG are sent to Nokia factories so that they can be recycled to make new phones. Great effort!



11 CLIMATE CHANGE



"Climate change does not respect border; it does not respect who you are-rich and poor; small and big. Therefore, this is what we call "global challenges," which require global solidarity."

Ban Ki-moon

CLIMATE CHANGE

Growing Pains

Over the past few decades, we have raised the earth's average temperature by 0.75°C , causing heat waves, droughts, wildfires, storms, and so on, which have killed tens of thousands of people and caused damages amounting to hundreds of billions of dollars. During these times of vulnerability, many organizations are taking measures to overcome the challenges.

IRMA, MARIA

The Homeless Plunged into Darkness Puerto Rico

The hurricane season has been punishing Puerto Rico, a Caribbean island with 3.4 million people and an unincorporated US territory. First, on September 7, 2017, Hurricane Irma, a huge category 5 storm, carved a merciless path of destruction, ravaging several Caribbean islands, killing at least 12 people, leaving thousands of others homeless, and plunging more than 1 million Puerto Ricans into darkness. People had not yet recovered from Irma when on September 20, 2017, Hurricane Maria, a powerful category 4 hurricane with a wind speed of 150 mph, made a direct landfall on Puerto Rico, ravaging the entire island and flooding it with several feet of

rainfall. What happened was truly catastrophic for Puerto Rico. According to CNN's September 28, 2017 report, Maria killed 16 people in Puerto Rico, 27 in the island nation of Dominica, and 1 in the US Virgin Islands.

As Puerto Rico tries to recover from the disasters, there are signs that aid from the US mainland is not reaching the people most in need, and responses are lackluster. In many places, there is still no water for drinking or bathing or flushing the toilet. There are limited food and cell services, and dozens of remote villages have been completely cut off for weeks. Carmen Yulín Cruz, the mayor of San Juan, tweeted on October 12, 2017: "Help us. Without robust and consistent help, we will die."

This is a terrible disaster that requires a better-coordinated response to help Puerto Rico recover from the devastation.

United Nations Association – UK

The United Nations Association – UK (UNA-UK) is the UK's leading source of independent analysis in the UN. It is a vibrant grassroots movement that works for a safer, fairer, and more sustainable world.

Founded in 1945, the UN reflects people's hopes for a better future, and since then, UNA-UK has enabled ordinary people to come forward and engage the organization's promises and influence decision-makers to support its goals. Thanks to the organization, millions of people now live safer and healthier lives, however, many have been left behind, and many of them need to be saved from their sufferings and experience a better life. Far too many people still die every year from violence, disasters, and deprivation.

Climate change highlights the need for international cooperation. Its global impacts require global action. To date, a robust treaty on climate change has been elusive.

UNA-UK serves as a bridge between governments, the UN, and the public. They lobby for joint efforts on peace, development, and human rights, and support action on climate change. They work with experts and practitioners to find new ways of dealing with the challenges we face. Through education and training, they prepare young people to play a role in international affairs. And by showing why the UN matters, UNA-UK encourages people to fulfil their responsibilities as global citizens. Their members and supporters multiply these efforts at the local and international level. Together, they form a critical mass of support for a strong, credible, and effective United Nations.

COP21

Conference of Parties, or COP 21, an international political response to climate change, was initiated at the Rio Earth Summit in 1992; the Rio Convention included the adoption of the UN Framework Convention on Climate Change (UNFCCC). This convention set out a framework for an action aimed at stabilizing the atmospheric concentrations of greenhouse gases (GHGs) to avoid “dangerous anthropogenic interference with the climate system.” The UNFCCC, which entered into force on March 21, 1994, now has a near-universal membership of 195 parties. The COP 21 government commitments and strategies require international, regional, and national cooperation between governments, businesses, the civil society, organizations, and households.

Paris Agreement: Climate 2020

A publication called *Climate 2020* by UNA-UK provides analysis and recommendations on fulfilling the Paris Agreement on climate change.

The Paris Agreement is an agreement within the United Nations Framework Convention on Climate Change (UNFCCC). Beginning in 2020, it was adopted by consensus on December 12, 2015. The agreement, for the first time, brings all nations into a common cause to make ambitious efforts to combat climate change and adapt to its effects with enhanced support to assist developing countries in doing so. As such, it charts a new course in the global climate effort. As of June 2017, the Paris Agreement remains a historic treaty signed by 195 parties and ratified by 146 countries, in addition to the European Union.

The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping the global rise in temperature this century well below 2°C and to pursue efforts that would limit the temperature increase even further to 1.5°C. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals, appropriate financial flows, a new technological framework, and an enhanced capacity building framework are planned to be put in place, thus supporting the action of developing countries and the most vulnerable countries in line with their respective national objectives.

WITHDRAWAL FROM THE AGREEMENT

At a time when the earth requires strict and effective action to solve the problems caused by abrupt climate change, on June 1, 2017, US

President Donald Trump announced that the United States would withdraw from the agreement, causing widespread condemnation in the European Union and many sectors in the United States. Article 28 of the agreement states the following:

1. At any time after three years from the date on which this Agreement has entered into force for a Party, that Party may withdraw from this Agreement by giving written notification to the Depositary.
2. Any such withdrawal shall take effect upon expiry of one year from the date of receipt by the Depositary of the notification of withdrawal, or on such later date as may be specified in the notification of withdrawal.

The agreement entered into force in the United States on November, 4, 2016, which means that the earliest possible effective withdrawal date for the United States is November 4, 2020, four years after the agreement came into effect in the United States. On Friday, August 4, 2017, the Trump administration delivered an official notice to the United Nations that the United States intended to withdraw from the Paris Agreement; however, the United States cannot formally notify the United Nations that it is withdrawing until 2019. As a result, that Friday's notice was largely a symbolic statement with no legal weight.

EXXONMOBIL ON CLIMATE CHANGE TO PRESIDENT TRUMP

On March 28, 2017, while reading the *Financial Times*, on the Emirates airline on my trip back to Sharjah from Johannesburg, South Africa, where I attended the Power and Electricity World Africa Summit, I came across the news about President Trump on the Paris climate change agreement, who has been making headlines since

day one of his presidency. ExxonMobil, the largest publicly-traded oil and gas company, is urging the White House to stick with the global climate agreement reached in Paris in 2016.

In a letter sent to the White House on March 22, 2017, days before President Donald Trump signed an executive order rolling back Barack Obama's climate legacy, Exxon told the administration that the Paris Agreement was an "effective framework for addressing the risks of climate change" and that the United States was "well positioned to compete."

In its letter, Exxon argues that there are several reasons why the United States should stay in the Paris accord, including the opportunity to support the greater use of natural gas, which creates lower carbon dioxide emissions than coal when burnt for power generation. Investing in the age of climate change, Exxon's manager for environmental policy and planning writes this in the letter: "It is prudent that the United States remain a party to the Paris Agreement to ensure a level playing field, so that global energy markets remain as free and competitive as possible."

UAE Minister of Climate Change and Environment

If I focused on the entire history of the United Arab Emirates, I would find that the environment has been a priority concern in this country. Strong institutional mechanisms to enhance environmental protection have been followed from the start. The founding of the Supreme Committee for Environment in 1975, the Federal Authority for Environment in 1993, and the Ministry of Environment and Water in 2006 reflect the increasing concern placed on environmental issues. The next step in dealing with environmental issues was taken by the UAE leadership in February 2016; that is, they expanded the role of

the Ministry of Environment and Water by establishing the Ministry of Climate Change and Environment, which has been an important milestone with the objective of managing all aspects related to international and domestic climate change affairs. His Excellency Dr. Thani Ahmed Al Zeyoudi was appointed as the minister of climate change and environment for the United Arab Emirates in February 2016. Dr. Al Zeyoudi is also the UAE's permanent representative to the International Renewable Energy Agency (IRENA) and was the director of the Department of Energy and Climate Change (DECC) within the Ministry of Foreign Affairs in 2015.

The establishment of the new ministry enhances the UAE's efforts to address the issue of climate change through the implementation of comprehensive policies and initiatives to mitigate and adapt to climate change and protect our unique environmental systems. I really appreciate the steps taken towards tackling environment and climate change issues. Bravo!

UAE SIGNS PARIS AGREEMENT

On April 23, 2016, according to Emirates News Agency, or WAM, the UAE joined over 174 countries in signing the Paris Climate Agreement during the high-level signing ceremony, convened by the United Nations' Secretary-General Ban Ki-moon in New York. The ceremony marked the first step in implementing the Paris Agreement, which was adopted in December 2015.

Dr. Al Zeyoudi, minister of climate change and environment, signed on behalf of the UAE government and said, "The UAE is proud to be here today to send a united message to the world. We will make the Paris Agreement work, and we will work individually and collectively to find the best courses of climate action."

During his statement at the signing ceremony, Dr. Al Zeyoudi outlined the voluntary steps that the UAE is taking to diversify its economy into knowledge-driven industries, particularly through the UAE Vision 2021, that is, its green growth strategy and innovation strategy. “These comprehensive strategies and plans will not only yield emission reduction benefits, but they will also help safeguard our economy for future generations.”

Dr. Al Zeyoudi also emphasized that the country’s strategies aimed at protecting its unique environmental resources, especially with regard to water and marine environment conservation.

On the margins of the signing ceremony, the UAE and the Kingdom of Morocco signed a memorandum of understanding (MoU) aimed at enhancing cooperation on climate change issues and addressing global sustainability challenges. The MoU builds on the strong bilateral ties with Morocco, which would host the 22nd Session of the Conference of Parties (COP 22) of the UNFCCC, held in Marrakech, Morocco in November 2016.

The UAE delegation also met with their counterparts from Australia, Canada, France, Madagascar, Maldives, the Philippines, and the Kingdom of Morocco to discuss areas of cooperation in the context of climate change and the environment.

Dr. Al Zeyoudi also met with the UN secretary-general’s special envoy for cities and climate change, Michael Bloomberg. They discussed what cities could do more to combat climate change. The UAE delegation included Razan Al Mubarak, secretary-general of the environment agency— Abu Dhabi (EAD). Al Mubarak said, “The Environment Agency of Abu Dhabi is committed to play its part and calls for an urgent and multistakeholder approach to climate

change that balances the need to reduce greenhouse gas emissions, decouple carbon dioxide from economic growth, adapt to a changing climate, and engage our community of citizens and residents to do their part in addressing what may be humanity's greatest environmental, societal, and economic challenge. Abu Dhabi has remained steadfast in its commitment to the development of its city and its people, and we remain dedicated to supporting this while protecting and preserving our natural heritage. We will remain an active, collaborative player in providing efficient access to reliable environmental data that will equip decision-makers with information that ensures that responsible, sustainable development is the way of our future."

The signing of the Paris Agreement is a significant step towards the path of ensuring that we see global warming curbed within the critical threshold.

Climate Change: A Deadly Threat

According to Dr. Nasser Saidi, chairman of the Clean Energy Business Council, climate change is a deadly threat to our habitat, animals, and people. According to a study, the current annual emissions of greenhouse gases are about 50 billion tonnes of carbon dioxide equivalent, compared with about 41 billion tonnes in 2005. An Intergovernmental Panel on Climate Change report has warned that the world is in a situation that could, if left rampant, deliver a global average temperature rise of 4°C or more by the end of the century. This is a condition that has not existed on earth for millions of years! We are also in the anthropogenic age, where human activities have a powerful effect on the global environment.

Decarbonization Strategies

- The GCC and other countries from the region have committed to renewable energy initiatives—be they the UAE’s target to generate 24 percent of its electricity from clean energy sources by 2021 or Morocco’s renewable energy target of 52 percent by 2030. These ambitious objectives need implementation through decarbonization strategies and objectives that require close partnership with the private sector.
- STRATEGY 1 starts with removing fossil fuel, water, electricity, and related subsidies so that the pricing of such resources and services reflects true economic costs and accounts for externalities. This would improve energy efficiency in all sectors and generate substantial environmental and health benefits.
- STRATEGY 2 focuses on the imposition of carbon taxes, rather than emission trading schemes. Businesses and households respond to price as well as nonprice incentives and “nudges.” Carbon taxes are taxes based on emissions generated from burning fuels. Introducing carbon taxes would shift the energy mix towards renewables, reduce fuel consumption, increase fuel efficiency, and sharply reduce the carbon emissions that are causing global warming. A carbon tax creates incentives for energy consumers (both businesses and households) to use cleaner fuels and adopt new clean technologies, thereby reducing the amount they pay in carbon tax. For businesses, investors, entrepreneurs, and researchers, carbon taxes would encourage investment and research and development in renewables and cleantech. For the GCC, the institution of a carbon tax would also generate substantial revenues for governments, increase energy efficiency,

and drive decarbonization strategies. Revenues could range from as low as US\$11 billion in Kuwait to as high as US\$80 billion in Saudi Arabia (depending on the tax, consumption, demand elasticity, and current price of gasoline). In essence, carbon taxes could raise substantially more revenue than current value-added tax proposals.

- **STRATEGY 3** comprises overarching climate change legal and regulatory frameworks to support implementation. Institutional frameworks are important because they imply widespread political commitment and support of climate change policies and investments. None of the countries in our region have enacted such legislation. The GCC can lead by enacting a climate change framework legislation (laws or regulations with equivalent status) that would serve as a comprehensive, unifying basis for a climate change policy. In this regard, the establishment of climate change ministries (e.g., in the UAE) is a step in the right direction.
- **STRATEGY 4** is decarbonization finance. COP 21 commitments will unleash more than \$16 trillion of investments in renewable energies and clean technologies. Governments need to set up climate funds—using the proceeds of carbon taxes—for renewables and cleantech infrastructures and facilitate the financing of R&D for renewables and investment through financial markets. For businesses and entrepreneurs, the green and clean economy presents an unprecedented opportunity for innovation and productivity-growth-enhancing investments, along with lower energy costs affecting all activities. There is no trade-off between economic growth and decarbonized economies.

International Government Communication Forum 2017

The sixth International Government Communication Forum (IGCF 2017) held at the Expo Centre Sharjah with the theme Societal Participation and Comprehensive Development, concluded its first day, March 22, on a very successful note, with a constructive dialogue, debate, and engagement.

The forum includes a combination of panel discussions, workshops, and interactive dialogue sessions to create maximum engagement and impact for all those attending. High-profile attendees on day one included Al Gore, former vice president of the United States, whom I got the privilege to meet and talk to personally regarding the climate change and global warming threat. It was really an honor to listen to him. As an expert, he weighed in on tangible strategies and solutions that governments, the private sector, and civil society can tap into to achieve long-term welfare, growth, and sustainability to cope with global warming issues. During his speech, Al Gore stated an old African proverb: “If you want to go fast, go alone. If you want to go far, go together.” But he made a good comment by saying that for global warming, we need to go together fast and far at the same time.

One interesting thing happened during Al Gore’s visit to Sharjah: he was given a very warm welcome by the organizers, and when he was just about to board the car to his place, he asked if the car was running on fossil fuel. To his surprise, the answer was yes. So he refused to take the car and said, “I am one of the global warming champions, and it wouldn’t be good to use a conventional-fuel-driven car.” So, he kindly requested an electric car. Although surprised, the organizer was able to find him an electric car.

Al Gore has been running a non-profit organization since 2005, the Climate Reality Project (formerly the Alliance for Climate Protection), which is devoted to solving the climate crisis. Through grassroots leadership trainings, global media events, digital communications, and issue campaigns, the organization works to spread the truth and raise awareness about the climate crisis, the ongoing dangers posed by global warming pollution, and solutions to climate change. Al Gore spends the majority of his time as Chairman of The Climate Reality Project, a nonprofit focused on finding solutions to the climate crisis. He was referred to by Time magazine as “a businessman who is out to change the world.”

Climate Neutral Now

Climate Neutral Now is an initiative taken by the UN on September 22, 2015, and is now a part of the UNFCCC. You may wonder what it means to be climate neutral. Climate neutrality is achieved by balancing the amount of emissions your organization generates against the same amount being reduced. Climate neutrality is not necessarily about zero emissions. Instead, it is about reducing current emissions to the point where we reach a balance between our emissions and the absorptive capacity of the earth.

The United Nations Climate Change urges businesses, governments, and individuals to take the Climate Neutral Now Pledge, a commitment to measure their climate footprints, reduce their greenhouse gas emissions as much as possible, and offset remaining emissions through a simple UN Certified Emission Reductions (units created from a clean development mechanism for greenhouse gas emission reductions) through an online portal, which makes it easy for anyone

to quickly select from a range of UN-verified emission reductions for offsetting.

As the world came together to sign the Paris Agreement in December 2015, all of us have a role to play in rapidly moving the planet towards a path that keeps the global temperature rise to well below 2°C. To make this a reality, Climate Neutral Now is the right platform, contributing to sustainable development in the developing world as well as reducing global emissions.

Mars Chief Calls for Greater Climate Change Fight

Do you like chocolates? Well, most kids and adults do love chocolates. I would like to share something that got my attention while reading my morning newspaper *Financial Times*, on September 6, 2017. Grant Reid, chief executive of Mars, the world's largest chocolate maker—the maker of Snickers, Twix, and M&M's—is urging companies to step up their efforts to tackle climate change, warning that current plans are “nowhere near” enough to meet targets set by the Paris accord. Reid said, “Most scientists are saying there's less than a 5 percent chance we will hit the Paris Agreement goals . . . which is catastrophic for the planet.” Mars has pledged to invest \$1 billion over the next few years in renewable energy, such as wind farms, and other programs as part of a “call to action” for companies to step up efforts in reducing emissions, said Reid. Mars, a 106-year-old company, employs 80,000 people globally and makes about \$35 billion in annual sales. The company says it will cut greenhouse gas emissions by 27 percent by 2025 and 67 percent by 2050, as it invests in windmills to power its operations. Currently, wind farms in Texas and Scotland generate enough power to cover the electricity

for Mars operations in the United States and the UK. As part of this investment, Mars says it will add wind and solar-powered farms to cover electricity for another nine countries by 2018. The destruction caused by the recent superstorm Harvey in large parts of Texas and the Gulf Coast serves as a “wake-up call,” said Mr. Reid.



12 FINANCIAL AND ECONOMIC CRISES



"As we go through the recent 2008–2009 financial crisis, we can see only the “shadows” of the truth. The truth is hidden deep inside the crisis itself. It is a dead-end road for anyone who seeks an understanding of what happened."

Dr. Rashid Alleem

FINANCIAL AND ECONOMIC CRISES

Change the Way You Think

In one of my interviews during the 2008–2009 meltdown, I was quoted as saying, “The new economy doesn’t require you to just try harder, work smarter, sell more, or work longer hours. It requires you to change the way you think and the way you work. Across your organization, all leaders must demonstrate rock-solid integrity, maintain personal credibility, and possess the ability to confront reality. In short, rethink your thinking—rework your work.”

Regarding the subject of the 2008–2009 financial and economic crisis, I must say that one “soft” reason for its occurrence comprised serious ethical failures. Issues of this kind can be controlled and overcome using good authentic leadership and quality directorial skills.

The Financial Crisis Inquiry Report

In my office library, there is an important book titled “The Financial Crisis Inquiry Report.” It discusses the final report of the National Commission on the Causes of the Financial and Economic Crises in the United States. Its aim was to “examine the domestic and global

causes of the financial crisis of 2007–2010 in the United States.” The Commission was established as part of the Fraud Enforcement and Recovery Act (Public Law 111-21) that Congress passed and the President signed in May 2009. It is a definitive report on what caused America’s economic meltdown and who was responsible.

The financial and economic crisis has touched the lives of millions of Americans who have lost their jobs and homes, but many have little understanding of how it happened. Now readers can get the facts from this very accessible report.

The Financial Crisis Inquiry Commission (FCIC) is a panel of 10 commissioners with experience in business, regulations, economics, and housing whom Congress chose to explain what had happened and why it had happened. The Democratic leadership of Congress appointed six members of the Commission, with the Republican leadership appointing four of them. This panel had subpoena powers that enabled them to interview people and examine documents that no reporter had access to.

The FCIC has reviewed millions of pages of documents and interviewed more than 600 leaders, experts, and participants in the financial markets and government regulatory agencies, as well as individuals and businesses that the crisis affected. In the tradition of the 9/11 Commission Report, the Financial Crisis Inquiry Report is a comprehensive book for the lay reader, complete with a glossary, charts, easy-to-read diagrams, and a timeline that includes important events. These comprise:

- Fraud and abuse in the financial sector, including fraud and abuse directed at consumers in the mortgage sector;
- Federal and State financial regulators, including the extent to

which they enforced or failed to enforce statutory, regulatory, or supervisory requirements;

- The global imbalance of the savings, international capital flows, and fiscal imbalances of various governments;
- Monetary policy and the availability and terms of credit;
- Accounting practices, including mark-to-market and fair value rules and the treatment of off-balance-sheet vehicles;
- The tax treatment of financial products and investments;
- Capital requirements and regulations on leverage and liquidity, including the capital structures of regulated and non-regulated financial entities;
- Credit rating agencies in the financial system, including financial institutions' and federal financial regulators' reliance on credit ratings, the use of credit ratings in financial regulation, and the use of credit ratings in the securitization markets;
- Lending practices and securitization, including the originate-to-distribute model for extending credit and transferring risk;
- Affiliations between insured depository institutions and securities, insurance, and other types of non-banking companies;
- The concept that certain institutions are "too-big-to-fail" and its impact on market expectations;
- Corporate governance, including the impact of company conversions from partnerships to corporations;
- Compensation structures;

- Changes in compensation for employees of financial companies as compared to compensation for others with similar skill sets in the labor market;
- The legal and regulatory structure of the United States housing market;
- Derivatives and unregulated financial products and practices, including credit default swaps;
- Short selling;
- Financial institution reliance on numerical models, including risk models and credit ratings;
- The legal and regulatory structure governing financial institutions, including the extent to which the structure creates the opportunity for financial institutions to engage in regulatory arbitrage;
- The legal and regulatory structure governing investor and mortgagor protection;
- Financial institutions and government-sponsored enterprises; and
- The quality of the due diligence that financial institutions have undertaken.

THE CONCLUSION

The report makes the following conclusions:

- This financial crisis was avoidable. It was the result of human action and inaction, not Mother Nature or computer models gone

haywire. The captains of finance and the public stewards of the financial system, so essential to the well-being of the American public, ignored the prior warnings and failed to question, understand, and manage the evolving risks.

- Widespread failures in financial regulation and supervision proved devastating to the stability of the nation's financial markets.
- Dramatic failures in corporate governance and risk management at many systemically important financial institutions were a key cause of this crisis.
- A combination of excessive borrowing, risky investments, and lack of transparency put the financial system on a collision course with crisis.
- The government was ill-prepared for the crisis, and its inconsistent response added to the uncertainty and panic in the financial markets.
- There was a systemic breakdown in accountability and ethics.
- Collapsing mortgage-lending standards and the mortgage securitization pipeline, lit and spread the flame of contagion and crisis.
- Over-the-counter derivatives contributed significantly to this crisis.
- The failures of credit rating agencies were essential cogs in the wheel of financial destruction.

Wall Street – “Black Tuesday”

Let's journey back in time for a short while. On Tuesday October 29, 1929, Black Tuesday, the most devastating stock market crash in the history of the United States hit Wall Street. Investors traded some 16 million shares on the New York Stock Exchange in a single day. Billions of dollars were lost. The crisis extended until 1939, thus making it the longest-lasting economic downturn in the history of the Western industrialized world. In the aftermath of the downturn, production declined and unemployment rose, sending America and the rest of the industrialized world into the Great Depression. By 1932, stocks were worth only about 20% of their summer of 1929 value. Not only did the stock market fail, but, by 1933, nearly half of America's banks had also failed and unemployment was approaching 15 million people or 30% of the workforce. The relief measures that the administration of President Franklin D. Roosevelt enacted helped lessen the worst effects of the Great Depression. However, the US economy would not fully turn around until the period after 1939, when World War II (1939– 1945) revitalized the American industry!

The International Financial Institution (IFI)

An international financial institution (IFI) is established (or chartered) by more than one country; hence, it is subject to international law. Its owners or shareholders are generally national governments. The best-known IFIs were established after World War II to assist in the reconstruction of Europe and to provide mechanisms for international cooperation in managing the global financial system. They include the World Bank, the IMF, and the International Finance Corporation.

WHAT DOES AN IFI WORK TO ACCOMPLISH? IT WORKS TO:

- Foster global monetary cooperation,
- Secure financial stability,
- Facilitate international trade,
- Promote high employment and sustainable economic growth, and
- Reduce poverty around the world.

The International Monetary Fund (IMF)

The International Monetary Fund (IMF) is an organization that was established in 1945 and is governed by and accountable to the 189 countries that make up its near-global membership.

HOW DOES IT WORK?

