





SECTION III

SPECIAL HIGHLIGHTS

- **Aligning SMEs to the Megatrends** 100
- **Economic Census 2016: Profile of SMEs** 109

Four Megatrends have been identified, each of which has the capacity to disrupt and reshape SMEs, and must be taken into consideration in the setting of policies, strategies and directions for SMEs in future.

The four Megatrends which will have a significant impact on SMEs are:

- Megatrend 1: Digital Future and 4th Industrial Revolution (IR 4.0)
- Megatrend 2: Rise of Entrepreneurship
- Megatrend 3: Globalisation
- Megatrend 4: Community Living

MEGATREND 1: DIGITAL FUTURE AND IR 4.0

As social, mobile, cloud, big data and growing demand for access to information converged, technology is disrupting all areas of the small business enterprise across all industries and geographies. However, from this disruption comes enormous opportunities for the enterprises to take advantage of connected devices enabled by the Internet of Things (IoT) to capture vast amounts of information, enter new markets, transform existing products, and introduce new business and delivery models. The advent of the digital enterprise also presents significant challenges; including new competition, changing customer engagement and business models, unprecedented transparency, privacy concerns and cyber security threats.

Technology is also changing the ways that people work, and is increasingly enabling machines and software to substitute humans. Enterprises and individuals who can seize the opportunities offered by digital advances stand to gain significantly while those who cannot may lose everything.

Digitalisation will impact businesses across all aspects of their operations as described below.

- **Digital Transformation is Changing Business and Revenue Models**

Rapid advances in cloud computing, connected devices, mobile, social media and data analytics are compelling many companies, including SMEs, to re-assess fundamental aspects of their business, including what products and services they sell, how they deliver these and how they need to organise to support their operations. Digital technologies are facilitating the introduction of new products and services, and are providing new ways to develop recurring revenue streams after an initial sale.

- **A Mobile First World**

Mobile is leapfrogging fixed broadband in many countries, particularly in rapid-growth markets. Webpage views from mobile phones now outnumber those from PCs in 48 countries. Currently, there are an estimated two billion mobile broadband connections which will expand to almost eight billion by 2019. Users are expecting and demanding functionality using the cloud, mobile and social technologies and they are using mobile more frequently to make purchases. Mobile devices are also becoming preferred tools for work and communication. All these present significant challenges to many companies, where legacy IT infrastructures are not ready for 'mobile first' strategies.



- **Digital Transformation and Proliferation of Data Impacting Business-Customer Relationship**

Businesses are gaining unprecedented opportunities to understand consumer needs, preferences and behaviours as the amount and types of customer data available from sources, including social media, online shopping behaviours and geo-location information are expanding rapidly. Companies that can extract value from this information will gain a more precise understanding of customer segments, and products and services can be tailored to the level of the individual. This is important as customers are demanding greater choice and control, more transparency, and anytime-anywhere access to information.

- **Digital Disruption Changing Market Context and Competitive Landscape**

Technology is no longer just an industry in itself, as it continues to reshape nearly every other industry in dramatic ways. The pervasiveness and power of new technologies are blurring sector boundaries as companies across industries develop their own digital strategies and solutions. Many companies not traditionally thought of as technology players are positioning themselves in the market with their own digital platforms providing innovative solutions to meet the unique needs of their customers and partners. The growing prevalence of these industry-focused solutions and those already offered by traditional technology firms are enabling the expansion of digital ecosystems and changing the competitive dynamics of the market.

- **Cyber Security**

Cyber threats continue to multiply and data breaches are growing in size and frequency. Theft of data and other forms of cybercrime are creating a significant economic toll. The mounting digitalisation of the world and the rising connectivity of people, devices and organisations provide new vulnerabilities for cybercriminals to exploit. As cyber risks increase rapidly, organisations and governments will need to mount concerted and sustained efforts to secure digital assets and protect confidential information.

