社会经济研究中心

SOCIO-ECONOMIC RESEARCH CENTRE

SERC

COVID-19: Accelerating Digitalisation

Malaysia – Now, Future and Opportunities

18 May 2020

Outline

Malaysia's Current State of Digitalisation

COVID-19 – Accelerate the Adoption of Digitalisation

Malaysia's National Digitalisation Transformation Plan

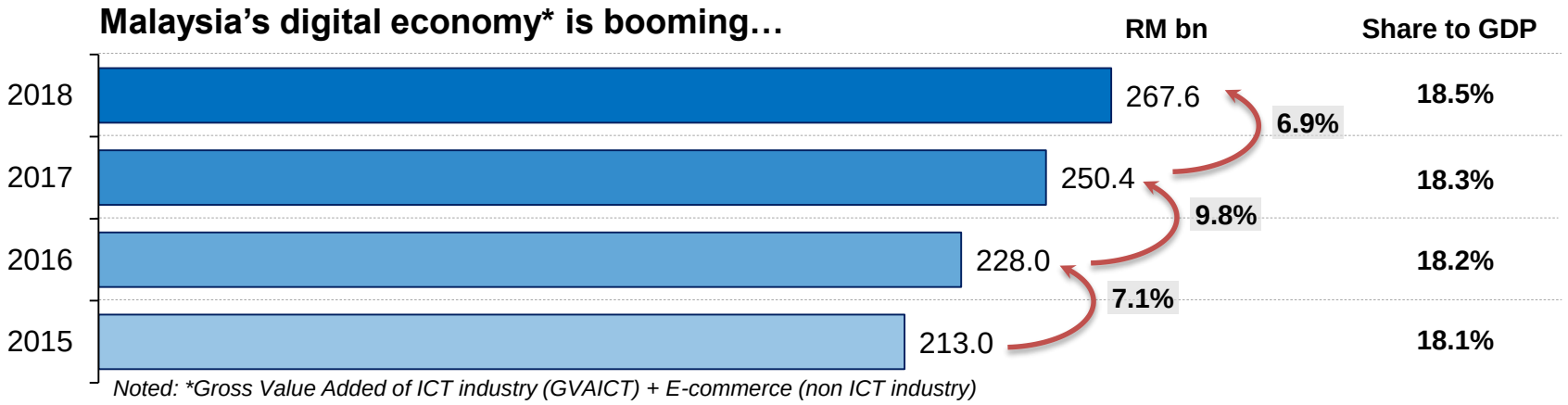
Malaysia's network and connection

Malaysia's digital transformation

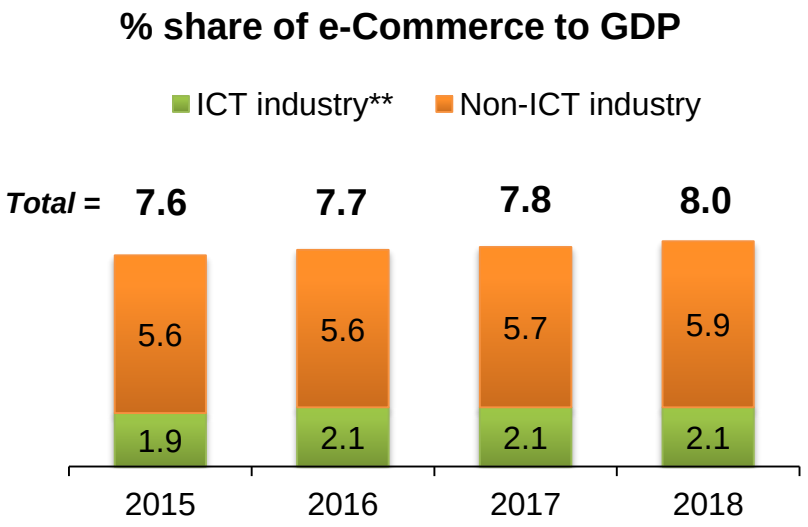
- Prior to the COVID-19 outbreak, the digital economy has been playing **an increasingly significant role as a new driver for Malaysia's economic growth, drive transformation in our daily lives, social-economic and business dealings and operations**.
- In 2018, **the digital economy contributed 18.5% of the Malaysian economy** as it **grown by 7.9% pa from RM213.0 billion in 2015 to RM267.6 billion in 2018**. The **e-Commerce's share to GDP stood at 8% or RM115.5 billion in 2018**, an increase of 9.0% pa from RM89.1 billion in 2015 (7.6% of GDP).
- This remarkable growth was largely driven by **non-Information, Communication and Technology (ICT) industry***, which had made up 5.9% share of GDP in 2018. The digitalisation process has been mainly driven by the **integration of ICT with traditional service sectors such as financial and entertainment sectors as well as e-Commerce**.
- In the global context, **Malaysia was ranked 26th out of 63 countries in the IMD World Digital Competitiveness Ranking in 2019,** marking a one notch improvement from the 27th placing in 2018.
- Malaysia is experiencing an "**adaptive imbalance" or a mismatch between high levels of training and education, and the attitudes towards embracing digitalisation**.