- It tracks global economic trends and performance,
- It alerts its member countries when it sees problems on the horizon,
- It provides a forum for policy dialogue, and
- It passes on know-how regarding tackling economic difficulties to governments.

The World Bank

The World Bank (WB) is an international financial institution that provides loans to developing countries for capital programs. It com-

prises two institutions: the International Bank for Reconstruction and Development (IBRD), which has 189 member countries, and the International Development Association (IDA), which has 173 members. The WB's officially stated goal is the reduction of poverty. It has set two ambitious goals: to reduce extreme poverty to no more than 3% by 2030 and promote shared prosperity and greater equity in the developing world. Furthermore, according to its articles of agreement, a commitment to the promotion of foreign investment and international trade and to the facilitation of capital investment must guide all its decisions.

The IMF and the World Bank

Although the IMF and the WB are different, the two organizations complement each other's work. The IMF's focus chiefly comprises macroeconomic and financial sector issues, while the World Bank is mainly concerned with longer-term development and poverty reduction.

The most important thing to note here is that, to be a member of the World Bank under the IBRD, it is mandatory for a country to be a member of the International Monetary Fund (IMF), and only members of the IBRD are allowed to join other institutions within the Bank (such as the IDA).

RISE WITH THE WORLD BANK

On May 17, 2016, I had the opportunity to meet Mr. Charles J. Cormier, Practice Manager of Energy, Middle East and North Africa Region. In the middle of our conversation, he mentioned RISE, which the World Bank developed. This really got my attention and I was most impressed by the initiative, so I decided to give it my full support.

So, what is RISE? In alignment with the Sustainable Energy for All (SE4ALL) initiative, the World Bank Group has developed “Readiness for Investment in Sustainable Energy” (RISE), which is a set of 27 indicators covering 111 countries and representing 96% of the world population. RISE was established to help compare national policy and regulatory frameworks for sustainable energy. It assesses countries’ policy and regulatory support for each of the three pillars of sustainable energy—access to modern energy, energy efficiency, and renewable energy.

Banks in the UAE

The UAE banking industry is robust in terms of both capital and assets. We all remember the economic recession that hit the world in 2009 and its great impact on the world financial markets. Yet, banks in the UAE were strong enough to withstand that recession. Well, there are two types of banks in the UAE: commercial banks and representative banks. Their main products include personal loans, car loans, credit cards, corporate or business loans, corporate facilities, and fixed deposits.

The UAE Central Bank is entrusted with the task of organizing banks in the upgrading of their management and ensuring their financial soundness. It issues circulars and regulations from time to time to achieve this objective. The Central Bank also continuously studies various ways and means of making the UAE a noted regional financial center.

A representative office undertakes one or more of the following activities:

1. Representing the financial institution licensed to operate inside the country, including making contact with concerned agencies

- on its behalf, as well as promoting its services in the local market;
2. Providing the head office of the licensed financial institution with data relating to economic developments in the country;
 3. Providing customers of the licensed financial institution with information on the local market;
 4. Providing data to the local agency that intends to develop its business in countries where the licensed institution conducts its business;
 5. Providing customers with banking, financial, and investment consultation services.

The representative offices should represent banks or any other financial institutions incorporated outside the country that hold valid licenses obtained from competent authorities. Such banks or financial institutions should also be subject to the direct supervision and examination of the said authorities in the country of origin and/ or the head office as per the laws of the country.

The G20

The G20 (also known as “G-20” or “Group of Twenty”), founded in 1999, is an international forum for the governments and central bank governors of the top 20 major economies. It was founded with the aim of studying, reviewing, and promoting the high-level discussion of policy issues for international financial stability. The foundation addresses issues that go beyond the responsibilities of any single organization. Its members include 19 individual countries—Argentina, Australia, Brazil, Canada, China, France, Germany, India, In-

onesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom, and the United States—along with the European Union (EU). The European Commission and the European Central Bank represent the EU. Collectively, the G20 economies account for around 85% of the gross world product (GWP), 80% of world trade (or, excluding EU intra-trade, 75%), and two-thirds of the world population.

Since 2008, the G20 heads of government have had periodical summits. Moreover, the finance ministers and central bank governors have held separate meetings to organize the leaders' summit and implement their decisions. This has led to the elevation of their stature. The summits were set up in response to both the financial crisis of 2007 and the growing recognition that key emerging countries were not being satisfactorily included in the global economic discussion. The first meeting of the G20 leaders on financial markets and the world economy was held in Washington, D.C., on November 14–15, 2008, at the National Building Museum.

Chinese Stock Market Turbulence

By July 8–9, 2015, the Shanghai stock market had fallen by 30% over three weeks. To prevent further losses, around 1,400 companies filed for a trading halt. The Chinese stock markets continued to drop in value despite the government's efforts to reduce the fall. After three stable weeks, the Shanghai index fell by 8.48% on August 24, marking the largest fall since 2007. It was a “Black Monday” for the Chinese stock market because the bulk of the aftershock occurred around July 27 and August 24, 2015.

On January 4 and 7, 2016, the Chinese stock market experienced a sharp sell-off of about 7% that had a quick effect on stocks glob-

ally. The stock market turbulence continued from January 4 to 15, the market fell by 18%, and the Dow Jones Industrial Average went down by 8.2%.

During the first 15 minutes of the first day of trade on the Chinese stock exchange, the stock market fell by 5% before leading regulators halted trading. It was reopened for another fifteen minutes and stocks fell until trading was again halted.

The Russian Financial Crisis

The collapse of the Russian rouble, which began in the second half of 2014, led to the financial crisis in Russia. A decline in confidence in the Russian economy caused investors to sell off their Russian assets, thus becoming a major reason for the collapse of the Russian rouble and sparking dread of an impending Russian financial crisis.

The lack of confidence in the Russian economy stemmed from at least two major factors. The first was the fall in the price of oil in 2014. Crude oil, a major export of Russia, experienced a decline in price of nearly 50% between the time of its yearly hike (that is, June 2014) and mid-December 2014. The Russian stock market in particular experienced large declines, with a 30% drop in the RTS Index from the beginning of December to December 16, 2014.

The second was the result of international economic sanctions imposed on Russia; the sanctions were designed to warn Russia against foreign policy actions that the West did not agree with. Instead, they became a crash course for Russian policy makers and elites, reminding them that, for Russia to truly secure an independent standing in international relations, it should be ready and able to withstand international pressure, especially in the economic sphere. On the

other hand, heavy military spending had put a further strain on the economy. According to Information Handling Services (IHS) Jane's Defense Budgets Annual Report, military spending in Russia rose by 21% in 2015. Despite the budget cuts that were announced for 2016, spending on the military remained a significant proportion of government spending in Russia.

Consumers and companies, regional financial markets, and Putin's ambitions regarding the Eurasian Economic Union suffered because of the crisis and the plunging of the Russian economy.

Regulatory Measures to Prevent Another Crisis

Steven Maijoor, Chairman of European Securities and Markets Authority (ESMA), shared regulatory measures to prevent another crisis during a conference at the CFA Institute. According to him, the following were three examples of major steps the EU took regarding securities markets in response to the financial crisis.

1) OTC DERIVATIVES/ EMIR

EMIR (European Market Infrastructure Regulation) is one of the most prominent EU responses to the financial crisis. OTC (over-the-counter) derivatives—contracts that two parties trade (and privately negotiate) directly without going through an exchange or other intermediary—played a major role in the financial crisis. It became apparent that a regulatory framework was needed to increase the transparency of derivatives, apply central clearing, and impose collateral requirements on bilateral transactions to cover market and counterparty risks. These are the exact issues that the use of central counterparties (CCP) and the exchange of margins address. All EU CCPs are now in the process of being authorized under EMIR, six

trade repositories are up and running to provide transparency on EU derivative trade, and ESMA has already decided how interest rate swaps will need to be centrally cleared.

II) SECURITISATIONS/ CREDIT RATINGS

Prior to the financial crisis, securitizations had become too complex. Together with the excessively optimistic CRA-issued (Community Reinvestment Act-issued) ratings, which were designed to encourage commercial banks and savings associations to help meet the needs of borrowers in all segments of their communities—including low income and moderate-income neighborhoods—they contributed to the spread of the financial crisis. Requirements for improved transparency around securitizations have since been agreed upon and are currently being implemented. The “skin in the game” rule under the AIFMD (Alternative Investment Fund Managers Directive), an EU law on the financial regulation of hedge funds, also aims to create the right incentives and limits conflicts of interest, as alternative funds must not be exposed to any securitization unless the “originator, sponsor, or original lender retains a net economic interest of at least 5%.” In addition, the three European CRA Regulations issued in previous years introduce a wide range of measures regarding credit ratings. These include bringing CRAs directly under the supervision of ESMA. This will help to reduce the reliance on credit ratings and alleviate the “cliff effects” through which downgrades can amplify a financial crisis. The supervisor of CRAs is well-developed.

(III) HEDGE FUNDS

Hedge funds were not regulated prior to the financial crisis. However, the AIFMD creates a comprehensive framework for the supervision and prudential oversight of alternative funds and private equity in the EU. Not only does it increase transparency for investors, but it

also equips national supervisors, ESMA, and the ESRB (European Systemic Risk Board) with the information and tools necessary to monitor and respond to risks to the stability of the financial system that the activities of alternative investment funds—for example, through excessive leverage—could cause or amplify.

Global Financial Cowering

US president, Donald Trump, is often in the news for his controversial statements, which have caused fearful conditions for the global finance world. I once heard news about President Trump's effect on Indian personal finance. As the experts say, Trump's attack on overseas infotech and generic pharma companies imply that sector specific funds are at risk, and his new energy policies could affect energy companies and funds. I was glad to hear that, in India, conditions are expected to be a little different. According to Vinod K. Sharma, Head of Business, Private Client Group, HDFC Securities, "there is a lack of clarity on how Trump will tackle trade, tax cuts and infrastructure spending. This scenario augurs well for India. A relatively weaker dollar will do wonders for our markets and will increase the attractiveness for the Foreign Institutional Investor (FIIs)."

One sector could benefit from Trump's approach, and that is "gold." The scenario is such that gold returns in India mainly track global price trends, which flourish when fear is at its highest. Let's hope for positive outcomes and that things will work in favor of investors.

Business Magnate

Warren Buffett is a well-known American business magnate, investor, and philanthropist. Some consider him to be one of the most suc-

cessful investors in the world. As of March 2017, he is the second wealthiest person in the United States with a net worth of \$78.7 billion. He has shared many tips for being successful, such as: invest in yourself before anything else; change bad habits as soon as you can; know your own strengths and weaknesses; never risk something you need, to get something you don't need; surround yourself with people you admire; face down your fears; your time is a precious resource, use it accordingly; and never ignore a great opportunity. Other than this, he gave his best advice during the financial crisis.

Warren Buffett's letters to shareholders are always filled with intelligent insights. His best advice, however, came during one of the most trying times in US history.

Warren Buffett released his 2008 letter to Berkshire Hathaway shareholders in February 2009. By this point, Fannie Mae and Freddie Mac were under government control, Lehman Brothers had filed for bankruptcy, and the US economy was undeniably in recession.

Buffett's letter to shareholders included five great investment tips for avoiding huge long-term losses.

1. "PRODUCE EARNINGS THAT ARE NOT CORRELATED TO THOSE OF THE GENERAL ECONOMY."

Most businesses tend to do better when the economy is healthy. Some businesses, however, aren't as heavily affected by swings in the economy. These tend to be companies that sell or produce necessities. Two of Berkshire's most important businesses—its insurance and utility groups—fall under this category.

The term "Float" is a not-so-fancy word for the premiums that insurance companies collect and hold onto until a claim is paid. This is critical for Berkshire because it's what Buffett uses to make his

stock investments. From 2007 to 2008, and then again from 2008 to 2009, two of the three major insurance companies that Berkshire owned increased their float.

For investors, looking back at the companies that were able to stay profitable through the recession could provide strong possibilities for helping to protect their portfolios against future risk.

2. "MAINTAINING BERKSHIRE'S GIBRALTAR-LIKE FINANCIAL POSITION."

Buffett said that, in good times and in bad, his chief priority, like that of Charlie Munger (an American investor, businessman, author, and philanthropist), was maintaining Berkshire's financial position. Buffett did this by focusing on the following: 1) maintaining excess liquidity, 2) strengthening competitive advantage, and 3) having diverse revenue streams. Today's investors would be wise to follow a similar formula.

This is achievable by first holding some money on the sidelines. While stuffing cash under one's mattress may not seem like a sound investment advice, having excess liquidity does allow greater maneuverability to seize opportunities as they arise.

Buffett also focused on strengthening Berkshire's competitive advantage. Investors don't necessarily have a "moat" to widen, though it's always good practice to focus on investing in businesses that have a strong competitive advantage.

Perhaps Buffett did not believe in the over-diversification of his stock portfolio, but he did own a wide variety of companies in several different industries. This wasn't, however, diversification for the sake of diversification. Buffett looked for great businesses at good prices, and it didn't hurt to find great businesses that spanned the entire stock market.

3. "WHEN INVESTING, PESSIMISM IS YOUR FRIEND, EUPHORIA THE ENEMY."

Buffett has said this 100 different ways 1,000 times—and he's probably been quoted a million times.

He has asserted, "When the market is down, you should be a buyer." It's very hard, however, to be in the middle of a global financial meltdown and to stick to one's guns.

Buffett did that, and, four years later, he made a killing: he earned \$12.7 billion in 2013.

4. "OUR ADVICE: BEWARE OF GEEKS BEARING FORMULAS."

Buffett went on to explain, "The stupefying losses in mortgage-related securities came in large part because of flawed, history-based models used by salesmen, rating agencies and investors."

If nothing else, the financial crisis has taught us that we cannot base models of the stock market on the stock market's history. The only thing predictable about the stock market is that it's unpredictable.

5. "BEWARE THE INVESTMENT ACTIVITY THAT PRODUCES APPLAUSE; THE GREAT MOVES ARE USUALLY GREETED BY YAWNS."

Think about the most boring thing you did all month. Perhaps a number of things come to mind: paying your mortgage (Wells Fargo), picking up some soda (Coca-Cola) and essentials (Proctor & Gamble) at the store (Wal-Mart), and paying for them with your credit card (American Express).

The African Development Bank

The African Development Bank (AfDB) works with the overarching objective of spurring sustainable economic development and social

progress in its regional member countries (RMCs), thus contributing to poverty reduction.

The Bank Group achieves this objective by:

- mobilizing and allocating resources for investment in RMCs and
- providing policy advice and technical assistance to support development efforts.

The Strategy outlines five main channels through which the Bank can deliver and improve the quality of growth in Africa. First recommended by the High-Level Panel review of 2007, and later enshrined in the Medium-Term Strategy for 2008–2012, these are areas in which the Bank has the greatest comparative advantage and a proven track record.

INFRASTRUCTURE DEVELOPMENT

Africa still has massive infrastructure needs. It invests only 4% of its GDP in infrastructure compared to China's 14%. Bridging the infrastructure gap could increase GDP growth by an estimated 2 percentage points a year.

The Bank has made significant contributions to infrastructure development in Africa, and tens of millions of Africans are now better off thanks to Bank investments in transport, energy, and water. The Bank intends to scale up infrastructure financing in the continent significantly—not just through its own lending but also by leveraging its financial resources.

REGIONAL ECONOMIC INTEGRATION

Integration is essential for Africa to realize its full growth potential, to participate in the global economy, and to share the benefits of

an increasingly connected global marketplace. Having 54 individual countries, often without the physical and economic machinery to act in tandem, seriously limits this possibility. The Bank is well-positioned to play a leading role in fostering Africa's economic integration, as well as to create larger, more attractive markets; to link landlocked countries, including fragile states and international markets; and to support intra-African trade.

PRIVATE SECTOR DEVELOPMENT

Private rather than public funds increasingly drive the dynamics of wealth and job creation in Africa—and a number of the tasks of government. Working directly and indirectly with governments, the Bank will continue to be an increasingly active partner and facilitator for private investment in Africa.

Delivering financing and providing advice and technical assistance, it will design activities that respond to the specific needs, opportunities, and challenges of the private sector. It will focus on African entrepreneurship, addressing the constraints facing women and young entrepreneurs and supporting micro, small, and medium enterprises. By strengthening the financial sector, it will stimulate lending to micro, small, and medium-size enterprises; help develop local capital markets, promote the better governance and risk management of financial institutions; and promote the adoption and implementation of financial standards and regulations.

GOVERNANCE AND ACCOUNTABILITY

Economic growth can only be built on the firmest foundations of just, transparent, and efficient governance and the institutions that the capable state administers. Responding to demands in Africa for better governance and basic services, the Bank will assist institu-

tions that support inclusion and promote accountability—for example, by strengthening the capacities of parliamentarians, the media, and civil society organizations. To improve public financial management, the Bank will do more to support fiscal decentralization and domestic resource mobilization.

SKILLS AND TECHNOLOGY

Unemployment across Africa is unacceptably high, especially among young people. To increase the supply of skilled workers, the Bank will step up its support for technical and vocational training linked to specific needs in the labor market. The aim is to equip young people with the right skills for both the formal and informal sectors, including the skills to create small businesses.

Strict Zero-Tolerance Policy

On April 3, 2017, I flew to Kenya on an Emirates flight to deliver a keynote speech at Africa's Renewable Energy Leaders' Summit, which was scheduled for April 4–5. On long-haul flights, I enjoy reading the newspapers. So, mid-flight, I requested the *Financial Times*, which I went through while sipping my coffee. While reading it, I encountered the policy on tax evasion by Credit Suisse, which I thought important to share with my dear readers. The policy is laid out below. In response to recent reports about tax probes in various European countries, Credit Suisse, a Swiss multinational financial services holding company, organized as a stock corporation with four divisions—Investment Banking, Private Banking, Asset Management, and a Shared Services Group that provides marketing and support to the other three divisions—applied a *Strict Zero-Tolerance Policy on Tax Evasion* as follows:

- Credit Suisse applied a strict zero-tolerance policy and sought to conduct business with clients who had paid their taxes and fully declared their assets.
- It strictly complied with all the applicable laws, rules, and regulations in the markets in which it operated.
- As a result of a review, the bank terminated its relationships with clients who did not provide evidence that they had paid taxes and declared their assets. This led to very significant asset outflows as it did not want to do business with clients who were unwilling to provide the required evidence.
- It made significant investments in implementing the new international standard "Automatic Exchange of Information" for tax matters for European locations effective by April 1, 2017, which would foster even stronger transparency internationally.
- Consistent with its zero-tolerance policy, it would continue to work closely with the local authorities in all matters and particularly in this new case.

How to Break the Power of Bankers

I would suggest that my readers read Ann Pettifor's new book, *The Production of Money*, which is an excellent contribution to the growing body of thought exposing mainstream neoclassical economics' poor understanding of money, banking, and finance.

Drawing extensively from the thought of John Maynard Keynes—a British economist whose ideas fundamentally changed the theory and practice of macroeconomics and the economic policies of governments—and the workings of the financial system from 1945—

1971, she makes a fourfold proposal. First, bank lending should be regulated so that credit is guided into productive lending rather than speculative activity. Second, regulators should set interest rates across a spectrum of lending options. Third, controls of international capital flows should be undertaken. Finally, a new Bretton Woods agreement should be adopted to govern monetary relations among independent nation-states, maintaining the exchange rate ($\pm 1\%$) by tying its currency to gold and the ability of the International Monetary Fund (IMF) to bridge temporary imbalances of payment. Pettifor wants to wind the clock back. Other than this valuable book, I suggest reading the more noteworthy contributions to the *Financial Times* edition from April 3, 2017, especially for novices who are keen on getting more experience in order to excel in this highly competitive world.

Venezuela Remains Mired in a Deep Economic Crisis

Venezuela is going through its third year of recession. Based on last year's (2016) scenario, which saw the economy shrink by a massive 18%, it is likely to be in the red this year and next year too. On Tuesday, April 18, 2017, the IMF updated its World Economic Outlook, stating, "Venezuela remains mired in a deep economic crisis."

The data shows that unemployment is set to surpass 25% this year, and could be well on its way to 28% next year. It was 7.4% in 2015, so the situation is worsening.

The IMF's prediction for inflation in Venezuela is pretty bad, but it is better than previous expectations. It's expected to skyrocket 720% this year, but, if Venezuela stays on its current path, the IMF predicts that inflation will rise over 2,000% in 2018.

While watching the news on TV, I saw the reactions and suffering of the people there. As Venezuela plunged deeper into crisis, its citizens continued massive protests against President Nicolas Maduro. By March 2016, 87% of Venezuelans were reportedly consuming less due to shortages.

On April 19, 2017, three people were killed in violent anti-government protests across the country. Later that day, the government seized the General Motors' plant in Venezuela. The company immediately shut down its operations there. Moreover, major corporations, such as Pepsi and Delta, are pulling out of the country. They had already either written off or dramatically cut down operations in recent years.

Wannacry Ransomware

We all agree that technology is advancing and that, hence, it is sometimes mandatory to roll with the changes and stay up to date! Well, the recent worldwide cyberattack, "WannaCry ransomware," targeted computers running the Microsoft Windows operating system by encrypting data and demanding ransom payments in the Bitcoin cryptocurrency. According to experts tracking and analysing the worm and its spread, it could have been one of the worst-ever recorded attacks of its kind.

The attack started on Friday, May 12, 2017, and was reported to have infected more than 230,000 computers in over 150 countries. It spread across networks and the internet to systems that had not implemented recent security updates, directly infecting any exposed systems. Nearly two months before the attack, on March 14, 2017, Microsoft had issued a "critical" patch to deal with the vulnerability of supported systems, but many organizations had not applied it.

Those still running older, unsupported operating systems, such as Windows XP and Windows Server 2003, were initially at particular risk. However, on the day after the outbreak, Microsoft took the unusual step of releasing updates for these operating systems. Hence, almost all victims were running Windows 7 or newer systems. The cyber risk modeling firm, Cyence, estimated the potential costs of the hack to run up to \$4 billion, while other groups predicted that losses would be in the hundreds of millions. The attack made 2017 the worst year for ransomware scams (scams in which hackers seize control of a company's or organization's computers and threaten to destroy data unless payment is made).

KILL SWITCH

Shortly after the WannaCry ransomware attack began, Marcus Hutchins, the young cyber expert, was credited with stopping its spread across the globe by accidentally triggering a "kill switch." The 22-year-old researcher became an internet hero for his efforts to slow down the spread of the infection that hit at least 150 countries. According to *The Telegraph*, he is now working with the government's National Cyber Security Center to prevent a new strain of the malicious software from spreading.

Dubai Cyber Security Strategy

The Dubai Cyber Security Strategy was launched on Wednesday, May 31, 2017, with the aim of strengthening Dubai's position as a world leader in innovation and managing cybersecurity risks among establishments and residents in Dubai. It seeks to enable people to maximize the benefits of technology and to ensure that they are ready to face any challenges that may accompany it. The Dubai Cyber Security Strategy involves the implementation of five main domains.

Cyber Smart Nation, the first domain, aims to raise public awareness of the importance of cyber security, ensuring the building of a society that is fully aware of the dangers of cybercrime and developing the skills and capabilities required to manage cybersecurity risks among government and private institutions and individuals in Dubai.

Innovation, the second domain, is concerned with innovation and scientific research in the field of electronic security; establishing a cyberspace that is free, fair, and secure, and encouraging innovation in the emirate of Dubai.

Cyber Security, the third domain, aims to build a secure cyberspace by establishing controls to protect the confidentiality, credibility, availability, and privacy of data.

Cyber Resilience, the fourth domain, will focus on maintaining the flexibility of cyberspace and ensuring the continuity and availability of IT systems in the event of any cyber attacks. It will also focus on providing a platform for exchanging information, support for the management of incidents related to cybersecurity, and advanced mechanisms to combat threats.

Lastly, the aim of the *National and International Collaboration* domain is to establish local and global partnerships to consolidate co-operation frameworks with different sectors at the global and local levels in order to confront threats and risks in cyberspace.

Famine Food Truck

It's worth mentioning here that, during financial crises or budget cuts, governments put on hold something very important: humanitarian aid. The budget that Trump proposed on May 22, 2017, slash-

es humanitarian aid. That translates into substantial cuts to Medicaid and other aid to the poor. Oxfam, a global movement of people working together to end the injustice of poverty, spoke against this budget in a unique manner. Staff from the non-profit, Oxfam America, manned a “Famine Food Truck” to spread awareness of food crises that had left 20 million people across Somalia, Nigeria, Yemen, and South Sudan on the brink of starvation. The food truck did not serve people lunch; instead, it dished out information about President Donald Trump’s proposed budget cuts to humanitarian aid.

The group asked Americans to urge Congress to counter Trump’s proposed budget. Oxfam America’s Vice President for Policy and Campaigns, Paul O’Brien, said in a statement, “President Trump’s budget proposal is immoral, short-sighted, and un-American, if enacted, this budget would mean death for many vulnerable women, children and men around the world. ‘America First’ must not mean the rest of the world goes to hell.”



