CONFERENCE BOOK

Wednesday, 11 September 2019

FROM **ORDINARY** TO **EXTRAORDINARY**

TRANSFORMATION

SID DIRECTORS CONFERENCE 2019

SID

SINGAPORE INSTITUTE OF DIRECTORS

SID
SINGAPORE
INSTITUTE OF
DIRECTORS

MISSION

To foster good governance and ethics in corporate leadership.

VISION

To be the national association advancing the highest level of ethical values, governance, and professional development of directors.

The Singapore Institute of Directors (SID) is the national association of company directors. SID promotes the professional development of directors and corporate leaders, and provides thought leadership and benchmarking on corporate governance and directorship. It works closely with the authorities and its network of members and professionals, to uphold and enhance the highest standards of corporate governance and ethical conduct.

Formed in 1998, the membership of SID comprises mainly directors and senior leaders from business, government agencies and nonprofits. SID has a comprehensive training curriculum that covers the spectrum of a director's developmental journey. Members have access to a range of resources, including research publications, forums, seminars, benchmarking awards and indices, board appointment services and regular networking and social events.

For more information, please visit www.sid.org.sg or contact SID at (65) 6422 1188.

CONTENTS

SECTION ONE
ABOUT THE CONFERENCE

Conference Programme

0815	**Registration**
0900	**Pre-Conference Networking Activity / Refreshments**
0945	**Welcome Address** Tham Sai Choy, Chairman, SID
0955	**Address by Guest of Honour** Ong Ye Kung, Minister for Education
1010	**Blue Ocean Shift: From Competition to Creation** Chan Kim, The BCG Chair Professor, INSEAD Business School Chan Kim, co-author of *Blue Ocean Strategy* and *Blue Ocean Shift*, dispels the myth that innovation must be disruptive and makes the case that nondisruptive creation — innovation without disruption — is an alternative path to growth. As organisations strive to compete in cut-throat markets, they risk missing out on strategic growth opportunities. Prof Kim draws on his 30-year research journey to explore how companies can expand their strategic thinking beyond competitive growth.
1030	**Transforming in the Face of Disruption** Chris Wei, Executive Chairman, Aviva Asia and Aviva Digital Chris Wei shares his perspective on how established global corporations can resist inertia and embrace the forces of change by keeping up with developing digital trends. Faced with digital disruption, companies must be prepared to evolve. The key is to focus on driving better customer propositions with enhanced engagement, user experience and data insights. Through increased collaboration with regulators, competitors and startups, companies can build a stronger ecosystem to strengthen the industry and benefit consumers.
1050	**Board Leadership: Pushing Boundaries** Charles Ormiston, Partner, Bain & Co Charles Ormiston, founding partner of Bain & Company's Southeast Asia business, looks at how companies across industries and sectors have deployed a range of successful initiatives to navigate the mounting digital disruption. Singapore companies face increasing pressure to adapt to global shifts in technology, consumer preferences, trade blocs and a shrinking skilled workforce. While it is tempting to think "this too will pass", Mr Ormiston argues that most firms have no choice but to respond vigorously.

1110 **Plenary Panel**
Role of Boards in Directing and Governing Transformation
Moderator: Charles Ormiston, Partner, Bain & Company

Speakers:
- Chan Kim, The BCG Chair Professor, INSEAD Business School
- Chris Wei, Executive Chairman, Aviva Asia and Aviva Digital
- Jocelyn Chng, CEO, JR Group
- David Low, CEO, Futuristic Store Fixtures

1200 **Lunch**

1300-1315 **Goodbye Digital Age, Hello Fusion Era**
Charlie Ang, Founding President, The Innovators Institute
Ambassador, SingularityU Singapore

We are reaching the end of the Digital Era, as defined by mobile, social and cloud technologies. As we enter the 2020s, the Fusion Era, powered by cognitive, immersive and trust technologies, will be rapidly taking shape. Preview the Fusion Era and how it will transform the world beyond recognition within the next decade.

1330 **Breakout Tracks**

Technology Track

Presented by: NCS
1330 - 1530
Nicoll 1, Level 3

Track Facilitator:
Poh Mui Hoon, Council Member, SID

Infinity War: Preparing for the NEXT wave

Organisations have to be future-ready to ride the NEXT wave of transformation in the digital economy. Improvements in operational efficiency, customer experience or digital synergies must take place across both internal processes and external touchpoints. In this track, speakers will share how enterprises can identify innovative sweet spots with design thinking and more agile approaches. They will also share their take on the latest emerging technologies and the potential applicationsin a volatile market environment.

Topic	Speaker
Embracing the NEXT wave of digital: Purpose-driven transformation	Ng Kuo Pin CEO, NCS
Building Smart airport capabilities: Creating a truly data-driven organisation	Steve Lee Chief Information Officer Group Senior Vice President, Technology, Changi Airport Group
Putting IoT and digital at the core: Optimising operations	Thierry Jakircevic General Manager, Digital Solution Centre, Bridgestone Corporation
Transforming tourism experiences and businesses	Quek Choon Yang Chief Technology Officer, Technology Transformation Group, Singapore Tourism Board
Panel discussion: What's NEXT in digital transformation	Moderator: Poh Mui Hoon Speakers: • Ng Kuo Pin • Steve Lee • Thierry Jakircevic • Quek Choon Yang
Demo Showcase	

Strategy Track

Co-presented by: Google and SAI Global
1330 - 1530
Nicoll 2, Level 3

Track Facilitator:
Wilson Chew, Council Member, SID

Endgame: Aligning strategy and risk management

SAI Global with PwC

An integrated approach to risk management supports organisational resilience particularly through periods of transformational change. Integrated risk management is based on the four cornerstones of good business management strategy, people and culture, processes and operating model, and technology and information. For an organisation to successfully manage transformational change, it is essential to anticipate and mitigate risk(s), both from external and internal sources, within the risk appetite and risk capacity of the organisation. This presentation will focus on how an organisation can reduce the uncertainty of change and embed a proactive risk management approach within an organisation.

Topic	Speaker
Aligning strategy and risk management through transformational change	Andrew Bissett Head of Advisory Asia Pacific, SAI Global
Panel discussion: Digitalising risk management: Key considerations to embark on an IRM transformational journey	Moderator: Mark Bookatz, Senior Vice President, SAI Global • Oliver Broich Senior Director APAC, SAI Global • Francis Wan Partner, Risk Assurance, PwC

Guardians of the Galaxy: Transforming your customer experience

KPMG with Google

A customer-centric focus helps leading companies build long-term customer relationships and strategic alignment. As customers grow more connected, empowered and demanding, organisations have to know their customers. Gain key insights into customer-driven trends with Google's latest technology and KPMG's Customer Experience Excellence survey. Participants will experience how real-time analytics can be harnessed to understand customer behaviours in the digital journey.

Topic	Speaker
Gain key insights from KPMG's Customer Experience Excellence survey on consumers in Singapore and globally. • What consumers expect • Leading industries and practices • Six pillars of excellent customer experience • Enterprises need to be more "connected"	Guillaume Sachet Partner, Management Consulting, KPMG Mohamad Sukkar JAPAC Strategy Lead, Cloud for Marketing, Google Cloud
Discussion topic: How understanding your customer motivation and behaviours can help drive growth in the top and bottom lines.	

Demo Showcase

Connectivity Track

Presented by: Huawei International
1330 - 1530
Nicoll 3, Level 3

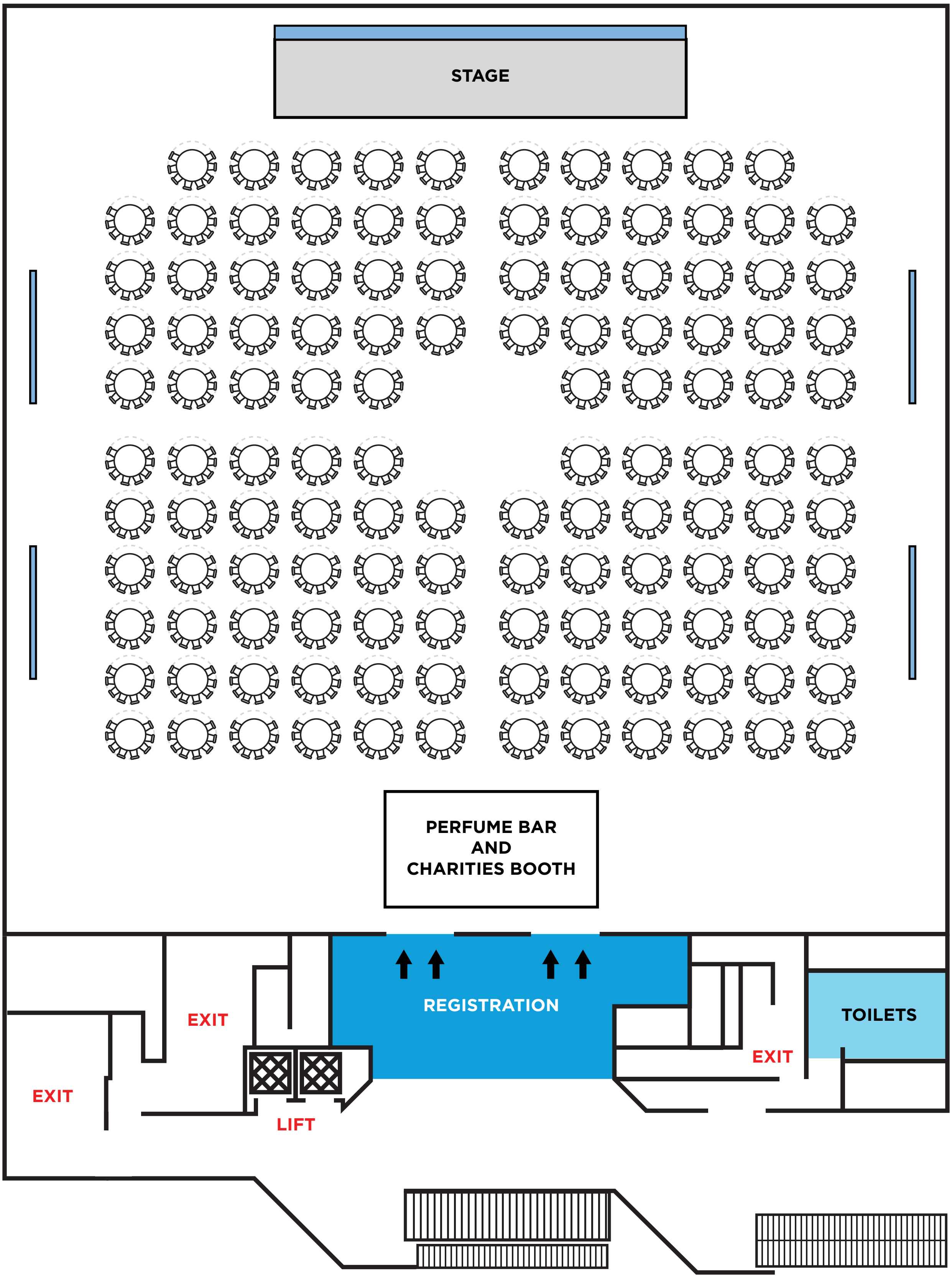
Track Facilitator:
Howie Lau, Council Member, SID

Far from Home: Business without borders

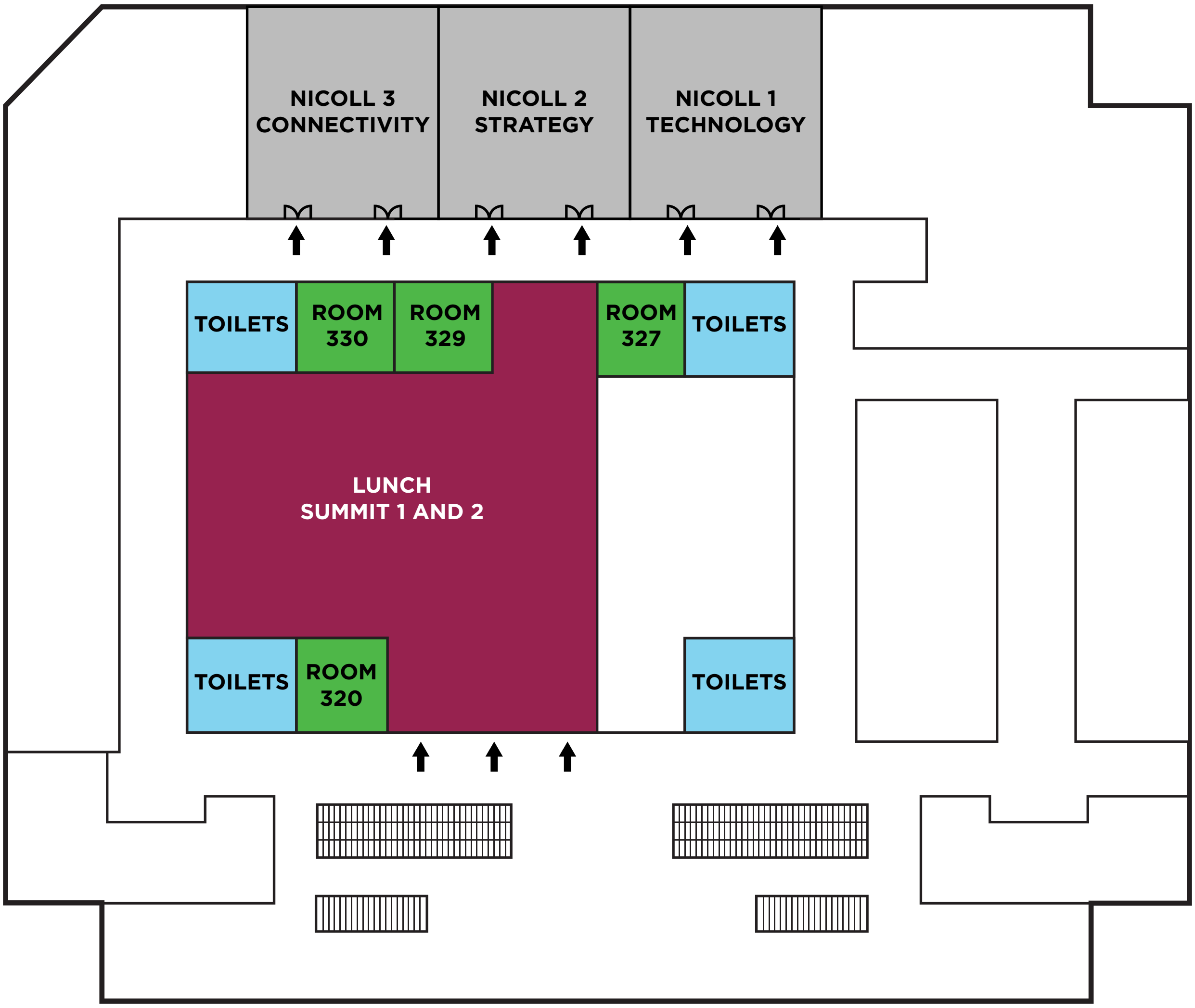
Significant advancements in technological development and innovation have enabled connectivity across multiple dimensions, enabling global markets, cross-border trade, a mobile workforce, and real-time communications. This has created opportunities to transform industries and businesses, through Artificial Intelligence, ePayments and 5G telecommunications, among others. In this track, speakers will discuss connectivity in terms of the infrastructure network, market development, customer relationships, talent acquisition and development, and financial capital.

Topic	Speaker
Introduction: Connectivity	Nicholas Ma CEO, Huawei International
Technology Connectivity	
Frontier technologies: The era of new technologies and innovations	Javier Gonzalez Head of Telecoms Asia, Oliver Wyman
Business Connectivity	
Connecting businesses through digital platforms	Sim Jian Min CEO, SourceSage
Digital enabled trade	New Soon Tee Cluster Director, Trade and Connectivity Infocomm Media Development Authority
Future of Work	
Unlock transformation challenges in an agile business landscape	Brandon Wu CTO, Huawei Southern Pacific Enterprise Business Group
Future connected things	Tan Yen Yen President, Vodafone Global Enterprise, Asia Pacific
Demo Showcase	

Map of Conference Plenary Hall
Level 4



Map of Breakout Rooms and Lunch Venue
Level 3



Breakout Tracks

Technology

Presented by: NCS
Infinity War: Preparing for the NEXT wave

Strategy

Co-presented by: SAI Global and PwC
Endgame: Aligning strategy and risk management

Co-presented by: KPMG and Google Cloud
Guardians of the Galaxy: Transforming your customer experience

Connectivity

Presented by: Huawei International
Far from Home: Business without borders

SECTION TWO
SPEAKERS' BIOGRAPHIES

SPEAKERS' BIOGRAPHIES

ONG YE KUNG
Minister for Education
Republic of Singapore

GUEST OF HONOUR

Ong Ye Kung is the Minister for Education. He was elected Member of Parliament for Sembawang GRC in September 2015, and appointed to the Cabinet of Singapore on 1 October 2015. He had held the positions of Minister for Education (Higher Education and Skills) and Second Minister for Defence. He is concurrently a board member of the Monetary Authority of Singapore and Chairman of the Chinese Development Assistance Council.

Prior to his Cabinet appointment, he held the position of Director of Group Strategy at Keppel Corporation, overseeing long-term strategic planning of the Group's activities. Before joining Keppel Corporation, he was the Deputy Secretary-General of National Trades Union Congress, overseeing the Labour Movement's employment and employability programmes. He also held various positions in the Government earlier. These include the Chief Executive of Singapore Workforce Development Agency, during which he spearheaded many initiatives to build up the Continuing Education and Training infrastructure.

He was the Principal Private Secretary to Prime Minister Lee Hsien Loong from 2003 to 2005, and Press Secretary to Prime Minister Lee from 1997 to 2003. Mr Ong was also the Deputy Chief Negotiator for the US-Singapore Free Trade Agreement. Mr Ong graduated from the London School of Economics and Political Science (UK) with a Bsc (Econs) First Class Honours, and holds a Master of Business Administration from the Institute of Management Development, Lausanne, Switzerland. He is married, with two teenage children.

Andrew Bissett
Head of Advisory APAC
SAI Global

Andrew Bissett is a commercially focused risk professional with over 20 years of experience in enterprise risk management transformation, internal audit, group policy frameworks, corporate governance and risk management technologies. He has a solid track record in successfully delivering change within multinational organisations, and previously led the risk function for organisations that include Woolworths Limited, Tabcorp Holdings and Qantas Airways.

He has assisted a number of organisations to transform their risk and assurance functions, and deliver value to the organisation. Mr Bissett often presents and facilitates training on better practices in risk and assurance management, with a focus on cyber security, compliance and integrated risk management. He has experience across a number of industry sectors, including aviation, oil and gas, energy, retail, services, government, telecommunications and financial services.

Brandon Wu
CTO
Huawei Southern Pacific
Enterprise Business Group

Brandon Wu leads Huawei Enterprise's BG CTO function and is responsible for solution strategy development for the Southern Pacific Region. He also leads Huawei's strategic initiative in Smart Campus which enables holistic innovations from connectivity, data to applications and services, supporting different campus transformation requirements from various industries. He is a hands-on, results-driven IT executive and C-Level adviser with over 20 years of ICT experience driving transformative strategic and operational change across complex organisations in diverse industries.

Previously, as Vice President for APAC region at Alcatel-Lucent/Nokia, he led two industry leading companies (Motive and mFormation) and streamlined them into a successful business unit, contributing to significant market shares in APAC countries on customer experience management and IoT platform solutions for various industries. Prior to this, he was the APAC Sales Head of Software Solutions Chief Marketing Officer for South East Asia Region at Alcatel-Lucent, and various consulting and product development roles.

Charles Ormiston
Partner
Bain & Company

Charles Ormiston is the founding partner of Bain & Company's Southeast Asia business, where he served as managing partner from 1995 to 2007. He is the leader of Bain's Retail practice in Asia Pacific and a contributor to Bain's Transformation and Strategy practices. He has more than 25 years of experience with Bain, and advises clients on transformational change across a broad range of industries, including retail, consumer products, technology, telecommunications, logistics and government.

Mr Ormiston has served on Bain's worldwide management committee, co-led a comprehensive review of Bain's global strategy and supported the opening of several new offices in developing markets. He chaired Bain's Global Nominating Committee from 2014 to 2018. He is a Trustee of the Singapore University of Technology and Design. He has also sat on the boards of the United World College of SE Asia (Chair), IDA Singapore, Sentosa Development Corporation, Media Development Authority of Singapore and MediaCorp.

Charlie Ang
Founding President
The Innovators Institute
Ambassador of
SingularityU Singapore

Charlie Ang is an exponential keynote speaker, business futurist, innovation strategist and future of work expert. As a business futurist, he analyses, imagines and explains the future, especially on how technology will impact, disrupt and empower businesses, industries, professions and economies. As an innovation strategist, he inspires, advises and speaks to organisations and leaders to imagine, innovate and transform in the Fourth Industrial Revolution.

He is the Founding President of The Innovators Institute and Ambassador of SingularityU Singapore, the local chapter of Singularity University.

Chris Wei
Executive Chairman
Aviva Asia & Digital

Chris Wei is the Global Chairman for Aviva Digital and Executive Chairman for Aviva Asia and Friends Provident International (FPI). He leads Aviva Group's global drive in digital transformation, and has transformed the 321-year-old insurer into a leading InsurTech disruptor. In addition to leading the Group Marketing function, he is also responsible for driving the implementation of Aviva Group's True Customer Composite strategy.

As Executive Chairman, Mr Wei works closely with senior leaders on setting strategic directions and managing the operations of Aviva and FPI across Asia. He is also actively involved in making decisions on initiatives that have significant implications for the business, customers, employees and other key stakeholders across the region. He is an associate of the Casualty Actuarial Society and a member of the American Academy of Actuaries. In January 2019, he was appointed Chairman of the Executive Council of the International Insurance Society.

David Low
CEO
Futuristic Store Fixtures

David Low Chor Hoon is the Group Chief Executive Officer and instrumental founder of Futuristic Store Fixtures Pte Ltd. He has 40 years of industry knowledge with clear vision of strategic growth for the company. Under his stewardship charting through various economic cycles, Futuristic has to date delivered close to 10,000 retail stores worldwide supporting leading global retail brands in their store fixtures needs.

Amongst the various industry accolades, Mr Low received the award for EY's Entrepreneur of the Year 2016 and was chosen to represent Singapore at EY's World Entrepreneur 2017 Competition. He continues to run Futuristic as a company that delivers on promises, with visionary agility to align with the dynamic evolvement of the industry.

Wilson Chew
Council Member
Singapore Institute of Directors

Wilson Chew is Partner at PricewaterhouseCoopers in Singapore. He leads the strategy team in the Entrepreneurial and Private Clients practice of the firm. Prior to PwC, Dr Chew was the Group Principal Consultant and CEO of StrategiCom, which was integrated into PwC in 2015. Dr Chew sits on the boards of Swee Hong Limited, Singapore Institute of Directors and The National Arthritis Foundation. He is an adviser for the Wharton-SMU-IBM Business & Industry Insight Programme and lectures at the University's Lien Centre for Social Innovation.

He was awarded the Asia Brand Leadership Award for his outstanding contribution to the applied knowledge of brand strategy in management science. He wrote three books: *Transforming Your Business into A Brand: The 10 Rules of Branding*, *Killer Differentiators: 13 Strategies to Grow Your Brand*, and *B2B: 10 Rules to Transform Your Business into A Brand*.

Francis Wan
Partner, Risk Assurance
PwC

Francis Wan has more than 20 years of experience in internal controls, corporate governance and business advisory. He specialises in helping clients develop internal control and enterprise risk management (ERM) programmes reporting directly to the audit committee and/or risk committee. He has also performed numerous ERM projects including the design and implementation of enterprise-wide risk management policies, processes and structures, and development of risk registers and risk indicators.

He is active in the corporate governance scene in Singapore, and is regularly tapped upon to conduct seminars on governance, risks and controls such as those organised by the Singapore Institute of Directors.