- **Greater Agility in Work Style and Means to Engage Talent**

While some industries still require workers that are time and location bound, it will become common in many sectors for workforces to be virtual; connecting to work anytime, from anywhere, and on any device. Mobile, social and cloud technologies, along with the ubiquity of Wi-Fi and broadband connections, are making it possible for more employees to work at times and places of their own choosing. Office configurations that remain will be more flexible, and will support higher levels of collaboration among colleagues as by 2020, the Millennials and Generation Z will comprise more than half of the workforce. These individuals have grown up connected, collaborative and mobile, and their attitudes and expectations will have a major impact upon how work is organised. Technological advances are also making it easier for companies to tap into networks of anonymous workers through online crowd sourcing and freelance platforms. Not only are different skill sets required to manage remote and contingent workers but existing organisational cultures will be harder to maintain.



- Digital and Robotic Technologies will Augment or Replace Workers**

Automation is set to accelerate and expand over the next decade. Advancements in technology are allowing for the mechanisation of new categories of jobs, including some that previously seemed immune. Innovations in AI and machine learning, exponential growth in computer processing power and sophisticated mobile robotics are all fueling this expansion. While automation has traditionally impacted blue-collar jobs and will continue to do so, it will increasingly target white-collar jobs as well. The impact of the new technologies will not be entirely destructive to the job market, however, new opportunities to develop, service or operate the next generation of software and machines will arise. There will be new types of jobs that do not exist today.

Impact of Digitalisation on SMEs

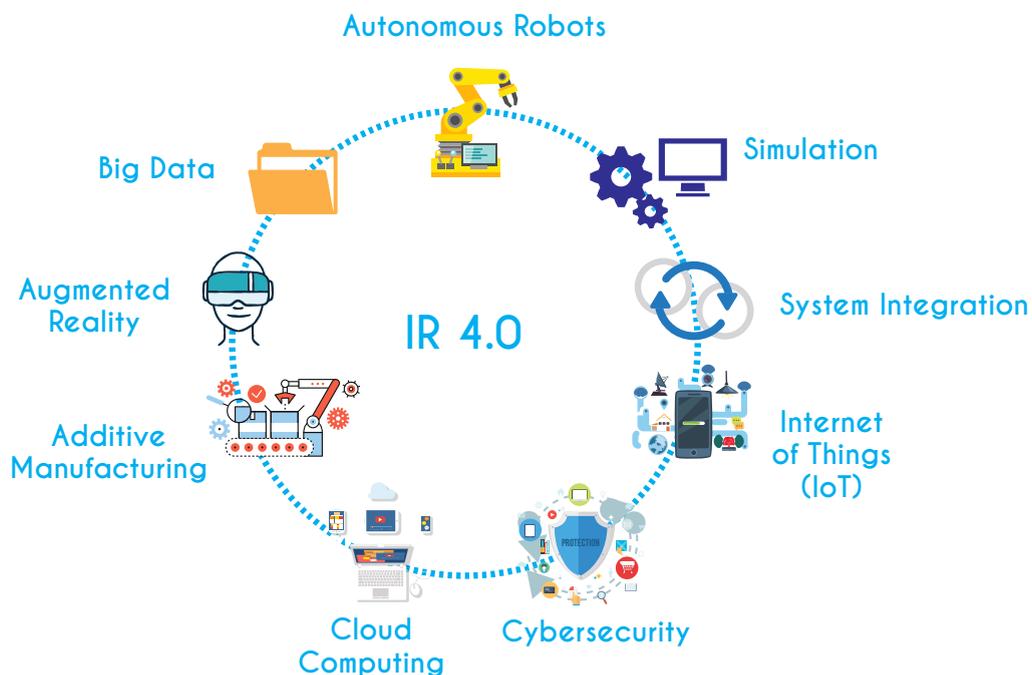
- SME Operation and Delivery Model**

Digital transformation will change SMEs' operations and delivery models. In order to develop further, SMEs will have to contend with the likes of Third Platform Technologies as well as virtual stores, subscription-based models, 3D printing, robots, IoT, artificial intelligence (AI), on-line platforms and the digital village, in a scenario where consumers are also co-creators of business while new jobs are being created from advancements in such technologies.