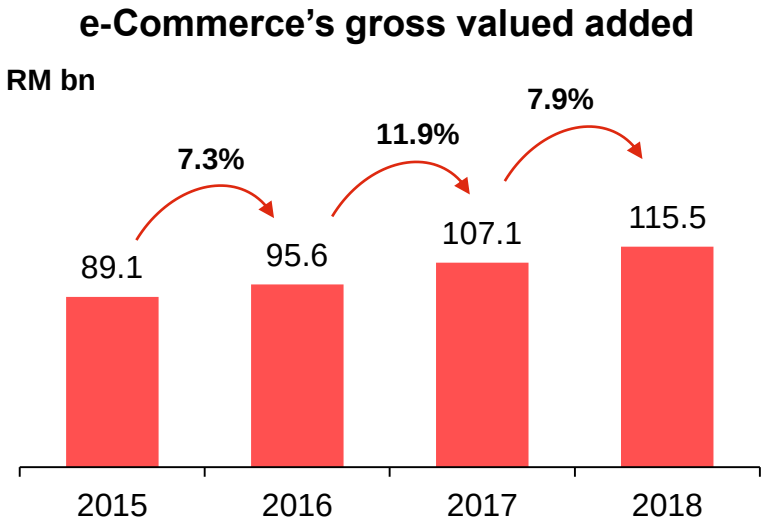
*Note: *Non-ICT industry refer to other industries that produce ICT products*

Digital economy contributes 18.5% of Malaysia's economy



For E-commerce outlook:





Source: DOSM

*Noted: **ICT manufacturing + ICT trade + ICT services + Content and media*

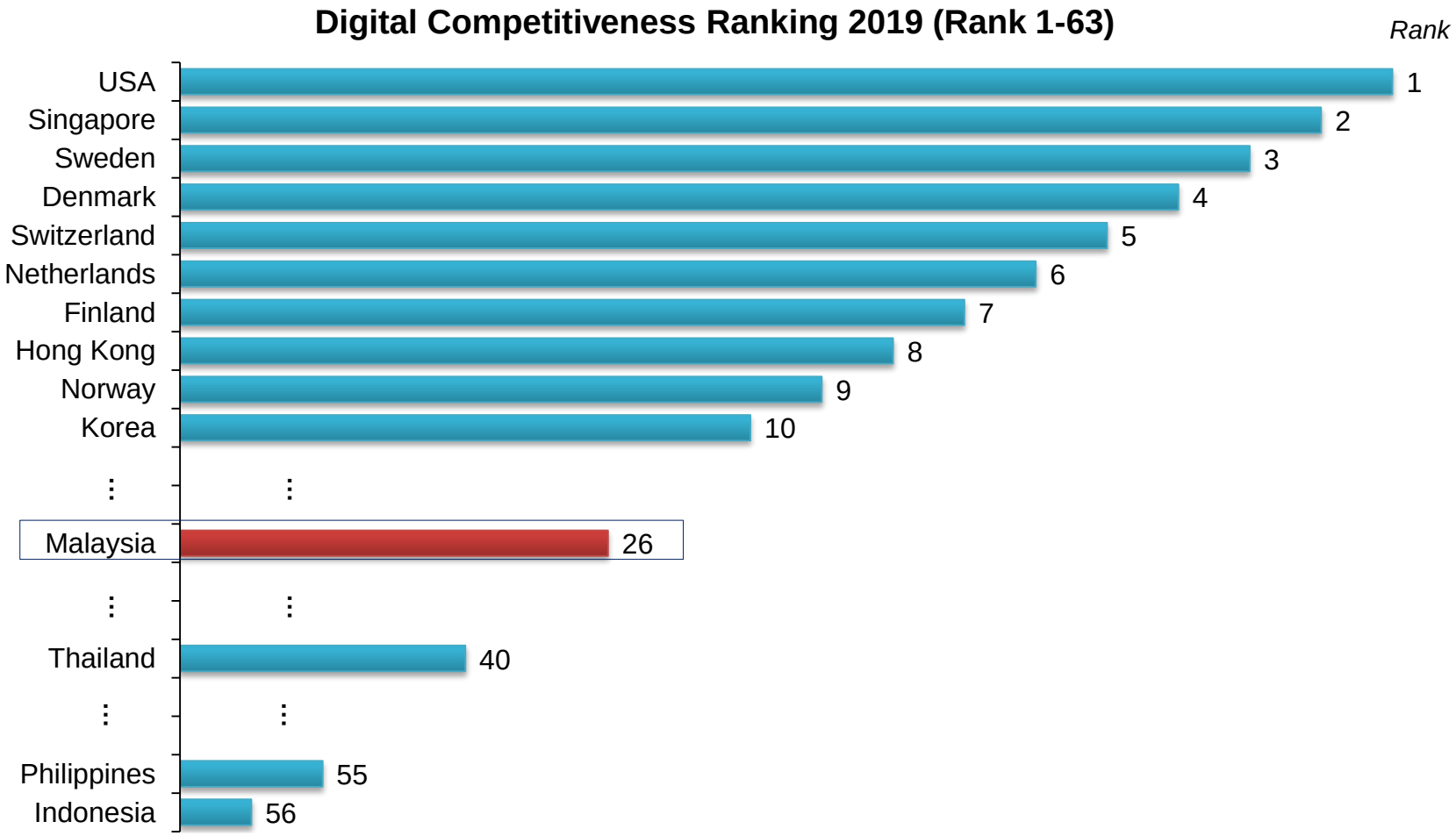
Top 20 economies by B2C e-Commerce sales in 2018