Guillaume Sachet
Partner
Management Consulting
KPMG

Guillaume Sachet has 23 years of experience in the tech industry. Prior to joining KPMG as a Partner, he was the Head of Strategy at Mediacorp where he drove digital transformation, innovation and investments between 2012 and 2017. He was subsequently appointed Head of Social to manage the group's social media and digital marketing activities.

Prior to Mediacorp, Mr Sachet was a Partner with the strategy practice of Accenture, responsible for telecom, media and tech strategy clients across Southeast Asia. Over the years, he has developed deep digital strategy and customer experience knowledge and expertise across the Asia Pacific region. He has spent close to 20 years in Asia, working in Singapore, Thailand, Malaysia, Indonesia, Australia, Brunei, Vietnam, Philippines, Korea and China. Recognised as a thought leader in the tech industry, he is a regular speaker and writer.

Howie Lau
Council Member
Singapore Institute of Directors

Howie Lau is the Chief Industry Development Officer at Infocomm Media Development Authority. Prior to his appointment, he was the Chief Marketing Officer and head of consumer business at StarHub where he was responsible for charting StarHub's brand and marketing as well as leading the mobility, pay TV and broadband businesses. Before that, he was the Vice President, Corporate Development at Lenovo where he led Lenovo's global end-to-end post-merger management and related merger and acquisition matters.

He has more than 25 years of experience managing profit and loss, corporate development and marketing across many territories in Lenovo and IBM. He serves as the Immediate Past President of Singapore Computer Society. Mr Lau also serves on the Governing Council of Singapore Institute of Directors and on the boards of the Institute of Systems Science at the National University of Singapore and the Singapore Science Centre.

Javier Gonzalez
Partner
Oliver Wyman

Javier Gonzalez is the Head of the Communications, Media and Technology Practice in Asia, based out of Singapore. He has over 18 years of telecoms specific consulting experience, with focus in operator launches, strategy and value proposition development. He has developed his professional experience in the US, South America, Europe, Middle East and Africa and Southeast Asia.

He was responsible for launching end-to-end one of the first pure digital telcos in Southeast Asia, and is currently launching a second one. He led the roll-out of Oliver Wyman's Digital Telco Index to assess the digital maturity of six telco operators across Asia and supported the Digital Competency Assessment of over 20 top calibre professionals to assess their readiness to lead a new digital venture. He also supported the launch of the first digital telco in the Middle East, and worked with major regional telecos on their transformation programmes.

Jian Min Sim
CEO
SourceSage

Jian Min is a serial entrepreneur who started his entrepreneurial ventures while he was still studying at University of Oxford and Princeton University. After graduating with a First Class Master of Engineering degree from Oxford, Mr Sim spent two years at Singapore's Agency for Science, Technology and Research, where he honed his technical and management skills.

He then started SourceSage in 2015, with an aim to digitise transactions in traditional business-to-business industries, starting from commodities. Mr Sim is also a frequent featured speaker at events organised by business schools, startup competitions and the Asian Development Bank. He is a recipient of the prestigious Royal Academy of Engineering Advanced Leadership Award, and International Telecom Union (United Nations) Global Innovation Award. He has also been featured on *Bloomberg*, *The Edge*, *Japan Chemical Daily*, and Singapore's Chinese-language newspapers.

Jocelyn Chng
Group CEO
JR Group Holdings

Jocelyn Chng, Group CEO of JR Group Holdings, has over 30 years of experience in food manufacturing and food service industries. She has transformed one of her companies, Sin Hwa Dee, from a small local business into a global food brand sold in over 40 cities today. In 2001, JR Foods pioneered a range of ready-to-eat meals which helps food services and businesses increase revenues, while gaining productivity with less resources. Under her leadership, JR Foods created Chef-In-Box, the first hot food vending machine in Singapore. This has grown into the world's first fully-automated and unmanned vending machine cafe, the Chef-In-Box Vendcafé, which was launched in 2016.

Ms Chng was appointed co-convener of the TR57 Working Group of the Singapore Standards Council, to introduce guidelines on food safety and good hygiene practices for the food vending industry. She was among the EY Entrepreneurial Winning Women™ Asia-Pacific, 2018, and Great Women of Our Time, 2017 (Finance & Commerce Sector). She also received the NUS Eminent Alumni Award, 2016.

Mark Bookatz
Senior Vice President
Asia Pacific
SAI Global

Mark Bookatz is Senior Vice President for Asia Pacific in SAI Global's Risk, Learning and Ethics division. He is a highly experienced information technology executive with over 15 years of experience of sales and delivery of enterprise governance, risk and compliance (GRC) solutions in Asia Pacific.

He has a solid track record in successfully delivering GRC systems within multinational organisations across Australia, Singapore and Hong Kong. These include some of the largest companies in industries such as banking, insurance, mining, oil and gas, engineering and utilities. The GRC systems include applications of enterprise risk management, operational risk management, regulatory compliance, internal audit, cyber security and governance. Mr Bookatz has held senior positions in SAI Global, Nasdaq (BWise), Cura Software, Dimension Data and PwC.

Mohamad Sukkar
JAPAC Strategy Lead
Cloud for Marketing
Google Cloud

Mohamad Sukkar leads marketing data and analytics solutions at Google Cloud in the Asia Pacific region. He and his team help enterprises across industries leverage Google Cloud technology to break down data silos, extract consumer insights faster and deliver better customer experiences.

Previously, Mr Sukkar led the Google Ads business partnership with regional advertisers in the consumer packaged goods and food and beverage sectors. He established the first joint business plans in the region and accelerated growth across YouTube, Google Search, and the Google Marketing Platform. Prior to joining Google in late 2012, Mr Sukkar was a commercial manager at Nokia leading the business relationship with telcos in Singapore. He also led regional marketing for Nokia's smartphone business in the Middle East and Africa Region and was responsible for go-to-market planning, communications, media and agency relations. He lives in Singapore with his wife and two sons.

New Soon Tee
Cluster Director
Trade and Connectivity
Infocomm Media
Development Authority

New Soon Tee is the Cluster Director of Trade and Connectivity in the Infocomm Media Development Authority (IMDA). He is also a member of the Singapore Service Standards Council. With over 22 years in information and communication technology, the industry veteran has conceptualised ideas and solutions which have transformed the logistics and retail sectors. He led the implementation of the Urban Logistics and Locker Alliance initiatives for Singapore.

Prior to joining IMDA, Mr New was the General Manager of Information Technology (IT) at Toll Global Logistics, where he was a member of the Global IT Steering Committee, responsible for developing the IT strategic roadmap for the Toll Group. He was previously with General Electric, where he was rotated across various businesses in multiple countries implementing enterprise IT solutions.

Ng Kuo Pin
CEO
NCS

Ng Kuo Pin is the CEO of NCS. He has 24 years of management and technology consulting experience. Prior to joining NCS, he held various executive leadership positions in Accenture. He started as an analyst in 1994 and was made partner in 2006. Between 2006 to 2018, he took on senior leadership roles within the global Communications, Media and Technology (CMT) operating group: Head of CMT Singapore, Head of CMT Greater China, and finally as Head of Consulting for CMT Asia Pacific, Africa and the Middle East.

Mr Ng enjoys working with clients, building up people and dealing with business and technology challenges (and opportunities) prevalent in today's increasingly complex enterprise and government environments. He believes that good ideas are best executed with a diverse and empowered team, and calls Asia Pacific home. Currently based in Singapore, he spent nine years living and working in Beijing and Sydney.

Nicholas Ma
CEO
Huawei International

Nicholas Ma is the Chief Executive Officer of Huawei International since December 2018. He has held various positions at Huawei in different regions throughout his tenure with the company. He has 15 years of experience in the telecommunications industry. Prior to his current role, he was the Deputy Chief Executive Officer of Huawei Philippines from 2014 to 2018.

From 2011 to 2014, Mr Ma was the Vice President of Global Wireless Marketing & Solutions Sales based in Huawei headquarters in Shenzhen. From 2008 to 2011, he was the Head for Wireless Marketing & Solution Sales of Huawei India regional office. Meanwhile, he has attended and organised major information and communications technology projects in over 40 countries from 2005 to 2008.

Oliver Broich
Senior Director, Delivery
SAI Global

Oliver Broich is Head of Professional Services for Asia Pacific in SAI Global's Risk, Learning and Ethics division. He is an experienced information technology service manager with over eight years of experience of delivery of enterprise governance, risk and compliance (GRC) solutions worldwide.

He has a solid track record in successfully delivering GRC systems within multinational organisations across the US, Europe, Middle East, Australia, Southeast Asia and Hong Kong. These include some of the largest companies in industries such as airlines, banking, insurance, mining, oil and gas, resale and automobile. The GRC systems include applications of enterprise risk management, operational risk management, regulatory compliance, internal audit, cyber security and governance. Mr Broich moved from Lufthansa and has held most positions involved in a project delivery cycle from product specialist to business analyst and team lead.

Poh Mui Hoon
Council Member
Singapore Institute of Directors

Poh Mui Hoon is an experienced digital director on boards of both for-profit and nonprofit organisations. Her career over the years has spanned various technology companies in areas such as electronic payments, e-commerce, data centres, systems integration and telecommunications. She is a member of the Governing Council and Chairperson of the Online Professional Development Committee of the Singapore Institute of Directors. She is currently a board member of Singapore Pools, Sistic.com and SATA CommHealth. She was formerly on the boards of various organisations such as Singapore PowerGrid Pte Ltd, SP Telecommunications and many other private companies. She is also part the NTUitive Pte Ltd's Investment Committee for the Strategic Research Innovation to evaluate innovative technology ideas.

Ms Poh was conferred the Distinguished Alumni Achievement Award by the Institute of Systems Science, National University of Singapore, in 2011 and is currently a Fellow of both the Singapore Institute of Directors and Singapore Computer Society.

Quek Choon Yang
Chief Technology Officer
Technology Transformation
Singapore Tourism Board

Quek Choon Yang joined the Singapore Tourism Board in September 2015 as its Chief Technology Officer. He is responsible for spearheading and implementing transformation initiatives within the board and for the tourism sector, providing counsel and direction in all technology, data, security and user experience issues, as well as creating a culture of technological dexterity.

Mr Quek has spent more than 20 years in the Information Systems industry. He founded and managed two companies around enterprise mobility solutions where he assisted organisations to realise their full potential through visioning, strategising and implementing best practices in their business processes with the appropriate technology. He sits on the Institute of Service Excellence Advisory Board, the Consumer Protection Resource Panel of the Competition and Consumer Commission of Singapore, the Hotel Innovation Committee and volunteers his team advising Anywhr, a travel company, and is a mentor for Singapore Centre for Social Enterprise (raiSE).

Steve Lee
Chief Information Officer &
Group Senior Vice President
Technology
Changi Airport Group

Steve Lee Hee Kwang is the Chief Information Officer and Group Senior Vice President, Technology at Changi Airport Group. His responsibilities include leading the SMART Airport Programme and Digital Transformation efforts, IT project management, operations and support, architecture and strategy, innovation projects for airport operations, development commercial and corporate systems.

Prior to joining CAG, he was the CIO at Kuok (Singapore) Ltd. He spent his earlier years in the Ministry of Defence (MINDEF) where he held the post of Deputy Director, MINDEF CIO Office. Mr Lee is past Chairman of Airport Council International (ACI) World Airport IT Standing Committee and past President of the IT Management Association (ITMA), Singapore. He also volunteers as an IT adviser at the National Gallery, Singapore Red Cross and National Volunteer & Philanthropy Centre. He led the team that topped the Future Travel Experience Airport Innovation Power List 2017, among other industry awards.

Tan Yen Yen
President, Asia Pacific
Vodafone Global Enterprise

Tan Yen Yen is the President, Asia Pacific of Vodafone Global Enterprise. She was previously Regional Vice President and Managing Director of Asia Pacific (South) for SAS Institute. Prior to joining SAS, she was Senior Vice President of Applications for Oracle Asia Pacific and Vice President and Managing Director for Hewlett-Packard Singapore.

She plays an active role in Singapore's infocomm industry, having held various government appointments, among them the Committee on the Future Economy, as a subcommittee member for Corporate Capabilities and Innovation. She also served as Chairman of the Singapore Infocomm Technology Federation, and was Director of Infocomm Development Authority of Singapore. Ms Tan is the Chairman of Singapore Science Centre, and sits on the boards of Singapore Press Holdings and ams AG. She served on the boards of the Singapore Institute of Directors, Cap Vista and Gemalto NV, and on the advisory board of the School of Computing at National University of Singapore.

Tham Sai Choy
Chairman
Singapore Institute of
Directors

Tham Sai Choy is a chartered accountant. He was for many years a member of KPMG's global board, its executive committee and its risk committee, and had responsibility for its Asia Pacific regional operations as its chairman. As a practising accountant, he was retained by companies large and small to lead a wide range of audit and consulting work. He was an early participant in the area of IT security, and in different capacities during his career had responsibility for developing the IT infrastructure in KPMG Singapore, overseeing IT risks in KPMG globally and assisting clients in IT security consulting work.

He is the audit committee chairman of the Housing Development Board, Nanyang Polytechnic, Mount Alvernia Hospital, and Singapore International Arbitration Centre. He also serves on the boards of the Accounting and Corporate Regulatory Authority, the regulator of businesses in Singapore, and DBS Group Holdings Ltd.

Thierry Jakircevic
General Manager of
Digital Solutions
Bridgestone Corporation

Thierry Jakircevic joined Bridgestone at the company's headquarter in Japan in September 2002. Throughout his career with the company, he has held diverse positions in field engineering in West Africa, training and education in Thailand and commercial tyre marketing in Singapore. In 2013, he returned to the company's head office in Tokyo as the General Manager of Digital Solutions with the goal of leveraging technology to deliver engaging and creative solutions that customers and teammates love to use.

What was originally supposed to be a temporary engagement turned out to be a new-found passion. 17 years later he continues to find excitement in the challenge of shaping the mobility of goods and people around the world.

W. Chan Kim
The BCG Chair Professor
INSEAD Business School

W. Chan Kim is The Boston Consulting Group Chair Professor of Strategy and International Management at INSEAD and Co-Director of the INSEAD Blue Ocean Strategy Institute, France. He has served as a board member as well as an adviser for a number of multinational corporations across the world. He is an advisory member for the European Union, a Fellow of the World Economic Forum, and serves as an adviser to several countries.

He is the co-author of the bestselling *Blue Ocean Shift* and *Blue Ocean Strategy*, the latter which has sold over 3.6 million copies. It is published in a record-breaking 46 languages and is a bestseller across five continents. Prof Kim is consistently ranked among the world's top five management gurus and was named among the world's top five best business school professors by *MBA Rankings*. He is the recipient of numerous global awards.

SECTION THREE READINGS: TECHNOLOGY

DIGITAL LEADERSHIP FOR GROWTH
Yeoh Oon Jin

CHOREOGRAPHING CORPORATE TRANSFORMATION
Manny Maceda, Michael Garstka, Charles Ormiston

BUILDING A DIGITAL CULTURE: A PERSPECTIVE FROM ASIA
Ian Johnston and Chris Uhrinek

MANAGING EMPLOYEES AMIDST DIGITAL TRANSFORMATION
Wolfram Hedrich and Peta Latimer

HOW BOARDS CAN LEVERAGE ARTIFICIAL INTELLIGENCE
Cheang Wai Keat

ROLE OF THE BOARD IN CYBER SECURITY
Rajesh Sreenivasan

OVERCOMING FUNDAMENTAL CYBER SECURITY GAPS
Cecil Su

Digital Leadership for Growth

By Yeoh Oon Jin, Executive Chairman, PwC Singapore

Organisations may be jumping fast on board the digital train and actively aiming at business transformation to align with the new world dynamics, but a lack of strong digital leadership could stall the effort. Digital leadership is core to surviving and thriving today and more so, in the future.

Beyond technology implementation, digital leadership is about fine balancing innovation, human insights, new technologies and tossing disruptions into transformation, while preparing a future ready workforce, and capitalising on data value to create unique people experiences.

How can today's business leaders morph into digital leaders of tomorrow? What should CEOs do to secure the future of their business in today's digital world?

Enable mindset to drive digital change

The fundamental change businesses are coping with is the accelerated pace of change in the digital world. It is hence essential to first transform the internal dynamics: change people's mindset. This is happening, albeit slowly.

Many leading businesses now are beginning to consider failures to be the foundation of future success, while several others are setting non-traditional management key performance indicators, beyond financials. Companies and their boards are moving away from the culture of rewarding exact certainty, to celebrating experimentation. Business leaders should create a culture that values mindset and innovation beyond profitability, for a more effective indicator of future success.

For instance, even as companies harness technology to grow the businesses, they should also use it to meet the needs of people and communities. It requires mindset change, to use technology to measure progress towards sustainable outcomes for society. Technology also has the potential to rejuvenate trade links between nations, as well as solve pressing environmental issues for sustainable living.

Be an innovation leader, build an ecosystem

Innovation propels new, exciting and interesting models that shape the future. Technology can intensify and scale those innovations to create more value and improve customer experiences. At the outset, boards should create a culture and vision that allow people to generate ideas and develop them into solutions that create value. Taking a customer-first approach in driving innovation can help customers fulfil a need they may not have yet imagined. Companies can take a step further, to ask and address what are their customers' customer needs.

Engagement with innovators on a consistent basis will make innovations real. Businesses should work with teams across geographic locations to enhance ideas and bring together groups of traditional and non-traditional skillsets, technologists and humanists, in ways traditional organisations would never think of.

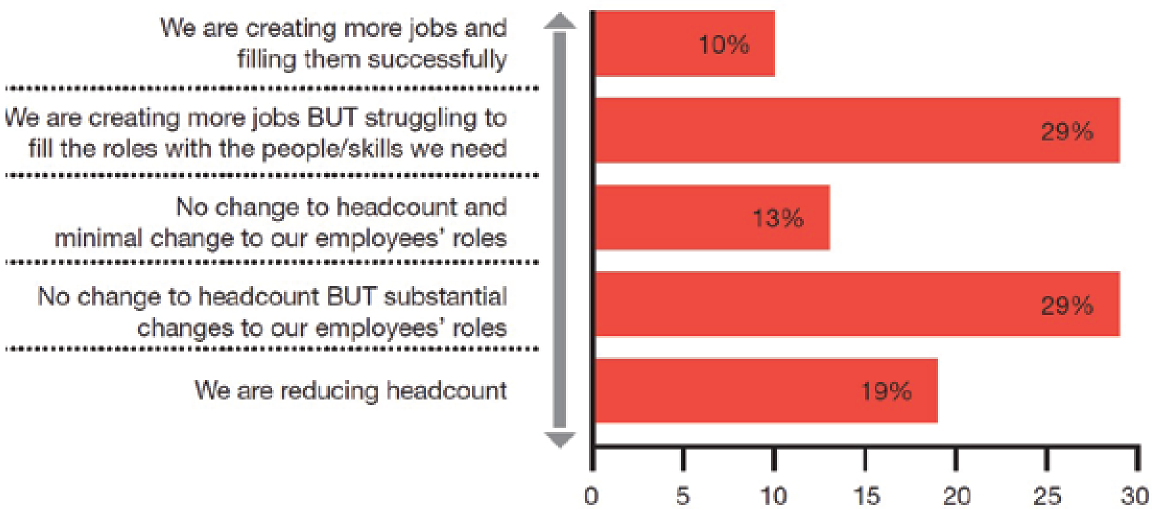
While business leaders in Singapore say that innovation suffers under legacy systems, there are reasons to be optimistic. PwC's *2018 Annual APEC CEO Survey* revealed that 39 per cent of CEOs in Singapore are investing in local startups, potentially looking at bringing innovation in-house. Nearly two out of three local CEOs believe Singapore has the strongest potential, outside the US and China, to raise unicorns (startups valued at over US$1 billion).

Prepare a future ready workforce

Technology has radically driven change at work, from automation to digital mobility, virtual collaboration and more. People are being pushed to acquire more and different new skills. Social and environmental pressures are creating demand for more flexible working conditions. These forces are making people insecure and anxious about the future of work, and how many or which jobs will be automated out of existence.

The jury is out on whether artificial intelligence (AI) will displace more jobs than it creates in the long run, with CEOs in ASEAN and Asia Pacific being the most pessimistic. In fact, the fear of losing jobs to machines compounds the biggest challenge of Singapore CEOs (See graph, "Talent crunch"). Business leaders in Singapore say that they are creating more jobs but struggling to fill the new roles. With nearly four out of five CEOs expressing concern in PwC's *22nd Annual Global CEO Survey* launched earlier this year, the skilled-talent gap is one of the top reasons for fading CEO confidence over global growth for 2019.

Talent crunch



PwC's 2018 Annual APEC CEO Survey

Boards must create a strong narrative as to what the future of work means for the company and its people. Creating an open and transparent corporate culture, andinvesting in talent development through upskilling and redeployment will cultivate a competitive and innovative workforce. In developing collaboration between technology and humans, the emphasis should be on human skills like creativity, empathy and ethics alongside digital skills. Workforce analytics can help gauge future talent needs, create compelling people experiences and eliminate potential biases in selection, assignment and appraisal.

Value data as enterprise asset

Data must be managed as an enterprise asset. Creating enhanced capabilities around data management and data analytics can enable its monetisation, and help spur innovation, design new products, and boost customer relationships and experiences.

It is also important to implement data governance to enable trust in data. This ties people, processes and technology together to formalise data management throughout the data lifecycle. Data integrity and security underpin an organisation's ability to derive and drive value from data.

Harbouring clean data is the only way to harness AI opportunities. PwC's latest *Global CEO Survey* reveals that even though 72 per cent of CEOs in ASEAN believe AI will be bigger than the internet revolution, 36 per cent have no plans to pursue AI now, as more than half of the respondents struggle with poor data reliability and lack of analytical talent.

Impact of AI

%	Global (1,378)	Asia Pacific (408)	ASEAN (78)
AI will displace more jobs than it creates in the long run	49%	60%	62%
AI will eliminate human bias such as gender bias	48%	61%	56%
AI is good for society	79%	85%	73%
AI will become as smart as humans	45%	58%	51%
AI-based decisions need to be explainable in order to be trusted	84%	88%	90%
AI will have a larger impact on the world than the internet revolution	62%	72%	72%
Governments should play a critical and integral role in the AI development	68%	79%	79%

PwC's 22nd Annual Global CEO Survey

Turn disruptions into digital transformation

Simply put, digital transformation refers to new ways of solving problems, creating unique customer and employee experiences and boosting business performance. What makes transformation-led business growth unique is: i) the speed at which it is implemented; ii) the agility around delivering change through quick steps; iii) the rate of adoption and bringing people along, and iv) the trust built around digital initiatives.

Digital transformation leaders help their employees make the digital transition by creating a narrative, a purpose and a culture that inspires people to create value. When employees feel supported, they respond with high levels of engagement and willingly bring in their intelligence, commitment, intuition and creativity to work.

As companies deep dive into digital transformation programmes, it is important to understand the vulnerabilities and how to proactively manage cyber and privacy risks. Finally, it is critical to build a digital trust environment. Digital world leaders must demonstrate how to lead with safety, security, reliability, privacy and data ethics.

Leading the digital revolution

A digital leader does not require decades of experience. As companies transform their business model, they need to identify and nurture a pool of future digital leaders across the organisation. As much as they are young, agile, tech savvy future leaders who are re-imagining the possible, they must also be humanists, capable of blending creativity, empathy and ethics into their digital business models. Corporate boards and CEOs must stand out as today's digital champions, driving their businesses towards a successful future and leading the digital revolution. ■

This article is adapted with permission from an article, "Five mantras for building digital leaders" by the author first published in *The Business Times* on 1 August 2019.

Choreographing Corporate Transformation

By Manny Maceda, Michael Garstka and Charles Ormiston

Great leaders thrive on pivotal moments because they recognise them as opportunities to reshape the destiny of their companies. Anticipating change and meeting it head-on can often mean the difference between letting a company stall and launching it on a transformational journey.

“Transformation” here is defined as a cross-functional effort to alter the financial, operational and strategic trajectory of the business, with a stated goal of producing game-changing results.

