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DIGITAL TRANSFORMATION LIFECYCLE, ALIGNMENT FOCUS AND LEADERSHIP CAPABILITIES FOR DIGITAL NATIVES IN MALAYSIA

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MURUGAPPAN SUBRAMANIAM





Definitions

Digitization, Digitalization, Digital Transformation



This is the conversion of analog or physical information to a digital format. Think of converting physical print media like a newspaper or an instruction manual into a computerized form which can be viewed on a screen.





This is the use of digital technologies and digitally enabled approaches to enable or improve business models and processes. Take for example the "Smart Watch". Typically, a **Watch** is an instrument which measures time and date. The digitalization of this instrument (Smart Watch) has transformed it into a Phone, MP3 Player, Heart Monitor etc.





This is the coordinated digitalization change efforts at scale, diffused through the operating model and all aspects of the business, including people, processes, technologies, and metrics.



Digitization vs. Digitalization vs. Digital Transformation



MODERN TECHNOLOGIES ENABLE FOURTH INDUSTRIAL REVOLUTION (4IR)

Advanced Technological Infra & Intelligentization





·•<u>@</u>··

Finance

Retail



Energy

Agriculture

- ICT technologies + vertical industries in depth + focuses on enterprise infrastructure, intelligent products, and customer platforms.
- Conventional business are pushed in thru technological changes and dynamics in consumer preference, needs, and behaviours e.g. GE discovery of the need for data based services in aviation and power sectors (Govindarajan & Immelt 2019)
- Digital natives are pulled in as an element of digitalized supply chain as an integrated multiple sector player (Atluri et al., 2018).
 Manufacturing Digitalization is part of their "corporate DNA" (Bongiorno et al 2018) e.g. Amazon, Ali Baba, Paypal (Kissler, 2001)

Manufacturing

Transportation



Education

Medical

service

-•

ICT technologies reconstruct with enterprises' information, capital, and logistics flows, improve their efficiency, and accelerate business model innovation to mitigate threats of new competitors e.g. Uber vs Grab (Davis, Sept 2018).





Video market worth hundreds of billions of dollars



Enterprise IT cloud transformation market worth trillions of dollars



IoT market worth 100 billions of dollars



Internet Plus Vertical industries





PAN EU

😂 at&t

Domain 2.0



Onlife Telco

史中国电信 CHINA TELECOM

CTNet 2025





Policy makers are

up their countries

against economic

Intelligent Connectivity: The \$23 Trillion opportunity



JENDELA – Malaysian Connectivity Action Plan

To improve coverage and quality of service nationwide, and prepare for the foundation of 5G

(7) Wireless Broadband	RMK-11, RMK-12 Focus (2016 – 2020) • Nationwide 3G coverage • Rapid 4G expansion	Current State (2020) 96.7% of 2G *coverage in populated areas 95.3% of 3G coverage in populated areas 91.8% of 4G coverage in populated areas 25Mbps Speed	RMK 12 Aspirations (2021-2025) • Nationwide 4G coverage • 5G planning and rollout	JENDELA National Aspirations • 100% of 4G coverage in populated areas • 100Mbps speed by adopting 5G
Fixed Broadband	• Expand from High Speed Broadband (HSBB) to HSBB 2 and Sub-Urban Broadband (SUBB)	 4.95 million premises passed 	 Expand fibre to sub- urban and rural areas Alternative technologies to connect premises 	 Gigabit access to 9 million premises passed
Delivery Ecosystem	Strengthen digital inf States	rastructure planning across	 Integrating digital infrastructure across Government, Businesses and Rakyat 	 A readily accessible Digital Infrastructure map

CONNECTIVITY IS INTEGRAL, THEREFORE INTELLIGENCE

GCI Performance Versus GDP

Starters Adopters Frontrunners (&)Average GDP Average GDP Average GDP Per Capita: Per Capita: Per Capita: US\$3,800 US\$58,100 US\$17,200 GCI Score Range: GCI Score Range: GCI Score Range: 65-85 23-39 40-64 exploring ways to make 120K Luxembourg the most of new and 110K In short, an increase in 100K GCI score is directly unexpected potential, related to economic 90K lay the groundwork for development. Switzerland 80K Norway sustainability and shore Ireland 70K 60K United States 50K Finland Sweden downturn in the future. United Arab Emirat 40K 🔵 Japan France Ital South Korea ĩ 30K 20K Czech Re GCI Score 2019

Source: Global Connectivity Index 2019



DIGITAL ADOPTION

Motivation 1

1. Malaysia's overall digital adoption is high, but is relatively low for business

Source: World Bank, Digital Digital adoption, by country and income level Adoption Index, 2018.