- Increasing Mobile Device Adoption**

SMEs are increasingly adopting mobile devices to employ workforce virtually even as such devices are being used increasingly to make purchases. The weakness here is that the existing legacy IT infrastructure is not ready for mobile first strategies.

Chart 1: Nine Inter-related Pillars of Industrial Revolution 4.0



Industrial Revolution 4.0

The first industrial revolution came about with steam and water power, the second began with the advent of electricity and assembly lines and the third was computerisation. In the 4th Industrial Revolution (IR 4.0), the world will encounter a range of new technologies that combine the physical, digital and biological worlds which will impact all disciplines, economies and industries. These technologies have great potential to continue to connect billions more people to the web and improve drastically the efficiency of business and organisations.

Going forward, Government funding, tax and non-tax incentives will have to be synchronised with the potential impact of these Megatrends and the nine pillars of IR 4.0

Nine Pillars of IR 4.0

Big Data: The ability to collect, store, and analyse massive amounts of data which can then be used to identify inefficiencies and production bottlenecks.

Autonomous Robot: The next generation of robots can do more on their own, including learn on the job and teaming up with other robots and humans.

Simulation: Operators and system designers can model and optimise machine settings in virtual reality, cutting actual set-up time to a fraction of what was previously thought possible.

Universal System Integration: The long-standing barriers between the shop floor and top floor give way to a more cohesive, cross-company approach to using and sharing data. Also horizontal integration with raw material suppliers and equipment vendors can benefit producers and suppliers alike.

Industrial IoT: By connecting embedded devices, plants, offices and companies, the Industrial Internet of Things (IoT) enables real-time data sharing between all parts of the system and all connected parties.

Cybersecurity: With such expansion of industrial communications, security becomes a critical aspect that must not be overlooked. A white paper says, "... secure, reliable communications as well as sophisticated identity and access management of machines and users are essential."

Cloud Computing: Much of the IoT and Big Data capacity will be provided through the cloud. Again, here is where security plays a vital role.

Additive Manufacturing: 3D printing allows for small batches and quick design changes, as well as reduced stockpiles of raw materials and lower transportation costs through on-site manufacturing.

Augmented Reality: Presenting useful task background and context for production and maintenance staff right when they need it will make their work easier and more successful.



MEGATREND 2: GLOBALISATION

Globalisation is the process by which the world is becoming increasingly interconnected as a result of massively increased trade and cultural exchange. Globalisation has increased the movement of goods, capital, services, people, technology and information. Faster growth and favourable demographics in Asia and rapid-growth markets will be the feature. Local SMEs need to be part of the globalisation Megatrend if they are to penetrate emerging markets.

- **Shifting of Global Economic Power to Rapid-growth Economies**

The global economic balance of power is shifting to BRIC (Brazil, Russia, India and China) and MINT (Mexico, Indonesia, Nigeria and Turkey) nations. The growth rates for major players such as China (+5.9%), India (+6.7%) the Middle East and North Africa (+4.9%) will continue tipping the world's centre of economic gravity toward the East and South. With growing economies, supported by socio-economic trends such as urban migration, declining dependency ratios, favorable demographics and growing income levels, rapid-growth markets will become increasingly important venues for conducting global business. For all companies with global ambitions – both established multinationals and their rapid growth market challengers, including SMEs – this great shift in economic power will force major adjustments in strategy,

- **Continued Transformation of Trade-flow Patterns**

Global merchandise trade is forecast to grow 8% annually to 2030 and should outpace Gross Domestic Product (GDP) growth. China, already the largest goods trader, will further consolidate its position in world trade while other emerging markets, such as India and Vietnam, are also expected to post double-digit annual export growth over the next seven years. Overall, the global trade landscape will be marked by increasingly high levels of integration with Asia likely to emerge as the fulcrum of future global trade and will remain at the centre of the world's fastest-growing trade routes. The world will remain highly interdependent through trade and financial system linkages, driving the need for stronger global policy coordination among nations and resilient supply chains for companies operating in this environment.