The first step of a transformational journey is identifying the full-potential vision and devising the right plan for realising it. A clear purpose and approach enable the enterprise to make the deep commitment to investments, capabilities and change that result in outperforming competitors and achieving sustained growth.

Defining a bold vision for how the company must change is one thing. But it is equally important to recalibrate this ideal vision and pace of change by assessing what the organisation can realistically undertake to align its leadership, manage change and work through the disruption.

Getting buy-in

Balancing these strategic and organisational imperatives provides direction for the change and determines the velocity and magnitude. Finding the right balance will calibrate the effort to deliver results. Securing management and investor buy-in will help establish early accountability and seed the kind of broad organisational and cultural evolution that will make the change last.

Creating the right strategy typically relies on the answers to three related questions.

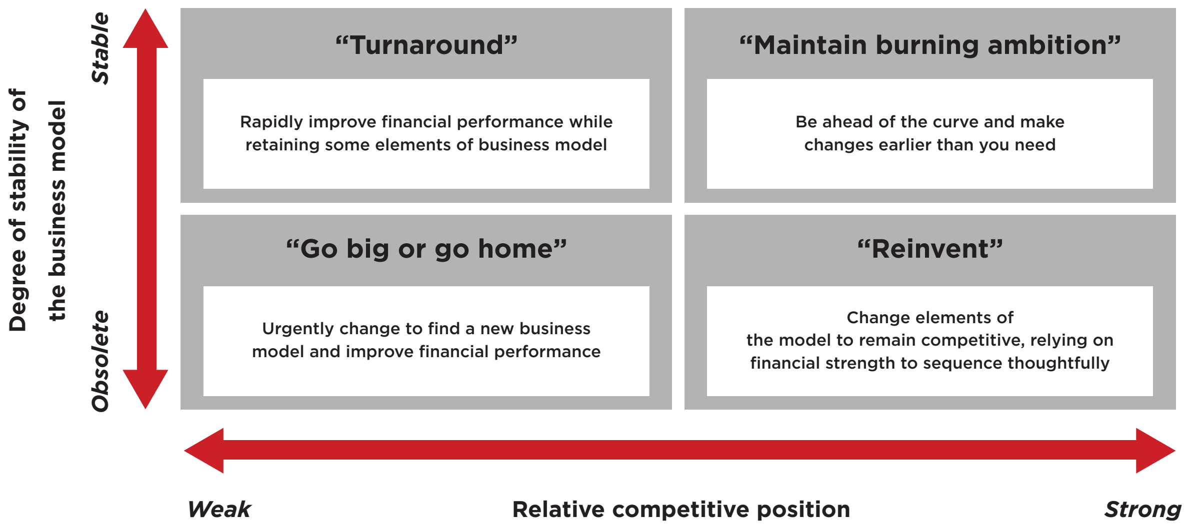
1. What kind of transformation is needed?

A company’s competitive position and stability will affect the type of transformation strategy. Ironically, defining the right transformation can be easier for a company in distress than for a company that is still evolving and growing. Companies that can anticipate change before growth slows afford themselves more time and flexibility to build an effective transformation strategy. Without an urgent need for change, determining the right timing and scale of a transformation can be less than obvious. The solution may be both hard to discern and difficult to sell within the organisation.

Corporate leaders should assess how far the company’s business model should shift to sustain or revive its growth. Depending on the current business environment, this would help determine the magnitude of the required change and how quickly it must unfold. This assessment will ultimately set the stage for the transformation effort by suggesting how it should be sequenced and managed most effectively. It will also help build consensus within the organisation by rooting the effort in clear, fact-based analysis.

Companies tend to fall into four broad quadrants that suggest what type of transformation may be required (See box, "Type of transformation required").

Type of transformation required



Turnaround
The business models of these companies remain relevant, but their financial performance is deteriorating — often drastically. The answer is typically a tightly focused turnaround to fix critical problem areas. The magnitude of change may be intense, the speed of execution important, but the effort is targeted on specific issues, not a company-wide transformation.

Maintain burning ambition
These companies are still going strong, with ample staying power and a solid strategy. But their leaders are restless and ambitious, constantly striving to reach full potential. By contemplating transformation from a position of strength, they have both the time and resources to take the most thoughtful approach. While these tend to be low-scale, slow-motion transformations, they can often provide crucial course adjustments to keep the company pointed where it needs to go.

Go big or go home
These companies are essentially rescue situations. In the worst cases, the combination of a deteriorating financial condition and a broken strategy imposes a single choice: Go big or go home. Transformation amounts to a high-level, high-velocity effort to survive — typically a full-scale programme to rebuild the company from the ground up, on a strict timetable.

Reinvent
Companies here are slowing down as their business models approach maturity. Market changes may require a strategy reset soon, yet their relative financial and competitive strengths allow their leaders to take a measured approach to transforming their companies for the future. Though the competitive situation may ultimately require sweeping change, these companies have the luxury of time to diagnose and execute methodically.

2. What is the right strategy?

Each effort to transform a company requires its own set of steps. The five core pillars common to each company are: strategy, operations, organisation, customer orientation and capital structure.

In an ideal world, any transformation should start with a thorough analysis to establish the right core strategy. Frequently, however, other capabilities require more immediate attention, particularly when a company's financial situation is dire. The balance sheet may need immediate attention or the organisational structure may need to be recalibrated quickly to meet a particular threat. That means coordination is at a premium, and resetting strategy would have to occur in parallel with other initiatives.

The right strategy also depends heavily on the transformation's unique risk profile, which reflects the company's distinct blend of organisational realities. Are the key shareholders, CEO and management team aligned on the need for sweeping change? Is there agreement on what needs fixing? Often, a company's culture is deeply resistant to change, and existing incentives support the status quo. The management bench may be too thin to implement the change effectively, or the organisation may be too overburdened to tackle new initiatives.

Balancing the transformation's ideal sequence with its real-world organisational context is critical. It may mean securing top leadership's approval by producing early wins in a particular area. It could require replacing managers in key roles with others who are capable of executing the required change, before launching a more comprehensive set of initiatives to serve a new strategy.

There is no one right answer for how to choreograph a transformation. In a step-by-step approach, getting the sequence right can be crucial.

3. How should change be managed?

As important as determining the right strategy is deciding how the transformation should be managed. Depending on the company's culture and the magnitude of the effort ahead, the solution tends to fall along a spectrum. At one end is a fully staffed and empowered transformation office run by a lead transformation executive. At the other, companies work directly through the existing line organisation. In the middle is a hybrid: a less powerful coordinating office led by a senior manager who devotes a significant portion of his or her time to issues like tracking results and resolving disputes.

Managing change through the normal chain of command can work under some circumstances, particularly at relatively healthy companies with a culture of decentralisation. If the effort is more of a turnaround involving certain parts of the business rather than a full transformation, managing through the line may be less disruptive. Or if the line management is strong and cohesive enough, top leaders may be able to count on division heads to work together to deliver the right results.

But as the scope and complexity of the transformation grow or the pace of change is "forced" by financial circumstances, the need increases for a higher degree of integration and control. Large transformations very often involve redesigning the line organisation itself, which makes it impractical to work within the existing structure. It is also hard to ask line managers to restructure their businesses and manage for day-to-day results at the same time.

Finally, coordination is essential. When one element of a broad transformation overlaps with others, a stronger integrated office is often best positioned to manage those dependencies.

In general, successful full-scale transformations require a separate organisation led by a highly skilled executive and a cross-functional team of the company's most creative and talented managers. They should be separated from the line for a defined period and charged with orchestrating the transformation agenda, coordinating results and resolving disputes. That frees up the rest of the business to run on a day-to-day basis with minimal disruption.

Every company's circumstances and culture are, of course, unique. There is no cookie-cutter solution for how a company choreographs and manages a broad, multifaceted transformation. But the right sequence and structure will always flow from a thorough analysis of the company's health and the degree to which the business model must shift to remain (or become) world class. ■

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Building a Digital Culture: A Perspective from Asia

By Ian Johnston and Chris Uhrinek

Digital transformation is a priority in most organisations today. The impact of this revolution is reflected in our everyday lives, and corporate leaders must understand how to drive fundamental changes in their organisations to ensure they continue to innovate and thrive.

Many organisations, however, place too much emphasis on technology which ironically, slows their digital transformations. Research shows that digitally mature organisations (i.e., ones that have successfully transformed themselves digitally at least once) place a far higher focus on their people as key enablers. People are at the heart of any successful organisation transformation, and digitally mature organisations focus on people and culture as much as technology.

The Singapore Government launched its Smart Nation initiative in 2014 to incorporate technology into the way that its citizens live, work and play. However, a recent *Disruptive Decision-Making* report by Telstra found that one in four Singapore-based organisations admitted to not being close to starting their digital transformation journey.

Digital acceleration refers to an organisation's ability to effectively deploy new technologies to incubate new digital offerings. New ways of working across the business can achieve efficiencies in the operating mode and/or enhance the customer experience. Leaders should focus on driving change at the enterprise level, breaking down silos, and enabling high levels of collaboration and commitment. This requires shifting the organisational culture to embrace the speed and agility made possible by digital technologies.

META factors for digital acceleration

As a critical first step to unlocking the promise of digital, organisations need to build a common understanding of where they fall along the journey to digital acceleration so executives can align on the areas to invest the time and resources needed to build a fully digital culture. This should be done at the individual and organisational level using the four elements of Mobilising, Executing, and Transforming with Agility ("META").

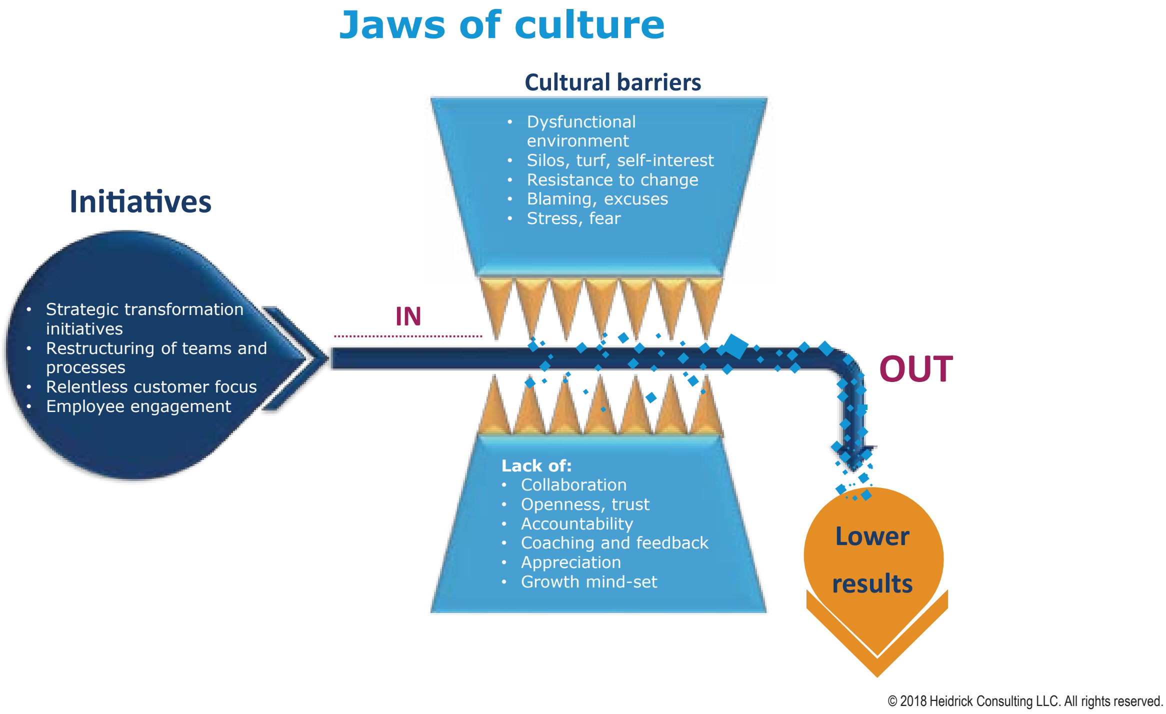
At the individual level, companies should assess the level of digital dexterity in their leaders, based on the four elements of META. Knowing the strengths and gaps in leadership capability for digital transformation will allow the top team to develop capabilities among existing leaders, as well as highlight where they may need to make hard choices about leaders who are not the best fit for their role.

At the organisation level, companies can also look at how they are performing against the META elements. The right corporate culture would assume underlying success in all of the factors listed below.

1. *Mobilisation* – empowering leadership; strategic sponsorship; digitised journeys.
2. *Execution* – digital capabilities; process adaptation; structural fluidity.
3. *Transformation* – technology adoption; co-creation currency; speed to innovate.
4. *Agility* – supported change; adaptive culture; continuous learning.

The behaviours that are so often in evidence during challenging transformations — resistance, passive aggressive attitudes, and silos, to name a few — are powerfully felt, although they cannot be seen or touched. These significantly impede progress (see box, “The jaws of culture”).

The jaws of culture



Source: “Winning Teams, Winning Cultures”, Senn Delaney, a Heidrick & Struggles company (Larry Senn & Jim Hart)

Accelerating a shift in culture

What should the leaders of organisations do to create a culture that supports their digital transformations? Four principles help to embed the digital mindset.

1. *Purposeful leadership*.
The organisation needs to know that the CEO and the executive team are fully committed to the changes, this is not something that can just be left to a chief information officer or chief technology officer. Linking the initiative to the organisation’s overall purpose, strategy and customer proposition gives context and credibility.

2. *Personal change.*
Success in the digital space means that leaders have to be the role models for the behaviour that they want to see in others. This starts at the most senior levels. Here’s an example of an “ah-ha” moment for one CEO about a lack of accountability in his organisation: “I was telling the analysts that we had missed our revenue targets because of uncertainty over Brexit. My insight was that all my competitors were dealing with the same challenges better than we were, and a recognition that accountability starts with me.”

3. *Broad engagement.*
It is vital to create energy and critical mass for a digital transformation. Visible credibility from senior leaders and a strong message that it is about getting the whole organisation engaged, and not the latest IT project or something that can be left to a project team. Organisations have strong cultural antibodies that show up in scepticism and a lack of trust.

4. *Sustainability.*
Address the legacy practices that will slow or stop the organisation. A fundamental part of the process is to understand the impact of performance measures (particularly incentives), communications and other processes.

A cultural transformation in Asia

An example of a company that has emphasised cultural change as a foundation to digital transformation in Asia is Rolls-Royce. As a company, it committed to creating what it calls a “High Performance Culture” (HPC). This initiative shifted the company’s focus away from a legacy, engineering focused mindset towards a blend that included greater customer engagement and a digitally enabled focus. Critical to this transformation was creating more inclusion, trust and collaboration.

A senior Rolls-Royce executive recalled an eye-opening moment when he realised the powerful benefit of HPC. One aspect of the company’s digital transformation journey was a significant business restructuring. The leadership teams of one business area were asked to put forward proposals on the restructuring.

“At first, we started down the expected path of ‘turf war’ type behaviours. Surprisingly, however, the shared language created during the HPC process allowed a small group of more ‘enlightened leaders’ to embrace a bigger team perspective and they encouraged individuals to be committed to the success of the overall outcome, not just their own part of it. The results were that the change happened quickly, with more alignment, and far less resistance than anybody expected. The story of the way that team overcame the challenge became a role model for others to emulate as it was so successful.”

To achieve its ambitious digital aspirations, Rolls-Royce has created a global digital academy that leans heavily on the HPC concepts and methods to achieve the scale and potential of digital initiatives in the short and long-term.

For Asia specifically, the culture-shaping process has helped to eliminate silos and increase speed to scale in unexpected ways. As business and cultural realities are quite different across the region — from Bangalore to Singapore to Shanghai — the common language, shared beliefs, and alignment to a single purpose has increased collaboration and knowledge sharing. It also increases employee engagement and motivation.

The competitive advantage of going digital comes from executing faster than your competitors. In the excitement to charge towards a digital future, company culture and talent are often afterthoughts. Ignoring the need to create a digital-ready culture will result in suboptimal outcomes and ultimately an organisation that is unable to keep pace with digital disruption. ■

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This article is excerpted and adapted with permission from a report titled “Building a digital culture” by Chad Carr and Scott Snyder first published by Heidrick Consulting on 4 June 2019.

Managing Employees Amidst Digital Transformations

By Wolfram Hedrich and Peta Latimer

With the rapid advances of technology across industries and economies, today's most monumental transformations are, more often than not, linked to technology. While "disruptive technology" has become a cliché, that is only so because digitisation in its various forms has completely transformed the way we conduct business.

Asia is emerging as the new hotbed for digital development with unicorn companies (with market valuation over US$1 billion) like Gojek, Lazada, Grab and Tokopedia, that are leveraging technology to grow. Singapore, in particular, has consistently been ranked first in the *Asian Digital Transformation Index* by the Economist Intelligence Unit.

Worldwide, the *Mercer Global Talent Trends 2019* study indicates 59 per cent of companies surveyed are planning to invest more in automation this year.

While the digital revolution is already underway in most organisations, it is yet to have the kind of impact (either positive or negative) that many predicted. As such, most organisations have not yet adopted any design or implementation strategies that would truly leverage the digital revolution by increasing productivity and work outcomes.

In order to bring about this much vaunted transformation, organisations need to fundamentally change their outlook towards digital technology. This means a shift from the perception of technology as a cost centre that supports other revenue generating activities, to a competitive advantage that drives organisational growth, as a way of investing in the future.

The biggest stakeholder

Organisations need to wake up to the fact that their employees — and their workforce — are the biggest stakeholder to be managed in the process of the business transformation.

As the technology juggernaut continues to move forward, companies find themselves at different stages of dealing with such transformations. From business leaders, technology vendors, to front-line employees, everyone has a crucial role to play in designing and implementing solutions for the future. However, the exponential pace at which things are changing can often end up leaving the workforce stranded.

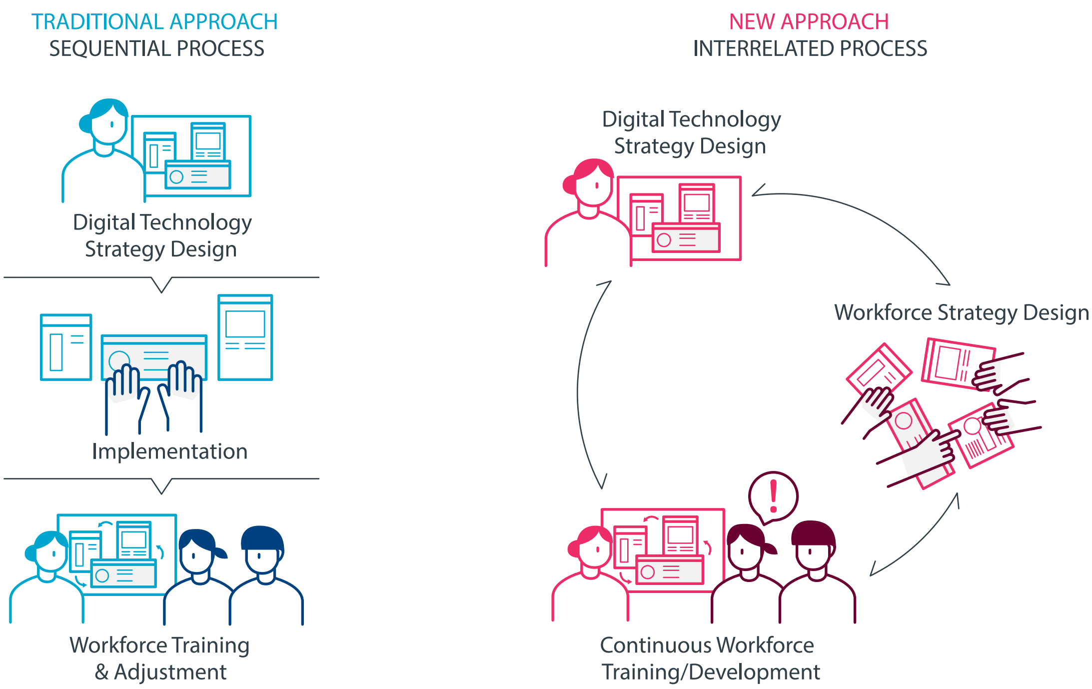
Research suggests that unpredictability in the business environment can result in more stress and less creativity which, in turn, can significantly impact work outcomes. Data collected by Mercer-Sirota also shows that only one out of six employees tends to agree with the way their organisations are responding to the changes in the external business environment.

For example, when Prudential Hong Kong automated its office systems, the company was surprised to note that it did not lead to anticipated cost savings. It was only when the management conducted an exercise of employee surveys and interviews that they were able to identify the pain points with the system in the first place. The insights led to better-informed decisions on work designs that enabled more efficient allocation of resources.

A new model of workforce design

Traditionally, a sequential approach has been the norm, wherein a linear path is taken: starting from vendors who develop products through to the sale of the final product to the chief technical officer. This top-down progression, however, puts the onus on managers who end up struggling to integrate the technologies in their workstreams. A new approach to this development strategy links to a circular integrated process. (See box, “Designing the workforce for the future”.)

Designing the workforce for the future



Key features (Traditional approach)

1. Sequential process in order to react to changes in the digital design
2. Reactive approach to retraining and rebalancing the workforce as technology is introduced
3. Vendors and top managers define the technology solutions, and HR manages the workforce adjustments
4. Top-down workforce strategy definition based on employee capacities and business unit alignment

Key features (New approach)

1. Integrated process directly relating workforce strategies with business strategies
2. Continuous and multidimensional training to prepare for new technologies and embed optionality
3. HR and the workforce help to define the problem, solution options, and workforce adjustments
4. Interrelated workforce strategy development building on worker engagement

Source: “Engaging the Workforce in Digital Transformation” by Marsh & McLennan Companies.

First, the continual upskilling of the workforce is an integral part of a transformative process. Most firms adopt a reactive stance, often waiting until a new technology is introduced and then training the workforce for it. Often, that is too late. A more proactive way would be to continuously educate and upgrade the skills of workers so that they have the required analytical and social skillsets to work productively with new technologies. In Singapore, the SkillsFuture initiative emphasises learning for current skills, as well as potential skills required in the future for large industries.

Second, collaborative technology design is another way for organisations to be more proactive. Organisations that involve the employees in the process of work design from the development stage can reap significant benefits. Research shows that work is less likely to become transactional and uni-directional, with an increased emphasis on relationships and expertise. There is a strong business case for involving the workforce in such design needs. A solution will only productively fit the needs of the business when the end user is part of this collaborative design process.

Third, automation should be about augmenting human input with artificial intelligence, rather than eliminating or replacing human input or labour. Artificial intelligence, which relies on machine learning, would not be suitable as a substitute for decisions that have inherent subjectivity and require human judgement. There needs to be a shift in the approach to using digital transformation to support and supplement human tasks. Tasks that are structured, frequent and involve a lot of data points, can leverage the self-learning nature of such technologies. Artificial intelligence can help provide data and analysis that support human decision making, thus improving efficiency.

Fourth, the integration of technology into workflows is critical. Disruptive technology and innovation are transformative only when they are integrated into the entire organisation. Too often, technology is taken as a piecemeal activity that changes a single component in isolation, rather than the entire process throughout the organisation. Hence, innovation remains additive, rather than holistic. Technology is not just a way to automate existing processes but employed holistically, can cause a paradigm shift in how things are run.

Fifth, and finally, strategic alliances at the top leadership levels should set the tone. Senior management and the board should work together to achieve the strategic goal of digital transformation. Having a chief digital officer (CDO), whose mandate is to design and lead strategic digitation initiatives in organisations, would provide a focus for the company. While the roles of the chief technology officer and chief information officer may overlap, the CDO can exist independently or in conjunction with any of the other two positions.

Taking the lead

The Singapore Government, in launching its Smart Nation and Digital Government Office to drive digital initiatives in public service, has appointed a CDO who serves as the official digital adviser to the government. To highlight the priority given to such initiatives, the group will be overseen by a ministerial committee. Organisations should take the cue and ensure high-level partnership between top leaders and technical experts, to coordinate development efforts.