Rank	Economy	B2C e-Commerce sales ($ billion)	Share of B2C e-Commerce sales in GDP	Online shoppers (million)	Online shoppers (% of internet users)
1	China	1,361	10.0	610	73
2	United States	1,091	5.3	189	80
3	United Kingdom	266	9.3	41	87
4	Japan	163	3.3	49	49
5	France	109	3.9	36	75
6	Korea (Rep.)	102	6.3	27	60
7	Germany	101	2.6	54	82
8	Spain	72	5.1	21	62
9	Canada	44	2.6	24	84
10	Hong Kong, China	38	10.4	2	38
11	Italy	32	1.6	18	47
12	Netherlands	28	3.1	12	84
13	Thailand	27	5.3	5	14
14	Mexico	26	2.1	24	33
15	Ireland	22	5.7	2	70
16	Australia	21	1.5	12	73
17	Russia	20	1.2	30	34
18	**Malaysia**	**19**	**6.0**	**15**	**53**
19	India	17	0.6	27	11
20	Brazil	15	0.8	39	34

Source: UNCTAD.

Malaysia was ranked 26th out of 63 countries in the world's digital competitiveness ranking

- The ranking comprises three factors: **knowledge, technology and future readiness**.



Source: IMD World Digital Competitiveness Ranking (WDCR) 2019

E-Commerce's income and usage on rising trend

2017:
RM447.8 billion

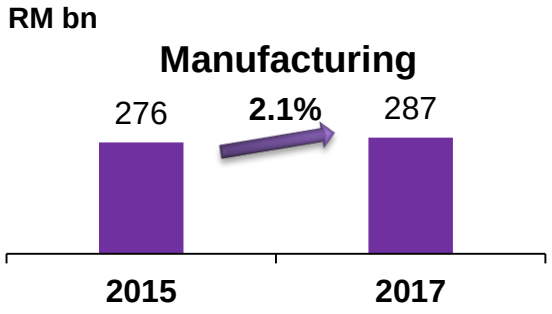
6.0%

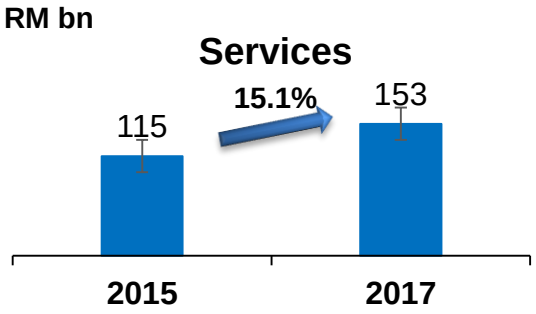
2015:
RM398.2 billion

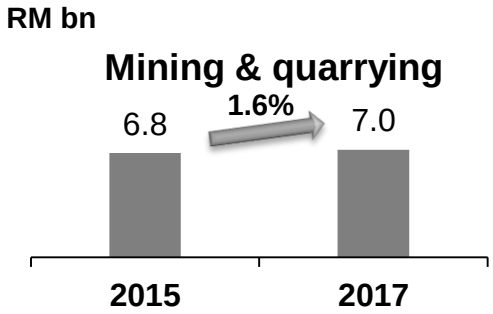
Type of Market	2015	2017	CAGR (15-17)
	RM billion		
Domestic	356.9	399.8	5.8%
International	41.3	48.0	7.8%

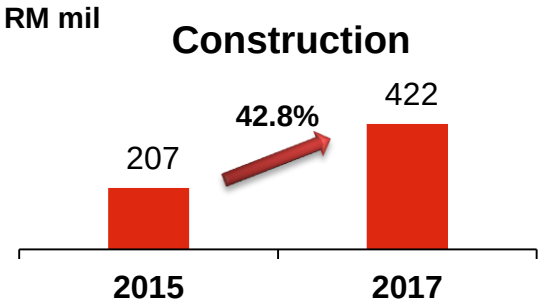
Type of Customers	2015	2017	CAGR (15-17)
	RM billion		
B2B	320.1	352.2	4.9%
B2C	68.8	82.5	9.5%
B2G	9.2	13.1	19.1%

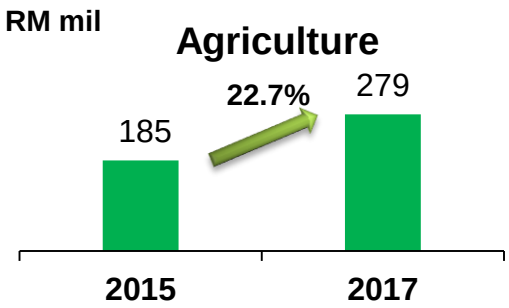
By sector:











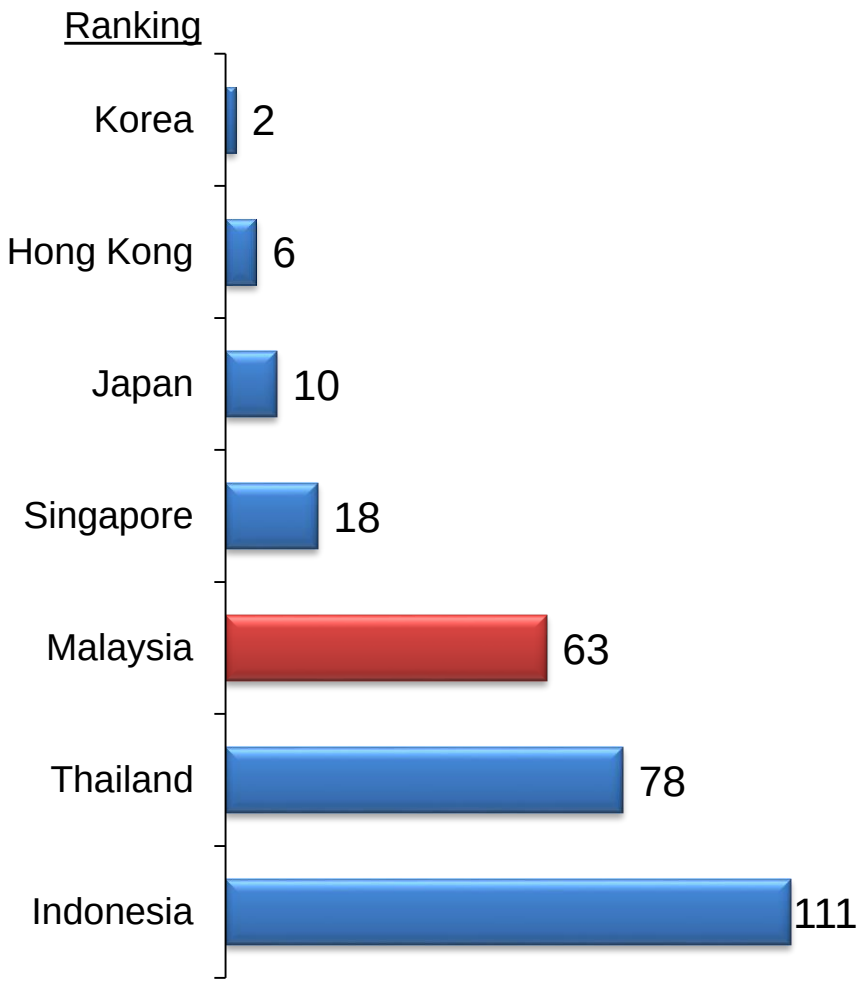
Source: DOSM

Malaysia's digital transformation (cont.)