13 COMPETITIVENESS



"Our future growth relies on competitiveness and innovation, skills and productivity and these in turn rely on the education of our people."

Julia Gillard

COMPETITIVENESS

Competitiveness is one of the key criteria that goes into assessing the success of countries, industries, and companies. According to the World Economic Forum, competitiveness is the set of institutions, policies, and factors that determine the level of productivity. So competition in a positive manner can help tremendously.

2016 Global Competitive Report

It gladdens me to write that, according to the IMD World Competitiveness ranking of 63 countries in 2017, the UAE has secured a place in the super league of the top 10 competitive countries in the world. In 2016, the UAE took 15th place, and I feel proud that it has since moved by five places to grab 10th spot in 2017.

Sheikh Mohammed bin Rashid, the Vice President and Prime Minister of the UAE and Ruler of Dubai, praised the efforts of federal, local, and private sector teams for their outstanding work, and said, “We’ll go at a steady pace to achieve our development vision and prosperity, well-being, and happiness for the homeland and its citizens; such global indicators were an effective incentive for continuous self-assessment and a mirror of our strengths and the opportunities for improvement and self-discovery.”

The World Economic Forum (WEF) stated, “The UAE continues to lead the MENA region, building on improvements in competitiveness in recent years. This year, small gains in areas such as technology adoption and business sophistication are partially offset by deteriorating macroeconomic stability that is the result of lower energy prices, which have led to a rise in inflation and public debt and to the emergence of a fiscal deficit. Overall, the UAE boasts a number of competitive strengths: infrastructure is top-notch (fourth overall), and goods and labor markets are open and efficient. Going forward, for the country to diversify its economy, enhancing innovation—where the country currently ranks 25th—will be crucial. There is equal scope for better leveraging digital technologies that are an important enabler of business innovation; currently, the country ranks 29th in the use of information and computer technology.”

These factors truly justify UAE’s place on the competitive list.

Twelve Pillars of Competitiveness

The Global Competitiveness Report defines competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. In essence, the more productive a country is, the more competitive it is in a globalized context. The World Economic Forum (WEF) uses 12 pillars of competitiveness, collecting reliable data from organizations such as the World Bank and the IMF to prepare the yearly index. The 12 pillars follow.

1. **INSTITUTIONS:** It is important that the institutional environment in which individuals, firms, and businesses interact be sound and fair. Excessive bureaucracy, corruption, overregulation, and dishonesty by government officials are deterrents to a country’s competitiveness globally

2. **INFRASTRUCTURE:** A productive economy requires extensive and efficient infrastructure. This determines the locations of economic activities and the types of activities that are suitable for specific areas of the economy.
3. **MACROECONOMIC ENVIRONMENT:** If a country is characterized by high macroeconomic instability (a rapidly depreciating exchange rate, high-interest rates, and inflation, etc.), it is difficult for the government to concentrate on providing the appropriate economic services.
4. **HEALTH AND PRIMARY EDUCATION:** A healthy work environment plays a vital role in a country's competitiveness and productivity. Ill workers are less efficient and cannot function at their full potential. Hence, they cannot fulfil existing requirements properly. This leads to significant costs to the business, as sick workers are often absent.

In addition to health, this pillar considers the quantity and quality of the basic education the population receives. This is increasingly important in today's economy. Less educated workers find it much harder to adapt to more advanced production processes and techniques. As a minimum, a basic education is compulsory for every individual. It could be said that the well-educated can execute tasks more innovatively. In other words, lack of basic education can become a constraint on business development, making it difficult for firms to move up the value chain by producing more sophisticated or value-intensive products.

5. **HIGHER EDUCATION AND TRAINING:** Quality higher education and training are crucial for economies that want to move up the value chain beyond simple production processes and products. More spe-

cifically, the present globalizing economy requires countries to nurture pools of well-educated workers who can perform complex tasks and adapt rapidly to their changing environment and the evolving needs of the production system. This pillar measures secondary and tertiary enrolment rates, as well as the quality of education as evaluated by business leaders. It also considers the extent of staff training because of the importance of vocational and continuous on-the-job training—which are neglected in many economies—for ensuring the constant upgrading of workers’ skills.

6. **EFFICIENCY IN THE GOODS MARKET:** Countries position themselves to produce the right mix of goods and services based on their supply and demand conditions.

7. **EFFICIENCY IN THE LABOR MARKET:** Workers must get jobs that are well-suited to their education and skills. They must be able to switch from one job to the next at a low cost and with relative ease, depending on shifts in consumer demand.

8. **A DEVELOPED FINANCIAL MARKET:** The financial and economic crisis has highlighted the central role that a sound and well-functioning financial sector plays in economic activities. An efficient financial sector allocates the resources that a nation’s citizens, as well as those entering the economy from abroad, save for their most productive uses. It channels resources to the entrepreneurial or investment projects with the highest expected rates of return rather than channeling them to the politically connected ones. A thorough and proper assessment of risk is, therefore, a key ingredient of a sound financial market.

9. **TECHNOLOGICAL READINESS:** In today's globalized world, technology has become an essential factor for firms' competition and prosperity. The technological readiness pillar measures the agility with which an economy adopts existing technologies to enhance the productivity of its industries. Information and communication technologies have evolved into the "general purpose technology" of our time, given their critical spillover to other economic sectors and their role as industry-wide enabling infrastructure. Therefore, ICT access and usage are key enablers of countries' overall technological readiness.

10. **MARKET SIZE:** The size of a country's market determines how much the country produces. Small economies, such as Jamaica, must take advantage of globalization and increase production for export.

11. **BUSINESS SOPHISTICATION:** There is no doubt that sophisticated business practices are conducive to higher efficiency in the production of goods and services. Business sophistication concerns two elements that are intricately linked: the quality of a country's overall business networks and the quality of individual firms' operations and strategies. These factors are especially important for countries at advanced stages of development, when, to a large extent, the more basic sources of productivity improvements have been exhausted.

12. **INNOVATION:** Innovation can emerge from new technological and non-technological knowledge. Nontechnological innovations are closely related to the know-how, skills, and working conditions that are embedded in organizations and that, therefore, the 11th pillar of the GCI largely covers.

Dubai Competitiveness Center

Being an Emirati, I am proud to write about the Dubai Competitiveness Center (DCC) here. The DCC is the operational arm of the Dubai Economic Council and was established with the vision of enhancing Dubai's global competitiveness and facilitating sustainable development. Its primary aim is to align Dubai's laws, regulations, and policies to the best practices in the world to promote innovation, technological development, and entrepreneurship. Moreover, by enhancing the focus on innovation and R&D, it aims to rapidly reposition Dubai as a constant "great disruptive innovation wave," thus granting it a more resilient place in the world. The strategies and activities of the Dubai Competitiveness Center are detailed below.

STRATEGIC OBJECTIVES:

- To produce the Dubai Annual Competitiveness Report and improve Dubai's ranking in global reports by carrying out studies and providing accurate information to the stakeholders;
- To enhance Dubai's competitiveness through the formation of sophisticated economic clusters;
- To spread awareness of Dubai's competitiveness through constant interaction with various media channels;
- To participate in and lead local and international competitiveness projects; and
- To assist in establishing and running a regional competitiveness learning platform.

COMPETITIVENESS STRATEGY

The core of Dubai's Competitiveness Strategy, which the DCC promotes, involves firms and sectors moving up the global value chains, and enhancing productivity, skills, and R&D in Dubai.

SETTING THE STAGE FOR POLICIES, REGULATIONS, & STANDARDS

The following strategies:

- Provide research and expertise to enhance the overall macroeconomic and microeconomic foundations of competitiveness.
- Measure the current state of competitiveness in Dubai by using various internationally-recognized methodologies and frameworks.
- Formulate draft policy and regulation proposals to increase the role of innovation and R&D in the economic and social development process in Dubai.

CLUSTER DEVELOPMENT AND PUBLIC PRIVATE PARTNERSHIP

- Establish cluster platforms/cluster working groups and play the role of a facilitator to enhance the Dubai clusters that have national and international growth.
- Work/align with cluster stakeholders as a facilitator of public and private dialogue for the continuous improvement of links within the cluster and across boundaries.
- Promote the enhancement of the innovation, R&D, and technological readiness components within each cluster through policy recommendations and partnerships with stakeholders.

PARTNERSHIP WITH INTERNATIONAL INSTITUTIONS

- Partner with international organizations and institutions working on competitiveness and economic development issues.
- Prepare joint research and policy recommendation work; organize local and international events on competitiveness.



14 INTERNATIONAL TRADE AND INVESTMENT



*"For the only way in which a durable peace
can be created is by world-wide restoration of
economic activity and international trade."*

James Forrestal

INTERNATIONAL TRADE AND INVESTMENT

On February 18, 2014, in a rare tribute to the wisdom reflected in “Management in the Whole of the Arab World,” I was honored with the Golden Arrow Award in Dubai, and the Middle East Excellence Awards Institute selected me as one of the “Best Government CEOs 2016” in the Middle East due to my continuous efforts to improve the business environment.

Free Zones: Let’s Do Business

I always say, “The most peaceful language on earth nowadays is the language of business.” If we need a peaceful world, a better tomorrow, and sustained global relationships, we should push the business bar and make deals.

One way of doing this is through the creation of free zones. According to the World Bank, free trade zones are “small, fenced-in, duty-free areas offering warehousing, storage, and distribution facilities for trade, trans-shipment, and re-export operations.” Free-trade zones can also be defined as labor-intensive manufacturing centers that involve the import of raw materials or components and the export of factory products.

Free zones can be referred to as follows:

- **FREE ECONOMIC ZONE** a designated area in which companies are taxed very lightly or not at all in order to encourage economic activity;
- **FREE TRADE ZONE (FTZ)** an area in which goods may be landed, handled, manufactured or reconfigured, and reexported without the intervention of customs authorities.

FREE TRADE ZONES IN THE UNITED ARAB EMIRATES

The UAE has several free zones across its seven emirates. They may be broadly categorized as seaport free-zones, airport free zones, and mainland free zones. Free trade zone incentives to attract Foreign Direct Investment (FDI) are:

- 100% foreign ownership of the enterprise,
- 100% import and export tax exemptions,
- 100% repatriation of capital and profits,
- Corporate tax exemptions for up to 50 years,
- No personal income taxes,
- Assistance with labor recruitment and additional support services, such as sponsorship and housing.

There are more than 37 free zones operating in the UAE, and each of them is designed around one or more business industry categories.

Licenses are offered only to the companies which lie within those categories. An independent Free Zone Authority (FZA) governs

each free zone and is the agency responsible for issuing FTZ operating licenses and assisting companies to establish their business in the FTZ.

I personally had a great experience managing two free zones in the UAE: the Hamriyah Free Zone and Sharjah International Airport Free Zone. Furthermore, I saw the contribution we made to the economy and to improving international trade and investment.

My Green Journey in Hamriyah Free Zone

A book I wrote, *My Green Journey in Hamriyah Free Zone*, summarises my full decade of service in one of the most successful free zones in the world. It discusses the importance of following the 12 principles of competitiveness to attract and retain FDI.

In March 2000, I was appointed Director General to lead the Business Unit. I remember that, when I took over, we had 78 companies, mainly SMEs, with a turnover of US \$3.6 million and total assets worth US \$57 million. Over a period of 13 years, Hamriyah Free Zone became a multibillion-dollar conglomeration of almost 6,000 companies with total assets valued at US \$545 million and 60,000 people representing 159 nationalities.

The Pearl Initiative

Prominent business leaders from across the Gulf Region formed the Pearl Initiative in 2010 to create a non-profit vehicle for the private sector that would take a lead in adopting higher standards of corporate accountability, transparency, and governance. Its vision entails a thriving economy in the Gulf Region, underpinned by a private sector that embraces good governance as a pillar of sustainable growth.

The Pearl Initiative believes that proactively raising standards in these areas enhances business innovation, opportunity, and value creation.

CALL TO ACTION

On October 27, 2016, the UAE-based Pearl Initiative and the United Nations Global Compact (UNGC) hosted their second regional forum on “Sustainability in Action: Business and the Sustainable Development Goals,” in Dubai, under the patronage of Sheikh Nahyan bin Mubarak Al Nahyan, the UAE Minister of Culture and Knowledge Development. The forum served as a successful call to action, encouraging collaborative strategy and practical action towards creating diverse, prosperous, and competitive economies. It was a great experience through which to explore sustainability and a chance to learn from an informative panel discussion.

Latif Ahmed, Congress Manager from Alleem Business Congress, and Ms. Shabih Fatima, Research and Development Senior Officer of Alleem Research and Development Center, attended the forum to actively participate in the network and discussions and show our full commitment to, and support for, the initiative that aligned with our “Alleem 21 Global Goals for Sustainable Development.” The most relevant goal was Number 21: International Cooperation.

At this significant event, Sheikh Nahyan said, “The UAE is deeply involved in both the Pearl Initiative and the UNGC. Within our country, 143 countries, business associations, SMEs, NGOs, and education institutions are already participating in the United Nations Global Compact. We are also seeing increased cooperation with other nations in developing solutions to important environmental issues that impact all human societies, now and in the future.” Sheikh Nahyan went on to emphasize how the power of global coopera-

tion could work wonders. He cited the successful negotiations of the Montreal Protocol, ratified by 197 UN member countries, which was widely considered to be one of the most important environmental treaties for the Protection of the Ozone Layer, as it phased out the production of numerous substances that were responsible for ozone depletion. He also credited both the Pearl Initiative and the UN Global Compact for their understanding of the complex relationship between corporate responsibility and corporate profits. “A critical bottom line for the Sustainable Development Goals (SDGs) is that private enterprises must be somehow persuaded to commit to sustainability. Corporate leaders must develop a new, shared understanding of what sustainability leadership requires or face the prospect of becoming irrelevant,” remarked Sheikh Nahyan. Moreover, he acknowledged Ban Ki-moon, the Secretary-General of the United Nations, for his leadership and efforts to leave a notable legacy for the transformation of the world through the 17 UN Sustainable Development Goals. Ban Ki-moon said, “Governance failure, humanitarian crises and persistent economic inequality have devastating consequences. That is why we must redouble efforts to help businesses recognize that sustainable development creates immense opportunities.” Then, he concluded, “The private sector is crucial to realizing the 2030 agenda for sustainable development. More and more leaders understand that sustainable development is not just the right way forward, but serves the long-term interest of business and stakeholders by improving stability and prosperity.”

I appreciate the outstanding work they did with such a wonderful vision of sustainability.

Another area of interest to me that aims toward the improvement of internal trade and investment is the concept of Public-Private Partnership (PPP).

PPP

Although there is no specified definition of PPP, the PPP Knowledge Lab describes it as “a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance.” We can also call it “a service that is funded and operated through a partnership of government and one or more private sector companies.”

A PPP can be used to finance, build, and operate projects such as public transportation networks, parks, and convention centers. If a project is financed through a PPP, it has a higher possibility of being completed soon. Both parties manage their own sets of jobs. For instance, the private partner participates in designing, completing, implementing, and funding the project, while the public partner focuses on defining and monitoring compliance according to their objectives. With the distribution of jobs comes the distribution of risks, according to the ability of each partner to assess, control, and cope with the project.

A PPP comes with several benefits: private-sector technology and innovation help to provide better public services through improved operational efficiency. The public sector provides incentives so that the private sector can deliver projects on time and within budget. In addition, the creation of economic diversification makes the country more competitive at enabling its infrastructural base and boosting associated construction, equipment, support services, and other businesses.

BOO (build–own–operate) is one of several related PPP project types, which includes BOOT (build–own–operate–transfer), BLT (build–lease–transfer), and BLOT (build–lease–operate–transfer).

It is a model in which a private organization builds, owns and operates a facility under the encouragement of the government. Moreover, it involves large amounts of finance and a long payback period. Although the government doesn't work in, or fund this model directly, it may offer other financial incentives, such as a tax-exempt status, then allow the BOO parties to deal with them independently.

Usually, the ownership of the project (e.g., a mobile phone network) remains with the project company; hence, the private company gets the benefits of any residual value of the project. This framework is used when the physical life of the project coincides with the concession period.

Consider the example of water treatment plants: private companies run these facilities to process raw water that the public sector entity provides. The water gets filtered then returned to the public-sector utility for delivery to customers.

Build–operate–transfer (BOT) or build–own–operate–transfer (BOOT) have extensive applications in infrastructure projects. In the BOT framework, a third party, for example, the public administration, delegates to a private-sector entity the design and building of infrastructure and the operation and maintenance of these facilities for a certain period. During this period, the private party has the responsibility of raising finances for the project, is entitled to retain all revenues that the project generates, and is the owner of the concerned facility. The facility is then transferred to the public administration at the end of the concession agreement without any remuneration to the private entity. Many entities use the BOT model or the BOOT model; namely: Pakistan, Thailand, Turkey, Taiwan, Bahrain, Saudi Arabia, Israel, India, Iran, Croatia, Japan, China, Vietnam, Malaysia, the Philippines, Egypt, Myanmar, Canada, Aus-

tralia, New Zealand, Nepal, and a few US states (California, Florida, Indiana, Texas, and Virginia). Unfortunately, the PPP concept is not widely used in the Arab world due to unawareness regarding its benefits.

Wal-Mart Nation

Wal-Mart-Ing America

According to an article published in *Forbes* magazine on January 30, 2007, “becoming a giant doesn’t just happen.” The status is earned through innovation and discipline—the traits that experts point to when explaining the meteoric rise of Wal-Mart from country store to controversial retailing giant.

Wal-Mart drives productivity, which has been crucial to the turning around of the US economy, according to Louis Galambos, Professor of Business History at Johns Hopkins University. That Europe hasn’t realized the same types of gains in productivity is partly a result of its reluctance to embrace the big-box retail model, which allows a company to take full advantage of the world supply chain to obtain and sell goods cheaply.

With its enormous growth over the years, of course, Wal-Mart has launched itself to the forefront of public debate on the question of how big is too big. Supporters point to the company’s ability to serve the public with wider selections and lower prices of everyday goods.

How much has Wal-Mart grown? Consider its \$250 billion domestic annual revenue, which is about five times that of Microsoft. It also outpaces the annual sales of Ford and General Motors combined, coming in at about two-thirds of all North American car sales including those by overseas competitors.

The company is more than 10 times the size of the radio advertising industry and three times the size of the domestic airline industry. In fact, Wal-Mart's annual sales are a full 35% of those of the entire travel and tourism industry, the second-biggest contributor to the country's GDP and job market. And speaking of GDP, Wal-Mart's sales in 2006 were greater than the economies of 144 countries, according to the International Monetary Fund.

TRIPS Agreement

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) is an international agreement that the World Trade Organization (WTO) administers and that sets down minimum standards for many forms of intellectual property (IP) regulation as applied to the nationals of other WTO members. It was the TRIPS agreement that, for the first time, introduced intellectual property law to the international trading system and remains the most comprehensive international agreement on intellectual property to date. The developing countries were concerned that the developed countries were insisting on an overly narrow reading of TRIPS. Hence, they initiated a round of talks that resulted in the Doha Declaration on the TRIPS Agreement and Public Health, which the WTO Ministerial Conference adopted in Doha on November 14, 2001.

The Doha Development Round

The Round was officially launched at the WTO's Fourth Ministerial Conference in Doha, Qatar, in November 2001. The Doha Ministerial Declaration provided the mandate for the negotiations, including those on agriculture, services, and an intellectual property topic (which had begun earlier).

Its aim was to achieve major reform of the international trading system through the introduction of lower trade barriers and revised trade rules. The work program covered about 20 areas of trade. The Round is also known semi-officially as the Doha Development Agenda or the Doha Development Round, as one of its fundamental objectives is the improvement of the trading prospects of developing countries.

During my decade of service as a Director General of Customs in the government of Sharjah, I created a fully-fledged intellectual property protection department to spread awareness in the community about the importance of intellectual property and to fight counterfeit and fake products. For that, Daimler Mercedes Benz recognized me internationally in early 2014.

I Invite You to Invest in Chad – President Idriss Deby

The president of Chad made a personal request to the international investment community to come and invest in Chad.

This came on the coat-tails of the 2017–2021 Chad National Development Plan’s two-day Round Table, which began on September 6, 2017, in Paris. Development partners were meeting there to approve Chad’s budgetary gap of 3,710 billion FCFA (Foreign Countries Financial Assistance/Aid).

In Paris, Chadian President, Idriss Deby, addressed a distinguished and talented group of international partners who would be validating the financing of the next step of Chad’s National Development Plan. He said, “Today, as the partners approve pledges at the Paris Round Table, I personally invite business leaders from around the world to

come and invest in Chad. Your investments will not only support the development of an emerging country, but the opportunities in Chad will represent handsome returns for those who join us.”

Not all readers know the degree to which the world relies on Chad to help enforce the security and stability of central Africa and the African continent. Chad has also emerged as a global model for the humane integration of hundreds of thousands of immigrants, whom the nation has welcomed and educated. Chad has adopted an inclusive and consensual development framework and has fostered a constructive dialogue that involves its administration, civil society, religious groups, parliament, and technical and financial partners.



15 CHILDREN'S RIGHTS



"When the lives and the rights of children are at stake, there must be no silent witnesses."

Carol Bellamy

CHILDREN'S RIGHTS

The Global Child Forum

On May 5, 2016, His Highness Dr. Shaikh Sultan Bin Mohammad Al Qasimi, Member of the Supreme Council and Ruler of Sharjah, and his wife, Shaikha Jawaher Bint Mohammad Al Qasimi, UN-HCR (United Nations High Commissioner for Refugees) Eminent Advocate for Refugee Children, attended the Global Child Forum in Kuala Lumpur. The event was held under the patronage of, and with the active participation of Carl XVI Gustaf, the King of Sweden, and Queen Silvia. “Children need to live safely with their families if they have to reach their full potential,” said His Highness Dr. Shaikh Sultan. He called for legislation and policies to protect children and guarantee their human rights.

Dr. Shaikh Sultan called on world leaders and the international community to ensure the rights of children to education, health, and protection from abuse and exploitation. Shaikha Jawaher called on governments, institutions, and decision-makers to pay attention to forgotten groups of children around the world. She said, “The future of peace in the entire world requires a united international stand towards underprivileged children around the world. For the next generation to grow up strong, well, and wise, and lead us to a more

progressive future, we must provide for all their needs now. Today, these children need an education, decent health care, and psychological stability in order to secure a future of peace, progress, and stability for the entire world.” Shaikha Jawaher added, “Suffering is not a destiny that faces a particular people, but a passing phase that will come to an end thanks to cooperation and collective efforts of the international community and the sincere desire to ensure a better future for generations to come. Childhood experiences can last a lifetime, so we must work together to ensure we do not have a lost generation of adults of tomorrow if we really want peace and development for all. We must start working with today’s children throughout the world, working together to protect them and the future of humanity.”

The theme of the forum was “Mobility and Connectivity: Children’s Rights and Sustainable Business.” It highlighted opportunities for advancing children’s rights through increased connectivity and mobility in the region and ensured that children’s rights would be respected and fulfilled.

The Protection of Children’s Rights

Child safety issues can ruin the future of any country and need to be addressed as a priority and dealt with. The Emirates Foundation has launched a campaign to address the rate of accidental deaths among children in the UAE. According to the National News Agency, 45,500 children were exposed to dangerous situations over a two year period. So, as part of a vision to overcome the problems that children in the region face, Sharjah is promoting children’s rights and welfare by organizing workshops at schools. The 2015 Child Safety Campaign, which the Sharjah Supreme Council for Family

Affairs launched, signed the agreement with the Protection of Children's Rights Administration as part of the Sharjah Department of Social Services. According to the report by the state news agency, both parties would cooperate and share experiences to implement child-protection standards as part of the campaign. The goal was to develop a safe and nurturing environment for children in Sharjah in accordance with international standards.

Hanadi Al Yafei, Head of the Campaign Organizing Committee, said, "The agreement highlights efforts to protect children and promote their rights and safety to ensure they achieve their full potential in the future." Further, Ahmed Al Tartour, Director of the Protection of Children's Rights Administration stated, "This initiative shows the great attention paid by the Sharjah Government to protect children from any danger or violence." In addition, Al Tartour stated that, according to the agreement, there would be 70 workshops at 45 government and private schools for three age groups, covering 2,350 boys and girls. He continued, "The type of workshop will differ from one age group to another with respect to children's comprehension and cognitive abilities. In addition, there will be joint activities and programs to spread awareness and educate children about their rights."