In summary, the holistic model of engaging the workforce in digital transformation focuses on five main tenets:

(1) The CEO serving as a system integrator and change process facilitator.

(2) Ensuring sufficient learning investments made well in advance to foster the right skills and cultural willingness.

(3) External vendors, management and employees all coming together to jointly define the problems or opportunities that digitisation would address.

(4) Design teams to consider systemic process change rather than piecemeal increments.

(5) The end users, i.e., employees, being involved from the development stage so as to pre-empt bottlenecks and reduce need for continuous iterations.

Successful transformation of organisations is about making them more digitally enabled and more human at the same time. ■

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How Boards Can Leverage Artificial Intelligence

By Cheang Wai Keat, Head of Advisory,
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Artificial intelligence, or AI, has caught the imagination of many in the corporate world, and for good reasons. Data can be a gamechanger. Harnessing data has proven to make a difference for companies looking to gain competitive advantage. While board members don't all need to be digital experts, they need to understand how AI, with its boundaries and limitations, can be leveraged wisely for their business.

Among the various uses of AI, intelligent automation is prevalent due to its maturity and the potential value that can be captured. An organisation can leverage AI to create, retain or capture value across its value chain. Intelligent automation automates repetitive and labour-intensive processes through self-learning techniques that improve on traditional automation software accuracy.

AI has the potential to independently resolve challenges within an organisation by imitating human interaction — in perceiving information, understanding and learning from it, and communicating results back to the user. Natural language processing techniques like speech recognition, or visual techniques such as smart and self-learning optical character recognition are examples of how AI has helped to improve the accuracy of information perception.

For interpretation, analysis and learning, sophisticated deep learning algorithms like neural networks can process large swathes of data to make better predictions for industrial use cases while other AI algorithms can be used to communicate with users via chatbots, or deliver insights to business users through data visualising techniques.

The applications for AI transcend business functions and industries, although not in the same manner and to varying extents. Retail, travel, logistics and telecommunications industries have taken the lead in applying AI, with more industries following suit. For example, companies performing smart contracting and supply chain optimisation through blockchain networks can use AI to optimise the data collected.

Assessing AI programmes

The value of AI, from the automation of onerous and repetitive tasks, can be appreciated in two ways. First, through savings from labour and other operational costs, and second, through freeing up resources for new and higher-level tasks. Yet, many companies struggle to appreciate and capture the entire value of automation, and overlook the potential opportunity cost.

Boards and management who understand AI and successfully communicate the vast potential of its value can instil employees' confidence in the longevity of their jobs and address concerns of job displacement more effectively, enhancing talent retention. This in turn feeds into building a culture of innovation — one that is centred around the use of data in the future.

Companies that are successful in adopting AI are focused on cultivating a data culture within the organisation. Among some of the initiatives are training middle and junior management to have a digital-first mindset, developing a centre of excellence for AI, and promoting lean governance with a mindset of a "failing fast" system which immediately reports any condition that is likely to indicate a failure.

How can boards leverage on AI? (See box, "Checklist for boards").

Checklist for boards

When evaluating AI programmes for funding, boards should have a framework for decision-making that assesses the following:

• *Strategic alignment:*
To what extent can the investment in AI help toachieve the organisation's strategic goals?

• *Maturity of technology:*
Where is the technology on the maturity curve and is it reliable?

• *Return on investment:*
What is the expected return on investment?

• *Time to value:*
How soon will the investment contribute to the desired outcome?

• *Availability of data:*
Is data readily available to support application in achieving meaningful results and continual testing for improvements?

• *Risk:*
What are the regulatory, legal and cyber risk exposures?

• *Availability of talent:*
Is there talent available within firm, or in collaboration with trusted partners?

Be aware of the challenges

The use of AI will present ethical, legal and programing challenges that need to be carefully managed. Common risks include algorithmic bias that can potentially obscure meaningful suggestions to decision-making, training data of poor quality and programming issues that introduce risks to the overall application.

Organisations must also be prepared for externalities such as cyber attacks due to increased data activity, legal risks and liabilities, and enterprise reputational risks, with a clear plan of action to mitigate the impact of such incidents. In selecting third-party service providers, organisations should look for partners that offer accountability and have robust risk management frameworks in place.

When considering the use of AI in the business, boards should ask how they challenge management to respond strategically to both the opportunities and risks associated with AI. How is the organisation using AI and new data sets for governance and risk management, and how does it manage the exposure to cyber attacks with the increased use of data? Does the organisation have a talent strategy for recruiting and retaining individuals with the necessary skillsets to manage and staff AI-related projects? And finally, what are the ethical consequences of failing to prevent algorithmic bias?

When combined with big data and analytics, AI is an invaluable tool for organisations to model future scenarios and better understand their customers. ■

The views in this article are those of the author and do not necessarily reflect the views of the global EY organisation or its member firms.

The Role of the Board in Cyber Security

By Rajesh Sreenivasan, Head, Technology, Media & Telecommunications, Rajah & Tann Singapore LLP

We live in a technology driven world, with modern technological developments ubiquitously providing degrees of efficiency and comfort to practically every aspect of our daily lives. At a macro level, entire industries are undergoing transformation, with the adoption of new, technology driven business models.

Yet, even as technology becomes a cornerstone in business strategy and operations, many corporate boards of directors remain insulated from these developments. One school of thought is that directors are, after all, the custodians of the company, charged with the preservation of tradition and remaining steadfast amidst the winds of change.

Today, however, directors are expected to take on more responsibility for fundamental governance failures and to move beyond the role of mere overseer. Nowhere is this more evident than in the issue of cyber security, and it is not difficult to see why. Cyber attacks in recent years have shown that virtually every organisation can be successfully breached, and the damages significant. Aside from the obvious direct financial loss, a cyber security breach could also lead to significant losses in many other forms, including:

- Disruption of products and services.
- Replacement of assets.
- Fines and penalties.
- Loss of competitive advantage.
- Reputation damage.

A wake-up call

The data breach that affected the US-based retail store, Target, in 2013 is often the reason cited for the significant shift in the role of the board of directors. It comes as no surprise that the world sat up and took notice, given that the incident led to a US$18.5 million (S$25 million) multistate settlement, a recommendation by an oversight committee to oust seven of Target's board members, as well as the replacement of its chief executive officer and chief information officer.

Closer to home, the recent cyber attack on healthcare institution SingHealth's patient including that of Singapore Prime Minister Lee Hsien Loong. This massive data breach resulted in the Personal Data Protection Commission meting out fines of S$250,000 and S$750,000 to SingHealth and Integrated Health Information Systems (IHiS) respectively for lapses in securing patient data which resulted in the nation's worst data breach.

In the report by the Committee of Inquiry that investigated the incident, the committee took the opportunity to categorically emphasise that cyber incident response processes "should also involve senior management and even members of the board of directors. This is a basic requirement of corporate risk management. Senior executives and board members should be prepared to respond to major crises caused by cyber-attacks..." (extract from the "Public Report of the Committee of Inquiry into the Cyber Attack on Singapore Health Services Private Limited's Patient Database on or around 27 June 2018").

The message is clear. Boards today are no longer responsible for mere risk oversight, they are now being held accountable for any failure to adequately mitigate those risks.

With power comes responsibility

In Singapore, the law also imposes duties on a director to, amongst other things, exercise power with skill, care and diligence as well as in good faith for the company's interest.

For example, the board of directors would be in breach of these fiduciary duties if there is a failure by the organisation to identify cyber risks present within their organisation and the board is unable to demonstrate that it has exercised diligent oversight and governance to ensure that management has come up with appropriate cyber security policies to address these risks. This could open up the possibility of a suit being brought against the directors for a breach of directors' duties either by the company or by the shareholders through a derivative action.

Although the technical nature of cyber security risks may be daunting to many directors, there is no expectation for them to become subject-matter experts themselves. Directors are permitted to rely on advice from management and consultants to make more informed judgments on such issues. Cyber security risks can, and should, be treated in the same way as any other category of risk within an organisation — with common sense and sound business judgment.

The approach used and the types of questions the board might ask when dealing with any other type of issue would similarly apply. For example, directors must first be aware of the different levels of cyber risk that the company is exposed to, and the current policies management has put in place to mitigate such risks. If such measures are found to be inadequate, the board should then take it upon itself to drive the conversation and ask tough questions regarding the company's preparedness in the event of a cyber security breach.

Top-level priority

When leadership at the top demonstrates that cyber security is a priority within its list of strategic initiatives, the rest of the organisation will follow suit. As a follow-up, the board may also wish to undertake a review of the company's annual budget and decide whether its security strategy should be built around in-house resources, or if the company would prefer to leverage outsourced services from managed security providers.

Cyber security is a trending topic right now across industries, for good reason. Directors are elevating cyber security issues to the level of enterprise-wide risk management, far beyond that of a limited IT concern. Boards are now coming to terms with the fact that cyber security risk exposure is only going to rise in prominence as they enter the new digital economy, and technology becomes an inevitable part of business.

Effective and responsible corporate management of cyber security is becoming increasingly important not just for a company and its immediate stakeholders, but also for society at large. Companies and boards need to prioritise cyber security as a top-level concern, with consequences that extend beyond just the company.

In the words of Steven Chabinsky, Global Chair of Data, Privacy & Cybersecurity at White & Case LLP, "Thinking of cybersecurity solely as an IT issue is like believing that a company's entire workforce, from the CEO down, is just one big HR issue." ■

Overcoming Fundamental Cyber Security Gaps

By Cecil Su, Director, Technology Risk Advisory, BDO LLP

The board's leadership is crucial for the long-term success of the company. This includes the oversight of the company's financial reporting process, assurance mechanisms, system of internal controls, and regulatory compliance. Towards this end, a primary duty of board members and senior management is to ensure that confidential information is protected in their respective organisations.

How then, to explain the numerous occurrences of data breaches that make the headlines? Even worse, many of these breaches of data networks go undiscovered for months, and the vulnerabilities were only discovered by external parties and not by the business itself. These gaps or deviations sound obvious and yet many organisations do not have a strategic framework or processes to address these critical issues.

The scale of the problem

In 2018 alone there were 6,500 disclosed data breaches, and worldwide spending of more than US$114 billion (S$155 billion) to tackle cyber security issues, according to research firm Gartner. The scale of the problem is widespread and massive. The question is, are the available resources employed to optimal effect?

Most enterprises, small and large, operate with a "set it and forget it" security automation — nursing the hope that multiple automated defence layers will solve the security problem. Unfortunately, this random approach is neither adequate nor efficient. This is because most security technology does what it is designed to do. That said, security automation by itself leaves open critical gaps, and cyber criminals have become adept at bypassing defences to steal sensitive information.

Cyber security solution providers are the first to admit that technology by itself does not solve the problem. Products tend to be programmed only for specific threat vectors. It takes human intervention to restore systems to normal after a breach occurs. The damage suffered by an enterprise depends mostly on how long the cyber threat remains undiscovered and unaddressed. (See box on "Fundamental cyber security gaps").

Be aware of the challenges

Cyber criminals' successes are increasing exponentially. Whether it is mining new vulnerabilities or exploiting abstracts on tried-and-true tactics, bad actors are negatively impacting businesses worldwide. Business leaders now recognise the dangers inherent in a growing cyber threat landscape, and that critical gaps can still exist in their cyber defence strategies.

To approach these issues, organisations can best use their limited resources to stay ahead of the ever-evolving threat landscape. The following are three ideas for addressing disconnects in the cyber security strategy.

Fundamental cyber security gaps

There are five gaps in the traditional approach to cyber security:

1. Protecting against the past.

Most security products are designed to recognise attacks that have happened before. They automatically prevent reoccurrences because they are programmed with the threat signatures. Unfortunately, the past is not always a guide to the future. Threats morph all the time, as cyber criminals devise new ways to bypass security technology. Automated security systems are always one step behind. Enterprises need protection against previously unknown (or "zero-day") threats, not just yesterday's known threats.

2. Maginot Line mentality.

The Maginot Line was a series of concrete fortifications that France deployed along its border with Germany during the 1930s. Similarly, traditional cyber security is based on an outwardly-focused prevention mentality. However, today's most damaging attacks elude existing defences to take up residence inside the enterprise network. Once there, they bide their time – gathering the information that will make the eventual attack more successful and damaging. Enterprises need to combat threats that may already exist inside the corporate network.

3. Malware myopia.

Malicious software is a huge problem, but it is just one threat vector. Only 40 per cent of last year's attacks were based on malware. Enterprises need to think about the other 60 per cent and protect against all possible threats, not just those that involve malware.

4. Alert overload.

A big problem with security automation is that it is automated. When a potential threat is identified, an alert is sent out. In no time at all, the IT staff is swamped with alerts. It is a constant challenge to tune these systems. Too tight, and you get flooded with alerts. Too loose, and you may not get that one alert you really need. In practice, most enterprises err on the "too loose" side, because they simply do not have the resources to investigate all the false positives. Enterprises need a way to sift through the millions of network events that happen every day to zero in on those that may pose a true and credible threat.

5. The "it's not my problem" syndrome.

When a real security breach happens, enterprises need immediate help. Cyber security has become an incredibly complex and specialised technology niche. Unfortunately, legacy Managed Security Service Providers only deliver notifications of breaches. They do not provide remediation assistance ("it's not my problem"). Unless organisations are prepared to pay a very steep a la carte price at the point of crisis, they should have in place expert services that render immediate, competent, and cost-effective help.

The first step is to eliminate the weakest links. Employees cause more than half of enterprise cyber breaches. This disconnect — between employees' role in cyber breaches versus mandated awareness training for all employees — increases organisations' vulnerability to attacks. No company has unlimited cyber security resources, so it is important to engage every team member in defending it. The more watchful eyes there are looking for anomalies and the fewer people who accidentally allow bad actors in, the more secure the organisation will emerge.

Strong user authentication is also key to reducing data breaches from negligent employees. Establishing strong authentication and then training employees on their role in protecting the organisation will go a long way in cyber defence. Closing the door on cyber criminals hinges, in part, on pinpointing the gaps in employee awareness training and overall cyber security strategy.

Second, organisations should conduct an assessment of their technologies, controls, processes and procedures to identify gaps and tighten response capabilities. The strength of an organisation's cyber security capabilities can make or break the cyber defence strategy. From gaps in strategic direction to staff shortages, holes in cyber defences develop when cyber security teams do not operate effectively.

Strong access control and patch management can help. While there are many cyber threats, potential hackers tend to attack the same kinds of vulnerabilities time and again. Configuration management with system hardening and restrictive use of administrative privileges will stave off most attacks. Continuous education is often seen as part of the job — from e-magazines to conferences, to vendor presentations, to certifications — IT professionals should never pass up an opportunity to increase their knowledge of technical products and stay up to date with the latest industry trends and products.

Third, and finally, strategic alliances and partnerships can enable the organisation to protect itself from emerging threats while concentrating on core business initiatives. A good strategic consultant can also assist in evaluating weaknesses and providing potential solutions. With their skilled cyber security staff and next-generation technology, cyber security consultants and managed service providers can help.

For companies looking at cost-effective options, the economies of scale of third-party cloud services can provide affordable services. One idea here is to implement an effective strategy that leverages the automation and rapid innovations available through global cloud service providers.

The constant pressure for cyber security to evolve makes it difficult for most organisations to stay ahead of the game, in staffing and technology. Recognising and reacting appropriately to those gaps in an organisation's security capabilities is a key leadership responsibility.

Businesses today have ever-greater options in cyber security technologies and practices. However, even the most cyber aware organisation can still be found wanting. Only by eliminating gaps in cyber security strategies and practices can an organisation fine tune its defences against the next cyber attack. ■

SECTION FOUR
READINGS: STRATEGY

Shaping Singapore's Disclosure-Based Approach

By Tan Cheng Han, Chairman, Singapore Exchange Regulation

The Singapore Government established the Corporate Finance Committee more than 20 years ago to make recommendations with the view of making Singapore a key financial centre for international corporate fundraising activity. Among other things, the Committee recommended that Singapore move its regulatory approach from a merit-based to a disclosure-based one.

There were a number of reasons for this. In essence, regulators may not be the best persons to determine the merits of investment decisions. A merit-based system also suggests a government stamp of approval, which disincentivises personal responsibility and self-reliance.

Nevertheless, no country in the world has only a merit-based or disclosure-based approach. Elements of both will exist; the question then, is which approach dominates. Where lies the sweet spot on the continuum — merit-based at one end and disclosure-based at the other?

While Singapore adopts the disclosure-based approach as a starting point, Singapore Exchange Regulation (SGX RegCo) may, from time to time, refuse applications for listing where applicants do not meet its criteria or if public interest grounds exist. In other words, an element of regulatory oversight and intervention will continue.

Indeed, many in Singapore advocate the view that SGX should be more interventionist as there are fewer institutional investors and analysts, and class action lawsuits do not exist. While it seems clear that SGX RegCo must supplement the disclosure-based regime with regulatory action, what is less clear are the parameters. This is something that will have to evolve over time as SGX RegCo is, after all, still a relatively young organisation.

Policy considerations

When SGX RegCo was established in 2017, the emphasis was not to over-regulate the market. While rules are necessary to ensure transparency and an orderly trading environment, rules must ultimately support the ecosystem positively and not impose unnecessary costs. In this regard, SGX RegCo has sought to incentivise companies to be good citizens.

For example, under the Fast Track programme, companies with good corporate governance practices and compliance track records enjoy priority clearance for selected corporate actions. Another example is the recently launched Automated Clearance Regime which facilitates swifter time-to-market for certain corporate actions. Initiatives such as these have been universally welcomed. There have, however, also been more controversial issues.

The first relates to the decision to allow dual class shares in appropriate cases. Dual class shares are allowed in certain jurisdictions, such as in the US and Hong Kong. It seems to have been used primarily by technology companies where continued control and involvement by a visionary leader is regarded as advantageous.

SGX RegCo debated and consulted the market on whether SGX should do the same. Many believe it will provide an option for suitable companies and offer investors more choices, while others say this is a fundamental departure from the one share, one vote system and may lead to poor corporate governance. Such arguments highlight the tension between disclosure-based and merit-based approaches.

Unlike a country where citizens do not have a choice as to their citizenship (although they can leave if they wish and are able to do so), shareholders have a choice whether to invest in a company. If they want to do so in a company with a dual class share structure, the question then arises as to whether the regulator should disallow this by prohibiting such a structure altogether.

SGX RegCo attempted to strike some form of balance by allowing dual class share structures with a number of safeguards, such as stipulating matters where each share would only have one vote, e.g. where independent directors/auditors are to be appointed or removed, delisting, and variations to the rights of shareholders or the company's constitution. Another example is limiting the weightage allowed to a maximum of 10 votes per share.

The second example relates to quarterly reporting. It is often argued that this gives rise to short-termism. Some may say half-yearly reporting also does this, so it may be just a matter of degree although it is generally accepted that a measure of regular reporting is necessary when shares are held by the public.

It would appear that quarterly reporting imposes a burden on companies that may not be commensurate with its supposed benefits, given that the listing manual already obliges companies to disclose material matters on a timely basis. Interestingly, some exchanges, e.g. in the UK, have moved away from quarterly reporting. This is significant because from memory, the need to align with international best practice was one of the principal reasons why Singapore adopted quarterly reporting.

Regulators in the US are also conducting a review of the quarterly reporting regime in light of feedback from investors that the current practices have caused the capital markets in the US to have an unhealthy short-term focus at the expense of long-term strategy and growth. At the same time, despite the obligation of continuous reporting, some segments of investors are in favour of retaining quarterly reporting because they feel that more frequent disclosure is always better.

Regulatory oversight

Complex as the above issues may be, they involve competing policy considerations and the need to find the right balance. There is no "silver bullet". A regulator that is overly aggressive may end up making matters worse and be accused of causing significant value to be lost, while one that acts inappropriately will not stop further harm from being caused. And the regulator will often have to make a judgment call without all the necessary facts before it.

The above illustrates some of the challenges faced by SGX RegCo as it works to foster trust in the market while ensuring efficiency. Getting the right nuance and balance is crucial. The question is how this is to be done effectively where the issues can be complex and the information incomplete.

Any industry or human activity generally begins as a reaction to a market or societal need. As the industry or activity becomes more prevalent, concerns inevitably emerge. These concerns include competition issues, misinformation, charlatans, fraud and market failure, all of which generate a need to protect sections of the public. This is when regulation begins.

Regulation becomes necessary as a response to a development that has taken off because society has, first and foremost, found the activity or industry relevant and useful. The regulator must therefore be mindful of the need not to choke the industry or activity to the point that its very usefulness is eroded, while at the same time ensure a reasonable level of protection for appropriate segments of the public.

Striking the right balance

Even though all of us can agree that getting the balance right is important, it is not easy to do so. It is like the common saying that common sense is often not common at all. In this regard it is important to develop the right organisational culture so as to maximise the prospects of a balanced, enlightened and robust approach towards regulation.

SGX RegCo has adopted as its approach, the "learning organisation". This means that the regulator is always learning, always wanting to improve to become a more conscientious, forward-looking and dynamic organisation.

For SGX RegCo to be such an entity, it must have a spirit of humility, be open to different internal and external views and perspectives, and have the ability to look at itself dispassionately. Such an organisation will make mistakes but they will be fewer and less serious, and it will maximise its prospects of not repeating such mistakes in future. This is the type of learning organisation that SGXRegCo will continue to strive to be, knowing that the striving is a continuous and evolving one. ■

Agile Governance

By Irving Low, Head of Advisory, KPMG in Singapore

The Fourth Industrial Revolution or Industry 4.0 — the confluence of physical, digital and bio technologies — heralds an era of exciting possibilities, and immense uncertainty.

Over the last two decades, technology has changed the way business is conducted, abolished once-successful business models, and overhauled age-old industries. That some of the world's most renowned brands no longer exist today serves as a warning to boards and leadership about the far-reaching nature of today's digital disruptions.

Amidst this environment, boards are under intense pressure to be vigilant in their oversight while also needing to be forward-looking, efficient, adaptable, flexible and responsive. In other words, being agile. But how can boards integrate agility into existing governance structures without losing control?

A forward-looking focus

For companies to continue to thrive and remain relevant, they need a board that is forward-looking, open to external views and has a structured approach to identifying and assessing emerging risks.

The risk landscape continues to shift and boards must keep abreast of new and emerging risks. In KPMG's *2019 Global CEO Outlook* report, CEOs highlighted the top five threats to growth. This shows a breadth of risk areas and emphasises that risks do not remain static. The table, "Threats to growth" highlights that the environment and climate change is now seen as the top threat to growth in 2019, compared to territorialism in 2018. Emerging and disruptive technology risk has moved up to second position in 2019.

Threats to growth

CEOs' top five risks for growth:

2019	2018
1. Environmental/climate change	1. Return to territorialism
2. Emerging/disruptive technology	2. Cyber security risk
3. Return to territorialism	3. Emerging/disruptive technology risk
4. Cyber security risk	4. Environmental/climate change
5. Operational risk	5. Operational risk

Source: 2019 Global CEO Outlook, KPMG International.

Boards must continue to establish robust processes to identify and analyse global and industry trends. They should arm themselves with sufficient information, such as expert views, credible industry research reports and relevant data analytics. This will help them make informed strategic decisions to drive long-term sustainable growth and ensure potential risks are mitigated, should they arise.

To maintain relevance and grow profitably, boards must be prepared to make brave decisions, which may involve disrupting their traditional (and sometimes entrenched) business models, to drive new revenue streams. A forward-looking board will leverage data to assist their decision making.

Predictive analytics and artificial intelligence are seen as powerful differentiators in shaping strategy and building customer loyalty or "stickiness". However, boards must ensure they continue to challenge the analysis and results or seek independent views to discharge their duties if they require more information or assurance prior to making decisions.

Fast and efficient decision making

As today's pace of change continues to accelerate, the board must balance the need for speed with integrity. To seize opportunities and grow market share (through areas such as new products, new technologies and new business models), companies must act fast. However, they must also continue to provide effective oversight to ensure new solutions not only address stakeholder expectations but meet compliance obligations.