According to the overall DAI, Malaysia has done more to embrace the digital figure than all ASEAN countries but Singapore



Malaysians are among the most digitally connected in the world

Malavsia = 0.55

1 005

3 995

GNI per capita

... but Malaysia's business

underperform relative to peer countries and the relative performance

of other dimensions of economy

12 235

12,235

ASEAN OECD

ASEAN OECD

2. A wide range of institutions are involved in promoting digital entrepreneurship in Malaysia, yet GRAB slipped

Motivation 2

Malaysia's Digital Entrepreneurship Ecosystem Map



Source: Malaysia's Digital Economy World Bank Group, MOF

- The Malaysian government initiated and remains at the center of the country's • digital entrepreneurship ecosystem
- Malaysia has also pioneered steps to promote inclusivity through award-winning digital entrepreneurship programs such as eUsahawan, eRezeki, GLOW, Goe-Commerce. These programs are intended to enable those in lower income groups to take advantage of potential business opportunities created by the gig or sharing

economy_____

- Yet, GRAB slipped through our hands
- Malaysian Digital business crossing 10 years anniversary is not happening fast and large enough

Motivation 3

3. No 'One Stop Identity' for digital businesses in Malaysia, unlike dot Gov (S'pore), DTA (Aust.), DEPA (Thailand)

Belong in different gate ways seeking licenses e.g.:

Telecommunication MCMC	Broadcasting MCMC	E-Commerce MCMC	
Business Domain MCMC	Digital Signature MCMC	SMEs SME Corp	
Payment Systems BNM	Money Services BNM	Financial Dev Innovations BNM	
Aviation	• Healthcare	• F&B	
Entry for licenses in the digital business domains exciting but sustainability is disappointing			







GOVERNMENT INITIATIVES

Policy Action

Evolution of policies related to DE in Malaysia



RM 9.4 billion for holistic National Digital Strategy 2021 Budget Setting up of Digital Nasional Berhad (DNB) as single Network provider for 5G Network RM 5.76 billion CAPEX RM 8.87 billion OPEX for next 10 years

Malaysian DE Blueprint with phases and desired outcome

-	Phase 1: 2021 - 2022	Phase 2: 2023 - 2025	Phase 3: 2026 - 2030
Phase	Accelerate adoption toward strengthening digital foundation	Drive digital transformation and inclusion	Become regional market leader in digital products and solutions (content and cybersecurity)
<u>в</u> т1	 Strong and clear digital governance High adoption of digital technologies in government All civil servants to possess basic digital literacy DE-branding awareness in business and public 	Effective use of technologies and data in the government that greater connectivity between all stakeholders Extensive government e-services	High ease of doing business in the country Data-driven government
72	High adoption of digital technologies, including e-commerce platform, across all firm size and digital maturity level Local champions are groomed to become regional players Increased regional collaboration via digital trade	Accelerated growth of local champions in a conducive environment that fosters innovation Improved stability, lowered risk and reduced compliance costs in digital trade and business Increased flow of innovation into the country with IP development and ownership highly encouraged	Local champions and a regional leader in producing digital products, solutions and content A highly attractive destination for investors and global unicorns
T3	Conducive and clear regulatory environment for the industry in developing digital infrastructure	 Faster and increased rollout of broadband infrastructure projects Equal broadband access between urban and rural 	High quality and extensive access to digital infrastructure
01800 T4	 Accelerated digitalisation within the development of talent in educational institutions Right balance of regulations on the gig economy 	 Digitalisation is successfully embedded and adopted in the development of digital talent Increased agility of the education system Gig workers are continuously retrained and upskilled 	 Malaysians equipped with the digital skills required to thrive in an evolving job market
T5	Increased confidence and usage of technology across all level of society	Equitable access to opportunities to uplift socioeconomic status	Greater digital inclusive society
<mark>⊛_</mark> T6	 Increased awareness about cybersecurity prevent instances of cyber crime 	 Malaysians are responsible, ethical and productive users of technologies Increased trust in personal data management and privacy 	 Highly secured and safe online ecosystem To be a regional leader in cybersecurity
			Source: EPU Report 2020

Covid-19

The reality of the interconnectivity has not only led to exponential transmission of prosperity and welfare (Walker, 2000; DasGupta, 2011; Brynjolfsson and McAfee, 2014), but also the transmission of infectious pandemics (Saker et al., 2004; Fontaine, 2020; The Economist, 2020).
This has been demonstrated by the recent Covid-19 pandemic which left companies with thriving digital leadership the only ones still delivering value when the clients were under movement restrictions over long period of time.