UN Convention

The United Nations Convention on the Rights of the Child (commonly abbreviated as the CRC, CROC, or UNCRC) is a human rights treaty which sets out the civil, political, economic, social, health, and cultural rights of children. The UN General Assembly adopted the Convention and opened it for signatures on November 20, 1989. It came into force on September 2, 1990, after the required

number of nations ratified it. Currently, 196 countries are party to it (that is, every member of the United Nations except the United States). The Convention defines a child as any human being under the age of 18 years, unless the age of majority is attained earlier under national legislation.

Nations that ratify this convention are bound to it by international law. The UN Committee on the Rights of the Child, which comprises member countries from around the world, monitors compliance. Once a year, the Committee submits a report to the Third Committee of the United Nations General Assembly, which also hears a statement from the CRC Chair, and the Assembly adopts a Resolution on the Rights of the Child.

Governments of countries that have ratified the Convention are periodically required to report to, and appear before, the United Nations Committee on the Rights of the Child for the examination of their progress with regard to the advancement of the implementation of the Convention and the status of child rights in their country.

No Tears, But Shock

I would like to say something about Katherine Jean "Kate" Bolduan, a CNN broadcast journalist. She has hosted many shows dealing with different topics and is well known for being articulate and asking tough, relevant questions. I decided to write about her because of her pure heart and her efforts to raise her voice against the suffering of children. On August 18, 2016, she spoke out in a very different way.

She shared a video of a five-year-old Syrian named Omran Daqneesh, who was sitting in the back of an ambulance with blood and soot all over him. The boy was in shock. Bolduan was tasked with explain-

ing what had happened to him: he and his family had been pulled from the rubble that was once their house. She said that there had been an air strike, which was common in the country as it had been embroiled in a violent civil war for years. The country was experiencing severe disruption. All of this made her cry. But she had to stop and compose herself a few times. She said, “What strikes me is we shed tears, but there are no tears here. He doesn’t cry once. That little boy is in total shock. He’s stunned, inside his home one moment and the next, lost in the fury and the flurry of war and chaos.”

It really is a matter of great sorrow that we can feel their suffering but are unable to act conclusively for their sake and their rights. Bravo Katherine!

HELLO Children

The Big Heart Foundation has also launched a local campaign seeking the support of UAE citizens and residents for Palestinian and Syrian refugee children, child cancer sufferers, and children in need. The campaign aims to help alleviate the suffering of children affected by wars and those with cancer by providing them with essentials such as healthcare, access to clean water, clothes, and shelter. Mariam Al Hammadi, director of the foundation, said, “As underprivileged children continue to suffer, we must step up our efforts to provide them with more support. The launch of this community campaign comes in line with our commitment to provide the needs of those children and ensure they live a dignified life.”

Children's Rights in the Digital Age, by UNICEF

In July and August 2014, 148 children from 16 countries, aged six to 18 and speaking eight different languages, participated in work-

shops to share their views on their rights in the digital age. The workshops were a joint effort of the Young and Well Cooperative Research Center (CRC), the Institute for Culture and Society at the University of Western Sydney, the Berkman Center for Internet and Society at Harvard University, and UNICEF, in partnership with the Digitally Connected Network.

On September 12, 2014, the committee discussed the children's views, which they got from the workshop on the last day of General Discussion on the issue of "Children's Rights and Digital Media."

1. RIGHT OF ACCESS

Children around the world increasingly think of access to digital media as a fundamental right. For children in the developing world, and for some in the developed world, access is still the biggest issue they face in relation to using digital media to enact their rights.

2. MOST COMMON USES

Regardless of the country they live in, the language they speak, or their socio-economic background, if children have regular and reliable access to digital media, they tend to use it for a common set of purposes: social connectedness, access to information, education, self-expression/creativity, and entertainment. Although children are concerned about how their digital media practices might negatively impact their rights, they overwhelmingly experience digital media as a positive influence on their lives.

3. LITERACY IS FUNDAMENTAL

The trifold literacy that characterizes today's very user-driven digital media environment—digital, media, and social literacy—is fundamental to children's capacity to use digital media competently and

exercise their rights in and with digital media. Literacy provides the technical and higher-order evaluative skills required to access, understand, produce, and participate in digital media.

4. RISK NARRATIVE PREDOMINANT

While children noted that digital media facilitated their communicative, educational, and informational needs, many found it difficult to articulate the ways in which digital media enhanced their lives and their rights in more specific and precise terms. In contrast, they generally found it much more straightforward to enunciate the risks and challenges associated with their digital media practices, quite possibly because the risk narrative had dominated their schooling in online practices.

5. NO ONLINE/OFFLINE BINARY

Children understand their digital rights as being closely intertwined with their human rights in broader terms. They do not readily distinguish between the online and the offline, but regard digital spaces as constituting just another setting in which they live their lives.

6. BALANCING RISK WITH OPPORTUNITY

Children's safety on connected media is vital, but it needs to be understood in the context of the spectrum of their digital rights; for example, children's rights of provision and participation in the Convention on the Rights of the Child Agency is as crucial to the positive, effective use of digital media as safety. Without the agency needed to participate and exercise rights, children can neither take advantage of the opportunities digital media can afford nor develop resiliency when facing risks. Moreover, they must be encouraged to think critically and develop their own language, views, strategies, associations, and interests as users of connected digital media.

7. SELF-ACTUALIZATION THROUGH MEDIA USE

Children increasingly see digital media as crucial to their rights to information, education, and participation. By engaging with digital media, they learn new skills and develop their talents; they become informed citizens of the world who can contribute meaningfully to their communities; and they foster friendships, family ties, and a sense of community and belonging. These things are important to their resilience and well-being.

8. CHILD-CENTERED DEFINITIONS

Children worry about how their digital participation might compromise their protection rights, and they take active steps to keep themselves safe. They don't always worry about the same things that concern adults. We need child-centered definitions of the risks and opportunities associated with digital media.

9. SEEKING ACKNOWLEDGMENT

Children say that the rights they enjoy in relation to digital media come with real responsibilities. These include understanding the consequences of their engagements, being personally accountable for the ways in which their online interactions impact others, and knowing when to exercise self-control. They also want adults to understand how and why they use digital media, and they want to be trusted to use it wisely.

10. ONGOING CONVERSATION WITH CHILDREN

Policy makers and practitioners must engage children in an ongoing conversation about how to use digital media to support children's rights. Children want to be involved in these conversations. They want to take responsibility for making the internet a better place, and they have valuable expertise to share.

Girls Not Brides

One term that really hurts me is “child marriage.” Global organizations define it as a formal marriage or informal union that an individual enters into before reaching the age of 18 years. It is a very common illegal act found in major parts of the world. The statistics regarding child marriage may surprise you: every year, 15 million girls get married before the age of 18 years. That translates into 28 girls every minute and one girl every two seconds. While conducting research on this topic, I collected this data from a global organization, Girls Not Brides, which is a partnership of more than 700 civil society organizations from over 90 countries that are committed to ending child marriage and enabling girls to fulfil their potential. Great job!

Child marriage is a human rights violation that we must end to achieve a fairer future for all. Child brides face huge challenges as they are isolated, their freedom is often curtailed, they frequently feel disempowered, and they are deprived of their fundamental rights to health, education, and safety.

Today, we have a unique opportunity to act and accelerate our efforts to help change the lives of girls and young women all over the world.

Girls Not Brides has developed a Theory of Change to demonstrate the range of approaches needed to address child marriage and crucially highlight that everyone has a role to play. The Theory of Change stresses the importance of long-term, sustainable interventions that are coordinated, well-resourced, and the result of shared learning. It focuses on four main strategies: empowering girls, mobilizing families and communities, providing services, and establishing and implementing laws and policies.

These four strategy areas are used to illustrate the types of effective interventions that are helping to prevent child marriage and to support married girls all over the world.

Consider this brief statement of facts about child marriage:

- If there is no reduction in child marriage, the global number of women married as children will reach 1.2 billion by 2050.
- One in three girls in the developing world are said to get married before the age of 18 years.
- Over 700 million women alive today were married as children.

The World Against Child Labor

I am writing this page on June 12, 2017, and it occurs to me that the date coincides with the World against Child Labor Day. According to the UN, today, around 215 million children around the world work, many of them full-time. They do not go to school and have little or no time to play. Many do not receive proper nutrition or care and are denied the chance to be children. More than half of them are exposed to the worst forms of child labor, including work in hazardous environments, slavery, other forms of forced labor, illicit activities like drug trafficking, and involvement in armed conflict.

One of the major aims set for the International Labor Organization (ILO) at its founding in 1919 was the abolition of child labor. From 1919 onwards, the principle that minimum age standards should be linked to schooling and that they should not be lower than the age of completion of compulsory schooling has been part of the ILO's standard-setting tradition in this area.

Child labor that is proscribed under international law falls into three categories:

- The unconditionally worst forms of child labor, which are internationally defined as slavery, trafficking, debt bondage and other forms of forced labor, forced recruitment of children for use in armed conflict, prostitution and pornography, and illicit activities;
- Labor performed by a child who is under the minimum age specified for that kind of work (as defined by national legislation in accordance with accepted international standards) and that is, thus, likely to impede the child's education and full development.
- Labor that jeopardizes the physical, mental, or moral well-being of a child, either because of its nature or because of the conditions in which it is carried out, and is known as "hazardous work."



16 FOOD SECURITY



"Food security means all people have access to culturally appropriate, nutritious food at all time without relying on emergency supplies."

Pattie Baker

FOOD SECURITY

World Food Programme

The World Food Programme (WFP) has a unique network for analyzing food security and works closely with national governments, UN partners, and NGOs. Before intervening, WFP first prioritizes understanding the food security situation of the population of a country. WFP's food security analysis is commonly known as VAM (vulnerability analysis and mapping) and is run by over 150 analysts around the world. They perform a wide range of assessments to identify hungry and food-insecure populations. The WFP answers the following questions:

- Who is food insecure or vulnerable?
- How many are there?
- Where do they live?
- Why are they food insecure or vulnerable?
- How is the situation likely to evolve, and what are the risks threatening them?
- What should be done to save their lives and livelihoods?

To collect, manage, and analyze data, they use advanced technologies such as satellite imagery, geographic information systems (GIS), and mobile data collection platforms such as smartphones, tablets, and personal digital assistants. Food security analysis is a core function of WFP. For continuous monitoring of food security conditions and market prices, WFP is increasingly working with its partners to establish food security monitoring systems (FSMS). Bulletins, reports, and analyses generated from all of these activities are public and can be downloaded from the Food Security Analysis Assessment Bank.

I truly appreciate the work done by WFP in such a well-planned manner. I remember back in 1994, I was leading a humanitarian mission to Croatia to give assistance to more than 25,000 Muslim refugees at the border of Bosnia and Herzegovina during the ethnic cleansing war against Bosnian Muslims declared by the nationalist leader of Serbia Slobodan Milosevic, who was pushing for what he called a Greater Serbia. During those tough times, I had the chance to work closely with WFP, and I saw how systematically they work and learnt a lot from them. Big thank you, WFP. Keep up the good work.

Facts from the UN for Food Security

- Agriculture is the single largest employer in the world, providing livelihoods to 40 percent of today's global population. It is the largest source of income and jobs in poor rural households.
- In a large portion of the developing world, 500 million small farms worldwide, mostly still rain-fed, provide up to 80 percent of the foods consumed. Investing in smallholder women and men is an important way to increase food security and nutrition

for the poorest, as well as food production for local and global markets.

- Since the 1900s, about 75 percent of crop diversity has been lost from farmers' fields. Better use of agricultural biodiversity can contribute to more nutritious diets, enhanced livelihoods for farming communities, and more resilient and sustainable farming systems.
- If women farmers had the same access to resources as men, the number of hungry people in the world could be reduced by up to 150 million.
- Worldwide, a total of 1.4 billion people, most of whom live in rural areas in the developing world, have no access to electricity. Energy poverty in many regions is a fundamental barrier to addressing hunger and ensuring that the world can produce enough food to meet future demands.

Syria Crisis

I have never heard of or seen a humanitarian crisis like the one happening in Syria now. This is year 2017, it has been more than six years, and the whole world still cannot find a solution. It is certainly a meltdown of humanity. The WFP is struggling to meet the urgent food needs of more than 5 million displaced people in Syria and its neighboring countries. How shameful!

UAE Food Bank

The UAE has established a food bank to reduce food waste and feed the needy people in the region and abroad. HH Sheikh Mohammed

bin Rashid, vice president of the UAE and ruler of Dubai, launched this initiative as part of the recent efforts announced by the UAE president, His Highness Sheikh Khalifa bin Zayed Al Nahyan, that 2017 is the Year of Giving, “which aims to instill benevolence in the hearts of our people.”

HH appointed his wife, Sheikha Hind bint Maktoum bin Juma Al Maktoum, as chair of the Board of Trustees of the UAE Food Bank. He said, “Having Sheikha Hind at the helm of the UAE Food Bank will ensure our high expectations from this new humanitarian agency . . . Sheikha Hind is very close to the people. Her love for charity qualifies her as the best person to lead the new project because we directed the bank to engage as many community agencies and volunteers as possible.”

Food security has been chosen as the first initiative this year because it is a basic human need. “We seek to engage numerous social organizations and volunteers in a system of giving, following Sheikh Zayed’s example of altruism,” HH Sheikh Mohammed said in reference to the UAE’s founding president. He added, “We hope the spirit of generosity spreads in and beyond the UAE through ambitious humanitarian initiatives throughout the Year of Giving.”

HOW DOES IT WORK?

The food bank will work with authorities and charities to collect excess foods from hotels, supermarkets, restaurants, and farms. It will store and package the foods for distribution. Dubai Municipality will provide operational support in line with international food safety guidelines. Volunteers will receive health and safety training. Inedible foods will be recycled for use as fertilisers, chemicals, and medicinal research.

According to the Dubai Media Office, the UAE loses \$3.5 billion in food waste every year. It said that the food bank also aims to help Dubai become the first in the region to achieve zero food waste. Last year, experts at the World Summit on Food Security said that more efforts are needed to reduce food waste in the UAE and identified it as a global problem.

SEED BANK

A seed bank stores seeds to preserve genetic diversity; hence, it is a type of gene bank. There are many reasons for storing seeds, one of which is to have on-hand the genes that plant breeders need to increase yield, disease resistance, drought tolerance, nutritional quality, and the like of plants used in agriculture (i.e., crops or domesticated species). Another reason is to forestall loss of genetic diversity in rare or imperiled plant species by conserving biodiversity *ex situ*. Many plants that were used centuries ago by humans are used less frequently now, and seed banks offer a way to preserve that historical and cultural value.

The Global Seed Vault is situated in Svalbard, midway between Norway and the Arctic, on the Norwegian island of Spitsbergen, near Longyearbyen, in the remote Arctic Svalbard archipelago, about 1,300 kilometers from the North Pole. Conservationist Cary Fowler, in association with the Consultative Group on International Agricultural Research (CGIAR) started the vault to preserve a wide variety of plant seeds that are duplicate samples, or “spare” copies, of seeds held in banks worldwide. The Norwegian government wholly funded the vault’s approximately US\$9 million construction. Storing seeds in the vault is free for end users, with Norway and the Global Crop Diversity Trust paying for the operational costs. The Trust’s primary funding comes from organizations such as the Bill and Melinda Gates Foundation and various governments worldwide.

SHARJAH SEED BANK

I am proud to say that Sharjah has also taken an initiative to preserve seeds. The Sharjah Seed Bank, founded in 2009, aims to preserve the genetic origins of terrestrial plants through seed genes. In 2014, the bank secured grants worth \$1.3 million to work on projects that involve conserving desert habitats and to research the use of native plants for commercial purposes. The funding is provided by the government of Sharjah, the Ministry of Higher Education and Scientific Research, the Emirates Foundation, and the Qatar Foundation.

The bank has modern facilities and laboratories to preserve the environmental heritage of seeds and herbs in the UAE. Botanists at the bank said that since 2012, they have collected 5,000 plant samples from across the Emirates, of which around 3,000 were classified and indexed into 415 species.

German App Guides Indian Farmers

A major contributor to crop loss is plant disease. While many farmers are able to identify some of the plant diseases, they lack access to proper treatment to save their crops on time. In 2015, PEAT, or Progressive Environmental and Agricultural Technologies, established a German start-up, which has developed a mobile app called Plantix.

It has a massive database of pictures of plant diseases, which are used for comparison and help in the identification and subsequent diagnosis and treatment. PEAT aims to support farmers across the world, specifically in developing countries, in using technology to enhance their agricultural output through timely and informed disease treatment.

In India, the life of a farmer is never easy. If the pests do not get you, the bad monsoons will; and if the monsoons do not come, then the

moneylenders will. And on top of it all, chemicals can render the farm useless, or the middlemen can fleece you by not paying a fair price for the product. The bottom line is that there are just too many negative elements at play.

According to the World Bank, India has 395 million acres of land available for cultivation, of which only 215 million acres are cultivated. The founders of PEAT want to save farming in India. Over the last couple of years, PEAT has been working with 30,000 Indian farmers. Today, agriculture is a \$500 billion industry, and there are more than 30 Indian start-ups that use technology to solve problems in the industry. VDrone, Kisan Network, and Crofarm are some of the start-ups that use drones and supply chain technologies and farm aggregation (farm-to-fork connect) to make farming a productive enterprise. I appreciate their efforts in helping farmers, as agriculture is demographically the broadest economic sector and plays a significant role in the overall socioeconomic fabric of India and many other countries.

Food Crisis in Kenya

Currently, Kenya is going through a food crisis that has led farmers to believe that the importation of maize to stabilize the rising prices of flour is a government scheme to flood the local market with cheap produce. Maize production in Rift Valley, the country's food basket, reduced from 21 million to 16 million bags last season because of various factors ranging from erratic rainfall to disease outbreak.

The farmers asked the government to implement agricultural policies that could help and motivate them to increase their crop production to end the recurrent food crisis. Mr. Andrew Rotich, chairman of the Trans Nzoia Maize and Livestock Association, said, "Depen-

dence on maize imports to curb the current food shortage is a clear indicator that the government is not concerned about the welfare of the farmers.”

The farmers have attributed this maize shortage to decreased acreage used for the cultivation of the crop owing to increased costs of farm inputs and an unstable market for the produce.

“Apart from erratic rainfall, disease outbreak, and other factors such as substandard farm inputs, augmented production costs have discouraged most farmers from investing in cereal farming, which has contributed to the current maize shortage,” said Mr. Jackson Kosgey, a farmer from Moiben, Uasin Gishu County.

BIS Harvest Festival 2017

I want to give special thanks to the British International School in Ajman for encouraging the new generation to plant, and for letting them know the importance of green world. On March 9, the school celebrated its first Harvest Festival of 2017, where students plucked 13 kilograms of organic vegetables from the school’s greenhouse.

The harvest festival offered the students an opportunity to make cross-curricular learning possible with art, science, environmental studies, and maths, all involved in what proved to be a hands-on learning process. Grades 5 and 6 students collected the best tomatoes and cabbages grown on the campus and set up a stall to sell the harvest.

On this wonderful initiative, the school principal, Dr. Tariq, said, “The harvest festival has not only energized the spirit of students but also uplifted the feeling of accomplishment from their own labor when the harvested vegetables were sold to parents and teachers.”

One Million Tonnes of Food Wasted in Ireland Every Year

According to FoodCloud, Ireland's not-for-profit organization that matches surplus foods in shops and restaurants with charity organizations and then gives them out to the community, "If 50,000 people in Ireland reduce food waste by just 1 kilogram per week, just over \$1 million will be saved. That's equivalent to over 5.7 million meals." And at least 1 million tonnes of food in Ireland and almost 1.3 billion tonnes worldwide are wasted per year. To put that into context, one in every four calories produced from food in the world is wasted. FoodCloud brings together policy-makers, chefs, retailers, and foodies to discuss how they can tackle the food waste challenge and identify opportunities.

To address this issue, government bodies, such as the Monaghan County Council and the Food Safety Authority of Ireland, which take all the reasonable steps to ensure that food consumed, produced, distributed, or marketed in the state meets the highest standards of food safety, have made a wonderful video with the slogan "Food Waste = Money Waste."

Yes, food waste is a serious issue and should be tackled properly. I am glad to see that both the private and the government sector in Ireland are actively taking good initiatives to address this issue and setting a good example for other governments.

Emirates Authority for Standardization and Metrology

The Emirates Authority for Standardization and Metrology (ESMA), which works to provide consumer protection, address environmental concerns, monitor the national market, and strengthen the national economy, by preparing standard specifications for review by

specialized technical committees, has warned of the recent spread of unsupported/noncertified devices that produce non-real results and “misleading” measurements of the ratio of chemicals in some fruits and vegetables in the state markets using the so-called green test, which is being promoted in the social media. On May 25, 2017, directives from the emirates authorized coordination among economic development departments and municipalities so they would work together to pull these products out of the state market.

The director general of the ESMA, Abdullah al-Maeeni, stated that there was no scientific basis or origin of the results, ratios, and indicators resulting from this type of device. He further explained that the examination of the proportions of chemicals in products should be conducted through devices that are subject to laboratory testing and periodic calibration to confirm their readiness to inspect the chemicals and the accuracy of their measurements, which has never occurred in the case of the said device. Maeeni emphasized that the device gave false information, was not registered with competent local authorities, and should be registered with the relevant authorities before it could be sold and promoted to ascertain its purpose and accuracy in calibration and metering, especially since this type of appliance was not subjected to a certified calibration.



17 EXTREME POVERTY



"Like slavery and apartheid, poverty is not natural. It is man-made and it can be overcome and eradicated by the actions of human beings."

Nelson Mandela

EXTREME POVERTY

Target 3 Billion

Target 3 Billion, is one of the most important and influential books I have ever read about sustainability. The book is written by His Excellency A. P. J. Abdul Kalam, the late president of India, and I had the honor of receiving a signed copy of the book from him on November 8, 2013, when he was state chief guest of the Sharjah government during the 32nd Sharjah International Book Fair.

I remember the good time we spent together when he invited me to his presidential suite at the Hilton hotel in Sharjah City to discuss the issue of poverty around the world and how to fight it. I remember his advice to me: “Son, this is the way forward [the book]. Read the book; feel the inspiration in it. I have listed my vision and put all my strategies to fight poverty. Around 3 billion people are out there in the world waiting for great leaders like you to give them a hand and lift them to a new landscape where they can feel the real meaning of sustainability and inclusive growth.”

You are Great

“You are Great. I love your book and your philosophy about sustainability. I don’t mind writing the foreword for your book, especially

after reading the chapter titled *Global Poverty*.” These words were said by His Excellency Ahmed Abdallah Mohamed Sambi, former president of the Comoro Islands. He was referring to my book *Sustainability: The fourth Wave of Economy*, during a discussion over breakfast in Dar-Us-Salaam, Tanzania, back in mid-2014.

Gallup, the American institute of public opinion, conducted a study to find out which country has the happiest citizens. The revelations only added credence to the fact that possession of wealth is not all about happiness. The study discovered that citizens of the *poorest* countries are the happiest. The list of happiest countries was topped by El Salvador, Paraguay, Uruguay, and Trinidad and Tobago.

Should we be satisfied with the fact that the poor are happier than the rich? They are happy because the realms of their world are very small. This is because the age of information and communication eludes them and development and change have not touched their lives.

The study amply proves that happiness is not an event. It is a state of mind. And I must say that happiness has no correlation with richness. The celebrated 19th-century English novelist, poet, playwright, and politician Edward Bulwer-Lytton described it best: *Happiness and virtue rest upon each other; the best are not only the happiest but the happiest are usually the best.*

The World Wealth Report says that the top 1 percent of the population owns 46 percent of all global assets. This paradoxical scenario does prevail.

During my service as a volunteer when I was general manager at Sharjah Charity International, I saw more smiles on the faces of those who were economically weaker than on those who were branded rich and powerful.

An Extraordinary Human

The UN Convention on the Rights of Persons with Disabilities was adopted on December 13, 2006, by the UN General Assembly, however, before this adoption, there was ignorance about persons with disabilities in the human rights discourse—they had been tucked away in savings clauses and sidelined in a few resolutions and declarations. The convention clearly spells out that persons with disabilities have equal access and the right to full and effective enjoyment of all human rights. There is no barrier for them, and they are allowed to access and enjoy this equality.

It is worth mentioning here that it was a proud moment for me when I was awarded a certificate of Goodwill Ambassador by the World Peace Organization in Washington, United States, with the title Extraordinary Human. The certificate contains these words: “Whereas you are active in the field of humanitarian work and the service of civil society in addition to the support of the disabled, you deserve all the thanks and appreciation, you are worthy of the title of an Extraordinary Human.” Thanks a lot to them for recognizing my efforts to help people suffering poverty and disability. The words of appreciation and recognition have boosted me with positive energy and allowed me to work more in this field.

UN 2030 Vision

Let us consider some facts. Out of the 7 billion people living in this planet, about 900 million—one in eight—do not have enough to eat. The conditions in some underdeveloped countries are worse.