A majority of companies have evolved their existing governance structures, delegations of authority and oversight mechanisms over time to accommodate their growth in size and complexity, with more layers of approval being added. Now is the time for boards to revisit these areas, vis-à-vis their strategies and risk appetite, to ensure they remain relevant and efficient in this new era of constant change.

Boards should examine the allocation of responsibilities across existing board committees to ensure alignment that promotes efficient and effective decisions to be made and escalated, where required, to the board for approval. Boards could also look to identify more opportunities to empower management, while holding them to account. To do so requires setting clear strategic objectives and expectations for managing risk.

In empowering management to "run faster", boards could establish dashboards to monitor exceptions and warning signs for when things are not in line with their expectations. For example, the accelerating rate of technological changes and evolving customer behaviours have sometimes created a "fear of missing out" mindset in some companies. Management, attuned to the urgent need to transform their businesses and operating models, may be pressured to act without a baseline understanding of what works for their organisations.

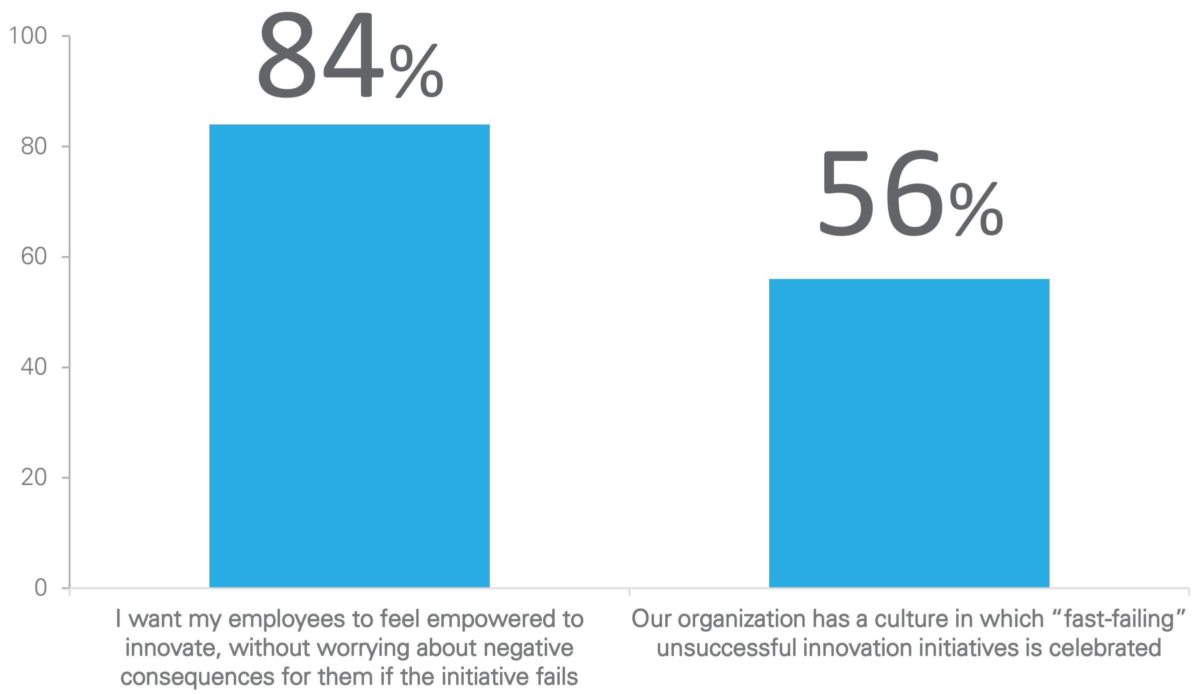
Boards must be armed with data and insights to know when to intervene and guide management in bringing things back on track or knowing when to stop or pull out of a new area. Equally, there must be clear consequences when management steps outside board expectations and puts the company at risk.

Being adaptable to change

By making innovation part of their corporate fabric, organisations can adapt quickly to technological disruption, changing customer demands and shifting internal perspectives on how the organisation creates value.

CEOs know that creating a culture steeped in innovation is important to thrive in an age of unpredictable, high-impact change. However, as shown in the graph, "Innovation culture", there may be a disconnect between theory and actual practice. While a majority (84 per cent) of CEOs want their employees to feel empowered to innovate without fear of negative consequences, they recognise there is still a long way to go in having a culture where "fast failing" (iterative learning) unsuccessful innovation initiatives are celebrated, with only 56 per cent indicating this was the case.

The innovation culture



Source: 2019 Global CEO Outlook, KPMG International.

To drive an innovation culture, boards should leverage the existing governance framework and integrate innovation considerations in all aspects, rather than creating a separate and disconnected channel. Examples include incorporating innovation into board and board committee agendas and strategic planning sessions, engaging capable leaders to drive change, and implementing mechanisms to encourage people to experiment with new ideas and embrace change. Some companies do this by establishing "sandbox" (testing) environments to encourage experimentation in a safe-to-fail environment.

A flexible and responsive board

The way in which the board is composed and the supporting governance structures it establishes have been well enshrined in legislation and principles-based codes. And this is for good reason: to ensure a common standard and consistency of approach in ensuring boards are acting in the best interest of the company.

However, there is an opportunity to revisit these traditional structures to ensure they remain fit for purpose and relevant in this era of rapid change. Key considerations should include examining the board composition in terms of diversity and the extent to which the board is progressively renewed to ensure it remains flexible and responsive to changing strategic direction, priorities and risks.

For example, boards concerned about digital and emerging technology risks were relatively quick to recruit directors with digital experience in recent years. These directors could advise management on the risks and benefits of social media, data analytics and other emerging technologies. However, there is a risk that even if tech-savvy directors have depth in one field, they may not possess the breadth in the digital space. As the technology strategy changes over time, they may not be able to challenge other aspects of technology advancements, such as artificial intelligence.

To obtain specialist insights without impacting board composition requirements, boards can recruit technology advisers to help them assess technology-related factors. In addition, they can form technology advisory panels, comprising of eminent business leaders, professionals and industry experts, to help harness new technologies.

Long-term sustainable performance

Companies must adapt to meet the constantly changing world, or risk becoming irrelevant.

Agile governance does not mean discarding existing governance structures for a more relaxed and casual approach. Adequate and effective governance and oversight structures and mechanisms must remain in place.

To remain relevant, boards must continuously look at ways to drive agility into their existing governance framework. Effective empowerment, data driven exception monitoring and cultural change are just some ways to drive long-term sustainable performance and value creation. By creating the organisational agility to disrupt existing business models and challenge long-held market orthodoxies, boards can ensure their organisations continue to thrive. ■

The Digital Transformation Journey: Always Transforming, Never Transformed

By Ivan Ng, Chief Technology Officer, City Developments Limited

Digital technologies are transforming entire industries and changing the way we live and work. Companies are rapidly embarking on a digital transformation journey to capture new opportunities provided by the disruption. In the process, companies aim to integrate these technologies in their core business, change the way they operate and transform the value they deliver to customers.

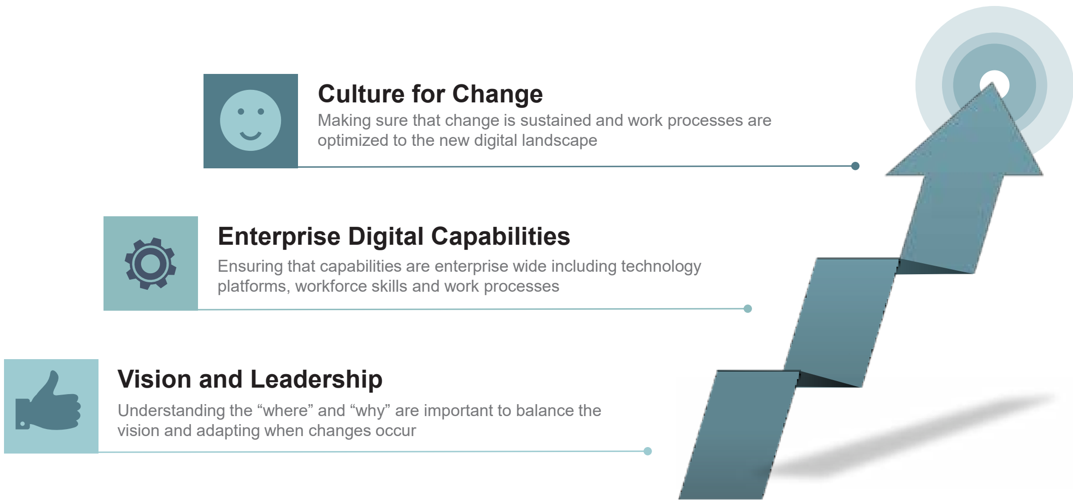
The stakes are high in this journey. Properly done, digital transformation can improve customer experience, turn customers into brand advocates and improve a company's top line. It can also drive operational efficiency, leading to higher employee satisfaction, better productivity and lower operating costs.

Consulting firm Keystone Strategy estimates that leaders in digital transformation can generate an average of US$100 million (S$136 million) more in operating income each year. Disruptive technologies are seen as key enablers to innovation, to drive new business models and hence growth, performance and valuation.

Yet, it is not all good news. Many companies are realising that the digital transformation journey can be fraught with pitfalls. The painful reality is that most digital transformations fail and the consequences can be dire. Companies that fail to adapt to meet the needs of today's digital marketplace will quickly become irrelevant.

While any transformation is never easy, these three elements of the digital transformation journey are fundamental and require the board and senior leadership team's attention. (See box, "Success in digital transformation").

Success in Digital Transformation



Vision and leadership

Without a clear definition of digital transformation, many companies will struggle to connect digital vision to their business, leaving them adrift in the fast-churning waters of digital adoption and change. The first step therefore is establishing a vision and the right leadership. Possible objectives include deepening customer engagement, empowering employees, optimising operations or even radically transforming or creating new products. Senior leadership will need to define a vision which includes clear benefits to the company, customers and employees.

The digital journey is made more uncertain as new waves of technological disruption emerge. Leaders will need to strike a delicate balance between having bold aspirations and being highly adaptive. The vision will need to be sufficiently bold, aiming for exponential growth rather than incremental improvements. This will, in turn, demand large investments and challenge previous assumptions about the company's business models.

The opportunities to move boldly are often a result of changing circumstances and require a willingness to pivot and change. The implication is that leaders will need to be comfortable about failing fast and often, while learning from mistakes as they run. Very often, minimum viable products — with just enough features to satisfy early adopters — will trump polished theoretical business solutions, with the option to scale up to the next level.

Enterprise digital capabilities

Beyond establishing the vision and leadership, critical capabilities need to be acquired to achieve a successful digital transformation. Many companies mistakenly equate digital transformation to be solely about technology. While the right investment in technological capabilities is important, the transformation will have little chance of success if people lack the mindset to change and organisations are mired with outdated work processes.

To be successful, companies need to develop truly enterprise-wide digital capabilities. These capabilities necessarily include an agile technology infrastructure, a workforce with the right talent and skills to take advantage of the digital technologies and cross-functional work processes. Only with these capabilities can a true transformation be made.

The rise of digital business models has catapulted technology to the strategic agenda. Investing in new digital platforms may seem like an obvious first step for most companies. However, most companies will have legacy infrastructure investments that are critical to current business operations but are also an obstacle to change. The key is to exploit new digital technologies, while ensuring that existing business processes are not impacted in the transformation journey.

Digital transformation will bring large-scale changes to the company and many organisations will need to build new skills or hire new talent to support this transformation. Employees may not be well-equipped to understand and utilise these new digital tools. Indeed, new roles may need to be created and skills developed for success in the future marketplace. Digital talent is increasingly in demand and companies will need to find new ways to acquire, develop and engage employees.

Culture for change

Digital transformation is hard work and taking people along the journey is essential for change to be sustained. Humans are resistant to change as it brings about uncertainty and this makes people uncomfortable. Resistance to digital transformation can be especially pronounced within businesses where employees are already invested in a certain way of doing things. As a result, companies pursuing an ambitious course of digital transformation will often encounter employee pushback which can manifest in a variety of ways.

Celebrating successes and cheering employees on when the going gets tough, are means to motivate, engage and connect the workforce. Companies should be transparent and consistent in their communication, especially with regards to the company's motivation for pursuing the change, and the expected outcome.

Often, automation creates the fear of job losses. This is inevitable and companies may want to engage with employees to reimagine their new roles. Actively empowering employees to be a part of the process will go a long way to increase buy-in because they are more likely to see the change as beneficial rather than a potential threat to their job prospects.

Always transforming, never transformed

The chances of achieving a successful digital transformation journey can be improved by having a clear vision of the business objectives, developing enterprise-wide capabilities beyond just technology and promoting a culture for change in which the capacity to adapt to technological disruptions is increased.

However, the digital transformation journey is not a one-off initiative and it does not have a finishing line. The reality is that customer expectations and business objectives are ever-evolving and hence the imperative to continuously stay ahead of them. While digital transformation can be a complex challenge for businesses to take on, it can be better understood as a reiterative process that brings a company closer to digital maturity.

In this digital age, successful companies will always be transforming and never transformed.

Making Business Transformation Work

By Lee Tze Shiong, Director, Transformation and Quality & Principal, Assurance, Nexia TS

Business transformation is the process of changing the systems, processes, people, technology and most importantly, the mindset of all stakeholders.

Taking the lead in corporate social responsibility and being at the forefront of technological advancement and digitalisation are some common priorities of top management today. With the rapid adoption of technology, business owners can no longer afford to stay in their comfort zones and operate without taking into consideration the changing demands from customers, vendors, business partners, stakeholders and their employees.

Business vision and integration

Before embarking on any transformation journey, business leaders need to have a clear vision for the organisation. Setting a vision requires involvement of mid-management and engagement from all levels of staff. Having their buy-in and support in embracing change will ensure a smooth transition. All these require careful planning to ensure successful change management.

External consultants are usually engaged by management to help manage the process, including setting goals and key performance indicators which should be aligned to the strategic direction of the organisation. Business leaders need to identify their strengths, weaknesses, opportunities and threats in order to create self-awareness. Equipped with this knowledge, they can thereafter deploy the right expertise to rectify the root causes of problems.

The organisation is then able to manage its operational, financial, human capital and technological risks effectively when it embarks on its transformation journey.

It is not uncommon to hear about departments working in silos. Whilst department heads may be motivated to work towards achieving the departments' goals, the actions and behaviours of each department may not be in the best interests of the organisation, and aligned with its goal.

An example of how this could happen is in a shared resources arrangement when one department is not willing to release its unutilised resources to another department which urgently needs the same resources. This may lead to sub-optimal use of the organisation's resources, leading to higher overheads and potential service delivery issues.

Individuals or departments used to working in "closed doors" conditions, especially in circumstances when the goals do not coincide with that of the organisation, have to change their behaviours and work beyond their boundaries to derive synergy. Organisations seeking to re-engineer their processes should institute new values and re-orientate the business to be more agile and adaptable. For instance, whenever there is a change involving adoption of technology and replacement of human tasks, management should engage the employees affected. Among management priorities should be the alleviation of their fear of dismissal, re-orientation of employee mindset and provision of opportunities to upskill and upgrade with retraining.

Business process automation

Artificial intelligence and robotic process automation are increasingly being used in labour-intensive industries to reduce human errors and improve efficiency. Business process automation is not just about replacing paper with electronic versions. Its objectives are to streamline the processes to be more efficient, transparent and consistent in the deliverables.

Business transformation also means employing innovative ways of overcoming various challenges faced by the organisation, which includes talent recruitment and retention, resource allocation and effective project management. With the changing expectations of younger generations of workers, traditional job scopes — such as the preparation of financial statements, accounts reconciliations, filing and proofreading of documents — are no longer tasks which they aspire to perform on a day-to-day routine.

Such menial chores can now be performed by machines. With rising labour and overhead costs, accounting firms are also turning to offshoring tasks which require less training and professional skills to lower cost jurisdictions. Digitalisation and availability of cross-border communication tools can enable staff to be re-channelled to perform strategic tasks requiring human judgement and analytical skills.

Office re-engineering

With rising office overheads, the trend is to upgrade on information technology infrastructure. Newer offices are usually based on open-space concepts with minimal partitions. This open workspace concept facilitates interaction amongst staff and alleviates the problems of departments working in silos. It also creates transparency and visibility of staff working in different departments.

Huge storage areas occupied by filing cabinets and shelves are now replaced by open office designs with cosy corners for staff to interact and have a chat over coffee. Physical space required for paper storage is now replaced by electronic systems which facilitate filing and retrieval of information. Digitalisation and paperless filing go hand-in-hand with clean desks and the hot-desking system, which involves multiple workers using a single physical work station during different times.

With increasing use of mobile apps, being able to perform tasks such as office expense claims, leave application and e-learning from the phone are the preferred mode by most employees. With the ability to access the office system remotely, employees no longer need to be desk bound and can perform their office tasks anywhere, anytime and more efficiently.

Business process transformation is a huge paradigm shift for organisations, especially small to medium-sized enterprises. Change management must be supported by adequate resources and technological expertise.

Resistance and scepticism from the staff and stakeholders are to be expected. Once the strategic direction of the organisation and the resulting benefits are clearly communicated and the concerns of the staff properly addressed, the negativity in morale can be turned into positive energy which can propel the organisation towards the next level of growth. ■

Building Resilience in a Changing World

By John Lim, Group CEO and Co-founder,
ARA Asset Management Limited

Back in 1964, the average lifespan of companies on the S&P 500 Index was 33 years. This declined to 24 years in 2016 and is forecast to halve to just 12 years by 2027, according to consulting firm Innosight. At the current churn rate, about half of S&P 500 companies will be replaced over the next decade.

The statistics are alarming. Why are companies being forced out of business so rapidly?

This startling trend can be explained by *creative destruction*, a concept introduced by Austrian economist Joseph Schumpeter in 1942 to describe the breaking down of long-standing practices in order to make way for innovation.

Transportation is a classic example. Long before the advent of airplanes and motor cars, horses and carriages served as the primary mode of transportation. It was not until the arrival of steam power in the 19th century that millions of new jobs in the rail industry were created, while at the same time rendering hundreds of thousands of carriage and harness makers obsolete.

Today, the transportation industry continues to be disrupted as consumers increasingly embrace new alternatives such as electric cars and ride-sharing, while looking forward to the not-so-distant future of air taxis and driverless cars.

The real estate story

Consider the real estate sector. The explosion of online retail transactions and the corresponding shift away from “brick and mortar” stores have put a squeeze on physical retail space. For example, the Singapore e-commerce market is set to balloon 48 per cent to S$9.98 billion by 2022, according to a study by payments technology company WorldPay.

The millennial lifestyle, however, incorporates the use of staff lounges, relaxation areas and collaboration corners. As businesses adapt, and take an omnichannel approach to align the in-store, website and mobile brand experience, this has translated into a surge in demand for co-working spaces. Corporates now seek out flexible lease options to manage their rental costs, and demand for commercial real estate has gone up.

This begets the question: as creative destruction becomes an increasingly strong force in today’s society, how can business leaders ensure the survival of their firm?

The answer is simple. They cannot.

Ensuring the survival of their firm is not a task for business leaders alone. It takes a systems approach — addressing elements of strategy, people, processes and technology — in a deliberate, concerted manner, to truly build a resilient, agile organisation that will last.

Aligning with trends

As the American academic Michael Porter said: “The essence of formulating strategy is relating a company to its environment.”

Indeed, the asset management space has become more challenging over the years. Plagued by cheap liquidity and clients becoming more cost-conscious, asset managers are under pressure to provide greater value to clients at lower fees.

Digitalisation and technology are quickly transforming the way in which real asset fund managers do business. Companies today can easily invest in assets located in any part of the world regardless of where they are based. Top firms now harness the latest technology, such as artificial intelligence and data analytics, to gain better business or operational insights and get ahead of the curve.

People-Process-Technology

A strategy cannot be accomplished without corresponding changes being cascaded throughout the organisation. As author and security technologist Bruce Schneier elaborates in the “The Golden Triangle” concept, the three interlinked and vital components of People, Process and Technology must be addressed for successful organisational change to occur.

In a nutshell, when a business strategy has been set for an organisation, all three dimensions need to be aligned, in order to create an employee culture that supports the new direction. A delicate balance has to be struck, as neglecting any one of these aspects is bound to lead to failure, according to this line of thinking. (See box on “Success in digital transformation”).

Success in Digital Transformation

People	The hiring and retaining of the right people require strong support from the management team and the board, forming a solid foundation on which people are anchored. Employees must be aligned with the organisation's vision and core values: **R**espect**, E**xcellence**, I**ntegrity and **T**eamwork (REIT)**.** The People aspect also includes selecting like-minded business partners. ARA counts on the support of renowned partners and investors such as CK Asset Holdings, The Straits Trading Company, CalPERS, The New York State Common Retirement Fund, Warburg Pincus and AVIC Trust, among others.
Process	People need to be empowered by effective and efficient processes that enable them to make day-to-day decisions that support the broader strategy. ARA leverages the best of the East and West – an "Eastern" culture of integrity, diligence and prudence, combined with robust "Western" risk management processes, internal controls and corporate governance systems – to inspire investor confidence.
Technology	Last but not least, the environment that employees work in has to support the People and Process, and ultimately the Strategy. As part of the digital transformation journey, ARA local and overseas teams work in new offices equipped with a collaborative ecosystem and strong, scaleable technology infrastructure. With intelligent workspace technologies, the new workspaces foster collaboration among staff globally. The company's managers also employ smart solutions on the ground to streamline operations and raise productivity.

Destruct or be destructed?

In the face of evolving disruptive technologies and global mega trends, the only constant is change.

Companies brave numerous economic cycles and business challenges. It is only through pursuing the right strategy, supported by the right people, processes and technology, that a company's transformation can work. The competitive landscape and environment will continue to change, and only the most agile of organisations will ultimately emerge successful. The journey continues. ■

Tech-ing Your Digital Strategy to the Next Level

By Marcus Tay, Consultant, Business Consulting, RSM

Amazon.com. Grab. Airbnb.

Who would have thought that these players would disrupt the traditional retail, transportation and hotel industries that have taken years to engineer resilience into their established sectors? Even more intriguing is how these disruptive players have modelled their businesses differently and yet still outperformed traditional competitors. These organisations, having identified market opportunities, laid down ingenious business strategies and are leveraging data and technology to become the new market leaders in their domains.

How can businesses take a leaf from their book, and better leverage data and technology to harness the rapid pace of technological development? By doing so, companies can transform their businesses to greater heights.

Stay focused

In this ever-changing business landscape, organisations need to identify opportunities quickly and adopt strategies to capitalise on these opportunities. To stay ahead of their competitors and transform themselves into leaders in their fields, companies must know the business terrain and be agile in identifying and acting on new growth areas.

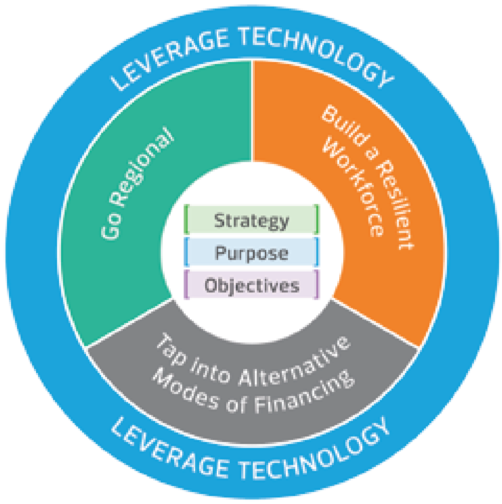
The Singapore government has released a list of 23 sector-specific Industry Transformation Maps (ITMs) to provide a glimpse of how businesses can stay in the forefront of the economy. The ITMs provide a roadmap to support organisations in their long-term planning and help identify high-growth areas for organisations to invest their time and resources in, to stay ahead and remain relevant in the digital future.