- **Increasing Share of Capital Flows to Developing Countries**

According to the World Bank, rapid-growth markets are expected to comprise a far greater share of gross capital inflows and outflows (including foreign investment, equity and debt portfolio investments, bank loans as well as other investments) in the future. By 2030, rapid-growth markets will account for 47% of gross global inflows, up from 23% in 2010. The increasing maturity of political institutions and the ongoing global and regional integration of financial markets make developing countries more attractive sources and destinations for capital flows. Developing Asia remains the world's leading FDI destination (30% share). All of these shifts put the onus on national policy-makers to create more business-friendly investment environments in rapid growth markets or they will fall behind.



• **Growing Global Middle Class will Drive Emergence of Lucrative New Markets**

Rapidly growing, young populations combined with strong economic growth are producing a surge of middle-income consumers in key rapid-growth markets. The World Bank projects that 50% of the total global stock of capital will reside in the developing world by 2030 (up from 33% in 2010), illustrating the shift in the global distribution of wealth, particularly in the Asia-Pacific region. The rapid expansion of middle income populations will be matched by a rapid increase in consumer spending, resulting in these fast-growing countries becoming prime markets for global and home-grown SMEs and large firms.

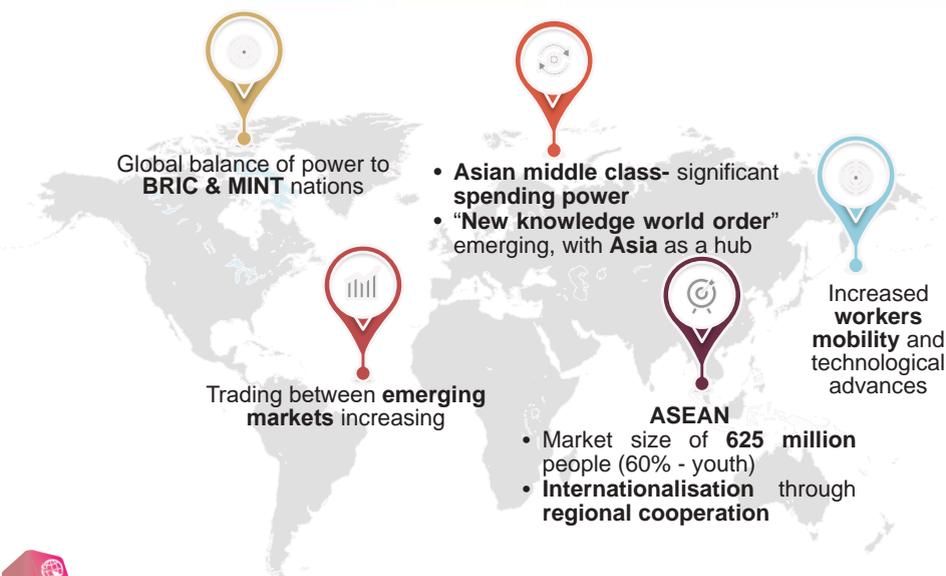
• **Asia is the Hub of Emerging New Knowledge World Order**

There is a growing shift in knowledge production toward Asia, primarily China. Rapid-growth markets are steadily increasing their academic and research output, particularly in Asia. China's heavy investment in education is bearing fruit as the country has overtaken the US in the number of doctorates awarded in science and engineering. By 2022, China is expected to overtake the US as the largest global spender on R&D. The momentum in education and research capabilities is shifting from West to East along with global growth patterns. One of the expected outcomes of this knowledge shift will be increased homegrown innovation and more outsourcing of services to the wealthiest rapid-growth markets.

• **Increasing Competition for Talent**

The worldwide competition for qualified talent is at its highest level since the pre-recession period. The situation is particularly acute when trying to find employees skilled in science, technology, engineering and mathematics. Many emerging markets have rapidly expanded the number of college graduates that they produce. By 2025, the South rather than the North may become the major source of technical talent in the global economy. As companies continue to globalise and as talent becomes harder to find, they will employ more highly diverse workforces. The labour force for many organisations will become multi-generational, multicultural and more gender-balanced as companies spread their operations globally.