At this point, I want to share the UN’s 2030 vision of eradicating extreme poverty.

- By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day.
- By 2030, reduce at least by half the proportion of men, women, and children of all ages living in poverty in all its dimensions according to national definitions.
- Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.
- By 2030, ensure that all men and women, especially the poor and vulnerable, have equal rights to economic resources, as well as access to basic services, ownership, and control over land and other forms of property, inheritance, natural resources, appropriate new technology, and financial services, including microfinance.
- By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social, and environmental shocks and disasters.
- Ensure significant mobilization of resources from a variety of sources, including enhanced development cooperation, to provide adequate and predictable means for developing countries, and particularly the least developed countries, to implement programs and policies to end poverty in all its dimensions.
- Create sound policy frameworks at the national, regional, and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions.

Thank You, ADB

The Asian Development Bank's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two-thirds of the world's poor: 1.8 billion people who live on less than \$2 a day, with 903 million struggling on less than \$1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

Angel of Mercy

There are always good people from all over the world who have good causes. These people keep asking themselves, "What is it from me?" You will not hear them asking, "What is it for me?" A good example is Abdul Sattar Edhi. He was a prominent Pakistani philanthropist, ascetic, and humanitarian who founded the Edhi Foundation, which runs hospitals, homeless shelters, rehab centers, and orphanages across Pakistan. Born in Gujarat, British India, Edhi moved to Karachi only to establish a free dispensary for Karachi's low-income residents. Edhi's charitable activities expanded in 1957 when an Asian flu epidemic swept through Karachi. Donations allowed him to buy his first ambulance the same year. He later expanded his charity network with the help of his wife, Bilquis Edhi. Over his lifetime, the Edhi Foundation expanded, backed entirely by private donations, including establishing a network of 1,800 minivan ambulances. By

the time of his death, Edhi was registered as a parent or guardian of nearly 20,000 children. He is known as the “Angel of Mercy” and is considered Pakistan’s “most respected” and legendary figure. In 2013, the Huffington Post claimed that he might be “the world’s greatest living humanitarian.”

Unfortunately, Edhi died on July 8, 2016, at the age of 88 because of kidney failure. He was laid to rest at the Edhi Village Karachi. He was such a great personality that reactions to his death came from several high-ranking Pakistani officials. Prime Minister Nawaz Sharif said, “We have lost a great servant of humanity. He was the real manifestation of love for those who were socially vulnerable, impoverished, helpless, and poor.” He also declared national mourning on the day following Edhi’s death and announced a state funeral for him. The head of the country’s army, Raheel Sharif, called him a “true humanitarian.”

Really, Edhi strongly promoted religious tolerance in Pakistan and extended support to the victims of Hurricane Katrina and the 1985 famine in Ethiopia. Edhi has been nominated for the Nobel Peace Prize several times.

Rockefeller Foundation

For more than a century, the Rockefeller Foundation has been dedicated to a single mission: promoting the well-being of humanity throughout the world. Today, the foundation pursues that mission with the dual goals of building greater resilience and advancing more inclusive economies. Through its portfolio of initiatives, its members strive to catalyze and scale transformative innovations, convene sector-spanning partnerships, and create systemic change to benefit poor and vulnerable people around the world.

PATHWAYS TO IMPACT

The Rockefeller Foundation utilizes three reinforcing levers for impact to varying degrees. These organizing principles, which were inspired by John D. Rockefeller Sr.'s tradition of scientific philanthropy, are the Three Pathways to Impact:

- **INTERVENTION:** Implementing time-bound initiatives that have specific goals and metrics, that directly impact people, and that can be scaled up or replicated more widely.
- **INFLUENCE:** Leveraging the Rockefeller Foundation's role and reputation as a catalyst, thought leader, and convening entity, to support new solutions to global problems.
- **INNOVATION:** Identifying, designing, testing, supporting, and implementing novel solutions, processes, and technologies.

Gap Between Rich and Poor

The gap between the rich and the poor keeps widening, according to the Organisation for Economic Co-operation and Development (OECD). In its 34 member states, the richest 10 percent of the population earn 9.6 times more than the income of the poorest 10 percent. There is no standard measure of inequality, but most indicators suggest it slowed or fell during the financial crisis and is now growing again.

I can quote here an example of how some people are enjoying a luxurious life while half of the planet is suffering from extreme poverty. A restaurant in the New York financial district is offering customers a pizza priced at US \$2,000. It is topped with caviar, Stilton cheese,

and gold leaf, with each bite costing around US\$50. This story is not just of New York, there are many other countries that offer gold pizza; but the question is, is it OK to enjoy this much luxury, knowing that a lot of people sleep with an empty stomach and are unable to get even the bare necessities for survival?

Happy Hour

I would like to share a story about humanity. Because of the recent price hikes, Egyptians have been experiencing shortages in basic goods. To mitigate the suffering of the people in the region, a restaurant in Dokki called Kebda w Shawarma made a great initiative. Very poor people cannot afford the prices of sandwiches, so the restaurant's owners suggested providing free sandwiches for one hour daily to help people through the economic crisis.

The initiative, which was announced by the end of 2016, attracted needy people, who formed long queues during "happy hour." Each customer could have up to five sandwiches for free. The restaurant does not specify a quota for the number of needy people who could be served sandwiches during happy hour. According to *Egypt Independent*, a customer named Mohamed Bayoumy praised the restaurant for their charitable initiative. He said, "some people can't afford food, so yes, it is definitely a good thing . . . You can see the number of people standing here who need food but cannot afford it. We're talking about a good meal for lunch in a place like this. That's all we need!"

Kebda w Shawarma employees are shareholders in the restaurant, so they receive a margin of profits instead of salaries. The collective ownership of the restaurant can better afford to provide free food to customers, said head chef Ahmed Samir. "All employees contribute

to the restaurant. Each one has a certain task within the scope of their expertise to focus on. We are making a business, instead of being employees of an owner . . . Solidarity is strength,” Samir added.

The owners of Kebda w Shawarma said that they did not plan to suspend the initiative soon, despite the harsh economic conditions, and that new branches are already in the pipeline for other Cairo neighborhoods.

50 for Freedom Campaign

The 50 for Freedom Campaign, led by the International Labor Organization and its partners, the International Trade Union Confederation and the International Organization of Employers, was launched on October 20, 2015. The campaign aims to end modern slavery. According to the latest ILO figures, there are 21 million modern-day slaves in the world today, the majority of whom are women and girls. Because of extreme poverty, they have become modern slaves. They work in mines, fields, and factories, as well as in homes and on the street. This industry generates estimated profits of 150 billion dollars every year.

The campaign’s goal is to persuade at least 50 countries to ratify the Protocol on Forced Labor by 2018. The protocol, which was adopted on June 11, is cited as the Protocol of 2014 to the Forced Labor Convention. I have provided one of the protocols below:

The measures to be taken for the prevention of forced or compulsory labor shall include

(a) educating and informing people, especially those considered to be particularly vulnerable, in order to prevent their becoming victims of forced or compulsory labor;

- (b) educating and informing employers, in order to prevent their becoming involved in forced or compulsory labor practices;
- (c) undertaking efforts to ensure that
 - (i) the coverage and enforcement of legislation relevant to the prevention of forced or compulsory labor, including labor law as appropriate, apply to all workers and all sectors of the economy and
 - (ii) labor inspection services and other services responsible for the implementation of this legislation are strengthened;
- (d) protecting persons, particularly migrant workers, from possible abusive and fraudulent practices during the recruitment and placement process;
- (e) supporting due diligence by both the public and the private sector to prevent and respond to risks of forced or compulsory labor; and
- (f) addressing the root causes and factors that heighten the risks of forced or compulsory labor.

The Protocol on Forced Labor could restore the hope and freedom of millions of people trapped in modern slavery. To support such a global movement, actors Robin Wright, David Oyelowo, and Wagner Moura, ILO's Goodwill Ambassador, have voiced the real-life stories of people trapped in modern slavery as part of the 50 for Freedom campaign to persuade countries to ratify a new international treaty to eliminate contemporary forms of slavery for good.

JOURNEY FROM SLAVERY TO FREEDOM

Poverty forced Brazilian Rafael Ferreira into slavery when he was 12-years-old. Five years later, with the help of *The 50 for Freedom Campaign*, he was rescued and is now about to start university. Let us go through the journey from slavery to freedom.

Working under the sweltering sun and earning just 5 Brazilian reais a day (US\$1.5), 12-year-old Rafael Ferreira da Silva slept in a shack in the woods. He ate what was given to him—mostly rice and beans—and drank the same water that bulls and other animals did. He had to work for five long years on a farm in rural Jauru in Brazil's Mato Grosso province to help pay off his father's debts. When he wanted to leave, they told him that he was still in debt and had to keep working.

As a young boy, he loved school, and used all his money to buy school supplies, pencils, erasers, and notebooks. When his supplies ran out, he could no longer attend school but had always dreamt of going back. "We led a very simple life. My father left my mother, and I stayed with him. He sent me to work because it was necessary. Enslaved people are in fragile situations, and, therefore, forced to work, work, work," said Rafael.

FREEDOM

He was rescued at the age of 17 during an operation conducted by the Brazilian Ministry of Labor.

After he was freed, Rafael received psychosocial care and took several courses through the Integrated Action Project, which was developed in 2009 by the Regional Labor and Employment office of Brazil's Ministry of Labor and the Federal University of Mato Grosso with the ILO's technical and institutional support.

The project offers education and vocational training to people in high-risk situations or those who have been rescued from slavery-like working conditions.

NEW OPPORTUNITIES

After he completed his training, Rafael worked in a supermarket, on a farm, and in a slaughterhouse. At the age of 24, he became a real estate agent and university student. Great!

“I study civil engineering, and I am paying my studies with my own money. I am the one who creates my destiny now . . . If Brazil were to invest in education, children would not be enslaved, and adults would have good job opportunities and be treated with more respect and dignity, rather than ending up working in degrading conditions,” he said.

As many as 700 people have benefited from the project since it was set up. It has now been replicated in three other Brazilian states: Bahia, Rio de Janeiro, and Ceara.

According to UN project coordinator Antonio Carlos Mello, “Rafael’s story shows how the Integrated Action Project, beyond offering training opportunities, gives its beneficiaries the chance to dream again, to plan for the future and overcome the difficult circumstances in which they grew up.”

Actionaid

ActionAid is a global movement of people working together to further human rights and defeat poverty for all, believing that, with the right opportunities, poor people will find their own solutions and lead new lives. Hence, it works with over 40 countries across the world with the main focus on people in poverty, people who face discrimination, and people whose voices are ignored.

In Nigeria, ActionAid commenced program operations in January 2000, after a country appraisal which found poverty in the midst of

plenty. They commenced work through a country agreement signed with the National Planning Commission of the Federal Republic of Nigeria, and currently, their work has spread across 26 states of the federation.

They operate with the following objectives:

- Work with the government and their institutions to promote laws, policies, and practices that address the rights of the poor and excluded communities.
- Work with organizations to advocate accountable, democratic, and transparent governance with pro-poor policies and programs.
- Enhance women and girls' access to decision-making processes, resources, and justice at all levels.
- Strengthen poor and excluded people and communities to influence policies and practices that affect their rights.
- Strengthen the structures, systems, and processes of ActionAid Nigeria and its partners for accountable, effective, and dynamic operations.

Pocket-Sized ECG

Scientists at the Bhabha Atomic Research Center (BARC) in India have set a good example of helping poor and disadvantaged people through technological advancements. What if we could examine our heart just as easily as we monitor our blood sugar or blood pressure without having to endure going to the hospital? That would really be great! And if the instrument is cheap and portable, then it would be a big help for people who live in remote or rural areas as they have

scarce facilities. As Thomas Fuller aptly put it, “health is not valued until sickness comes.” But at least health can be checked properly even if the patient is at home, traveling, or at work. Here, I would like to share that scientists at the Bhabha Atomic Research Center in India have developed a compact, low-cost, and portable tele-electrocardiogram (ECG) system that could be controlled by a mobile phone through a Bluetooth connection.

Although the team is still far away from commercially producing this card-sized ECG machine dubbed as Tele-ECG, they estimate that it would be priced at around \$62. Commercial machines currently available in the market cost between \$620 and \$775. TeleECG will have a battery inside it and will be chargeable with a mobile phone charger. Also, its accompanying app will ensure real-time sharing of a patient’s ECG report with doctors. The time saved will be of critical importance in saving lives.

A researcher from the BARC team claimed that this pocket-sized and pocket-friendly ECG machine will be able to churn out around 300 ECG reports on a single charge. In rural areas, where almost 70 percent of Indians live and where critical cardio care facilities are rare or absent, this machine could be a life saver.

This will not only benefit the patients but also reduce hospital load. The system is very adaptable and can be connected to a laptop or personal computer.

China Poverty Reduction Plan

The 11th ASEAN-China Forum on Social Development and Poverty Reduction took place in Cambodia in 2017. During the meeting, over 120 government officials, experts, and scholars from China and

ASEAN countries gathered together and discussed China's poverty alleviation plan and most successful practices.

Increased industrialization and urbanization throughout the country has transformed an agricultural surplus labor force into urban employment. While researching on the topic, I found an article in the Borgen Project, a nonprofit organization in Washington that addresses and works towards ending poverty and hunger. The article says that according to China's State Council Leading Group Office of Poverty Alleviation and Development, more than 700 million Chinese citizens have transitioned out of poverty. In addition, the rural poor population in China declined to 43.35 million in December 2016.

China, the country with the largest population in the world, with 1.38 billion people, and the second largest economy that accounts for 14.8 percent of the world economy, considers *steady income growth* for the bottom 60 percent of households in rural areas as the primary component of its poverty reduction plan. This plan has four underlying factors:

1. Equally distributing land between the "bottom quintile" households and the top income households is another goal. Equal distribution of land enables lower income households to proportionally benefit from the payments the state provides to support agricultural development.
2. Universal social development programs are making contributions to increase income growth for bottom households. China has successfully implemented several social development programs designed to hasten educational, medical, and income growth.

3.Targeted poverty reduction programs will develop the physical infrastructure and increase social development. They will also generate income to assist poor households.

I truly agree with the belief of the president of the International Fund for Agricultural Development (IFAD), Gilbert Hounbo, that China's poverty reduction plan presents an excellent model for other countries to implement within their economies.



18 WOMEN
EMPOWERMENT



*"There is no tool for development more effective
than the empowerment of woman."*

Kofi Annan

WOMEN EMPOWERMENT

Emirati Women's Day

August 28, was recently declared Emirati Women's Day and marks the creation of the General Women's Union in 1975. This date is an opportunity to celebrate Emirati women's achievements since the union was founded. The celebrations come in line with the directives of Her Highness Sheikha Fatima Bint Mubarak, chairperson of the General Women's Union, supreme chairperson of the Family Development Foundation and chairwoman of the Supreme Council for Motherhood and Childhood, to celebrate Emirati Women's Day with the slogan Women and Innovation.

Women empowerment has been one of the notable success stories in the UAE. The UAE firmly believes that progress on issues relating to women's rights is essential for building a tolerant and modern society. Since the very foundation of the United Arab Emirates on December 2, 1971, women have been recognized as equal partners in national development by the UAE's leaders.

The government continues to pursue a strategy of empowering women in all fields. The UAE society has comfortably accepted this approach in a way that has made women real partners and drivers in

the country's ongoing development process. Throughout the UAE's history, the leadership of the country has heavily invested in women. The founding father of the UAE, the late Sheikh Zayed Bin Sultan Al Nahyan, made the cause of women empowerment a top priority of the UAE government. In this respect, every possible effort was and continues to be made to support the talents of Emirati women and to develop social conditions, which, in turn, encourages women to fully participate in public life.

Sheikh Zayed once said, "The woman is half of the society. Any country which pursues development should not leave her in poverty or illiteracy. I am on the woman's side. I always say this in order to uphold her right to work and participate in the building process of her country." The UAE government has successfully delivered on this objective by offering women education, employment, and training opportunities and by introducing forward-thinking and progressive laws and legislation that have paved the way for women empowerment.

The Constitution of the UAE guarantees equal rights for both men and women. Under the Constitution, women enjoy the same legal status, claim to titles, access to education, right to practice professions, and right to inherit property. Women are also guaranteed the same access to employment, health, and family welfare facilities. Furthermore, the UAE has enacted a range of legislations and laws that provide legal protection for women and punish anyone who would compromise their dignity or personal safety. In this context, the UAE has signed all international treaties on protecting the rights of women. Since His Highness Sheikh Khalifa bin Zayed Al Nahyan came to power in 2004 as the president of the UAE, the issue of women empowerment has gained only further momentum. His Highness Sheikh Khalifa has led national efforts to create permanent

and positive changes in women's lives. He has done so by offering more education and training opportunities that would increase the role and contribution of women in the public sphere.

UAE 2015–2021 Road Map

His Highness Sheikh Mohammed bin Rashid Al Maktoum, vice president and prime minister of the UAE and ruler of Dubai, has launched a seven-year UAE National Agenda leading to the UAE Vision 2021, which also coincides with the UAE's 50th National Day.

The UAE National Agenda, which was developed by over 300 officials from 90 federal and local government entities, includes a set of national indicators in the sectors of education, healthcare, economy, police and security, housing, infrastructure, and government services.

These indicators are long-term, measurable performance outcomes in each of the national priorities, and generally compare the UAE against the global benchmarks. The national indicators are periodically monitored by government leadership to ensure their targets are achieved by 2021. The visions are united in responsibility, united in destiny, united in knowledge, and united in prosperity.

To fulfil these visions, in March 2015, Her Highness Sheikha Fatima Bint Mubarak, chairwoman of the General Women's Union, launched the National Strategy for Empowerment of Emirati Women in the UAE 2015–2021, which provides a guiding framework and reference for all federal and local governmental institutions and civil society organizations in developing plans and work programs to empower women in all areas.

Emirates Council for Gender Balance

Furthermore, His Highness Sheikh Mohammed bin Rashid Al Maktoum has also been at the forefront of encouraging women empowerment in the UAE. For instance, during the Government Summit in Dubai in 2015, His Highness Sheikh Mohammed announced the formation of the Emirates Council for Gender Balance, which aims to bridge the gender gap and boost the UAE's efforts to evolve and enhance women's role as key partners in building the future of the nation.

Women in the UAE

The UAE is a recognized leader in terms of gender equality in the region. This achievement comes from the fundamental belief that women and men are equal partners in society. Through a series of public and private sector initiatives, women are playing an increasingly stronger role in all facets of Emirati society. Women graduates in the UAE excel in government, engineering, science, healthcare, media, computer technology, law, commerce, and the oil industry, amongst other fields. Eight women serve in the UAE Cabinet, while nine women hold seats in the Federal National Council (FNC). A consultative parliamentary body accounts for nearly one-quarter of the FNC's membership.

First Lady Minister of the UAE

HE Sheikha Lubna bint Khalid bin Sultan Al Qasimi, the first lady to hold a ministerial post in the United Arab Emirates, is the best example of women empowerment whom I should mention. Currently, HE Sheikha Lubna is the minister of state for tolerance and was pre-

viously minister of state for international cooperation and minister of economic and planning of the UAE in 2004.

Sheikha Lubna graduated from the California State University, Chico, USA (1981) with a bachelor's degree in computer science and has an executive MBA from the American University of Sharjah, UAE (2002). Her Excellency holds honorary doctorate degrees in science from California State University of Chico (USA), in law from the University of Exeter (UK), and in economics from the Hankuk University of Foreign Studies (Korea). Her Excellency was recently awarded an honorary doctorate degree in humane letters by the Lebanese American University (Lebanon).

In addition to her portfolio responsibilities, Sheikha Lubna holds several distinguished positions, including president of Zayed University, and serves on a number of boards, namely, the Emirates Nuclear Energy Corporation and the Emirates Foundation for Youth Development. Moreover, Her Excellency is a member of the Governing Board of Lee Kuan Yew School of Public Policy at the National University of Singapore and many other local and international organizations. In 2016, she was listed as the 43rd most powerful woman in the world by *Forbes*. Really proud of you, Sheikha Lubna.

Youngest Lady Minister

Her Excellency Shamma Al Mazrui, at 22, is the youngest minister in the world. In the new cabinet, she has served as minister of state for youth affairs since February 2016. Her tasks are focused on youth issues and aspirations at the ministerial council, setting development plans and strategies for improving youth capabilities, in addition to further utilizing their energy in various fields.

Apart from handling the minister of state for youth affairs portfolio, previously HE Shamma Al Mazrui worked in private equity at one of Abu Dhabi's sovereign wealth funds. She also worked as a public policy analyst at the UAE Mission to the United Nations as a ministry policy analyst with the Prime Minister's Office, as a research analyst at the UAE embassy in the USA, and as an education policy researcher at Tamkeen (UAE Strategic Affairs Authority).

HE Shamma Al Mazrui obtained her master of public policy degree with distinction from the University of Oxford in 2015. She was the first UAE Rhodes scholar and ranked within the top of her class. She completed her bachelor of arts in economics degree with a concentration in finance at New York University Abu Dhabi (NYU-AD) in 2014. HH Sheikh Mohammed said, "We will give the council prerogatives, and we expect true achievements from her and her council. Young people represent some half of our Arab societies, so it is only logical to give them a voice and role in governing the nation. The youth have hopes and dreams, issues and challenges. They are the reason why societies prosper or fail. They are our hope for the future. Our young country was built by the hands and achievements of the youth. They are our strength and speed and our treasure for the future."

I am proud of you, Shamma! Continue your pursuits and make your nation proud. I am so glad that today more women are being given more opportunities to serve their country.

UAE National Assembly

The UAE has several women ambassadors. Currently, the UAE permanent representative to the United Nations, Lana Nusseibeh; the ambassador to Spain, Hessa Al Otaiba; the ambassador to Montene-

gro, Hafsa Al Ulama; and the consul general to Italy in Milan, Noura Mohammed, are women. Around 15 percent of Emirati women work in highly skilled technical fields, and a third of Emirati women hold senior-level positions. The best example is Dr. Amal Al Qubaisi, who was appointed president of the Federal National Council (FNC) in November 2015, the region's first female leader of a national assembly. She previously made history in 2006 as the first woman elected to the FNC, and in 2011, she was appointed deputy speaker of the FNC. Today, Emirati women constitute 66 percent of the national UAE labor market in fields as diverse as engineering, science, health care, media, computer technology, law, civil and military aviation, commerce, academics, public service, and the oil industry. Glad to see that women are doing very well in their respective fields.

Breaking the Stereotypes

Maj. Mariam Al Mansouri is the first female fighter pilot in the United Arab Emirates. She had wanted to be a fighter pilot since she finished high school, but she had to overcome gender stereotypes along the way. In the meantime, she earned her degree and served in the army. She graduated in 2007 and was one of the first women to join the United Arab Emirates Air Force (UAEAF) academy. She attended the Khalifa bin-Zayed Air College of the United Arab Emirates Air Force for pilots and received the Mohammed bin Rashid Pride of the Emirates medal for excellence in her field. In her interview with CNN, she said, "At that time, the doors were not open for females to be pilots. So I had to wait almost 10 years for the decision to be taken." She stressed that there is no difference between men and women when it comes to defending their country. "We are in a hot area, so we have to prepare every citizen," she added. "Of

course, everybody is responsible for defending their country—male or female. When that time comes, everybody will jump in.”

She leads UAE mission air strikes against the Islamic State of Iraq and Syria (ISIS). The Emirates were among the five Arab allies that joined the United States in launching air strikes in Syria in 2014 to beat back ISIS forces. In an interview with the National Broadcasting Company (NBC), Yousef Al Otaiba, Emirati ambassador to the United States, recounted that when US Air Force tanker pilots radioed in to speak with the UAE mission during air refueling and heard Al-Mansouri’s voice, they were initially surprised and silent for a short time.

Major Mariam, you really make us proud, and I totally agree with your thought that everybody is responsible for defending their country. Very true.

The UAE Businesswomen Council

Emirati women have also made great strides in the world of business and investment. The UAE Businesswomen Council, a nationwide network of business, professional, and academic women, was set up in 2002. Emirati businesswomen are running investments worth more than US\$3.26 billion in various fields, including trade, industry, finance, real estate, tourism, fairs and exhibitions, construction, and services. In the banking sector alone, 38 percent of employees are Emirati women. In conclusion, today, many Emirati women, who account for 49.3 percent of the national population, are at the cutting edge and forefront of UAE economic, political, and social life. With the help of the government’s unwavering commitment to empowering women and providing equal opportunities, the status

of women in the UAE has flourished in parallel with the country's growth since the federation was established in 1971. It is evident that this process will only continue apace, and women will remain an ever-important cornerstone for not only the UAE's present but also its future.