At the centre of every organisation lies its purpose. Companies can look into developing a strategy on how and what to do by reflecting inward and understanding why the business exists. Opportunities are everywhere, be it in the areas of technology, human capital, or financing options. (See box, "How businesses can leverage technology").

Leverage technology

Organisations have begun exploring technologies like artificial intelligence, machine learning and robotic process automation for the benefits they bring — cost savings, productivity and efficiency improvements, among them. Automation enables organisations to process transactions in a consistent, systematic order with a high degree of accuracy.

How businesses can leverage technology



Transactions can be automatically assessed in real time against various laws, regulations and rules to reduce the risk of non-compliance. All this can be done 24/7, promising increased efficiency and cost reduction. Real-time feedback also presents opportunities for more appropriate and timely decisions, which are critical in today's world which is fuelled by instant demand solutions.

For example, global payment solutions company Mastercard has adopted artificial intelligence and machine learning in its decision and fraud detection services to increase approvals for genuine transactions, and reduce occurrence of false declines. In the insurance industry, the use of robotic process automation has reduced time spent on data processing as well as minimised error rate.

Resilient workforce

Implementation of technology, however, is not without its obstacles. Fixed mindsets, aversion to change and resistance by employees who fear existing jobs will be disrupted are among some of the issues that will arise. Organisations have to carefully manage such resistance to align everyone in the organisation. Building a resilient workforce and engaging with employees to bring them on board the transformation journey is an important step.

In addition to looking at technology as a tool to reduce operating cost, business owners should consider technology as a tool to increase business value. Organisations can look into reskilling the employees who are displaced to perform tasks that generate greater value, through better technologies. Companies that invest in re-training and upgrading the skills of their employees are likely to build a pool of committed and loyal talents.

Go regional

Going regional should also form part of the business transformation process to reduce reliance on a single economy. There is tremendous growth potential from the growing middle class in the ASEAN region. The increasing demand for consumer goods and services creates an avenue for businesses to further develop, especially in the field of e-commerce. Analytical tools such as Google Analytics may be deployed to analyse web traffic data to gain insights and formulate strategies for various markets.

In addition, Singapore has numerous Regional Free Trade Agreements that help support organisations to connect with neighbouring countries and expand our reach into ASEAN. The ASEAN Economic Community Blueprint 2025 further demonstrates members' commitment in forming a cohesive and integrated ASEAN economy, through tariff reduction and facilitation of trade and labour movement across borders.

Businesses have started to relocate their production facilities outwards to tap into the benefits of cost differential and establish ground presence, increasing the supply chain effectiveness. A regionalisation strategy could be the first step towards globalisation.

Alternative financing models

Finally, companies must be able to raise funds to seize potential opportunities. Recent trends show that organisations are leaning towards private equity funding. With fewer regulatory hurdles, as well as the increased speed and lower cost, private equity funding is becoming more attractive. Private equity firms also offer expertise in areas such as financial management and strategic planning, leveraging a wide portfolio to increase traction in generating returns.

Technology is also facilitating the development of platforms to match willing parties to smaller ticket-sized deals and to accelerate the fruition of early stage fundraising. This has made the financing landscape more vibrant. In addition, investment crowdfunding platforms can directly link investors and organisations with special projects, creating another financing channel.

To harness the power of technology, companies have to actively consider the design and transformation of business operations. Technological development is not just a modular improvement to one aspect of a business, but must be integrated with existing systems to provide even greater value.

The pace at which the world is evolving continues to increase. Those who are not prepared for change will inevitably fall behind. Emerging technologies help to equalise opportunities, and the success of an organisation will largely depend on how swiftly the company can pivot, innovate and transform itself. Research has shown that companies that are clear on their purpose, leverage technologies to serve customer and business needs, and have a long-term and viable strategy, are able to take their businesses to the next level. ■

Indicators Your Regulatory Compliance Framework Needs an Upgrade

By Mark Bookatz, Senior Vice President APAC, SAI Global

Regulatory compliance is a moving target, a mandate that continually shifts in both scope and complexity. Amidst regulatory change and a rapidly evolving business environment, compliance officers are tasked with sustaining a sound and relevant compliance programme while mitigating costs.

The sheer volume of regulations companies must comply with is ever growing. Even as legislators attempt to lessen the regulatory burdens on companies, new complex vulnerabilities emerge (cyber security, terrorist financing and data privacy, for example). Compliance programmes must have the capacity and agility to manage change effectively.

Non-compliance can cost nearly three times as much as meeting compliance requirements effectively, so it pays to stay compliant. Companies that fail to maintain a sound compliance framework are vulnerable to fines as well as reputational damage that can undermine share price and investor confidence.

Following are seven key indicators that it is time to take regulatory compliance to the next level.

1. Regulatory compliance analysts spend more time on administrative coordination than compliance tasks.

It is time to tech-enable your company's compliance programme when compliance staff routinely spend more work hours on administrative tasks than high-value compliance work.

Failing to automate administrative aspects of compliance workflows, such as sending emails, managing document versions, and manually tracking compliance controls and remediation issues in Access or Excel results in hours of wasted time for compliance personnel (who are becoming increasingly expensive in tight labour markets).

Manual compliance processes are not just inefficient, they are often ineffective. Manual anti-money laundering (AML) monitoring processes, for example, are estimated to miss about half of the transactions that should be flagged as suspicious. US-basedfinancial institutions have racked up US$26 billion (S$35 billion) in fines for failure to comply with AML and know-your-customer (KYC) regulations since 2008.

Miring regulatory compliance staff in manual processes can also slow change management efforts or even worse, cause the company to act on incomplete information. Regulatory compliance analysts can spend hours exhaustively scouring the internet for new or changing rules and regulations, maintaining regulatory libraries, and mapping regulatory changes to relevant business process and compliance policies.

In a recent KPMG compliance survey, only 27 per cent of chief compliance officers felt strongly that their compliance programme is keeping pace with regulatory changes. Cutting the administrative burden of compliance can increase capacity to execute a more proactive, sustainable and agile compliance programme.

2. Legacy compliance technologies have not been updated for years.

Many enterprise organisations have matured beyond managing compliance through Excel spreadsheets and SharePoint to develop in-house compliance systems or build a user interface over a third-party database application like an Access. When the company's homegrown compliance system is so outdated that it drives staff to develop inefficient workarounds, it is time to look at a purpose-built compliance IT solution.

Companies that develop their own compliance IT framework in house are locked into an ongoing expense of maintaining the solution themselves. It is not uncommon to come across legacy solutions that have not been updated for years, because the programmer who originally developed the solution has left the organisation and nobody understands the back-end code well enough to maintain it.

Another serious problem with homegrown compliance applications is that they can enable a compliance culture that avoids adoption of best practices and rule changes. A purpose-built compliance solution has best practices already built into the design, along with limits on who can control updates or exceptions to rules.

3. Compliance teams operate in silos utilising disparate compliance management tools — and one or more of them is in need of an upgrade.

Compliance teams within large enterprises can evolve into separate silos supported by technologies that are fragmented around specific compliance functions.

Fragmented operating systems make it difficult to align compliance activities across an organisation; they cause inefficiencies on a mass scale and they obstruct enterprise-wide views of compliance. Siloed compliance teams lack a common set of controls, regulatory taxonomies, and regulatory libraries. They don't utilise the same data sources and they often interpret and apply regulations inconsistently, which leads to gaps and overlaps in compliance.

An integrated, configurable enterprise-wide compliance solution reduces risk, improves collaboration and communication, enables comprehensive reporting, standardises data sources and regulatory libraries, and eliminates redundancy across the organisation. An integrated compliance platform reinforces a top-down message to the entire organisation that compliance is a priority.

4. Compliance reporting is a manual process.

Your company has outgrown its compliance operating system if reporting is a cut-and-paste manual process. In this age of automated data visualisation, manual processes for aggregating data and creating compliance reports is a waste of compliance manpower — and a lost opportunity to provide the board with meaningful insights into compliance effectiveness.

An automated compliance reporting dashboard, fed by data from a robust compliance technology, can provide a holistic view of the overall state and effectiveness of compliance across the entire enterprise. Automated compliance reporting is also a gateway to the next-generation capability of compliance technology: behavioural analytics. Employing behavioural science gives compliance leaders the ability to predict and prevent compliance problems before they occur.

5. Compliance controls are monitored by volume, not exception.

Every compliance officer faces the same problem — the burden of monitoring a huge volume of internal controls. When a compliance team reaches the point that they are so overwhelmed administrating procedural adherence to controls that they never get adequate time to remediate material exceptions, the company is highly vulnerable to fines and regulatory pressure.

Managing change is everything in compliance — a cost-effective, sustainable programme needs a common set of enterprise-wide controls and technology tools that can help identify and track the controls that have the highest material impact on a company.

Adopting a risk-based approach to monitoring controls is an important step in maturity for any company's compliance programme. According to a recent report by McKinsey & Company, shifting from a procedural-based to a risk-based approach can free up to 30 per cent of compliance capacity.

The banking industry is notoriously highly regulated, and a conservative estimate of bank compliance spending is about 5 per cent of annual revenue. Automation represents a huge cost savings opportunity, both in terms of man hours and prevention of penalties from regulators.

6. Your company plans to acquire new businesses or expand into new markets.

Many companies are turning to acquisitions and new markets to augment organic growth, which makes them subject to a larger regulatory regime. Whether a company is expanding into domestic or foreign markets or acquiring an existing company, it is the job of the chief compliance officer and regulatory compliance team to ensure a smooth transition from a compliance standpoint.

With regards to corruption, for instance, the acquiring company needs to ensure that the Code of Conduct, policies and procedures of the target company are consistent with its own; if not, the acquiring company needs to apply its own anti-corruption regime to the newly acquired company within 18 months or as quickly as possible. During 2018, 16 US-based companies paid a record US$2.89 billion to resolve Foreign Corrupt Practices Act cases.

A scaleable, enterprise-wide governance, risk management and compliance platform that populates best practices into the organisation's compliance ecosystem can accelerate a compliance team's ability to accommodate new regulatory requirements, align corporate cultures across business units, and manage change effectively.

7. New regulations are having a seismic impact on your compliance programme.

A sudden, unexpected increase in the volume of work related to regulatory change management can overwhelm the capacity of manual processes within your compliance framework. It is difficult to anticipate the next fiscal crisis or corporate scandal that will result in sweeping regulatory change. The financial crisis that spawned the Dodd-Frank Act occurred 10 years ago, and the banking industry is still grappling with high compliance costs and overhead as a result.

Manual compliance processes can also have difficulty absorbing less traumatic events than a recession and sweeping legislation. A spike in regulatory notifications that are deemed to have a material impact, an unusually high number of on-going regulatory exams, or a significant volume of new regulations that need to be risk assessed all have the potential to overburden a fragmented compliance framework.

The price of compliance failure can be high — for large US-based financial institutions, it is a staggering US$243 billion. Fortunately, multi-point compliance IT solutions can be adopted in stages, so investing in capacity for regulatory change-readiness does not have to break the compliance budget. If it prevents fines, the system will more than pay for itself. ■

This article is condensed with permission from a white paper of the same title first published by SAI Global in June 2019.

SAI 360

Integrated Risk Management

In today's complex business landscape, perspective is everything

WHY SAI GLOBAL

SAI Global offers customers an integrated suite of proven risk and compliance solutions to manage and assess their operational and strategic risk and compliance obligations. We bring innovation to integration; combining transparency, accountability, risk agility and ethics to improve your future business outcomes and build your organizations risk culture.

Our solutions are backed by our teams of domain and industry experts globally. We've helped thousands of customers just like you with problems just like yours all over the world for more than 90 years.

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[solutions] to advance confidently

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SECTION FIVE
READINGS: CONNECTIVITY

Growing Importance of Artificial Intelligence in a Hyper-Connected World

By Nicholas Ma, Chief Executive Officer, Huawei International

In the digital technology space, few would dispute the transformative opportunity and emerging reality of artificial intelligence (AI), which incorporates knowledge engineering, machine learning and robotics. AI has disrupted — and continues to disrupt — social interactions, operational networks and communications.

Connecting businesses around the world, AI cuts across the strategic realm, operational processes and ultimately, the bottom line.

Smart devices infused with AI, such as smartphones, tablets and wearable technology, form part of the more visible information and communications technology infrastructure. In addition, enterprise products with growing AI elements, for businesses and governments, exist across four key domains — telecommunication networks, information technology, smart devices and cloud computing.

However, the network itself needs to have AI controls engineered into its core and into the services that run on it. This means that AI will exist at the cloud back-end, down the data pipe, and AI will also have a key role in the devices themselves. Indeed, the latest network devices that are being rolled out these days come built with AI chipsets.

Given the remarkable weight of technology and data involved, companies must identify broad areas of growth, and also implement specific plans that build upon existing capabilities to do more.

Growing value proposition of AI

Much of the focus today is on connectivity — whether it be smart homes, autonomous vehicles or the Internet of Things (the interconnection of computing devices embedded in everyday objects). Central to the growth of these technologies is the availability of large amounts of quality data and machine learning. Besides new technologies, AI also has the power to transform traditional communication systems, making them more agile and intelligent.

Looking ahead, the road to fifth generation mobile internet, or 5G, is paved with AI. In a world where the requirement of each network connection is more and more diversified and where latency requirements are less than one millisecond — such as in the use of remote autonomous vehicles and even online gaming — AI can offer advantages in the new era of 5G that maximises network value.

Another example is cloud computing. With the augmentation of AI, the cloud can go beyond being a technology that simply offers data storage, to one which provides insightful data analytics.

Of course, some of these AI-enabled technologies are in the early growth stages. Investment in proprietary technology development can help see the products to maturity and bring about great benefits for people and businesses.

Take facial recognition, for instance, which provides technology capable of identifying or verifying a person from a digital image or a video frame from a video source. Current technology has pioneered an intelligent chip able to recognise more than 200 faces in a single frame picture as compared to a maximum of 30 faces in a common processor.

Improving performance without increasing power consumption is key to enhancing efficiency. Intelligent computing platform systems enable AI infrastructure solutions that can be widely used in smart cities, smart transportation, smart healthcare, and other AI inference.

Through continuous innovations and investment, end users will have access to powerful computing — paving the way to the future of AI.

A thriving ecosystem is necessary

Singapore presents a largely unique environment as it is one of the most open economies worldwide, enabling businesses to reach out to diverse demographics of people and industries in the region — and even globally. Singapore's vibrant and dedicated research and development landscape provides synergies for industry players.

For the adoption of AI to take place, a comprehensive ecosystem is critical. It is simply not enough to provide AI-enabled infrastructure. Establishing collaborative networks with partners who share the same vision to leverage the platform and develop compatible applications is an important step.

In April 2019, Huawei launched its AI-enabled cloud and AI lab in Singapore to offer local startups a platform to network and develop in, and also to aim at local talent cultivation. This encourages active collaboration among industry partners to develop and deep dive into end-to-end solutions.

The company has also collaborated with organisations such as the Infocomm Media Development Authority, Economic Development Board and the National University of Singapore, to nurture and train talent who are passionate about AI research and development. Cooperation and collaboration with universities, polytechnics and industrial players will strengthen the digital push forward.

For example, the Seeds for the Future programme is a collaborative effort aimed at transferring knowledge, creating opportunities and growing Singaporean undergraduates into future AI talents. Partnerships between the public and private sector on programmes allow effective immersion of talent in key technology hubs such as China, to gain exposure to digital businesses at the forefront of innovation where growth is taking shape. The programme has been implemented in 125 countries worldwide, with over 4,725 trainees visiting China on study trips.

The way forward

In the next two to three decades, the human society will inevitably evolve into an intelligent ecosystem. Amidst rapid technological evolutions and political movements around the world, corporate sustainability and business continuity management are especially critical. Focus on the customer will be a key touch point for business growth.

Connecting suppliers and customers, and channelling resources into research and development, will require adjustments in procurement, manufacturing, logistics, and global technical services. A forward-looking strategy will ensure strategic alignment with not just the company's growth plans but its partners, regulators and other companies.

The world is witnessing an unprecedented rate of change across the globe. Something new is always being developed, and what is at the forefront now will shrivel to old news six months later.

AI is here to stay, and businesses cannot afford to be complacent and simply jump on the tech bandwagon. Beyond just keeping up with trends, successful organisations have a proactive role in creating trends. Renewing knowledge, ramping up the learning curve and creating disruptive yet sustainable business strategies are only some of the items that companies need to start checking off their to-do list. ■

Connectivity, Reform and Opportunity

By Huang Xuhua, Head of China Practice, Allen & Gledhill LLP

In the past decade, names like Alibaba, Tencent, Xiaomi and Huawei have become recognisable across the world. With China's fast-growing digital economy, it is no wonder that the country houses some of the world's top tech giants, to rank among the likes of Apple, Amazon, Microsoft, Google and Facebook. And nowhere has the impact of China's digital revolution been felt more than in the ASEAN region, where internet giants Alibaba and Tencent have invested heavily.

The question is how businesses in Singapore can embrace such rapid transformation occurring in China, and stay ahead in the future economy. It is not only in the area of technology that China is undergoing historic change. China is aiming to lead in connecting the world on many levels, and within itself, it is facilitating structural legal changes to bring about an economically progressive environment.

Connectivity

Digital transformation revolutionises connectivity, and adds a further dimension to the Belt and Road Initiative (BRI) — China's global infrastructure development programme which encompasses an estimated US$1 trillion (S$1.36 trillion) of projects. Building on the idea of ancient silk routes, the BRI aims to build a trade and infrastructure network connecting Asia with Europe and Africa.

In 2015, the concept of the information or digital silk road was introduced, to cover submarine cables and satellite passageways. The resulting physical and digital connectivity brought by the BRI is envisaged to boost economies and raise living standards in the countries and regions involved.

Singapore's challenge is to leverage on the BRI, and tap on the benefits that such a massive project can bring. It would seem natural for Singapore to build on its past and present experience with China, including government-to-government projects like the Suzhou Industrial Park (1994), Tianjin Eco-city (2007) and Chongqing Connectivity Initiative (2015), to take Sino-Singapore cooperation to a new level.

Indeed, Singapore has been an early and strong supporter of the BRI and is working with China on promoting connectivity in various areas, including finance, transportation, logistics as well as information and communications technology.

Reform

China's receptivity to increasing bilateral cooperation and foreign investment has been manifested in economic liberalisation and legal reform over the years. After President Deng Xiaoping opened China's door to the rest of the world in 1978, there was a promulgation of laws to promote foreign investment.

This resulted in the introduction of investment vehicles, such as the equity joint venture, the wholly foreign-owned enterprise, and the co-operative joint venture — collectively known as foreign-invested enterprises (FIEs) — and the establishment of special economic zones. In 1994, the PRC Company Law was introduced to regulate companies in China. The first Foreign Investment Catalogue was released the following year, setting out "encouraged", "restricted" and "prohibited" sectors for foreign investment in China.

It comes as no surprise that there are restraints on foreign investment in China. The Foreign Investment Catalogue, however, has been calibrated and updated over the years, and the areas of permitted foreign investment have been expanded, with restrictions and prohibitions gradually lessening. This trend culminated in the first nationwide Negative List which was announced on 28 June 2018 and came into force a month later.

The Negative List 2018, which repealed the Foreign Investment Catalogue, whittled down the sectors prohibited and restricted from foreign investment from 63 to 48. The Negative List 2019, which was announced on 30 June 2019, further reduced such prohibited and restricted sectors down to 40. This brings the list of prohibited and restricted sectors to its shortest in China's recent economic history. In particular, constraints to foreign investment in areas such as financial services, transportation, infrastructure, agriculture and mining have been relaxed.

In relation to the telecommunications sector, foreign investment in e-commerce had already been permitted prior to 2018. The Negative List 2019 further removes restrictions on foreign investment in domestic multi-party communications, storage and retransmission and call centre services, thereby opening the door to foreign investment in value-added telecommunications even wider.

Sectors which do not appear on the Negative List are considered open to foreign investment in China. In 2016, administrative reform was introduced such that projects in the encouraged or permitted sectors no longer require approval from the Ministry of Commerce or its local commissions, but are only subject to filing and registration requirements with the relevant government authorities. This has increased certainty and sped up the time taken to conclude projects and investments for foreign investors.

China's move to provide an increasingly open and transparent environment for foreign investment has been further underlined by the passing of the Foreign Investment Law (FIL) by the state legislative National People's Congress on 15 March 2019. The FIL will replace Chinese laws governing FIEs which have been in place since the 1980s.

The thrust of the FIL is that FIEs and local companies will be treated on the same footing. Unless they fall under restricted sectors in the Negative List, FIEs would be treated the same way as local enterprises, including undergoing the same incorporation process and conforming to the same governance rules set out in the PRC Company Law. Government policies supporting business development and government procurements will apply equally to both FIEs and local companies. Additionally, the FIL protects the intellectual property rights of foreign investors and FIEs and those responsible for any infringements will be strictly held legally liable.

China observers are eagerly watching how the FIL, now in the form of broad guidelines, will be encapsulated. The detailed rules and regulations are likely to be revealed when the FIL comes into force on 1 January 2020.

Opportunity

China's ongoing transformation, marked by increasing openness and a drive for connectivity, presents opportunities aplenty for businesses across the world. Singapore is strategically placed as a gateway between eastern and western economies and cultures. The challenge is how Singapore businesses can likewise transform to harness the opportunities brought about by economic, technological, social and political changes in China. The first step would be to keep a close eye on the political and legal developments occurring in the most populous country in the world. ■

Engaging Tomorrow's Customers: A Banking Perspective

By Dennis Khoo, Regional Head of TMRW Digital Group, UOB

ASEAN is coming of age. Sixty per cent of the ASEAN population today is under 35 years old. The region is only behind China and India for having the most millennials. ASEAN is also becoming increasingly connected. In 2017, almost half of consumers in ASEAN have a smartphone. And with the price of smartphones in ASEAN expected to drop and be within reach of more users, the number of new smartphone-equipped consumers is expected to grow by 100 million by 2020.

These trends are changing the way companies engage with ASEAN's mobile-savvy and connected consumers. For one, the way in which they expect services will be increasingly influenced by fast-growing mobile services that are simple, accessible and intelligent.

This same level of expectation applies to what customers want from banking services. Most banks have responded to this by implementing different digital strategies to serve their customers into the future.

Deciding which business model best fits a corporate strategy can be daunting. Instead of focusing on what digital strategies can be executed the fastest, it may be more valuable to start from a blank slate and to reinvent the customer engagement model.

In a competitive landscape such as banking where products and services are commoditised, the only way to stand out is to ensure that the customer experience is simple, intuitive and engaging. As such, it is important to take the time needed to understand the customer's point of view and how they are engaging and will engage banking services in the future before deciding on an engagement model.

Simplicity and accessibility

The retail banking landscape in ASEAN has seen changes geared towards one goal — to make banking services frictionless and therefore simpler for customers. For example, Vietnam has announced an ambition to make nine in 10 payments cashless by 2020. In Thailand, customers can view their credit card statement with just one click on the messaging app LINE.

UOB launched its digital bank TMRW (pronounced 'tomorrow') in March 2019. TMRW is created for ASEAN's digital generation and taps the on-ground expertise of the Bank's ASEAN employees to address the cultural and behavioural nuances of each market.

Increasing collaboration between banks and financial technology (FinTech) firms has resulted in the development of innovative solutions which make banking more accessible to half of the ASEAN adult population who are still unbanked or underserved.

For example, artificial intelligence-driven credit assessment solutions such as Avatec.ai, a joint venture between UOB and Chinese FinTech firm, PINTEC, enable banks and companies offering financing services to assess more accurately the credit quality of potential customers, including those new to credit. Richer data from smartphones, available with customer consent, is also powering alternative credit scoring solutions provided by the likes of Avatec.ai and CredoLab. This has the twin effects of increasing consumers' access to credit and improving credit quality at the same time.

With the high smartphone penetration in ASEAN, customers have the ability to make almost all banking transactions digitally no matter where they are. The emergence of national digital identification services across ASEAN, such as MyInfo in Singapore, also means that customers do not need to look for a bank branch to sign up for new products, as a fully electronic means of authentication is now possible.