APSAT

REGIONAL DIGITAL ECONOMY DATA SUMMARY

	Malaysia	Indonesia	Philippines	Singapore	Vietnam
Combined value of startups	\$4b	\$60b	\$4b	\$35b	\$5b
No. of unicorns (>\$1b valuation)	0	4 (Gojek, Tokopedia, Traveloka, Bukalapak)	1 (Revolution Precrafted)	<mark>5</mark> (Grab, Sea, Lazada, Razer, Trax)	1 (VNG)
Fiscal policy - Corporate tax- - digital tax*-	24% <mark>6%</mark>	25% 10%	30% 12%	17% 7%	20% 10%
Ease of doing business	15 th	73 rd	124 th	2 nd	69 th
Human capital (% of skilled workers)	27.5%	42%	25.2%	56%	12%

Source:

World Banl, Deloitte, The Future of Fintech in Southeast Asia (Finch Capital), The Jakarta Post, Singapore Stats, Talent Corp, ASEAN Briefing, e27.co, CISCO white paper, ecovis.com,



DIGITAL LEADERSHIP DEFINED Digital leadership: a leader who recognizes that digitalization is NOT ONLY about technology BUT also about:

Customers

10

(Euler, 2015; Abatiello et al., 2017 Kane et al., 2018).



CHALLENEGES

HENCE LEADERSHIP APPROACH NEED TO EVOLVE

The pursuit toward digita transformation entail leadership phenomenon. (Karr,2019) Three additional obstacles identified when undergoing digital transformationincumbency, talent & culture (Govindarajan and immelt, 2018)

For leadership, new approach and style is required. (Zupancic et al 2017)





WHY THE DIGITAL LEADERSHIP GAPS NEED ADDRESSING

- A comprehension of **how digital native enterprises should lead their business** transformation and (its stages) would benefit by recognising vital digital leadership capabilities and deploy them across the transformation journey.
- An assumption that a **digital native enterprise would have the capability needed for such a journey (and its stages) would be dangerous** as not all digital leaders could lead in a dynamic digital infused environment.
- Undertaking this research on digital leadership and transformation for Malaysian landscape would assist the country in continuing the engagement toward a digital force in entrepreneurship.
- A digital leader should align their capabilities to fit the environment underpinning the digital transformation.





FOCUS....FINDING THE SWEET SPOT





Process Digital Transformation (PDT)

Business Model Digital Transformation (BMDT)

Domain Digital Transformation (DDT)

Organization Digital Transformation (ODT)

Forms of Transformation (Annacone, 2019)



EXPLORATORY FINDINGS

MATCH BETWEEN THEMES AND SAT

Themes were identified using the manual thematic analysis

	Themes from interviews	Strategic Alignment Theory's elements	Description
	Ready to lead in a disruption led transformation	Digital entrepreneurship – disrupter and innovation	Five of seven respondents emphasized on leveraging on technology to attain organizational value i.e. technology driven execution of strategy.
	Create new business values	Value creator – data oriented value	The role of creativity and innovation is one that corresponds to processes within a business and an environment that attracts the right talent. For example, business that provides an environment that promotes an empowering culture, values information and contribution by everyone in the business.
	Embrace failure culture	Digital entrepreneurship – culture and mindset	All respondents viewed failure as a means of learning thus necessary for the achievement of a business growth aspiration. However, the speed at which failure happens is essential for the creation of new business values and new customer value propositions.
1	Initiate structural changes	Architectural view – structure change	The adaptability of digital leaders in relation to business cycles implies that organizations must continuously evolve. For example, if the organization is to fully adopt an agile model, start-up leaders may not be the best leaders taking the organization to the next phase.
Q ₀	Acquire and build new skills	Architectural view – human capital management	All respondents agreed skill refresh is constantly required. However there was no consensus on which ones to acquire externally and those to build in house. Consensus on skill building was equilibrium between technology and business acumen.
8	Be agile	Agile leadership – agile strategy	All respondents consented agility to stamina, flexibility, dynamicity and fast analysis and problem identification as critical in business sustainability going in the future.