NAMA

The NAMA Women Advancement Establishment, which was founded on December 15, 2015, was created as part of the effort to empower women globally. Her Highness Sheikha Jawaher Bint Mohammed Al Qasimi is the chairperson of the NAMA Women Advancement Establishment and wife of His Highness Dr. Sheikh Sultan bin Mohammed Al Qasimi, supreme council member and ruler of Sharjah.

NAMA aims to develop opportunities for women in three major sectors: economic, professional, and social. Other initiatives and programs may be launched by the establishment in other sectors in the future. On September 26, 2016, Her Highness Sheikha Jawaher launched the \$2.74 million NAMA International Women Fund during the launching of the Women, Peace, and Security Focal Points Network session at the UN Headquarters in New York City, which was organized as a side event of the 71st UN General Assembly.

"GLOCALIZATION" MIND-SET

Great steps have been taken towards women empowerment. Her Highness Sheikha Jawaher said that the main objective of launching the NAMA Fund is to support local, regional, and international efforts to support women's development as economic, social, and professional decision makers. It seeks to organize financial and human

resources required to elevate the status of women and support programs for women's economic and professional empowerment and invest in initiatives for the same, not only in the UAE, but across the world. Sheikha Jawaher is really a global shaper.

Sheikha Jawaher said, "In the UAE, we grew up as women blessed with the care and support of our founding father Sheikh Zayed and his brothers, their Highnesses the rulers of the Emirates, who believed in women's essential and important roles as key partners in the development of the union."

Sharjah Family Supreme Council

In line with the great attention to the importance of family coherence and sanctity in our culture, on November 26, 2000, His Highness Dr. Sheikh Sultan bin Mohammed Al Qasimi, ruler of Sharjah, issued Emiri Decree No. 24, setting up the Family Supreme Council of Sharjah (FSC). The decree said that the council, which works in the development, protection, and welfare of families, will be an autonomous department and will have its own budget and administration, and the council will have a board, a chairman, and a deputy chairman. Sheikha Jawaher bint Mohammed Al Qasimi, wife of the ruler of Sharjah and chairwoman of the Sharjah Girls Club, said that the FSC has been established in line with the great attention paid by the ruler to the importance of family coherence and sanctity in our culture.

Woman: Secret Sauces of Success

On Friday, January 23, 2015, during a session on day 3 of the World Economic Forum (WEF) in Davos, Switzerland, Jack Ma, the found-

er and executive chairman of China's online marketplace Alibaba, revealed the reason why his company is so successful. According to the *Hollywood Reporter*, he said, "One of the secret sauces of Alibaba is we have a lot of women," and added that 47 percent of his staff and 33 percent of individuals in senior roles are women.

Jack Ma commented that "women think about others more than themselves," which is key for Alibaba and its ability to serve users. I do follow the same strategy because a woman has got better managing capability.

Balancing the Equation of Life

According to a report by the UN, which I also mentioned earlier, if women farmers had the same access to resources as men, the number of hungry people in the world would be reduced by up to 150 million. So, there is something to be worried about and to be sorted to balance the equation of life. I want to share the same vision with my lovely readers.

SCIP: A BRIDGE BACK TO WORK

While reading the book, *Tata Log*, by Harish Bhat, I came across a chapter titled "Second Careers for Intelligent Women." The title itself gives a very clear picture of the chapter. The author has covered a few stories of women who took a career break to raise a family and got a chance to return to the corporate sector through a platform launched by the Tata Group in 2008 called Second Career Internship Program (SCIP). SCIP gives a chance to women who have skipped a few years of work.

So many well-qualified, intelligent women put their careers on hold to take care of their young children and families. As the years pass,

these women find it increasingly challenging to return to the workplace, despite wanting to do so. SCIP is a very special program designed to help these women achieve their aspirations and to tap into an enormous pool of experience and talent. It provides them with a plethora of career options to choose from so that they can work when they want, where they want, on the project that they want, and at the pace they want. I really like the flexibility they offer at work.

Emaratiyah: The UAE's Inspiring Women

As a gesture of gratitude and in celebration of the valuable contributions of Emirati women who have prospered in different fields, a special edition book titled *Emaratiyah: The UAE's Inspiring Women* was launched by the Federal Competitiveness and Statistics Authority (FCSA) on the occasion of the Emirati Women's Day. FCSA had presented a preselection list of 100 women to an independent advisory committee, and then the top 24 candidates were selected based on several criteria marking women's contribution to the UAE's development.

Reem Al-Hashemi, minister of state for international cooperation and chairwoman of FCSA, stressed that women's empowerment has always been one of the key indicators of a nation's social and economic progress and development. She also highlighted that societies simply cannot sustain a comprehensive development agenda without the full and active participation of women in the community. The role of Emirati women has rapidly expanded and evolved since the establishment of the union, and their contributions are visible in all aspects of UAE life.

Justifying the notion that the UAE enables its society through women empowerment, Al Hashemi said that Emirati women's journey

towards success and prosperity in the UAE was encapsulated by the principles laid down by the country's leadership, as underlined by a true belief and conviction of the importance of women's role as key partners in building the future of the country.

A success story causes positive behavioral changes and brings about more happiness, so I suggest that people, especially women, read such books and excel in their respective fields.

G(IRLS)20

Launched in 2009, designed according to the G20 architecture, G(irls)20 brings together female delegates, one from each G20 country, plus a representative from the European and African Unions, Afghanistan, Pakistan, and the MENA region. G(irls)20 places girls and women at the heart of the economic decision making process by advancing the idea that increasing female labor force participation will generate growth, stabilize communities and countries, and lead to social innovation.

G(irls)20 work at the community and individual level by making strategic investments in girls and women, aged 15-25 in over 20 countries. They do this so that girls can pursue opportunities at home and abroad. In partnership with the private sector, social profit sector and individuals, G(irls)20 are able to provide skills-building workshops (entrepreneurship, financial preparedness, communications, technology navigation, leadership, etc.); a global summit; global mentorships; and coaching, so that each of their participants can launch their own program/initiative to empower others. G(irls)20 is also the driving force behind Fathers Empowering Daughters, Boot-camp For Brains and Girls on Boards.

Fatima Meer

During my recent visit to South Africa, at the airport while waiting for my return flight, I went to one of the duty-free shops to do a little shopping. While walking around the book section in the shop, I saw a book titled *Fatima Meer*, which contains Fatima Meer's biography and autobiography. I picked up the book, and quickly glancing through the chapters, I found so much material fitting for my research on women empowerment, and I would like to share this great personality with the readers.

Fatima Meer, an example of fortitude and prowess, is worth mentioning here. Born in Durban, a city in South Africa, she was the most formidable female leader of Indian origin in the liberation movement in South Africa. She was an intellectual, academic, writer, activist, and above all, a tireless fighter for social justice and human rights.

Meer was the first non-White woman to be appointed in a "White" university when she joined the University of Natal as a lecturer in sociology in 1956, and later set up the influential Institute for Black Research at the university in 1972. Describing her characteristic intervention during an incident of student unrest, one of her students said, "It was an unbelievable sight to see this petite little woman, wrapped in a sari, march in front of a Hippo (an armored police vehicle) and order it to stop." What bravery and courage!

As Winnie Mandela, Meer's close friend, put it, "At a time when most Indian girls were helping their mothers in the kitchen making samosas, this young woman was leading protest marches and challenging the most oppressive system in the world."

During the race riots at the Cato Manor area in her hometown of Durban in 1949, in which black people attacked Indian homes and

businesses, she was one of the first to get to the heart of the troubled area with a van full of supplies and baby milk. She also helped establish the Durban District Women's League, an organization created to forge alliances between Africans and Indians in response to the race riots between the two groups in 1949.

Passionate about education, Meer was also involved in a number of schemes and projects to help impoverished Africans learn key skills. A woman of strong convictions, she lived her life with a strong sense of duty. She did things instinctively, spontaneously, and passionately, sometimes in the most haphazard manner. Being an amazing writer, she wrote Nelson Mandela's first biography, *Higher Than Hope*, which was published in 1988, along with more than 40 other books, essays, and lectures. Her book on Gandhi's life, *Apprenticeship of a Mahatma*, became the basis of the 1996 film *The Making of the Mahatma*, for which she wrote the screenplay.

Women Still Missing Out on Most Senior Jobs

The news that I read from an edition of the *Financial Times*, published on April 4, 2017, caused me grief. According to the data gathered by the *FT*, the majority of junior staff in financial services are women, but only one in four of those who reach a senior role is female. The *FT* gathered data from 50 of the world's biggest banks, insurers, asset managers, and professional services firms on their progress towards achieving a more even split between men and women throughout their organizations. Another 15 companies refused to disclose information.

The data revealed that the share of women plunges dramatically as employees move up through the ranks at their institutions. Despite some improvements in recent years, progress has been painstakingly

slow. Women made up 25.5 percent of senior roles in 2016, compared with 23.7 percent in 2014. The number of women in mid-level jobs stayed flat at just over 39 percent for the same period.

Across the sector, the *FT* data found that professional services firms had the highest representation of women at senior levels, with one woman for every two men. Banks, insurers, and asset managers were broadly similar, with about one woman for every three men.

Regionally, Asia was an outlier. Banks, which were the only companies to disclose data for the region, had just 6.9 percent female representation at their most senior levels. Last week, Schrodgers was the latest British blue-chip company to publish pay gap data, revealing that female staff were paid salaries 33 percent lower than male staff on average, while bonuses were 66 percent lower.

The data, of course, do not reflect a good sign of gender equality in the workplace. It gives me deep sorrow, and at the same time, I feel good that I have supported equality in my organization by giving similar opportunities to men and women in their respective fields. And I expect a lot more organizations to promote gender equality because everybody has talent, which is different from one person to another.

Why Empowering Women Can Make Women and Men Happier

Women's empowerment continues to be at the top of my agenda, so that I have decided to make an overall goal to maintain this focus. On March 8, 2017, Women's Empowerment Day, I conducted some research on the great jobs done by women across the world, and I came across an OECD article titled "Why Empowering Women Can Make Women and Men Happier." The title itself caught my attention

as it speaks about my two very important goals: women empowerment and happiness together. I would like to share this article with my readers.

The OECD has long argued that the ultimate goal of public policies is to improve the quality of our lives. But what makes us happy? Does living in a country guarantee equal rights and opportunities to women and men increase people's happiness? The answer, apparently, is yes.

Gender-based discrimination remains a critical challenge around the globe. Despite changes in gender roles following progress in economic, political, and social rights, no country has achieved gender parity. Only half of working-age women are in the labor force, earning on average 24 percent less than men (UN Women, 2015). Despite their increasing involvement in the labor market, women still perform 75 percent of the total unpaid care and domestic work (OECD, 2014). And gender-based discrimination in social norms remains widespread worldwide (OECD Development Center, 2014).

Empirical evidence shows that gender inequality is bad for growth, especially when it comes to gender disparities in education, labor, and social institutions. Sidelining women holds back economies from growing and prospering: current levels of gender-based discrimination in social institutions cost up to US\$12 trillion to the global economy. On the other hand, closing the gender gap to allow women to play the same role in labor markets as men would add as much as US\$ 28 trillion (26 percent) to the annual global GDP in 2025.

The study finds that current gender-based discrimination in social institutions fuels a decline of 4.4 percent in the world average level of life satisfaction.

Together, these findings foreshadow the need to focus more on the life satisfaction impact of government policies as a way to measure fairness. Ultimately, they stress the potential of gender equality to promote better, happier lives.

Jayaram Jayalalithaa, Revolutionary Leader

Jayaram Jayalalithaa who died on December 6, 2016, was an Indian actor turned politician who worked in 140 films between 1961 and 1980 and served six terms as the chief minister of Tamil Nadu for over 14 years between 1991 and 2016. From 1989 onwards, she was the general secretary of the All India Anna Dravida Munnetra Kazhagam (AIADMK). As she was a very kindhearted woman who was full of love and sympathy for people, a Dravidian party's cadre (officers/staff) revered her as their Amma (mother), Puratchi Thalaivi (revolutionary leader), and Thanga Tharagai (golden maiden). However, some of her critics in the media and the opposition accused her of fostering a cult of personality and demanding absolute loyalty from AIADMK legislators and ministers, who often publicly prostrated themselves before her.

Jayalalithaa received praise for her versatility as an actor and for her dancing skills, for which she earned the sobriquet "queen of Tamil cinema." In 1982, when Marudur Gopalan Ramachandran, popularly known as MGR, also an Indian actor, filmmaker, and politician was serving as chief minister of Tamil Nadu, Jayalalithaa joined AIADMK, the party he founded. Her political rise was rapid; within a few years, she became AIADMK propaganda secretary and was elected to the Rajya Sabha, the upper house of the Parliament of India. After MGR's death in 1987, Jayalalithaa proclaimed herself his political heir and, after fighting off a faction headed by Janaki Ram-

achandran, MGR's widow, emerged as the sole leader of AIAD-MK.

She did a lot in her political career for the welfare of society; some of her achievements I would like to share with my dear readers.

BRAND AMMA

This is probably one the most innovative welfare schemes introduced by the late chief minister. Under her rule, the government rolled out a plethora of welfare schemes, such as free laptops for students and canteens with subsidized food, called Amma Unavagam for the homeless. Apart from the midday meal scheme, Jaya introduced breakfast meals across government schools.

STABILIZED POWER SITUATION

Rampant power cuts were a major problem in villages across the state. Remote areas would experience load shedding for more than 12 hours. Several small industries were on the verge of shutting down owing to having a poor power supply. In her second consecutive term, Jayalalithaa tackled this problem by strongly pushing for solar energy. The government also provided 200–750 units of free electricity to handloom and power loom weavers.

GOLD SCHEME FOR WOMEN

She introduced the Thallikku Thangam scheme to provide gold for mangal sutra (an ornament that the bride wears in Indian Hindu marriages) and financial assistance for the conduct of a marriage ceremony. According to the government's website, four grams of gold and \$387.6 as marriage assistance have been given to 86,676 educated poor women.

CRADLE BABY SCHEME

In 1992, the “cradle baby” scheme, another brainchild of the late Chief Minister Jayalalithaa, was initiated in towns and villages across Tamil Nadu to battle female infanticide. In this scheme, parents are allowed to anonymously hand over their newborns to cradle baby centers. The centers are well-equipped with life-saving drugs and other facilities. These centers have been set up in various districts across Tamil Nadu, such as Madurai, Theni, Dindigul, Dharmapuri, Erode, and Namakkal.

Assia Djébar

Assia Djébar was a famous Algerian novelist, translator, and filmmaker who is noted for her feminist stance. Most of her works deal with obstacles faced by women, and her novels are clearly focused on the creation of a genealogy (study of family history) of Algerian women. Her political stance is virulently antipatriarchal as much as it is anticolonial. She did not believe in a social system in which power is held by men through cultural norms and customs that favor men and withhold opportunities from women. She was elected to the Académie Française on June 16, 2005, and became the first writer from the Maghreb to achieve such recognition. For the entire body of her work, she was awarded the 1996 Neustadt International Prize for Literature.

LIFE IN A JAR

I recommend, my dear reader, that you read the book *Life in a Jar: The Irena Sendler Project*, by Jack Mayer. It has been one of the best-selling Holocaust books on Amazon for over seven years. Irena Sendler was a Polish nurse, humanitarian, and social worker who

protected Jewish people during World War II in the German-occupied city of Warsaw. It is estimated that Irena rescued 2,500 children. With the help of her rescue network, she made false documents and provided shelter outside the Ghetto, saving those children from the Holocaust. This work was done at a huge risk, as giving any kind of assistance to Jews in German-occupied Poland was punishable by death, not just for the person who was providing help, but also for their entire family or household.

She and her network made lists of the children's real names, put these lists in jars, then buried them in a garden so that someday she could dig them up and find the children and tell them of their real identity.

The German occupiers eventually discovered her activities, and she was arrested by the gestapo (the official secret police of Nazi Germany and German-occupied Europe), who tortured her and sentenced her to death. Later managing to evade execution and survive the war, in 1965, Sendler was recognized by the State of Israel as Righteous among the Nations. Later in her life, she was awarded the Order of the White Eagle, Poland's highest honor, for her wartime humanitarian efforts.



19 EMPLOYMENT, SKILLS AND HUMAN CAPITAL



"The example of the believers in their affection, mercy, and compassion for each other is that of a body. When any limb aches, the whole body reacts with sleeplessness and fever."

Prophet Mohammed
(Peace Be upon Him)

EMPLOYMENT SKILLS AND HUMAN CAPITAL

Human capital and employment skills are interlinked. “Employment skills,” or employability, can be defined as the transferable skills needed by individuals to make them employable, while “human capital” refers to the collective skills, knowledge, and other intangible assets of individuals that can be used to create economic value for the individuals, their employers, or their community. But what do human capital and employment skills demand from us? The best I can say is “leadership qualities,” and it gives me immense pleasure to write here that, in 2017, the Indian Human Welfare Organization conferred on me two very prestigious awards: the Inspirational Leader Award and the Lifetime Achievement Award.

In 2017, I was recognized as an Exemplary Leader in the UAE by New York Institute of Technology in collaboration with Multinational Business Academy. In the same year, I ranked third among the 25 most influential CEOs in GCC. Overwhelmed! These recognitions make me glad and, at the same time, empower me with positive energy to keep doing the best I can as a leader.

Read More

The Sharjah government came up with an innovative idea to build a better tomorrow for its citizens and to ensure that they have the right skills, tools, and knowledge to create a knowledge hub through an annual book fair, where hundreds of publishing houses and capacity-building trainers from around the world bring millions of books from different fields, written in more than 200 languages, for the public to read and buy.

The Sharjah International Book Fair (SIBF) is the third largest book fair in the world. It is a very prestigious fair in the Arab world and home to an exciting literary event in the region. SIBF is held under the patronage of His Highness Sheikh Dr. Sultan bin Mohammed Al Qasimi, member of the supreme council and ruler of Sharjah, who strives to promote literacy and reading and preserve culture in the emirate. The main aim of SIBF is to encourage reading among people, especially the younger generation, by making quality books accessible to them at affordable prices.

Held annually since its inception, SIBF attracts millions of visitors from around the world. The fair runs for 11 days and hosts some of the biggest names in the publishing and cultural sphere and organizes hundreds of events. In 2015, at the 34th edition of SIBF, the participants included Egyptian actor Mohammed Sobhy, Irish writer Darren Shan, BBC and Sky TV presenter and writer John McCarthy, Nigerian Booker Prize-winning writer and poet Ben Okri, and Indian actor Mohanlal. In 2015, there were 1,547 publishing houses from 64 countries exhibiting at SIBF and over 1.5 million books in 210 languages on display. It received 1.5 million visitors, firmly placing the emirate on the map as a cultural focal point.

There are many other initiatives at SIBF, including the Translation Grant, a project of the Sharjah government that funds the translation of books for both regional and international publishers, and the Culture Café, which hosts poetry readings and cultural events featuring regional personalities.

America Reads

The America Reads Challenge is an initiative started in 1996 by the Clinton administration. In August 1996, President Clinton proposed a national literacy campaign that would enlist “one million volunteer tutors ready and able to give children the personal attention they need to catch up and get ahead.” The initiative is funded through Federal Work. In 1996, the Department of Education’s work-study program provided \$617 million to support part-time employment for 713,000 students at 3,400 colleges and universities. In November 1996, President Clinton announced that the federal government would waive this requirement and pay 100 percent of the wages of any student employed as tutor for pre-school and elementary school children. The federal government worked as a catalyst in building the president’s “citizen army” of reading tutors.

The initiative trains 35 UCSB (University of California, Santa Barbara) students to be tutors in elementary schools. Each tutor is expected to help students advance in the subject areas of reading and mathematics and support children in their school development. Tutors work directly with kindergarten through sixth-grade students to help improve their reading and math proficiency skills. They facilitate one-on-one work with individual students, group work, or class activities. I appreciate the wonderful initiative meant to encourage good education.

The Clinton initiative has encouraged me for the last 15 years to motivate and encourage my employees to read. Reading is one of my favorite hobbies.

Sharjah Reads

In my continued effort to encourage my people to read more and be knowledgeable about different fields of life and business, for the last 15 years I have created small libraries in different organizations where I personally select the books and reading materials with the slogan Sharjah Reads.

SEWA Got Talent

SEWA employs over 5000 individuals from diverse backgrounds and cultures spanning over 35 nationalities. This multicultural identity adds a lot to the unique business culture that we have here. This cultural difference also drives innovation.

While giving deep thought as to how I could improve the performance of SEWA, it came to my mind that our organization is a craft and talent powerhouse. And as a connoisseur of talents, I just had to tap this wealth of knowledge that surrounds me. So I gave it a try!

I decided to have a meeting with the human resource manager, Saeed, and gave him the responsibility of finding/tapping talents. This is how the idea of SEWA Got Talent came into being. The idea behind this was to provide employees with an opportunity to showcase their talents so that SEWA can identify the rich and varied talents it harbors. As expected, the response was overwhelming. Many employees came forward with their passion for writing, singing, painting, cooking, playing international games, and many more.

One employee, Abu Ba Backer, from the water call center section, is worth mentioning here. He is endowed with the talent of writing poems and prose. In fact, he has written plays that have been staged in India. I am amazed by his short poems and prose writings, which have been published and won accolades. Armed with such great talent, I truly appreciate Abu Ba Backer's efforts to find time outside his daily chores to keep his passion for writing poems and prose alive.

Getting the right mix of talent is important for companies to progress in areas such as innovation, collaboration, customer satisfaction, and of course, technology. I admire people who think and work in very different ways—all-rounders and specialists—who imagine and implement.

SEWA WRITERS

SEWA Writers is an initiative conceptualized by the Marketing and Communication Department, which I supported and approved right away. The idea behind it is to invite all SEWA employees who have writing talent to share their success stories, whether personal or professional, with their colleagues. We decided to pick a personal inspirational story from various writers every week and send it to the department so it could be shared with the rest of the employees. I was overwhelmed by the employees' responses and happy to see how motivated and inspired they are as they are able to share their experiences with their colleagues. I was told by the marketing and communications manager that he has a long waiting list of employees who want to contribute to this endeavor.

CALLIGRAPHY TALENT

Have you ever imagined what the world would look like without creative people? Boring! It is my deep-seated belief that every individual harbours a unique talent. And a talent with a dash of creativity is rare. One example is calligraphy. We found out that a SEWA employee is a fantastic calligraphy artist. He has organized exhibitions and displayed his artworks/craft in other public forums. In fact, one of his latest exhibitions has been extended for another month on the directives of the Cultural Department of Sharjah.

Welldone, DBA

The Digital Business Academy (DBA) is a free online platform created by Tech City UK to teach people everything they need to start, grow, or join a digital business. DBA worked with University College London, Cambridge University Judge Business School, Founder Centric, and Valuable Content to create 11 expert courses. Upon completion of the courses, DBA provides access to rewards, including free co-working, internship, and bespoke mentoring support.

It offers 11 expert courses, ranging from developing a digital product to running social media campaigns and mastering finance for your business. DBA offers a free opportunity for you to gain the business skills you need in a digital world, at your own pace, from your own place, online, for free.

Each course consists of short video lessons, giving you practical advice from experts and entrepreneurs who have been through it all, with hands-on tasks to help you practice what you have learnt.

For each course that you complete, you earn a certificate. On top of that, you earn the right to apply for the many rewards on offer. This

is truly a fantastic effort by DBA. Now I would like to quote sayings from David Cameron, former prime minister of the UK. “The UK is one of the fastest-growing digital economies in the G20, and we must embrace new models of education, such as the Digital Business Academy, to upskill our national capabilities and provide people with the tools they need to participate and thrive in the new economy. Building on our initiative to put coding into the school curriculum, Digital Business Academy provides the commercial know-how needed to turn the UK into a nation of business builders, with an equipped workforce for the 21st century.”

Retreat of the Leading Brain | Emergenetics

Emergenetics psychometric profiling is a world-class tool developed after many years of brain research at Harvard and Nebraska Universities and used by the biggest organizations around the world, such as Microsoft, Cisco, Deloitte, Western Union, Allianz, Siemens, and Accenture, and so on.

A noteworthy example here is SEWA young leaders’ visit to Cambridge University in the UK to attend a course on the emergenetics program in the UK. It was a week-long course that ran from May 8 to 14, 2017. Emergenetics is the merging of two ideas: our behavior emerging from our life experiences and our genetic traits. Emergenetics is rooted in the concept that who you are today is a product of your behavior, genetic makeup, and life experiences.

The team also visited St. John’s Innovation Park at the center of the North Cambridge Research and Development Cluster. The innovation center is the first of its kind in Europe and focuses on supporting knowledge-based businesses. The Innovation Incubator at St John’s

Innovation Center provides first-class training and support vital for any growing business.

We were quite impressed by its philosophy because of its uniqueness. It is uncommon because it encompasses inherent human genetic profiles and behavioral aspects. Hence, we decided to build a SEWA Emergenetics Mini Lab in our main boardroom, which explains the theory in a few lines. The emergentics model mesmerized me. It presented offbeat ways to unleash individual potential at the optimum level.