Data and intelligence

Enterprising players in the banking industry have also begun to deepen their understanding of customers by harnessing insights from data. In doing so, banks can help customers to make more informed decisions as they save and spend. Data can also be used to help customers make smarter decisions. Innovative comparison websites like eCompareMo in Philippines aggregate product data across banks so that customers can choose the most suitable banking product for themselves easily.

What are the implications of these evolving trends for the future of retail banking in ASEAN?

It is likely that omni-channel and mobile-only banking platforms will co-exist in the future as they serve distinct and different customer bases.

Omni-channel customers typically span across a range of lifestyles and life stages, each with their different sets of needs and priorities. Banks must ensure that their customer experiences, services and solutions are relevant to this diverse group of customers. This is why products and services offered as part of an omni-channel banking strategy are typically more comprehensive.

In contrast, the customers who would choose to bank only on mobile devices are typically a more homogenous group — that is, consumers who prefer to engage on the mobile phone and who are digital natives. Many in this group are millennials who are not looking for sophisticated banking products. This means that banks are able to design simpler products, services and user interfaces that push the envelope to provide these customers a truly instinctive digital experience. Given that the digital generation is often a quick adopter of new digital solutions with high expectations of digital services, banks must be agile and quick to learn and to test new ways to deepen the engagement with this group.

Rewriting the future of banking

Creating a personalised experience for customers is key for retail banks to deepen customer engagement and increase customer advocacy. With the increasing number of FinTech solutions that enable banks to use data to harness richer insights, personalising the banking experience for each and every customer is now possible where once it was difficult or expensive.

For example, UOB's TMRW is using data to transform the way it anticipates, converses and serves customers. This deepens the digital engagement with customers to help them spend and save more wisely. In analysing the customer's transaction data, digital banks such as TMRW can anticipate what he or she wants and needs, and provide the customer with insights to make banking and financial planning simpler, more intuitive and transparent.

As more banks advance in their digital strategies and with the commoditisation of financial products and services, what will set one digital bank apart from the other is the customer experience. Banks must rethink their customer engagement model and redesign the user interface and the customer journey through the lens of the customer.

For banks who want to tap ASEAN's growth story, it is important that they understand the diverse nuances of each market and personalise the customer experience accordingly. Only then will they be able to engage the customers of tomorrow for the long term. ■

Digital Transformation in the Legal Industry

By Lam Chung Nian, Partner, WongPartnership LLP

Businesses today are increasingly grappling with disruptive technologies such as artificial intelligence (AI) and machine learning, which have the potential to transform not only established business models and the way in which governments, businesses and consumers interact, but also how services are performed and delivered to clients.

The legal profession has not been immune to this "Fourth Industrial Revolution", with the emergence of legal technology solutions which seek to harness technology and AI to automate various aspects of legal work, and render the performance of daily legal tasks more efficient. These tools now span various categories of legal tasks and functions, such as contract drafting, contract review, due diligence, litigation, and intellectual property portfolio management.

As technology continues to influence and reshape the legal industry, a re-imagination of the profession itself may well be required. These legal technology tools present both opportunities and challenges to all the stakeholders in the Singapore legal industry in Singapore.

In a 2018 survey conducted by the Law Society of Singapore, 68 per cent of the decision makers in local law firms viewed legal technology as both an opportunity and threat at the same time.

Staying relevant in this digital age

Staying agile in a constantly evolving business environment is key to survival. As technology is changing the way law is being practised around the world, lawyers are not immune to the effects of digital disruption. Firms must embrace technological innovation as a cornerstone of growth, balanced against a continuing commitment to ensuring the delivery of top quality legal solutions and advice.

In embarking on a law firm's digital transformation journey, the adoption of AI can enhance due diligence processes. AI-powered document automation platforms can help lawyers and clients generate documents more efficiently. Other legal technology solutions, such as automated document creation, proofreading and document comparison tools, can also enhance productivity, improve the quality of document review and workflow processes.

Adoption of such technologies can make work processes more efficient, and allow law firms to evolve their service offerings to better meet client requirements, both in terms of meeting ever tighter timelines for delivery, as well as meeting the particular client requirements for different types of projects, such as internal due diligence, and making the review of repetitive documents more efficient.

For example, with such tools, advanced machine learning techniques can automatically sort, cluster and classify documents in data rooms and assist with the identification and reporting of issues. Alongside this, the embrace of technology in improving operational back-office efficiencies and enhancing access to knowledge repositories will also focus on a firm's internal business processes, to streamline procedures and enhance productivity.

A snapshot of WongPartnership's digital transformation journey

- In 2017, the firm adopted artificial intelligence through an AI-powered platform and as a result achieved greater efficiency in managing corporate and business transactions.

- In the same year, the firm established an AI-powered document automation platform, WPGenerate to help its lawyers generate documents more efficiently. The firm also launched a platform, WPGateway for clients to harness this technology.

- In 2018, the firm was part of the core working group for the Venture Capital Investment Model Agreements (VIMA), an initiative by the Singapore Academy of Law and the Singapore Venture Capital & Private Equity Association. The firm further leveraged on legal technology tools to allow members of the tech startup community and other community stakeholders to generate customised versions of certain VIMA documents through structured questionnaires.

- In early 2019, the firm acquired new document review solutions to improve document review and workflow processes.

Human intelligence and machine intelligence

The digital transformation of an organisation is, however, not just about the adoption of technology for the sake of it. An organisation's successful digital transformation is also dependent on the creation of synergistic value by combining both human intelligence and machine intelligence within an organisation.

The guiding ethos in the adoption of legal technology should be to assist, and not substitute, the role of the (human) lawyer in making professional assessments and judgments.

Technology can be used to improve efficiency for lawyers and improve client access to the firm, but clients should continue to receive the same personalised attention and bespoke solutions from its lawyers. It is critical to emphasise continuous training to ensure that the younger generations of lawyers will continue to have the skillsets critical to their becoming good lawyers. AI tools will augment but never replace the professional skillsets that these lawyers will need to develop.

In the not too distant future, technology solutions will further evolve to allow for greater collaboration between stakeholders, both clients and service providers, through the adoption of common interfaces and open data standards. This will allow even greater productivity gains as communications between systems will become seamless.

Advances in natural language and AI processing capabilities will allow for technology to become more accurate and effective. New paradigms may also become more prevalent, such as smart-contracts and robo-advisers. Against this, legal frameworks will need to continue to evolve to equip lawyers to understand and address the legal and ethical challenges that these new developments will bring.

Whilst some commentators have predicted ultimately the decline of today's professions as technology becomes increasingly capable, "artificial intelligence" should never be confused with "artificial sentience". The former is often conflated with the latter, but the latter posits the ability of a computer to have conscious, sentient, self-aware thought. These will remain capabilities exclusively within the domain of the human mind, as these higher order abilities draw upon the depth of human knowledge, experience, and emotion — which are impossible to define and codify, much less implement technologically.

Ultimately, therefore, the adoption of legal technology builds on this fundamental principle — the melding of human intelligence assisted by the judicious adoption of modern legal technology tools that will prepare the legal firm for the demands of the digital economy and the clients of the future. ■

Future Ready Finance Departments

By Evan Law, Chief Executive, Singapore Accountancy Commission

Digitalisation has taken the world by storm, driving a rapid transformation of global businesses and redefining the future of work across all industries. More than half of all current workplace tasks will be performed by machines by 2025, compared with about 29 per cent today, according to *The Future of Jobs Report 2018* by the World Economic Forum. This would displace about 75 million jobs globally — although 133 million new jobs are expected to be created by 2022.

In Singapore alone, the technological revolution will bring about a pervasive change in the way we live, work and play. In healthcare, for example, patients can undergo physiotherapy at home while wearing sensors and being filmed for their therapist to review remotely, a service that was piloted two years ago.

In transportation, a future Singapore could have self-driving shuttles or pods that can be booked using a smartphone to bring their passengers to the train station or within the neighbourhood. Extensive trials have already begun and driverless vehicles will be launched by 2022.

Singapore will also be home to the single largest fully-automated terminal in the world when the mega port opens in Tuas; and the world's third largest terminal with state-of-the-art technology when Terminal 5 is ready at Changi Airport.

New technologies, such as artificial intelligence, robotics and nanotechnology, together with the availability of big data and analytics, are producing breakthroughs and replacing traditional businesses. Connectivity and the seamless transition to a new world order, based on digital transformation, is premised on organisational change.

How can the finance function keep pace with these advancements, and help businesses ride this tidal wave of change?

The evolving role of CFOs

The role of the chief finance officer (CFO) and the finance function within businesses will need to evolve from focusing on compliance reporting to providing strategic business insights. CFOs will need to be more than just the financial expert in the room. Increasingly, companies will look to their CFOs to deliver change to the organisation to meet the new challenges.

A poll of 100 CFOs of large-cap companies conducted at the Deloitte CFO Vision Conference 2017 indicated that 87 per cent were asked by their chief executive officers (CEOs) to play a key role in driving innovation in their companies. And consultancy firm The Hackett Group reported that 84 per cent of its survey respondents indicated that the top objective of finance departments is to support the organisation's analytics needs.

How can the digital transformation of the finance function bring value to a company?

Firstly, processes will be improved. Robotic process automation technology automates manual and simple tasks, resulting in greater efficiency.

Secondly, with more efficient processes, finance departments will be able to dedicate resources to provide real-time financial information. Data visualisation technology can produce visual dashboards with real-time information about operations and finances which are critical for better performance.

Finally, with the availability of huge amounts of data, finance departments could use advanced analytics technology to provide insights for timely and reliable decision-making — and help the company uncover growth opportunities.

Digital transformation: The people-centric approach

Digital transformation requires the partnership of both technology and humans to realise its full potential. This calls for an organisation-wide change involving three people-centric areas: leadership, talent and culture.

1. *Digital leadership.*
CFOs play a central role in managing an organisation's assets, services, products, customers and suppliers. As such, they are in an ideal position to shape the company's business practices and way of thinking in the new digital age. To do this, they need to partner the company's business leaders to understand their business needs and provide value by improving their processes. They also need to work closely with their CEOs and boards to be aligned with their expectations to bring value to the company.

2. *Digital talent.*
Skills upgrading is paramount for the adoption of technology. Professionals need to have multi-disciplinary knowledge, including data and technological skills, strategic thinking and an in-depth understanding of the company's business. The Skills Framework for Accountancy, jointly developed by SkillsFuture Singapore , Workforce Singapore and the Singapore Accountancy Commission, is a useful guide to upskill staff. There is also an increasing number of professional conversion programmes (PCP) to help the workforce to move into new job roles. An example is the PCP for Management Accountants as management reporting — reporting on financial and operational information to help management make strategic decisions — is becoming increasingly important. CFOs must also be able to communicate this information effectively to management.

3. *Digital culture.*
Companies that cultivate a culture of digital transformation, where people are engaged and innovation is encouraged, are more likely to be successful in their digitalisation journey. For such a culture to take root, technology should not be viewed as a threat to jobs but as an enabler to do more. Finance professionals should however be wary of driving change just to keep up with the trends. They should anticipate the needs of the company and adopt changes that would benefit the company in the long run. Change should be an ongoing process, and calibrated according to changes in the industry, regulations, and customer and stakeholder demands.

All this, however, assumes that CFOs will have the digital skillsets and knowledge to provide real-time, data-driven decisions. This begs the question of whether finance departments are adequately equipped and resourced to support a company's digital transformation.

In fact, studies have shown that there is a capability gap in this area. The EY-CPA Australia report on *Future-Proof Your Finance Capability 2017* found that four out of five respondents felt that they were not equipped with the skills to meet the job demands of the future. Hence, organisational change must put people at the heart of its strategy. (See box on "Digital transformation: The people-centric approach").

It is increasingly clear that CFOs cannot delay embarking on their digital transformation plans as competitors and other industries are making rapid digital progress, and the role of the finance department is a critical function to secure the success of a company. CFOs need to set the path towards becoming a digital finance organisation today for the company to flourish in the business environment of the future. ■

Can Businesses Do Good and Be Well?

By Mohit Mehrotra, Arnub Ghosh and Samrat Bose

There is a strong interdependency between commitment to sustainable development and commercial success. In the future, companies that will outperform the market are those that operate with a strong sense of purpose and make a genuine commitment to sustainable development. A 2017 report by Deloitte indicated that a set of billion-dollar companies making a strong commitment to sustainability is estimated to have out-performed competitors in the stock market by 11 per cent.

This interdependency is accentuated in the era of digital disruption. Like never before, digital is playing its role of connecting ecosystems of stakeholders, thus creating greater leverage on the impact of business actions.

This is forcing businesses to look beyond the customary lenses of desirability, feasibility and viability when evaluating their forays, and to add another lens — relevancy of their actions towards a sustainable society. The rapid advent of digital will make businesses harness the power of ecosystems to drive both social good and financial success — we call this #DigitalforSocialGood.

Repurposing the rural opportunity in ASEAN

Farm-to-fork is the taxonomy used to describe the value chain from production to consumption. For Southeast Asia economies, the farm-to-fork value chain is vital, not only to take on the global challenge of providing adequate, safe and nutritious food supply, but also because it provides a source of income for 38 per cent of the region's 648 million population who are employed in the agri-goods industry. Tackling farm-to-fork challenges presents significant opportunities for businesses to generate an additional US$370 billion GDP uplift to Southeast Asia's economy by 2025.

#DigitalforSocialGood can disrupt the conventional linear value chain to something that is more dynamic and interconnected. Essentially, a traditional agriculture player can now partner with non-traditional adjacent industry players through digital means to co-create solutions that did not exist in the past and unlock value that was not feasible to capitalise in the non-digital era.

For example, crop insurance has largely been unavailable to small holding farmers due to prohibitive costs of administration and high risks. To overcome this, telco operators in Kenya are leveraging low-cost mobile phone payment systems and solar powered weather stations to offer farmers "pay as you plant" insurance. Local agro-dealers use camera phones to scan barcodes that immediately register the farmers with the insurance company. During bad weather conditions, the affected farmers can automatically receive payouts via mobile transfers.

Learn-to-earn in the digital economy

In Southeast Asia, MSMEs (Micro, Small & Medium Enterprises) represent almost 99 per cent of all businesses and influence millions of lives and jobs. The micro-enterprise segment, in particular, represents close to 90 per cent of firms, or about 55 million enterprises, and contribute 41 per cent to employment but only 15 per cent to GDP. However, research shows that productivity of these micro enterprises is 25-30 per cent lower than that of small and medium enterprises.

These firms are predominantly in rural areas hindered by a lack of basic access to skills, infrastructure and capital.

As a significant proportion of micro enterprises in the region are “offline”, digitising this segment would see multiplier effects in terms of increased revenue and greater productivity — for instance, greater access to skills, higher job creation rate, increased access to export markets, greater innovation, lower export and transaction costs, and reduced time to market. These effects can result in a 4-5 per cent uplift in GDP, which translates to about US$200-250 billion.

As an example, a major e-commerce provider launched a rural academy to help rural firms enhance their digital literacy. The focus was to coach the rural MSMEs to use digital tools to expand their market presence as well as connect and engage with their customers and other communities. Since the launch, the programme has helped over 2,000 MSMEs and enabled 60 per cent of them to go global on the back of an e-commerce platform.

Other examples include collaboration between banks and fintechs to improve the loan approval rates for MSMEs and also between banks, telcos and tech firms to address the needs of unbanked rural businesses.

Driving growth through connectivity

The lessons of the farm-to-fork and learn-to-earn examples are two-fold. Firstly, digital technology is not a privilege of the middle/upper-class urban dwellers and can be extended to rural and semi-urban societies. Secondly, the key to unlocking value through digital transformation is to nurture a “collaborative tech” ecosystem consisting of traditional players with domain expertise and non-traditional players who understand how to leverage digital to harness a broad set of opportunities.

Urbanisation is a key megatrend. However, solving for urbanisation alone will not be enough to weather the effects of economic uncertainties and secure sustainable growth. In fact, despite rapid urbanisation, almost half of Southeast Asia’s population continues to live in rural areas and by 2025 this figure will remain sizeable at 47 per cent. Taking bold actions to nurture a collaborative tech ecosystem for the rural and semi-urban regions could be the alternative and the most important pathway to drive equitable growth in Southeast Asia. ■

Mohit Mehrotra is Asia Pacific Co-Leader, Arnub Ghosh is Southeast Asia Director and Samrat Bose is Southeast Asia Senior Manager for Monitor Deloitte.

This article is adapted with permission from an article titled “Can businesses do good and prosper?” by the authors first published in *The Business Times* on 30 May 2019.

Rethinking Business for Social Transformation

By Keith Chua, Executive Chairman, ABR Holdings

For business development to be truly transformational, companies must consciously carry out change in the area of sustainable growth. Put simply, meaningful transformation should have a positive impact on society.

Progress cannot be measured by purely commercial success, and a corporate vision and mission cannot be driven by just the bottom-line.

This idea of businesses doing good is not new. In recent times, doing good has featured across various strata of society. In the case of Singapore, there are many accounts of the business community actively engaged in giving back, helping the needy and less fortunate, and doing good.

Examples include successful businessmen, family foundations, cultural associations and philanthropic institutions. Tan Tock Seng is an example of a 19th century businessman whose legacy of giving and doing good continues today alongside a list of many others. His acts of kindness brought healthcare to many when healthcare provision was limited.

Social entrepreneurship

Some sectors of the business community have begun to realise the consequences of the shift in trends and started to do something about this. We have since seen the rise of the social entrepreneur. Some social entrepreneurs have advocated for environmental concerns, others on health, sanitation and clean water, yet others on the vulnerable in society including the concerns as a consequence of rising socioeconomic inequality.

The result has been a business community that has heard, and begun to take note that there has to be a rethinking of business models today and into the future.

The transformation of business methods and models for the good of society comes in many forms, as there are endless ways to give back to society (see box, “In the Company of Good”).

Corporations can do a great deal to transform the whole business landscape and ecosystem of giving back to society. Corporate philanthropy is a simple start — companies that engage employees in identifying causes that can be financially supported at the company level and through employee-driven giving.

Businesses can also encourage active participation through planned volunteerism. Employees often find this both a meaningful platform to give time and also build relationships and connections that bring benefits to the workplace.

In the Company of Good

The National Volunteer and Philanthropy Centre, the Singapore Business Federation and Ministry of Culture, Community and Youth have banded together to promote the Company of Good initiative. Established in 2016, the project seeks to empower businesses in Singapore to give in strategic, sustainable and impactful ways.

The objectives are:

To build a city of good.
People are at the heart of every company. People want to work for companies that are socially responsible and buy from those that put goodness first. Their actions are what will create a Singapore where every organisation gives back one way or another.

To optimise business goals.
Creating a strong business and building a better world are not conflicting goals. Rather, both are essential ingredients for long-term success. In helping companies do good well, both business and the community benefit.

To enhance capability.
Access to a myriad of corporate giving resources, connecting a community of like-minded business leaders and practitioners, and networking at events inspire companies through good corporate giving practices. To date, over 1,000 corporates have benefited from the giving resources, events and workshops that have been rolled out as part of the initiative, based on the four "I"s framework:

1. Investment.
How extensively and strategically a company gives. ("Does your company give in more than one way that is aligned to its vision and mission, strategy and/or nature of its business?")

2. Integration.
How giving is integrated with business functions and supports business interests. ("Does your business advocate a social cause of procure from charities?")

3. Institutionalisation.
How giving is supported by policies, systems and incentives. ("Does your company provide paid volunteer leave or recognise outstanding employee volunteers?")

4. Impact.
How mechanisms have been put in place to measure impact. ("Does your company set up processes to measure the input, output, outcome and impact of your giving?")

Businesses which are serious about real transformation can consider getting on board the Company of Good initiative, to encourage volunteering and giving, and be recognised as Champions of Good.

Inclusive workplaces

Many companies are already becoming inclusive workplaces. Opportunities for employment of persons from disadvantaged groups can be transformational to society, bringing businesses toward an increasing level of social consciousness and the realisation of a truly caring and sharing nation.

Successful and sustainable businesses will have the financial capability and stability to take both measured and bold steps in giving back.

The typical social entrepreneur is challenged by financial sustainability while achieving social objectives. There is a high rate of attrition but many social entrepreneurs will often recover, regroup and restart the journey. Along the way, there will be much positive contribution to society.

Today, there are many initiatives developed by social entrepreneurs that have become financially sustainable. The various models of income generation have been adequate to bring about scale — and with this scale attracts venture capital, social impact funds and public mainstream funding.

However, the path of the social entrepreneur remains highly challenging and uncertain. On the other end of the spectrum there is an increasing number of corporations moving beyond the notion of corporate social responsibility. There is an increasing number of Singapore companies that have made doing good a key purpose alongside financial performance.

As this convergence of the for-profit enterprises moves toward increasingly doing good, hopefully the day will come when all businesses can be termed social businesses. Transformation in this form will result in an inclusive society where everyone will have opportunity and no one will be left behind. ■

SECTION SIX

SUPPORTING ORGANISATIONS AND CHARITIES

SUPPORTING ORGANISATIONS

The Accounting and Corporate Regulatory Authority (ACRA) is the national regulator of business entities, public accountants and corporate service providers in Singapore. It promotes a trusted and vibrant environment for businesses to thrive and flourish, and contribute towards making Singapore the best place for business.

www.acra.gov.sg

Enterprise Singapore is the government agency championing enterprise development. Its vision for Singapore is a vibrant economy with globally competitive Singapore companies. International Enterprise Singapore and SPRING came together on 1 April 2018 as a single agency to form Enterprise Singapore. Its mission is to grow stronger Singapore companies by building capabilities and accessing global opportunities, thereby creating good jobs for Singaporeans. The agency works with committed companies to build capabilities, innovate and internationalise. It also supports the growth of Singapore as a hub for global trading and startups, and builds trust in Singapore's products and services through quality and standards.

www.enterprisesg.gov.sg

The Singapore Accountancy Commission (SAC) spearheads the development of the Singapore accountancy sector with the vision of developing Singapore into a leading global accountancy hub. SAC is working to achieve this by deepening the skills of the accountancy talent pool; developing the industry to capture growth opportunities; and creating a hub and exchange by building Singapore into a centre for thought leadership. SAC is a statutory body under the Ministry of Finance.

www.sac.gov.sg

Singapore Exchange is Asia's leading and trusted market infrastructure, operating equity, fixed income and derivatives markets to the highest regulatory standards. As Asia's most international, multi-asset exchange, SGX provides listing, trading, clearing, settlement, depository and data services, with about 40% of listed companies and over 80% of listed bonds originating outside of Singapore. SGX is the world's most liquid international market for the benchmark equity indices of China, India, Japan and ASEAN and offers commodities and currency derivatives products. Singapore Exchange Regulation is the wholly-owned subsidiary of SGX that undertakes all frontline regulatory functions on behalf of SGX and its regulated subsidiaries.

www.sgx.com

CHARITIES

Assisi Hospice provides palliative care for patients and families that preserves their dignity and quality of life. Patients of any race, faith and financial position are cared for by its team of specialist doctors, nurses, allied health and pastoral care professionals. Assisi Hospice provides care for patients across the continuum of home care, inpatient and day care. This allows patients and family members to journey with a clinical team they are familiar with, and to receive care in the way that they need. With 85 inpatient beds, including specialised wards for dementia palliative care and paediatric palliative care, a day-care centre and the outreach of its home care team, the Hospice serves more than 2,000 patients a year.

The Handicaps Welfare Association (HWA) is an organisation of the disabled run by the disabled and for the disabled. Founded in 1969, HWA will be celebrating 50 years of serving the community this year. It is committed to enhance the quality of life of persons with disability and integrate them into mainstream society. HWA aims to create an awareness of the special needs of persons with disability and to solicit partnership with and assistance from organisations and individuals to further the well-being of persons with disability. The Association serves persons with disability and the community by providing wheelchair accessible transport service, rehabilitation service, home care service, and social service and integration.