Chart 2: Megatrend 2: Globalisation



MEGATREND 3: RISE OF ENTREPRENEURSHIP

Entrepreneurs are the lifeblood of economic growth as the growth and prosperity of all economies remain highly dependent on entrepreneurial activities. Entrepreneurs provide a source of income and employment for themselves, create employment for others, produce new and innovative products or services, and drive greater upstream and downstream value chain activities. While some entrepreneurial activity around the world is still driven by necessity, high-impact entrepreneurship, once largely confined to mature markets, is now an essential driver of economic expansion in rapid-growth markets. In some cases, these high-impact entrepreneurs are building innovative and scalable enterprises that capitalise on local needs and serve as role models for new entrepreneurs.

Some features of the entrepreneurship trend are:

- **Entrepreneurial Activity in Rapid Growth Markets Moving from Necessity to Opportunity**

Entrepreneurial activity in rapid-growth markets have long been high as measured by the Total Early Stage Entrepreneurial Activity Index (TEA rate), which represents the percentage of individuals aged 18 to 64 in an economy who are in the process of starting or are already running new businesses. Rapid-growth economies often exhibit much higher TEA rates than mature economies due to the fact that entrepreneurs in these markets launch businesses out of necessity, including poverty and lack of wage-based employment opportunities. Innovative entrepreneurship may be defined as creating a product, service or process that represents a significant commercial opportunity (as opposed to necessity-driven entrepreneurship). High-impact entrepreneurs will continue to build transformative businesses in both rapid-growth and mature markets and in some cases, these new companies have disrupted existing industries and created new industries or industry segments. Google, Facebook, Twitter, Virgin Airlines, Uber and GoPro are examples of such.

- **Entrepreneurs are Increasingly Young**

Nearly 50% of the world's entrepreneurs are between the ages of 25 and 44, with those between 25 to 34 years showing the highest rates of entrepreneurial activity. In China, 57% of its entrepreneurs are between the ages of 25 to 34.

“ High-impact entrepreneurs are building innovative and scalable enterprises that capitalise on local needs and serve as role models for new entrepreneurs ”





- **Entrepreneurs are Increasingly Female**

Millions of women across the world are starting or operating new businesses, many of whom are driven by opportunity rather than necessity. Women's entrepreneurial ventures are also an increasingly important source of new jobs. The World Bank reports that women-owned SMEs in the US are expanding at more than double the rate of all other firms and contributing nearly USD3 trillion to the USD16 trillion to the US economy (19%) and directly delivering 23 million jobs (16% of all jobs). In developing countries, women-run SMEs are also increasing and across the globe, there are roughly 8 million to 10 million formal SMEs with at least one woman owner.

- **More Supportive Environments to Underpin Entrepreneurial Growth**

Supportive environments are increasingly essential to successful entrepreneurship and these are evolving across the world. The ideal entrepreneurial environment has five pillars: access to funding, entrepreneurial culture, supportive regulatory and tax regimes, educational systems that support entrepreneurial mindsets and a coordinated approach that links the public, private and voluntary sectors.

MEGATREND 4: COMMUNITY LIVING

Globally there will be more devices connected to the Internet than people (50 billion devices versus 7.5 billion people by 2020) therefore making it even more important to connect and empower communities through ICT and broadband, particularly microenterprises in rural areas as they need to be part of the digital economy.

Microenterprises in the developing world account for the bulk of business ventures. In Malaysia, for example, 76.5% of businesses here are categorised as microenterprises. Such businesses have little need for automation and the inclination is towards mobile applications, especially as mobile devices are getting increasingly cheaper and more powerful. Furthermore, it is more feasible for microenterprises to adopt ICT as it is lower in cost and easier to access. Ultimately peer pressure would also help push microenterprises towards adoption of mobile applications.

The recently launched Go Global Malaysia (#MYGoGlobal) aims at helping local SMEs to explore new markets by introducing them to digitalisation and equipping them with the right knowledge and tools. The public-private partnership, led by industry partners namely Google, Alliance Bank, Mastercard and Maxis in collaboration with MITI, MATRADE and SME Corp. Malaysia will empower SMEs to build up their business capabilities, connect with partners in the digital ecosystem, promote exports and grow to be globally competitive SMEs.