Emergenetics, which is the science of identifying our individual preferences, states that each individual's temperament can be described in terms of three behavioral attributes and four thinking attributes. I will explain the concept of emergentics in more detail in the following paragraphs.

BEHAVIORAL ATTRIBUTES

The behavioral attributes are what people see first about you. These attributes can be changed through training and coaching. They comprise the following three traits:

1. **EXPRESSIVENESS** – This is your level of participation in social situations. It is about sharing what you are experiencing on the inside with the outside world.
2. **ASSERTIVENESS** – This is your level of interest in controlling tasks and results. Your degree of assertiveness reflects the amount of energy you invest in expressing your thoughts, feelings, and beliefs.

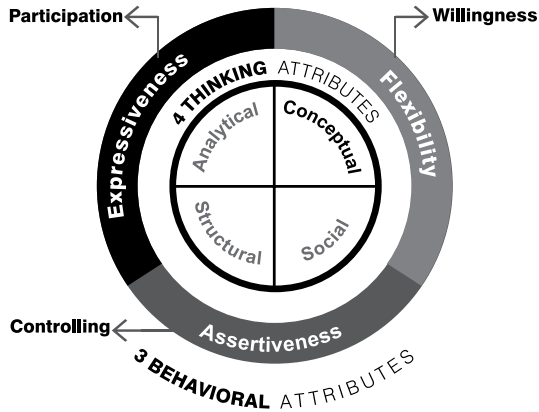
3. **FLEXIBILITY** – This measures your willingness to accommodate the thoughts and actions of others. Your degree of flexibility reflects how much you are willing to fit in with and accommodate the interpersonal needs of others.

THINKING ATTRIBUTES

People cannot see the way we think, and what is going on in our head may be mysterious to them. These attributes are core and fixed within an individual and difficult to change. They comprise the following four traits:

1. **ANALYTICAL** thinking is rational, inquiring, and clear. The analytical part of our brain wants to see data and research. Analytical people are considered logical, cogent, and to the point. They usually learn through mental analysis.
2. **STRUCTURAL** thinking is detailed, practical, and methodical. The structural part of the brain follows rules and is cautious of new ideas. Structural thinking people like guidelines, and they learn by doing.
3. **SOCIAL** thinking is relational, collaborative, and supportive. The social part of the brain is team-oriented and socially-aware. Social people are considered connectors, and they learn from others.
4. **CONCEPTUAL** thinking is imaginative, unconventional, and visionary. The conceptual part of the brain likes change and is easily bored. These people are intuitive, inventive, and innovative. They learn by experimenting.

By understanding and appreciating our emergentics profile/preferences, we get to have more complete knowledge of ourselves. The info graph below summarizes the concept of emergentics.



Data Rich, Information Poor

Just because data are collected does not mean that it can be used. Every organization produces data every day. However, many companies fail to harvest these data and turn them into useful information. This limitation is a big problem for large firms that have legacy systems. Older information systems are often incompatible with other systems, technologies, and ways of conducting business. Incompatible legacy systems can be a major roadblock to turning data into information, and they can inhibit a firm's agility, holding back operational and strategic initiatives. Outdated information systems that are not designed to share data are incompatible with newer technologies and are not aligned with the firm's current business needs.

There is not a single formula for success when designing a corporate information strategy: think of market basket analysis or demographic trending—gather bits and pieces of information known to be meaningful, and connect, model, and store them in such a way that they provide insight that supports business objectives.

The 5 Levels of Leadership

John Maxwell, a very well-known American author, speaker, and pastor, has written many books primarily focusing on leadership. On August 7, 2017, at the Conrad Hotel in Dubai, Maxwell presented me with a signed copy of his outstanding book: *The 5 Levels of Leadership*. The entire book is devoted to exploring the levels—their upsides, their downsides, the best behaviors for a particular level, the beliefs that help a leader move up to the next level, and how a particular level relates to the laws of leadership. Let us wade into the levels!

LEVEL 1: POSITION

This is the lowest level of leadership—the entry level. People who make it only to level 1 may be bosses, but they are never leaders. They have subordinates, not team members. They rely on rules, regulations, policies, and organizational charts to control their people. Their people will only follow them within the stated boundaries of their authority.

Position is the only level that does not require ability and effort to achieve. Anyone can be appointed to a position. This means that position is a fine starting point, but every leader should aspire to grow beyond level 1.

LEVEL 2: PERMISSION

Making the shift from position to permission brings a person's first real step into leadership. Leadership is influence, and when a leader learns to function at the permission level, everything changes. People do more than merely comply with orders; they actually start to follow. And they do so because they really want to. Why? Because the leader begins to influence people with relationship, not just position.

When people feel liked, cared for, included, valued, and trusted, they begin to work together with their leader and each other. And that can change the entire working environment. The old saying is indeed true: people go along with leaders they get along with.

LEVEL 3: PRODUCTION

Production qualifies and separates true leaders from people who merely occupy leadership positions. Good leaders always make things happen. They get results and can have a significant impact on an organization. Not only are they productive individually, but they also are able to help the team produce. No one can fake level 3. Either you are producing for the organization and adding to its bottom line (whatever that may be), or you are not.

Some people never move up from level 2, permission, to level 3, production. Why? They cannot seem to produce results. When that is the case, it is usually because they lack the self-discipline, work ethic, organization, or skills to be productive. However, if you desire to go to higher levels of leadership, you simply have to produce. There is no other way around it.

LEVEL 4: PEOPLE DEVELOPMENT

At level 3, the emphasis is on personal and corporate productivity.

The ability to create a highly productive team, department, or organization indicates a higher level of leadership ability than most others display. But to reach the upper levels of leadership that create elite organizations, leaders must transition from producers to developers. Why? Because people are any organization's most appreciable assets.

Good leaders at level 4 invest their time, energy, money, and thinking into growing others as leaders. How does this emphasis on people and people decisions translate into action? Leaders in the people development level of leadership shift their focus from the production achieved by others to the development of their potential. And they put only 20 percent of their focus on their personal productivity while putting 80 percent of it on developing and leading others. This can be challenging for highly productive people who are used to getting their hands dirty, but it is a change that can revolutionize an organization and give it a much brighter future.

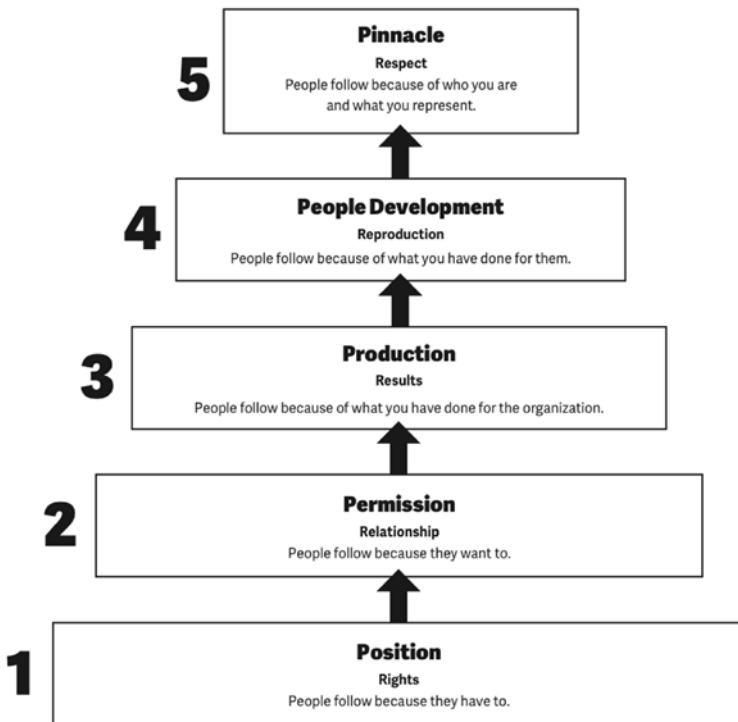
LEVEL 5: PINNACLE

Rare are leaders who reach level 5—the pinnacle. Not only is leadership at this level a culmination of leading well at the other four levels, but it also requires both a high degree of skill and some amount of natural leadership ability. It takes a lot to be able to develop other leaders so that they reach level 4. That is what level 5 leaders do. Individuals who reach level 5 lead so well for so long that they create a legacy of leadership in the organization they serve.

Pinnacle leaders stand out. They are a cut above the rest, and they seem to bring success with them wherever they go. Leadership at this high level lifts the entire organization and creates an environment that benefits everyone in it, contributing to their success. Level 5 leaders often possess an influence that transcends the organization and the industry they work in.

Most leaders who reach the pinnacle do so later in their careers. However, this level is not a resting place for leaders to stop and view their success. It is a reproducing place from which they make the greatest impact on their lives. That is why leaders who reach the pinnacle should make the most of it while they can. With gratitude and humility, they should lift up as many leaders as they can, tackle as many great challenges as possible, and extend their influence to make a positive difference beyond their own organization and industry.

The following infograph summarizes the five levels of leadership:



UAEU in the World's "Top 3.5 Percent" Universities

United Arab Emirates University (UAEU), the first and most comprehensive national university in the UAE, founded in 1976 by the late Sheikh Zayed bin Sultan Al Nahyan, aspires to become a comprehensive, research-intensive university and currently enrolls approximately 14,000 Emirati and international students. As we live in a competitive world, I feel very proud to share the latest international news on the quality of education in the UAE as part of the country's effort to best prepare future leaders for their jobs. UAEU has been ranked in the top 3.5 percent in the 2017 list of the world's top 1000 universities by the Center for World University Rankings (CWUR), a publisher of the most comprehensive academic rankings of global universities. According to CWUR, "In addition to its high-quality research output, the two key factors that were fundamental to UAEU's success were alumni employment, and research innovation and technology transfer."

UAEU offers high-quality graduate and undergraduate programs in its nine colleges: business and economics, education, engineering, food and agriculture, humanities and social sciences, IT, law, medicine and health sciences, and science.



20 SUSTAIN
INCLUSIVE
GROWTH



*"Inclusive growth should not be a mere slogan
but a fundamental driving force for sustain-
able development."*

Former President Pranab Mukherjee, India

SUSTAIN INCLUSIVE GROWTH

What is Inclusive Growth?

One of the best definitions I like to use to describe inclusive growth is this: inclusive growth signals a process by which economic growth is generated and distributed in ways that are broadly based, which allows people to form economic growth.

Why does Inclusion Matter?

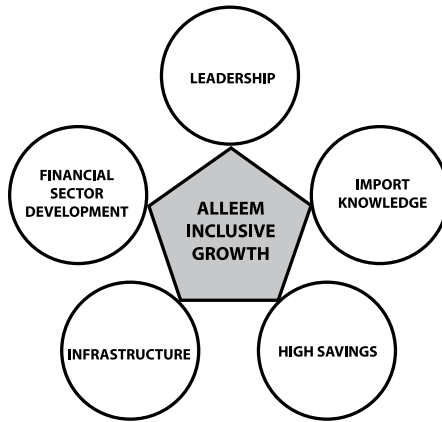
In my view, inclusion matters in many ways:

- It helps sharply reduce poverty. In Brazil, the Human Development Index of Municipalities dramatically improved during the last two decades. According to UNDP, in 1991, 99.2 percent of the municipalities had a low/very low Human Development Index (HDI), however, this figure fell to 25.2 percent in 2010. In other words, the number of municipalities with high/very high HDI jumped from around 0 percent in 1991 to 34.7 percent in 2010. In 2012, the Brazilian HDI was 0.730, which is ranked 83rd in the world and considered high.

- Inclusion affects social stability and peace, such as the political instability we see in Egypt, Yemen, Tunisia, and Iraq. The Arab Spring! Arab countries show immense concern for the demands of inclusive growth. To have social stability, governments in Arab countries and their developmental partners have strived to regulate their economic policies and assistance programs for inclusive growth and social justice.
- Inclusion contributes to growth (Korea, Japan in the 20th century).
- Inclusion is essential for big growth to continue. Inclusive growth is also one of the reasons why India ranked third in the GDP PPP rankings in 2016, lifting millions of its citizens out of poverty in the process. The country has attracted billions of dollars in foreign direct investment (FDI) and the world's most dynamic firms. The country is trying to promote young, middle-class, lower-class and all other citizens, a move that acts as an appropriate ingredient for continued growth.

Alleem Inclusive Growth Strategies

The following is my model for inclusive growth. It is based on my experiences from working for so many humanitarian projects and the intensive research conducted by the Alleem R&D Center. The model consists of five pillars: leadership, import knowledge, high savings, infrastructure, and financial sector development. To sustain growth over a long period, a set of conditions need to come together in a very integrated way. The following info graph summarizes the module.



1. LEADERSHIP

As the saying goes, “That government is best which governs least.” This can be seen in smart governments, and I am proud to say that the UAE is one of them. Yes, indeed, leadership is a must if we consider a country’s sustainability and inclusive growth.

CCC

Growth is about more than economics. It also requires committed, credible, and capable governments. A country’s policy makers must communicate a credible vision for the future and a strategy for achieving it. Also, we can look at Singapore’s growth, which has served as an organizing principle of the country’s politics for the past 40 years.

2. IMPORT KNOWLEDGE

They say, “It is easier to learn something than it is to invent it.” That is why advanced economies do not grow (and cannot grow) at a rate of 7 percent or more and why lagging economies can catch up.

LEARNING ORGANIZATIONS TO LEARNING COUNTRY

A learning organization is a concept adopted by the most successful organizations and corporations around the world. What is it? A popular definition is this: a learning organization is one that acquires knowledge and innovates fast enough to survive and thrive in a rapidly changing environment by embracing characteristics that encourage, support, and promote participation.

In his book, *The Fifth Discipline: The Art and Practice of the Learning Organization*, Peter Senge describes five characteristics that embody learning organizations:

- **SYSTEMS THINKING.** This is the understanding of how everything works together—how all the parts influence one another to compose the whole.
- **PERSONAL MASTERY.** Individuals must learn for organizations to learn. Personal mastery of skills and knowledge is a journey with no final destination. It is more than just building skills and competencies; it involves a hunger for knowledge and continual improvement.
- **MENTAL MODELS.** Senge defines this as “deeply ingrained assumptions, generalizations, or even pictures and images that influence how we understand the world and how we take action.”
- **BUILDING SHARED VISION.** Vision is more than a statement, it is a shared future. When all your staff believe and see the vision, it can become a reality. A shared vision creates excitement and synergies to work toward common goals.

- **TEAM LEARNING.** Team learning begins when individual assumptions are abandoned and an organization's members begin to think together. This requires a culture of understanding and openness. Hoarders of information and knowledge have no place in learning organizations. The idea is for everyone to share what they know and build on the sum knowledge of the entire team.

FOREIGN DIRECT INVESTMENT (FDI)

One of the UAE's strategies in importing knowledge is creating free zones throughout the nation. The UAE has attracted multinationals to its 47 free zones, where they enjoy tax holidays and other privileges.

Historically, Japan and Korea were much less open to FDI, though they did import and improve on technology from outside. For example, Japan's Sony surpassed America's RCA in the small radio market using the technology it had licensed from the American company itself!

3. HIGH SAVINGS

The Abu Dhabi Investment Authority (ADIA) is the world's largest sovereign wealth fund owned by the Emirate of Abu Dhabi in the UAE. It was founded in 1976 by His Highness the late Sheikh Zayed bin Sultan Al Nahyan, the founding president of the United Arab Emirates and leader of Abu Dhabi. He created the Abu Dhabi Investment Authority and separated it from the government as an arms-length organization with an independent management. Its goal is to invest the Abu Dhabi government's surpluses across various asset

classes, with low risk. It manages the emirate's excess oil reserves, estimated to be as much as \$500 billion. Its portfolio grows at an annual rate of about 10 percent compounded. The fund is a member of the International Forum of Sovereign Wealth Funds and is therefore signed up to the Santiago Principles. The Santiago Principles are designed as a common global set of 24 voluntary guidelines that assign best practices for the operations of sovereign wealth funds (SWFs). Although ADIA has never published how much it has in assets, estimates have been between US\$800 billion to approximately US\$875 billion. The Sovereign Wealth Fund Institute puts the figure at US\$773 billion.

EIA

After the success of ADIA, the UAE government created a similar sovereign wealth fund. In similar ways, the Emirates Investment Authority (EIA), which was formed in November 2007, is an investment institution setup with a mandate to manage the sovereign wealth of the United Arab Emirates' federal government.

CHINA'S NATIONAL SAVINGS

While reading the IZA (Institute of Labor Economics) Discussion Paper of January 2011, I got to know that China has saved more than a third of its national income every year for the past 25 years. You could just imagine the financial vision of China and how much wealth the nation has for its future generations.

The statistics that China associates with in the past three decades are quite remarkable: the gross national savings as a percentage of gross domestic product (GDP) hovered just a little above 35 percent in the 1980s, and the average yearly rate climbed to 41 percent in the 1990s. Since China's entry into the World Trade Organization

(WTO), its growth in aggregate savings accelerated, surging from just below 38 percent in 2000 to an unprecedented 53 percent in 2007. China's national savings rates since 2000 have been one of the highest in the world.

We can say that China's high savings rate could be the result of the country's faster economic growth relative to the rest of the world, which boosts its income, as well as the government's tax receipts.

According to the National Bureau of Economic Research's 2011 report by Dennis Tao Yang, Junsen Zhang, and Shaojie Zhou, the corporate, household, and government sectors have all contributed significantly to the upsurge in national savings in the past decade. The key causes also include accession to the WTO, rising corporate profits, changes in life cycle earnings, pension system, other provisions of social services, and demographic transition.

4. INFRASTRUCTURE

There is a point to be clarified whenever we talk about infrastructure. For the majority of the people, whenever they hear the word infrastructure, they think of buildings only, such as roads, airports, high-rises, and other types of building, which is wrong. Infrastructure includes more than buildings. Social and financial institutions are infrastructure too. I like to call the two infrastructure types as hard and soft infrastructure. Infrastructure is also an important factor for sustaining long-term growth. The following is a summary of my thoughts:

HARD INFRASTRUCTURE:

- Transportation (roads, airports, seaports)
- Energy (power, natural gas, petroleum)

- Water management (drinking water, sewage, etc.)
- Communication (TV, radio, phone, postal)

SOFT INFRASTRUCTURE:

- Social (education, health care, social welfare)
- Industrial (free zones, manufacturing units, industrial areas, etc.)
- Institutional (financial system, IT, governance)

In China, Thailand, and Vietnam, their total infrastructure investment exceeds 7 percent of the GDP. India doubled its investments in infrastructure to \$1 trillion during the 11th Five-Year Plan, which began in 2012, with half of it expected from the private sector.

PPP

Public-private partnerships (PPP) have been extremely successful in a wide variety of infrastructure areas, including telecommunications, roads, power generation, and port management. But there have been numerous failures as well. Lessons should be learnt from both.

5. FINANCIAL SECTOR DEVELOPMENT

Careful regulation and supervision are required to prevent banks from expanding credit too far (2007–2008 credit crunch). One way to speed up financial sector development is to invite foreign financial firms (FFF) to invest in the sector. Just as FDI brings expertise to a domestic industry, so could the entry of foreign banks raise the game of domestic ones, thereby making them more robust.

The term foreign financial firm can be defined as when a company or individual from one nation invests in the assets or ownership stakes

of a company based in another nation. Foreign investment denotes that foreigners have an active role in management as part of their investment. Because of increased globalization in business, it has become very common for big companies to branch out and invest money in companies in other countries. Its benefit is that it attracts cheaper labor, production, and less tax by opening new manufacturing plants in another country.

Another reason to branch out and make a foreign investment in another firm in another country is that the firm being purchased has a specific technology, products, or access to additional customers that the purchasing firm wants. Overall, foreign investment is a good sign as it often leads to economic stability, job growth, more income to a country and creates good understanding between countries.

PARTICIPATION IS NEEDED IN STRATEGIES FOR SUSTAINED GROWTH

To ensure the success of the inclusive growth model and to guarantee sustained growth, the following four actors' roles are important: government sector, private sector, civil society, and individuals. Different sectors follow their own strategies for a growth-oriented output.

- The government sector is rights driven; it provides information, stability, and legitimacy.
- The private sector is profit-driven; it is inventive, single-minded, and fast.
- Civil society is value-driven; it is responsive, inclusive, and imaginative.
- Individuals are driven by many agendas (e.g., personal, community, country).

I preached and presented this model for so many years now, and I am happy to see the acceptance and the positive feedback I have been receiving and the changes it has made in so many societies around the world.

I am proud and honored to mention that on February 15, 2017, during my visit to India, the Alleem R&D Center was recognized at the Global CSR Excellence and Leadership Awards for *developing sustainable strategies*. It was truly an overwhelming moment for me as it was the first international recognition for the center. The Global CSR is Asia's most prestigious recognition awards program for corporate social responsibility. The program recognizes and honors companies for their outstanding, innovative, and world-class products, services, projects, and programs implemented, whether past or present. These projects should demonstrate the company's leadership, sincerity, and ongoing commitment to incorporate ethical values, compliance with legal requirements, and respect for individuals, communities, and the environment in the way they do business.

To excel and be deserving of this recognition, I must keep the challenge on and do my best to earn the trust people have placed in me and to meet the requirements of the needy.

GRAMEEN BANK

I had the pleasure of being invited by Abu Dhabi Islamic Bank back in February 2015, to be a keynote speaker in one of their events, and it so happened that Dr. Muhammad Yunus, a civil society leader who was awarded the Nobel Peace Prize for founding the Grameen Bank and for pioneering the concepts of microcredit and microfinance, was also a guest. I delivered my speech right after he did. During

the break, I gave him a copy of my book *Sustainability: The Fourth Wave of Economy*, which he appreciated a lot, especially when he read my book dedication, which reads, “To Almost One Billion People Who Sleep with Hunger and Pain Every Night.” Then he talked about his Grameen Bank. I was impressed with its humble beginnings and what the bank has achieved so far. It gives me pleasure to write about the bank’s profile and its global achievements in the following paragraphs.

The Grameen Bank is a Nobel Peace Prize–winning microfinance organization and community development bank founded in Bangladesh in 1976, by Professor Muhammad Yunus. It operates based on the principle that loans are better than charity to alleviate poverty. They offer people an opportunity to take initiatives in business or agriculture, which provide earnings and enable them to pay off their debt.

The bank is founded on the belief that people have endless potential, and unleashing their creativity and initiative can help end poverty. Grameen offers credit to the poor, women, those who are illiterate, and the unemployed. Access to credit is based on reasonable terms, such as the group lending system and weekly installment payments, with reasonably long loan terms, allowing the poor to build on their existing skills to earn better income at each loan cycle.

Grameen’s objective has been to promote financial independence among the poor. Yunus encourages all borrowers to become savers so that their local capital can be converted into new loans for others. Since 1995, Grameen has funded 90 percent of its loans with interest income and deposits collected, aligning the interests of its new borrowers and depositor-shareholders. Grameen converts deposits made in villages into loans for the more needy in the villages.

It targets the poorest of the poor, with a special emphasis on women, who receive 95 percent of the bank's loans. Other than the Nobel Peace Prize, the Grameen bank received the Independence Day Award in 1994, which is the highest government award in Bangladesh.

The Grameen Bank has also attracted other countries because of its great policies. Latifee, the managing director of Grameen Trust, said, "We have been working in India since 1992 through our partners like Share Microfin and Society for Rural Improvement. Until now, these organizations have been coordinating with our Dhaka office. However, now we have the necessary permission to set up our liaison office in India, which will allow us to organize our work here better."

Generosity Top 20

In line with the thought of the American philanthropist Andrew Carnegie, who once set the standard for giving back—"No man can become rich without himself enriching others, the man who dies rich dies disgraced"—Wealth-X, the leading global wealth information and insight business, has compiled a list of the 20 most generous people in the world, ranked by total charitable giving to date. With a total combined donation amount of \$106.8 billion, the following 20 individuals are the top philanthropists in the world:

1. **BILL GATES** – Lifetime donations: \$27 billion. While he is best known as the co-founder of Microsoft, Bill Gates now focuses most of his time on philanthropy, running the Bill & Melinda Gates Foundation alongside his wife.