Founded in 1981, Methodist Welfare Services (MWS) is a nonprofit organisation, and is registered under the Charities Act as an Institution of a Public Character. Its purpose is to serve all who live under the strains of poverty of relationships, physical and socio-emotional health, and finances, regardless of age, race and religion. MWS achieves this through an integrated and holistic helping process for every person who comes through its doors. This includes a spectrum of care that ranges from community-based social and health programmes for seniors to residential nursing and rehabilitative care, home-based care and hospice services, counselling and therapy, and debt relief and asset-building programmes.

SECTION SEVEN
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ABR Holdings Limited is listed on the mainboard of the Singapore Exchange and began as the owner and operator of the first full-service Swensen's ice cream restaurant in Singapore back in 1979. The Swensen's brand, with 24 restaurants in Singapore, remains one of the market leaders in the western casual dining category. Besides Swensen's, ABR manages a portfolio of popular food and beverage companies and brands. These include Season Confectionary & Bakery, Season's Café, Earle Swensen's, Yogen Früz, Tip Top Curry Puffs, Sticky Wings and Chilli Padi Group. ABR also has investments in property development in the region.

www.abr.com.sg

Allen & Gledhill is an award-winning full-service Southeast Asian law firm providing legal services to a wide range of premier clients. The firm is consistently ranked as one of the market leaders in Singapore and Southeast Asia, having been involved in a number of challenging, complex and significant deals, many of which are first of its kind. With its offices in Singapore and Myanmar; its associate firm, Rahmat Lim & Partners in Malaysia; and its alliance firm, Soemadipradja & Taher in Indonesia, the Allen & Gledhill network has over 550 lawyers in the region, making it one of the largest law firms in Southeast Asia.

www.allenandgledhill.com

Founded in 2002, ARA is a premier global integrated real assets fund manager with gross assets under management by the group and its associates at approximately S$80.1 billion, and a footprint in 23 countries. ARA is focused on the management of REITs, private real assets funds and real estate management services. Its multi-platform, multi-product strategy, together with its dedicated local teams, enable the group to offer enduring value to investors.

www.ara-group.com

Bain & Company is the management consulting firm that the world's business leaders come to when they want results. Bain advises clients on private equity, mergers and acquisitions, operations excellence, consumer products and retail, marketing, digital transformation and strategy, technology, and advanced analytics, developing practical insights that clients act on and transferring skills that make change stick. The firm aligns its incentives with clients by linking its fees to their results. Bain's clients have outperformed the stock market 4 to 1. Founded in 1973, Bain has 58 offices in 37 countries. Bain Southeast Asia has established a strong track record serving a range of clients from its offices in Kuala Lumpur, Singapore, Jakarta and Bangkok.

www.bain.com/southeast-asia

BDO LLP is a full-service professional tax, accounting and business advisory firm with a long history of serving both small and medium-sized enterprises, large privately-held businesses and multinational companies across a broad spectrum of industries in Singapore. For more than 40 years, the firm has helped local and international businesses grow by providing the highest quality tax, audit and assurance, financial and business advisory services. The company takes great pride in delivering exceptional client service. BDO LLP is an independent member firm of BDO International — the world's fifth largest accountancy network with 1,591 offices in 162 countries and territories.

www.bdo.com.sg

BoardRoom is Asia-Pacific's leader in corporate and advisory services including regional employee plan services, regional payroll solutions, corporate secretarial, share registry services, accounting, taxation, payroll and human resources. For over 50 years, BoardRoom has supported companies from startups to giants, in navigating complex operational and regulatory policies as well as cultural sensitivities. BoardRoom is well-positioned in Asia-Pacific with offices in Singapore, Australia, China, Hong Kong, and Malaysia, as well as an extensive partner network in Asia to help businesses expand and grow. BoardRoom is the partner of choice for many Fortune 500 multinational companies, public listed and privately-owned enterprises.

www.boardroomlimited.com

City Developments Limited (CDL) is a leading global real estate operating company with a network spanning 103 locations in 29 countries and regions. With a track record of over 55 years, CDL has developed over 43,000 homes and owns over 18 million square feet of lettable floor area globally. Its diversified global land bank offers 4.1 million square feet of developable gross floor area. Beyond shaping cityscapes with award-winning architectural icons, it is focused on building sustainably. CDL is the only Singapore company to be listed on the Global 100 Most Sustainable Corporations in the World for 10 consecutive years.

www.cdl.com.sg

Headquartered in Singapore and listed on the Singapore Exchange since 5 November 2004, Delfi Limited and its subsidiaries manufacture and/or distribute branded consumer products that are sold in over 17 countries. The group owns the Delfi brand and controls the consumer rights to the Van Houten brand name in key markets in Asia. In addition, the group also distributes a portfolio of well-known agency brands in Indonesia, Malaysia and the Philippines. The group was awarded the top spot in the annual Singapore Enterprise 50 Award in 2003 and was named the Enterprise of the Year 2004 by the Singapore Business Awards and one of Singapore's 15 Most Valuable Brands in November 2005 by International Enterprise Singapore.

www.delfilimited.com

Deloitte is a leading global provider of audit and assurance, consulting, financial advisory, risk advisory, tax and legal and related services. Its network of member firms with approximately 286,000 people in more than 150 countries and territories serves four out of five Fortune Global 500® companies. Deloitte SEA and the Deloitte firms in Australia, China, Japan, New Zealand and Taiwan recently joined together to create Deloitte Asia Pacific. This increase in scale will enable the company to serve clients more seamlessly across the region and provide them with innovative services from a wide range of geographies, businesses and industry sectors.

www.deloitte.com

Diligent is the pioneer in modern governance. It empowers leaders to turn governance into a competitive advantage through unparalleled insight and highly secure, integrated SaaS applications, helping organisations thrive and endure in today's complex, global landscape. The company's trusted, cloud-based applications streamline the day-to-day work of board management and committees, support collaboration and secure information sharing throughout the organisation, manage subsidiary and entity data, and deliver the insights and information leaders need to mitigate governance deficits and seize new opportunities. The largest global network of corporate directors and executives, Diligent is relied on by more than 16,000 organisations and 650,000 leaders in in over 90 countries.

www.diligent.com

Enterprise Singapore is the government agency championing enterprise development. Its vision for Singapore is a vibrant economy with globally competitive Singapore companies. International Enterprise Singapore and SPRING came together on 1 April 2018 as a single agency to form Enterprise Singapore. Its mission is to grow stronger Singapore companies by building capabilities and accessing global opportunities, thereby creating good jobs for Singaporeans. The agency works with committed companies to build capabilities, innovate and internationalise. It also supports the growth of Singapore as a hub for global trading and startups, and builds trust in Singapore's products and services through quality and standards.

www.enterprisesg.gov.sg

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services it delivers helps build trust and confidence in the capital markets and in economies the world over. EY develops outstanding leaders who team up to deliver on its promises to all its stakeholders. In so doing, the company plays a critical role in building a better working world for its people, clients and communities. EY refers to the global organisation, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients.

www.ey.com

FRASERS PROPERTY

Frasers Property Limited is a multinational company that owns, develops and manages, a diverse, integrated portfolio of properties. Listed on SGX-ST, the company has total assets of approximately S$33.2 billion as at 31 March 2019. Its assets range from residential, retail, commercial and business parks, to logistics and industrial in Southeast Asia, Australia, Europe, and China. Its well-established hospitality business owns and or operates serviced apartments and hotels in over 70 cities across Asia, Australia, Europe, the Middle East and Africa. The company is unified by its commitment to deliver enriching and memorable experiences for customers and stakeholders. Frasers Property is also a sponsor of three REITs and one stapled trust listed on the SGX-ST.

www.frasersproperty.com

Google Cloud

Google Cloud is widely recognised as a global leader in delivering a secure, open and intelligent enterprise cloud platform. The organisation is focused on building solutions in five key categories — infrastructure modernisation, data management, smart business analytics, artificial intelligence and machine learning, and collaboration — and is concentrating efforts in 15 global markets. Today, customers across more than 150 countries trust Google Cloud to modernise their computing environment for today's digital world. Google Cloud helps thousands of organisations, including many of the world's largest companies, transform their businesses.

cloud.google.com

HEIDRICK & STRUGGLES

WE HELP OUR CLIENTS CHANGE THE WORLD, ONE LEADERSHIP TEAM AT A TIME™

Heidrick & Struggles (Nasdaq: HSII) serves the senior-level talent and leadership needs of the world's top organisations as a trusted adviser across executive search, leadership assessment and development, organisation and team effectiveness, and culture shaping services. Heidrick & Struggles pioneered the profession of executive search more than 60 years ago. Today, the firm provides integrated leadership solutions to help its clients change the world, one leadership team at a time.®

www.heidrick.com

Singapore mainboard-listed Hiap Hoe Limited is a regional premium real estate group with a diversified portfolio of hospitality, retail, commercial and residential assets. The group is known for the development of luxury and mid-tier residential as well as hotel-cum-commercial properties that are distinct in design and preferred for their excellent location and investment prospects. The group's portfolio includes distinctive projects such as Zhongshan Park Integrated Development, Skyline 360° and Waterscape at Cavenagh. Its hospitality assets include Ramada Singapore and Days Hotel Singapore, Holiday Inn Express in Manchester, Four Points by Sheraton Melbourne Docklands and Aloft Perth. The group has more than three decades of experience in investing in major asset classes and holds a financial investments portfolio in excess of S$200 million.

www.hiaphoe.com

Huawei is a leading global provider of information and communications technology (ICT) infrastructure and smart devices. With integrated solutions across four key domains – telecom networks, IT, smart devices, and cloud services – the firm is committed to bringing digital to every person, home and organisation for a fully connected, intelligent world. Founded in 1987, Huawei is a private company fully owned by its employees. The company has more than 180,000 employees, and operates in more than 170 countries and regions. Huawei has been in Singapore for over 18 years as a reliable partner that enables Singapore to be a better-connected nation with its cutting-edge solutions.

www.huawei.com

With a global footprint in more than 20 countries, Keppel is a multi-business company providing robust solutions for sustainable urbanisation, to meet the growing need for energy, infrastructure, clean environments, high quality homes and offices, and connectivity. It aims to be a global company at the forefront of its chosen industries, shaping the future for the benefit of all its stakeholders – sustaining growth, empowering lives and nurturing communities. The Keppel Group of Companies includes Keppel Offshore & Marine, Keppel Land, Keppel Infrastructure, Keppel Capital, Keppel Telecommunications & Transportation (Keppel T&T) and Keppel Urban Solutions, among others.

www.kepcorp.com

KPMG in Singapore is part of a global network of professional services firms providing audit, tax and advisory services. With 207,000 outstanding professionals at independent member firms in 153 countries worldwide, KPMG offers a globally-consistent standard of service based on professional capabilities, industry insight and local knowledge. In the ASEAN region, KPMG member firms operate across all 10 countries. The firm's professionals work closely with clients to mitigate risks and grasp opportunities in their pursuit of business growth, enhanced performance, governance, and compliance objectives.

www.kpmg.com.sg

NCS is a member of the Singtel Group and the leading information, communications and technology (ICT) service provider with presence in the Asia Pacific region. NCS delivers end-to-end ICT solutions to help governments and enterprises realise business value through digital transformation and the innovative use of technology. Its unique delivery capabilities include consulting, applications development, systems integration, outsourcing, infrastructure management and portal solutions. In addition, NCS provides digital services to organisations by enabling their applications using digital technologies, including social media, mobility, analytics, cloud, artificial intelligence and robotics.

www.ncs.com.sg

Established in 1993, and as a member firm of Nexia International, Nexia TS offers a full suite of professional services ranging from assurance, tax advisory, corporate governance, internal audit, valuation advisory, M&A advisory to corporate recovery, forensic investigation, cyber security and technology advisory and data analytics. Nexia's reputation is built on technical competence, personalised approach, proactive client servicing and a commitment to unwavering integrity and professionalism. The firm has assisted more than 35 IPO listings in the capacity of reporting auditors and consultancy roles, and achieved a consistent IPO track record in the past five years.

www.nexiats.com.sg

OCBC Bank is the longest established Singapore bank, formed in 1932 from the merger of three local banks. It is the second largest financial services group in Southeast Asia by assets and one of the world's most highly-rated banks, with an Aa1 rating from Moody's. OCBC Bank and its subsidiaries offer a broad array of commercial banking, specialist financial and wealth management services, ranging from consumer, corporate, investment, private and transaction banking to treasury, insurance, asset management and stockbroking services. OCBC Bank's key markets are Singapore, Malaysia, Indonesia and Greater China. It has more than 570 branches and representative offices in 19 countries and regions.

www.ocbc.com

PwC's purpose is to build trust in society and solve important problems. They are a network of firms in 158 countries with over 250,000 people who are committed to delivering quality in assurance, advisory and tax services. PwC refers to the PwC network and/or one or more of its member firms, each of which is a separate legal entity.

www.pwc.com/sg

Rajah & Tann Singapore is a leading full-service law firm in Singapore and one of the largest in Southeast Asia. The firm has been at the leading edge of law, having worked on many of the biggest and highest profile cases in the region. It is a member firm of Rajah & Tann Asia, one of the largest regional networks that brings together leading law firms and over 750 fee earners in Cambodia, China, Indonesia, Lao PDR, Malaysia, Myanmar, Singapore, Thailand, Philippines and Vietnam. Rajah & Tann Asia's geographical reach also includes Singapore-based regional desks focusing on Japan and South Asia.

www.rajahtannasia.com

RSM Risk Advisory is the business consulting unit in RSM's integrated advisory practice that includes corporate advisory and restructuring and forensics. Value is the core of its service delivery, whether it is to enhance, preserve, rehabilitate or recover. RSM helps growing businesses improve profits,preserve value and manage succession. RSM addresses the strategic, digitalisation and technology innovation needs of today's businesses. It helps businesses safeguard value by optimising business processes, streamlining functionaleffectiveness as well as helping identifying areas which aid in improving profits. RSM is the seventh largest audit, tax and consulting network globally. In Singapore, it is the largest outside the Big Four serving the compliance and governance needs of internationally active businesses.

www.rsm.global/singapore

SAI Global helps organisations proactively manage risk to create trust and achieve business excellence, growth, and sustainability. Its integrated risk management solutions are a combination of leading capabilities, services and advisory offerings that operate across the entire risk lifecycle allowing businesses to focus elsewhere. Together, these tools and knowledge enable clients to develop a holistic, integrated view of risk. The company has a global reach with locations across Europe, the Middle East, Africa, the Americas, Asia and the Pacific.

www.saiglobal.com

Singapore Exchange is Asia's leading and trusted market infrastructure, operating equity, fixed income and derivatives markets to the highest regulatory standards. As Asia's most international, multi-asset exchange, SGX provides listing, trading, clearing, settlement, depository and data services, with about 40% of listed companies and over 80% of listed bonds originating outside of Singapore. SGX is the world's most liquid international market for the benchmark equity indices of China, India, Japan and ASEAN and offers commodities and currency derivatives products. Singapore Exchange Regulation is the wholly-owned subsidiary of SGX that undertakes all frontline regulatory functions on behalf of SGX and its regulated subsidiaries.

www.sgx.com

Incorporated in 1984, Singapore Press Holdings Ltd (SPH) is Asia's leading media organisation; publishing newspapers, magazines and books in both print and digital editions. It also owns other digital products, online classifieds, radio stations and outdoor media. On the property front, SPH REIT comprises Paragon, The Clementi Mall, The Rail Mall and holds 85% equity stake in Figtree Grove in Australia. SPH owns and operates The Seletar Mall and is developing The Woodleigh Residences. It also owns a portfolio of purpose-built student accommodation in the UK, Orange Valley nursing homes, and runs a regional events arm and Buzz retail outlets.

www.sph.com.sg

United Overseas Bank Limited (UOB) is a leading bank in Asia with a global network of more than 500 offices in 19 countries and territories in Asia Pacific, Europe and North America. Since its incorporation in 1935, UOB has grown organically and through a series of strategic acquisitions. UOB is rated among the world's top banks: Aa1 by Moody's and AA- by both Standard & Poor's and Fitch Rating. In Asia, UOB operates through its head office in Singapore and banking subsidiaries in China, Indonesia, Malaysia, Thailand and Vietnam, as well as branches and representative offices across the region.

www.uobgroup.com

Unity is the creator of the world's most widely used real-time 3D (RT3D) development platform, giving developers around the world the tools to create rich, interactive 2D, 3D, VR and AR experiences. Its 1000-person engineering team keeps Unity at the bleeding-edge of technology by working alongside partners such as Facebook, Google, Microsoft and Oculus to ensure optimised support for the latest releases and platforms. Experiences made with Unity reach nearly 3 billion devices worldwide, and were installed 24 billion times in the last 12 months. Unity is powering RT3D in architecture, automotive, construction, engineering, film, games, and more.

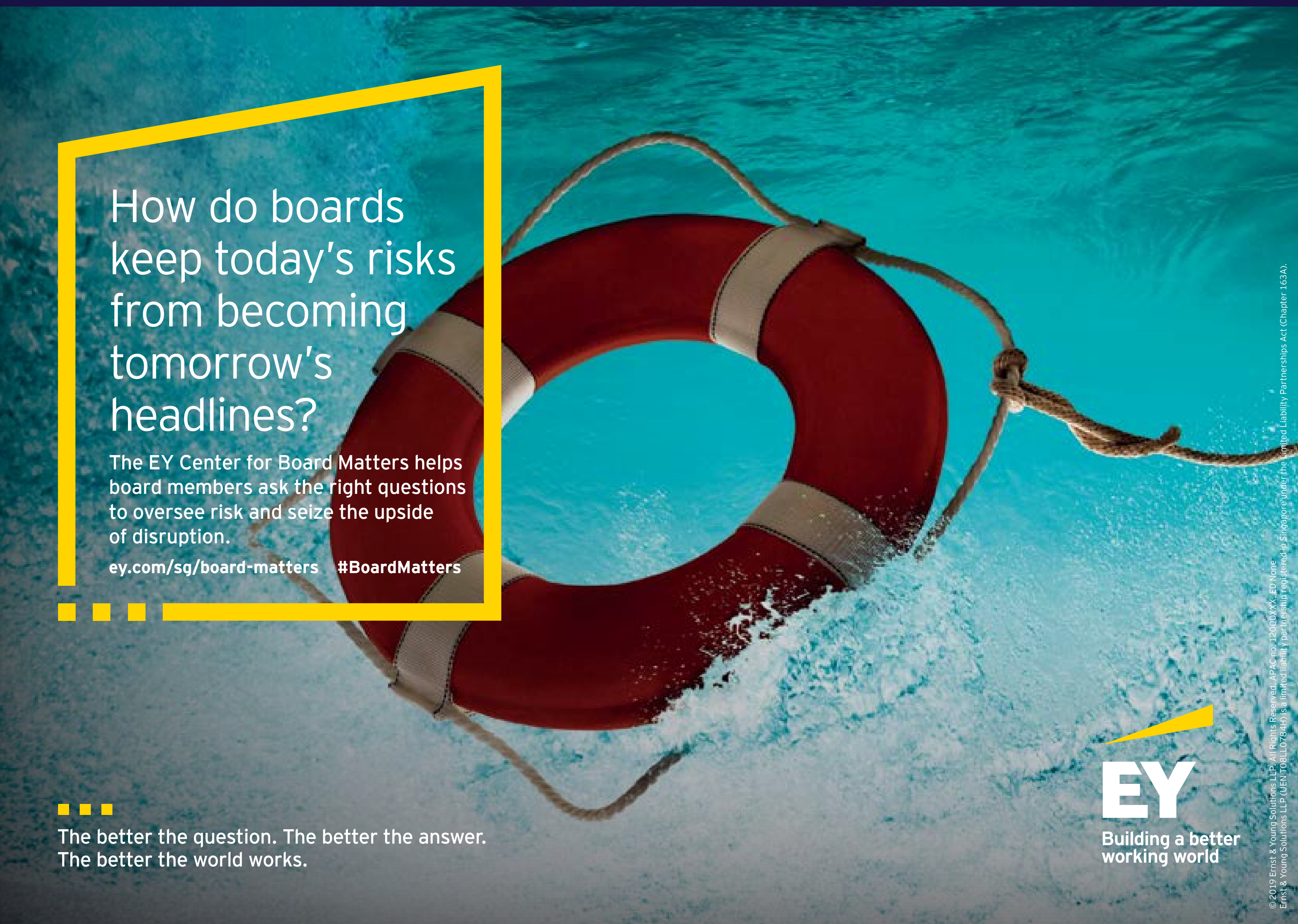
www.unity.com

Headquartered in Singapore, V3 owns and develops premium products and services through its leading luxury and wellness brands — OSIM, TWG Tea and ONI (GNC, LAC, Xndo) — promoting and inspiring a healthy lifestyle to a broad and affluent consumer demographic across Asia. The company also owns Futuristic Store Fixtures, which supports some of the world's leading retail brands. V3 has a history of impressive brand creation and development, a deep understanding of the consumer market and retailing, and a presence in over 100 cities in 26 countries around the world.

www.v3group.com

WongPartnership is a major provider of legal services in ASEAN, China and the Middle East. Headquartered in Singapore, the firm has lawyers and offices in Beijing, Shanghai and Yangon, as well as in Abu Dhabi, Dubai, Jakarta, Kuala Lumpur and Manila, through member firms of WPG, a regional law network. The network comprises WongPartnership and four other prominent law firms — Al Aidarous Advocates and Legal Consultants (Middle East), Foong & Partners (Malaysia), Makes & Partners (Indonesia) and Zambrano Gruba Caganda & Advincula (Philippines). Together, WPG is able to offer the expertise of over 400 professionals to meet the needs of clients in all sectors throughout the region.

www.wongpartnership.com



How do boards keep today's risks from becoming tomorrow's headlines?
The EY Center for Board Matters helps board members ask the right questions to oversee risk and seize the upside of disruption.
ey.com/sg/board-matters
#BoardMatters
The better the question. The better the answer. The better the world works.
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Tough Questions for CEOs:
How are you...
Leading innovation?
Future proofing your workforce?
Turning data into enterprise asset?
Enabling mindset change?
Turning disruption into transformation?
pwc
Scan QR code to deep dive into
PwC's Digital Leadership Mantras 2019
pwc.com/sg


RSM
Being Understood
It starts from being understood. To transform from ordinary to the extraordinary.
As a leader in the mid-market space, we are in tune with what the business owner needs and wants.
Our integrated Advisory solutions redefine what traditional advisors do.
We help growing businesses transform from ordinary to the extraordinary.
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Haryana Jaafar
Sue Anne Kuek
Yang Wai Wai

SGOOD - Singapore Governance for Outstanding Organisation Directors

Programme Overview

This course is designed for individual board members to enhance their capabilities for the effective governance of nonprofit organisations (NPOs). It aims to help NPO directors develop a better understanding of the nonprofit landscape in Singapore, their role and responsibilities as NPO directors and the underlying social trends affecting the effectiveness and sustainability of NPOs. The case studies and engaging panel discussions with practitioners and leaders from the sector provide opportunities for participants to share perspectives and gain an understanding of on-the-ground realities. Participants will also pick up management skills that help them avoid common pitfalls and be more effective in their oversight.

8 modules directly relevant for good governance

8 facilitators with industry experience

7 case studies to enhance learning

25 panel speakers who are leaders in the sector

At A Glance...

What
A development programme for nonprofit directors comprising eight modules (four hours each).

Why
To strengthen nonprofit organisational effectiveness.

Who
Board and council members of nonprofit organisations.

Modules

1 Essentials of NonProfit Board Leadership

2 Board Dynamics

3 Board and Management Dynamics

4 Talent and Volunteer Management

5 Strategy and Board Performance

6 Financial Management and Accountability

7 Fundraising, Outreach and Advocacy

8 Social Trends

*This course has been pre-approved for VWOs-Charities Capability Fund (VCF) funding up to 15 April 2020. All exempt, registered charities and Institutions of a Public Character (IPCs) can apply for the VCF training grant, and are required to fill in the VCF Training Grant Refund Form.

For more details, please visit

www.sid.org.sg/SGOOD

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