These themes were concluded to be in line with Strategic Alignment Theory's elements as proposed by Henderson and Venkataraman (1992) and further extended version of Li et al., 2016





Having the right, digital-savvy leaders in place

- Leadership plays a very important role in setting the context of the organization's digital transformation strategy. Thus, transformative leadership requires bringing people along on a new journey, one with unknown practices, risks and opportunities.
- Companies excelling in digital leadership share a set of common characteristics:
 - Clarity
 - Agility
 - Grit



CLARITY

- Clarity emerges as a key talent for leaders in organizations and governments.
- Creating clarity is achieved by reflecting and synthesizing the environment in which organizations operate, encompassing their ecosystem.
- This results in clarity of vision for shareholders and stakeholders that can be translated into coherent strategy and plans.



 The ability to use various leadership styles as required by the fastchanging situations that will become the new normal in the 4th Industrial Revolution era.



- Perseverance and Passion for long-term goals.
- In a digital context, grit is about staying committed to the digital vision of an enterprise over a long period of time.
- In the digital-transformation age, talent needs to be multidisciplinary, combining business skills and good technological knowledge, plus how to apply them effectively and quickly to changing economic paradigms.



CONCLUSION

As digital disruption accelerates, we often hear a sense of urgency among executives - but it rarely reaches the level of specificity needed to address the disconnects described.

The crucial elements in formulating a successful strategy are:

- : Involve the entire management team in digital transformation efforts.
- : The pace of change needs to be quick so, implement frequent reviews on strategies

: Technology implemented must be revised and refreshed to satiate the demands of the current market

: Strategic agility will require data, lots of it.

DEST - ADDATE - ADDAT



APU/APIIT DIGITAL SERVICES TRANSFORMATION PROGRAMME "HORIZON 2020"

OBJECTIVES	STRATEGIES
nsform end-User eXperience (UX)	Cloud Migration (Amazon Web Services)
sform Teaching, Learning & Assessments	
nce Communication & Collaboration	Office 365 Email and Communications
ce accessibility to applications (Any device any place any time)	Deploy Microsoft Teams + Moodle
ve Application Performance and User Productivity	
e Reliability and Redundancy	AGILE Development Methodology
ess Process Automation and Digitisation	API-driven Applications Development
ve Data Integrity	
scalability of Applications	Hybrid Development Framework
value of data through:	CAS Single Sign-On
r Report Generation (self-service) Analytics for predictive modelling	Overhaul Reporting System
e Total Cost of Ownership (TCO)	
ve application development turnaround	GIMS Revival
ce security through Single Sign-On and Authentication	Continuous Enhancement of Bandwidth
op-of-the-class Internet Access across the Campus	and Wifi



Welcome to APU Queue Management System

Please swipe your card to choose a service







Home Lock the system History Logout



Queue Information Exchange (QUiX)

- Signaling Display
- Functions Online & Offline
- Mobile App Notification (WIP)
- Visitor Satisfaction Survey (WIP)

Counter-

Online Appointment (WIP)

Realtime Analysis and Intelligent Reports

- Average Waiting/Serving Time (overall)
- Average Serving Time by Counter
- Count of Daily Visitors
- Staff Performance Report
- Generate Daily, Weekly, Monthly, and Yearly Scheduled Report
- Ticket Status Reports
- Top Clientele
- Inquiries by Service Type Report
- Daily and Monthly Peak Time Analysis







TRANSiX





Add to Folder REQUEST FOR REFERENCE LETTER Student Name * ALIBEK SULEIMENOV Student ID * Head of Department User Input Suggested by HOD TP032678 reverted Email Address * TP032678@mail.apu.edu.my Approval 🖋 User Input Contact Number * rejected

Submit

MAINTENANCE REQUEST FORM

Letter to

	MAINTENANCE DETAIL	LS
Types of Maintenance Requested *		
Computer/Server	Network	O Telephone/PABX
 Security/Forensic 	 Electrical/Aircond 	 Application/Patch
_ Lab	Other	
Department *		
	•	
Maintenance Objective/Outcome *		
Start Date +	Start Time	•
æ	HH MM	AD .
End Date *	End Time *	•



APU EXIT FORM

PERSONAL INFORMATION			
Nationality *	Intake *		
Secondary Email (Personal) •	Phone*		
Home Country Phone •	Do you use University Accommodation ? •		

Are you under working visa ?

- Yes:
- O No

Visa Expiry Date *

Online Forms with Workflow



THANK YOU