2. **WARREN BUFFETT** – Lifetime donations: \$21.5 billion. The chairman and CEO of the holding company Berkshire Hathaway, Warren Buffett is not only one of the wealthiest people in the world but also one of the most charitable.
3. **GEORGE SOROS** – Lifetime donations: \$8 billion. George Soros, the retired founder of Soros Fund Management, currently serves as the chairman of the Open Society Foundations, a network of foundations he founded in 1979, which primarily donate to international causes, community development, social services, health, and education.
4. **AZIM PREMJI** – Lifetime donations: \$8 billion. In addition to serving as the chairman of the Indian consulting and IT company Wipro, Azim Premji is the founder and chairman of the Azim Premji Foundation, which works to reform India's school and examination systems.
5. **CHARLES FRANCIS FEENEY** – Lifetime donations: \$6.3 billion. Known as the “James Bond of philanthropy,” retail magnate Chuck Feeney is on a mission to give away his entire fortune—and with his current net worth down to \$1.5 million, it seems that he has succeeded.
6. **SULAIMAN BIN ABDUL AZIZ AL RAJHI** – Lifetime donations: \$5.7 billion. Back in 1957, Sulaiman bin Abdul Aziz Al Rajhi co-founded the Al Rajhi Bank with his three brothers. It grew into one of the world's largest Islamic banks and earned Al Rajhi a 10-digit net worth.

7. **GORDON MOORE** – Lifetime donations: \$5 billion. Gordon Moore co-founded Intel in 1968; however, these days he is focused on philanthropy. He retired from his corporate positions in 2006 and currently runs the Gordon and Betty Moore Foundation with his wife.
8. **CARLOS SLIM HELÚ** – Lifetime donations: \$4 billion. One of the richest self-made billionaires in the world and the chairman of Grupo Carso, Carlos Slim Helú's primary philanthropic efforts are made through Fundación Carlos Slim Helú.
9. **ELI BROAD** – Lifetime donations: \$3.3 billion. Through the Broad Foundation, KB Home co-founder and former SunAmerica CEO Eli Broad invests in public education, science, and the arts.
10. **GEORGE KAISER** – Lifetime donations: \$3.3 billion. George Kaiser, chairman of BOK Financial Corporation, founded the George Kaiser Family Foundation, which gives to educational, health, religious, social, and community-development-related causes, including the Tulsa Community College Foundation, Oklahoma City Educare, National Energy Policy Institute, Tulsa Community Foundation, and University of Tulsa.
11. **MICHAEL BLOOMBERG** – Lifetime donations: \$3 billion. Michael Bloomberg is the founder and CEO of the media company Bloomberg and founder of the Bloomberg Foundation, which gives primarily to educational, health-care, and environmental causes. Recipients of the foundation's donations include John Hopkins University, World Lung Foundation, the World Health Organization, Sierra Club Foundation, and John Hopkins Bloomberg School of Public Health.

12. **PAUL ALLEN** – Lifetime donations: \$2 billion. Paul Allen, co-founder of Microsoft, now serves as the chairman of Vulcan, his private investment company.
13. **MARK ZUCKERBERG** – Lifetime donations: \$1.6 billion. Facebook founder and CEO Mark Zuckerberg is one of the youngest self-made billionaires in the world. The social media mogul has signed the Giving Pledge and promises to donate at least half of his wealth in his lifetime.
14. **LI KA-SHING** – Lifetime donations: \$1.4 billion. Li Ka-shing is a global investor in disruptive technology and one of the richest men in Asia.
15. **JON HUNTSMAN SR.** – Lifetime donations: \$1.2 billion. Jon Huntsman Sr. is the founder and executive chairman of Huntsman Corporation, a chemical product manufacturer.
16. **TED TURNER** – Lifetime donations: \$1.2 billion. Ted Turner, former CEO of the Turner Broadcasting System (TBS) and vice chairman and director of AOL Time Warner, is the current chairman of Turner Enterprises, a diversified holding company.
17. **JAMES SIMONS** – Lifetime donations: \$1.2 billion. James Simons is chairman of investment management company Renaissance Technologies, one of the largest and most successful hedge fund companies in the world with \$65 billion in assets. Simons served as the company's CEO until retiring in 2009.
18. **MICHAEL DELL** – Lifetime donations: \$1.1 billion. Michael Dell is the chairman and CEO of the computer company Dell. Since 1999, he has been the director of the Michael and Susan Dell

Foundation, which gives primarily to education, social and human services, arts and culture, and community development causes.

19.PIERRE OMIDYAR – Lifetime donations: \$1 billion. Paris born Iranian American Pierre Omidyar is a cofounder and the current chairman of eBay.

20.DIETMAR HOPP – Lifetime donations: \$1 billion. Dietmar Hopp is a German IT entrepreneur and a co-founder and former chairman and CEO of SAP, a multinational company that provides application and analytics software and software-related services for enterprises worldwide.



21 INTERNATIONAL COOPERATION



"Systems fail when people with ability don't have authority and people with authority don't have ability."

Amit Kalantri

INTERNATIONAL COOPERATION



Global Governance

Global governance is defined as “the complex of formal and informal institutions, mechanisms, relationships, and processes between and among states, markets, citizens and organizations, both inter-and non-governmental, through which collective interests in the global plan are articulated, rights and obligations are established, and differences are mediated.”

Golden Friends of India Award

I was proud to be felicitated with the Golden Friends of India Award by Anurag Bhushan, Consul General of India in Dubai, on the occasion of the 68th Indian Republic Day celebrations in Dubai. The award was instituted by the Indian Business and Professional Council (IBPC) as a mark of acknowledgment and appreciation for my role in promoting economic and investment relationships between the UAE and India and in fostering private-public investments in various sectors, especially in Sharjah Free Zones. IBPC is one of the professional organizations that recognizes businessmen and professionals within the framework of the Chamber of Commerce and

Industry and contributes to stimulating economic, trade, and investment relations between India and the United Arab Emirates.

It was really an honor to receive such a prestigious award underlined with the depth of the bilateral relations between the UAE and India.

Trade Balance Between UAE and India

Trade is vital to the success of a civilization. International trade is an important factor in raising living standards, providing employment, and enabling consumers to enjoy variety and exploration. According to the Emirates 24|7, India is considered the UAE's primary trade partner, accounting for about 9.8 percent of its total non-oil trade. India is also the largest importer of goods from the UAE, buying about 14.9 percent of the country's exports and about 8.7 percent of its re-exports, and has become the second-largest market of the UAE in the latter category.

India ranks third among the countries that export to the UAE, accounting for about 9.2 percent of total imports by the UAE. The total volume of foreign trade between the two countries amounted to \$60 billion in 2014, thus making the UAE India's primary trade partner in the Middle East and North Africa. Economic sources expect the value of trade exchanges between the UAE and India to hit \$100 billion in 2020.

Thank You, Singapore

It was another proud moment for me as I received the Friend of Singapore Sustainability Award on February 1, 2017, from G. Jaya Krishnan, International Enterprise's Group Director of Middle East

& Africa. I thank you, Singapore, for recognizing my efforts in sustainability. It means a lot.

GGGI and SEWA Meet

On January 25, 2017, I had the opportunity to meet with Ms. Jin Young Kim, UAE Country Representative, and her team from Global Green Growth Institute (GGGI) in my SEWA office. There, we had a great discussion about sustainable cities and ways to promote achievement of strong, inclusive, and sustainable green growth. I would like to elaborate more on this topic below.

GGGI

GGGI is an international organization headquartered in Seoul, Korea. Launched in June 2010, GGGI supports the widespread dissemination and implementation of a new model of development for green growth. The green growth paradigm integrates economic development and environmental sustainability. It includes poverty reduction, green job creation, social development, and energy security through the promotion of green technology and innovation. It is dedicated to supporting and promoting strong, inclusive, and sustainable economic growth in developing countries and emerging economies.

GGGI STRATEGIC PLAN 2015-2020

- 1.Strengthened national, sub-national, and local green growth planning, financing, and institutional frameworks.
- 2.Increased green investment flows.
- 3.Improved multi-directional knowledge sharing and learning between South–South and South–North–South countries.

UAE & GGGI COLLABORATION

On March 13, 2011, the UAE Ministry of Foreign Affairs signed a memorandum of understanding with the GGGI. The agreement includes the establishment of a Middle East and North Africa (MENA) regional office in Abu Dhabi's Masdar City, as well as the development of joint capacity-building programs.

The announcement was made by Dr. Sultan Ahmed Al Jaber, UAE Special Envoy for Energy and Climate Change and Chief Executive of Masdar. Regarding the announcement, Dr. Al Jaber said, "The mandate set out for GGGI by President Lee Myung-bak to help advance green economic growth is fully aligned with our forward-thinking leadership's vision. Such institutions are crucial to the adoption of renewable energy technologies and climate change mitigation and we are delighted that GGGI has chosen to establish its regional office at Masdar City in Abu Dhabi. The partnership between the UAE and GGGI will promote the development of collaborative programs and activities that will catalyze green growth across the UAE and the region."

GGGI Executive Director Richard Samans said, "Through its presence in the UAE, GGGI will utilize its network of public-private partnerships to promote Masdar City as a world-class smart city. GGGI will also develop the new regional office as a knowledge-sharing, training, and capacity-building center in the field of green growth."

The memorandum of understanding states that GGGI experts will work in the new Abu Dhabi regional office to help develop and execute low-emission green growth projects under a green growth master plan tailored to UAE's conditions. Training and capacity-building programs will also be conducted on green growth initiatives at the regional, national, and local levels through reciprocal human

resource exchange programs. GGGI activities will also involve financial support for joint projects, collaborative research, and joint programs.

UAE will foster a tri-party collaboration involving GGGI, the Masdar Institute of Science and Technology, and the International Renewable Energy Agency (IRENA) to promote the adoption of renewable energy solutions, new green technologies, and carbon-neutral measures to advance economic growth as well as quality of life in Masdar City and the world.

Saudi Red Crescent Authorities

Saudi Red Crescent Authorities (SRCA), founded in 1963, is a humanitarian society that provides emergency medical services in the Kingdom of Saudi Arabia. The SRCA offers emergent and fast first aid with skill and effective results for citizens and foreign laborers who are staying in the kingdom in ordinary circumstances and in catastrophic times. It also contributes to relief work both inside the Kingdom and abroad as well as enhancing the standard of medical knowledge. As the SRCA has made special efforts toward the promotion of international humanitarian aid, one of its most significant projects in this regard is Saudi HEART, which I would like to briefly mention to my readers.

SAUDI HEART

Saudi Humanitarian Emergency Aid & Response Team, Saudi HEART, enhances the capacity and impact of the SRCA's humanitarian services nationally and internationally, reduces suffering in disaster-affected communities, and contributes to the future recovery of the most vulnerable populations affected by emergencies and disasters.

Its mission and strategic goal is to serve as an international model in qualification and empowerment to provide humanitarian aid to victims of natural disasters and humanitarian crises, without discrimination. The team operates at the best standards and follows international performance criteria. Team members are passionate about their mission, inspired by the responsibility of their national identity, enlightened by the highest human values and committed to the principles of the International Federation of the Red Cross and Red Crescent societies—humanity, impartiality, neutrality, independence, voluntary service, unity, and universality. The team guards its members and is committed to protecting and always maintaining a helpful and supportive role in this area. They are thoroughly equipped to meet the call of duty at any time around the world.

ASPEN INSTITUTE

The Aspen Institute is an educational and policy studies organization based in Washington, DC. It is a nonpartisan forum for values-based leadership and the exchange of ideas.

The Aspen Institute has earned a reputation for gathering diverse, nonpartisan thought leaders, creative thinkers, scholars, and members of the public to address some of the world's most complex problems. But the goal of these convenings is to have an impact beyond the conference room. They are designed to provoke, further, and improve actions taken in the real world.

In order to achieve their mission, they promote policy programs, leadership initiatives, conferences and events, youth and engagement programs, seminars, and international partnerships.

Self-Made Millionaire Trapped by Wealth

A self-made millionaire, 38-year-old Mazzi Dumato was living the luxurious life in Dubai when he decided to give it all up and travel the world in a campervan.

He is a Brazilian of Syrian origin and was feeling trapped by his fortune—penthouse, supercars, and wealth—so he donated much of his money to set up centers to help poor people in Brazil.

In an interview, he was quoted as saying, “It was meaningless wealth, and what was most important was my life, which I barely had a grip on. So I chose adventure and to learn more about what was happening outside the bubble that I was living in, and decided that I wanted to go out in the world and make a difference.”

Mr. Dumato left Dubai by giving his main business, Cactimedia, to his younger brother Michael and closing his other two businesses. He later bought properties in Brazil that he turned into centers for the poor.

“Our first is a healing center with a full-time doctor, in the city of Florianopolis. The second one is a house where we provide free accommodation and food to people from the leukemia hospital in Curitiba,” he said. An alternative treatment center for cancer in Uru-bici, Brazil, the largest of the three centers, will be opened at the end of the year.

Shell Foundation

Shell Foundation is an independent charity established by the Shell Group in 2000 with a \$250 million endowment to create and scale new solutions to global development challenges. Business thinking

applied to the major social and environmental issues is linked to the energy sector, and seeks to leverage the skills and networks of Shell where possible, to deliver greater developmental impact. Shell Foundation acts like a business in the way they assess their effectiveness and regularly publish their internal performance analysis to support organizations in related fields.

They are part of a small yet growing number of “venture philanthropists,” who view enterprise-based models as a cost-effective way to support inclusive economic development.

FOUNDATION APPROACH

Shell Foundation works with a small number of entrepreneurial partners with the aim of identifying the market failures that underpin many of the world’s problems, and setting up new social enterprises to solve them. The foundation provides patient grant funding, extensive business support, and access to networks to help pioneers validate new models, achieve financial independence, and expand across geographical boundaries.

Once a new solution is proven to be viable, they create specialist intermediaries to facilitate growth and replication at an industry level.

This shows their conscious dedication to the work. I appreciate and thank them for doing so much for global development.

Center on International Cooperation

The Center on International Cooperation (CIC) is a foreign policy think tank based at New York University that works to enhance multilateral responses to global problems, including conflict, humani-

tarian crises, and recovery; international security challenges, including weapons proliferation and the changing balance of power; and resource scarcity and climate change. Through innovative applied research and direct engagement with policy actors, CIC has been at the forefront of policy decision-making in each of its core areas of research.

CIC's programs and research activities focus on international security institutions, post-conflict peace-building, and global peace operations, with a particular emphasis on the UN and multilateral responses to conflict. Their projects are Global Peace Operations; the Afghanistan Regional Project; Resource Scarcity, Climate Change, and Multilateralism; Humanitarian Action in a New Security Era; Strengthening Multilateral Approaches to Nuclear and Other WMDs; and the Managing Global Order Project.

Clinton Global Initiative

Established in 2005 by President Bill Clinton, the Clinton Global Initiative (CGI) convened global and emerging leaders to create and implement solutions to the world's most pressing challenges, such as climate change, economic development, empowerment of women, and global health issues. Through CGI University, CGI America, CGI International and its flagship Annual Meeting, CGI brought together more than 200 sitting and former heads of state, more than 20 Nobel laureates, and hundreds of leading corporate CEOs, presidents of foundations, executive directors of the most effective NGOs, and major philanthropists, to commit to take action against these challenges. From 2005–2016, CGI members have made more than 3,600 Commitments to Action, which are improving the lives of over 435 million people in 180 countries.

With the mission of turning ideas into action, CGI acts in the following four ways. Let's take a closer look.

- **INSPIRATION** – In the CGI community, today's foremost thinkers meet tomorrow's ground-breaking solutions. Thought leaders and visionaries push the conversation forward, inspiring all members to be creative and innovative in their collective action.
- **NETWORKING** – The diverse CGI membership offers a unique opportunity to interact with individuals across multiple sectors and industries. Members include CEOs of the world's largest companies, leading NGOs and foundations, government representatives, and prominent philanthropists.
- **KNOWLEDGE BUILDING** – At CGI, knowledge-building creates the foundation for informed action. Industry leaders analyze their most effective programs, fresh voices put forth innovative approaches, and established experts debate different interventions. Also, members provide a constant flow of new solutions and lessons learned.
- **COLLABORATION** – Spurred by a collective sense of urgency and shared responsibility, CGI members collaborate to best leverage their resources and expertise. Some partnerships develop organically from networking, while others grow through issue specific member gatherings or CGI staff facilitation.

ASEAN

The Association of Southeast Asian Nations (ASEAN) is a regional intergovernmental organization established on August 8, 1967, in

Bangkok, Thailand, with the signing of the ASEAN Declaration by the Founding Fathers; namely, Indonesia, Malaysia, the Philippines, Singapore, and Thailand. ASEAN promotes pan-Asianism (unity of Asian people) and inter-governmental cooperation and facilitates economic, political, military, educational, and cultural integration among its members and Asian states. Since 1967, the organization's membership has expanded to include Brunei, Cambodia, Laos, Myanmar, and Vietnam.

On August 8, 2017, I had the honor of attending the ASEAN golden jubilee celebration in Dubai as a guest of honor; I was very pleased with their concept of "one vision, one identity, and one community." There were performances representing its five founding countries and ending with the unity song.

In their relations with one another, the ASEAN member states have adopted the following fundamental principles contained in the Treaty of Amity and Cooperation, a peace treaty established by the founding members of ASEAN in Southeast Asia in 1976:

1. Mutual respect for the independence, sovereignty, equality, territorial integrity, and national identity of all nations.
2. The right of every state to lead its national existence free from external interference, subversion, or coercion.
3. Non-interference in the internal affairs of one another.
4. Settlement of differences or disputes by peaceful means.
5. Renunciation of the threat or use of force.
6. Effective cooperation among themselves.

Mission to Seafarers

Mission to Seafarers is a global nonprofit organization funded entirely by donations, which operates over 121 Seafarers' Centers in more than 200 ports in over 50 countries. It has operated in the UAE since 1962; the Angel Appeal was the name given to the project launched to generate awareness and support for the work of Mission to Seafarers in UAE.

In 2016, Mission to Seafarers assisted 1589 seafarers who were without pay for a combined total of 6,356 months, or 529 years. Their mission is to help seafarers facing shipwreck, abandonment, loneliness, and danger.

The MV Flying Angel, based in the Fujairah Anchorage, is the only floating seafarers' center in the world, created to take support and services to ships where crews cannot access port. The Angel Appeal generates support for Mission to Seafarers and the MV Flying Angel in the form of humanitarian aid and emergency assistance such as counseling, communication with home, shelter, food, clothes, and legal aid. They coordinate welfare and humanitarian projects through volunteer and community engagement projects with partners and corporate social responsibility programs. They also manage fund-raising with individuals, societies, and corporations through events, drives and distributions, and donations of goods and/or services in kind. In 2015, they assisted 728 seafarers who were without pay.

JICA

Japan International Cooperation Agency (JICA) is a governmental agency chartered to assist economic and social growth in developing countries and promote international cooperation. The Brookings In-

stitution is a century-old American research group that conducts research and education in the social sciences, primarily in economics, metropolitan policy, governance, foreign policy, and global economy. These two organizations have advanced a joint research on inclusive growth in the Arab region. They have published five papers based on research findings focusing on four countries—Egypt, Tunisia, Yemen, and Iraq. This research comprehends three important dimensions of inclusive development: economic opportunities for youth, education, and voice of citizens and good governance.

UN Global Cooperation

UN Security Council resolution 1373 (2001), adopted unanimously by the United Nations Security Council on September 28, 2001, and other Security Council resolutions, calls upon member states to work together to prevent and suppress terrorist acts, including through increased cooperation. Resolution 1373 specifically decides that member states shall “ensure that any person who participates in the financing, planning, preparation or perpetration of terrorist acts, or in supporting terrorist, acts is brought to justice.” Furthermore, resolution 1373 decides that all states shall “afford one another the greatest measure of assistance in connection with criminal investigations or criminal proceedings.” Member states are called upon, in particular, to cooperate “through bilateral and multilateral arrangements and agreements, to prevent and suppress terrorist attacks and to take action against perpetrators of such acts.” The international counterterrorism instruments also require states to cooperate with one another, to make terrorist offenses extraditable, and to submit terrorists for prosecution if they are not to be extradited. The United Nations Global Counter-Terrorism Strategy and its Action Plan, adopted unanimously in 2006, also contain provisions on international cooperation and extradition.

The Committee adopts the following policy guidance on the work of the Committee and its Executive Directorate (CTED), with a view to the effective implementation of all relevant obligations of Member States in the area of international cooperation.

- a.** Call upon Member States to become parties to and implement the international counter-terrorism instruments.
- b.** Encourage Member States to increase their bilateral cooperation on extradition and mutual legal assistance, including concluding agreements, as appropriate.
- c.** Recommend to Member States to become parties to relevant sub-regional and regional instruments on extradition and mutual legal assistance.
- d.** Urge Member States to use the applicable international instruments to which they are parties as a basis for mutual legal assistance, and consider using the international instruments as a basis for extradition in terrorism cases.
- e.** Encourage Member States to enact and, where appropriate, review and update extradition and mutual legal assistance laws consistent with their international obligations, including their human rights obligations.
- f.** Recommend to Member States that they expedite, simplify, and give priority to extradition and mutual legal assistance requests in terrorism-related cases and implement international and regional best practices in the field of extradition and mutual legal assistance, with due respect for human rights, fundamental freedoms and international refugee law.

Banker to the Poor

Dr. Muhammad Yunus (*Banker to the Poor*), with whom I had interacted in a couple of international programs, is a Noble Prize winner and founder of the Bangladesh-based Grameen Bank, which pioneered microcredit. During his last visit to Sharjah, he told me about his newly released book, *A World of Three Zeros: The New Economics of Zero Poverty, Zero Unemployment, and Zero Net Carbon Emissions*. In the book, he describes himself as “fundamentally optimistic about the future.” That optimism permeates his argument that the capitalist system’s economic framework, driven by personal interest, is broken and must be redesigned so that “both personal and collective interests are recognized, promoted, and celebrated.” Yunus’s preferred vehicle for this redesigned economy is the social business, which aims not to enrich investors but to improve people’s lives and make the world a better place. Yunus explains how social businesses can help reduce poverty, unemployment, and environmental degradation. He then examines the “megapowers” that he believes are crucial to his vision of world transformation: young people, old people, technology, good governance, and human rights. Along the way, he expresses his support for fair, free global trade. The book is packed with real-life examples, many from Yunus’s own experiences with Grameen Bank. Though the sparseness of financial data in the text is a weakness, Yunus offers sound recommendations to distribute global wealth more equitably through individual and systemic support for small-scale entrepreneurship.



About the Author

Dr. Rashid Alleem is ranked third among the 25 most influential CEOs in GCC and is considered one of the 100 most influential CEOs in the Middle East. He is a passionate writer; an environmentalist; a sought-after thought leader; the creator of CRITICAL Thinking, a unique blend of “critical and lateral” thinking; and an internationally respected transformational leader. The founder of Alleem Knowledge Center, Dr. Alleem is a dynamic leader who has worked with prestigious governmental, semigovernmental, and nonprofit organizations. He is an entrepreneur par excellence with a flair for effective, strategic decision-making by means of innovative thinking. Dr. Rashid was recognized as “The Knowledge Ambassador of the UAE” by His Highness Sheikh Mohammed bin Rashid Al Maktoum—the Vice President and Prime Minister of the UAE and ruler of the Emirate of Dubai—and as “Environmentalist of the Year 2012” by the fourth Prime Minister of Malaysia, Dr. Mahathir Mohamad.

Dr. Alleem earned a Ph.D. from the University of Salford, in Manchester, UK. Being a “sustainovationalist,” he has received four honorary doctorates from different universities: Atlantic International University (USA), in recognition of his achievements in the socioeconomic fields; Somalia University, for his humanitarian services; American Global International University (USA), for his global business contributions and numerous academic achievements; and Indian Peace University, from which he received a Doctorate in Philosophy for his exceptional contributions, dedication, and social services to society.

Dr. Alleem was recently recognized as The Global Green Ambassador by DMG. Under his leadership, SEWA received the Voluntary Cancellation

Certificate for excellence in energy-saving and the reduction of CO2 emissions by the United Nations Framework Convention on Climate Change (UNFCCC) in 2017. The Friend of Singapore Sustainability Award 2017 was bestowed on him by the government of Singapore, and he became a member of the advisory board of the Singapore World Water Council. He has been awarded the prestigious title of “The Ambassador of Peace & Happiness in the Arab World” by Voice of Kerala (VOK).

As a highly sought-after keynote speaker, presenter, and teacher, Dr. Alleem is well-known for delivering compelling and practical messages to audiences of more than 100,000 people every year, including at some of the largest regional and international venues. Last but not least, he is one of the most interviewed and published charismatic media personalities in the region. A prolific writer both in English and Arabic, Dr. Rashid Alleem is the author of several books on management and leadership. His newest book, *The SEWA Way*, showcases 15 winning principles, providing a roadmap for achieving success both on an organizational and a personal scale. Aiming to improve social, economic, and environmental living conditions worldwide and helping to improve the quality of life for hundreds of millions who have not yet seen the benefits of sustainable development and inclusive growth, he has written four books on the topic of sustainability: *My Green Journey in Hamriyah*; *Sustainability: The Fourth Wave of Economy*; *I Am Committed to 17 Global Goals*; and *Alleem Sustainable Development Goals*.

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