- The Government needs to **ramp up a full-fledge e-government** as well as **coordinate a Public-Private Partnership to win public trust in using technology tools** to **increase process efficiency, reduce cost and boost productivity**.
- The **E–Government Development Index (EGDI)**, which measures national institutions' readiness and capacity to use ICTs to deliver public services, shows that **Malaysia was ranked 48th -- markedly behind Singapore (7th) and Japan (10th).**
- The **current e-Government system is probably at 30-40%,** meaning that the process of digitalising public delivery services must be more comprehensive and accelerated.
- For the **Network Readiness Index 2019**, **Malaysia's 4G mobile network coverage was ranked 60th out of 121 countries**, lagging behind Vietnam (56th), India (54th), Thailand (38th), Japan (24th) and Singapore (1st).
- **A 5G network needs to be rolled out fast** as it be **the "catalytic enabler" of the digital economy** to boost Malaysia's growth potential and sustainability.
- With **the Government expected to lead the e-curve**, businesses and people are **hoping for a strong political will and action to improve the current digital infrastructure**.

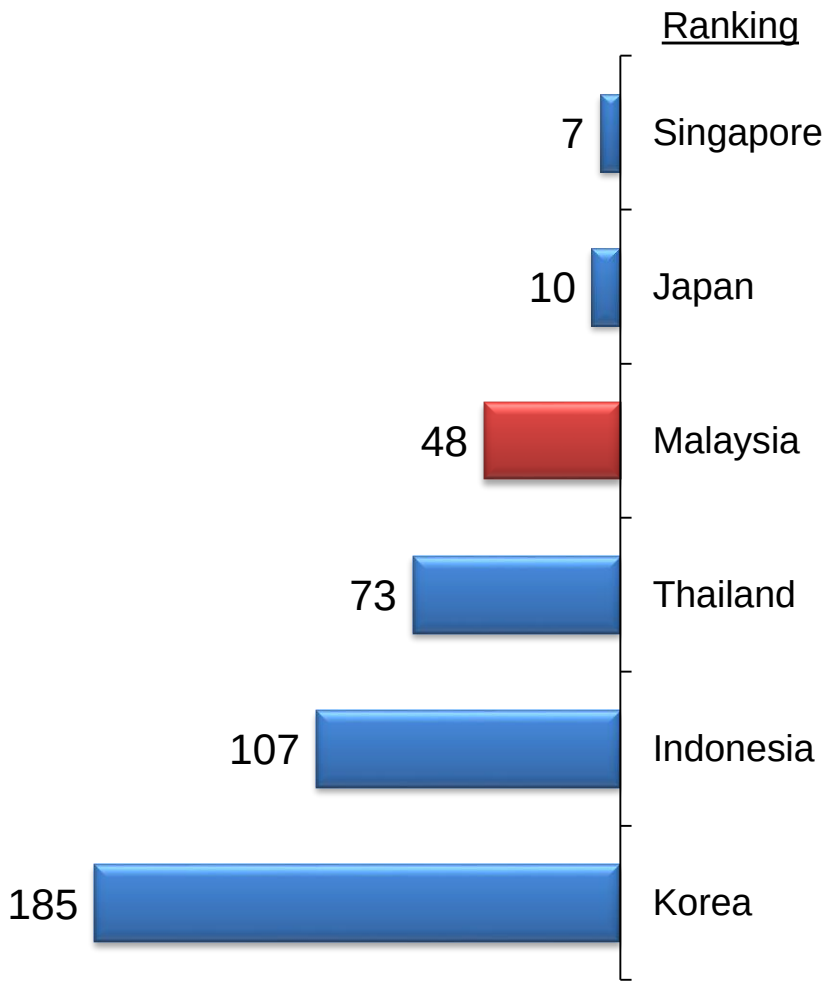
Malaysia's ranking in ICT-related development

ICT Development Index (IDI) 2017



Source: International Telecommunication Union (ITU)

E-Government Development Index 2018

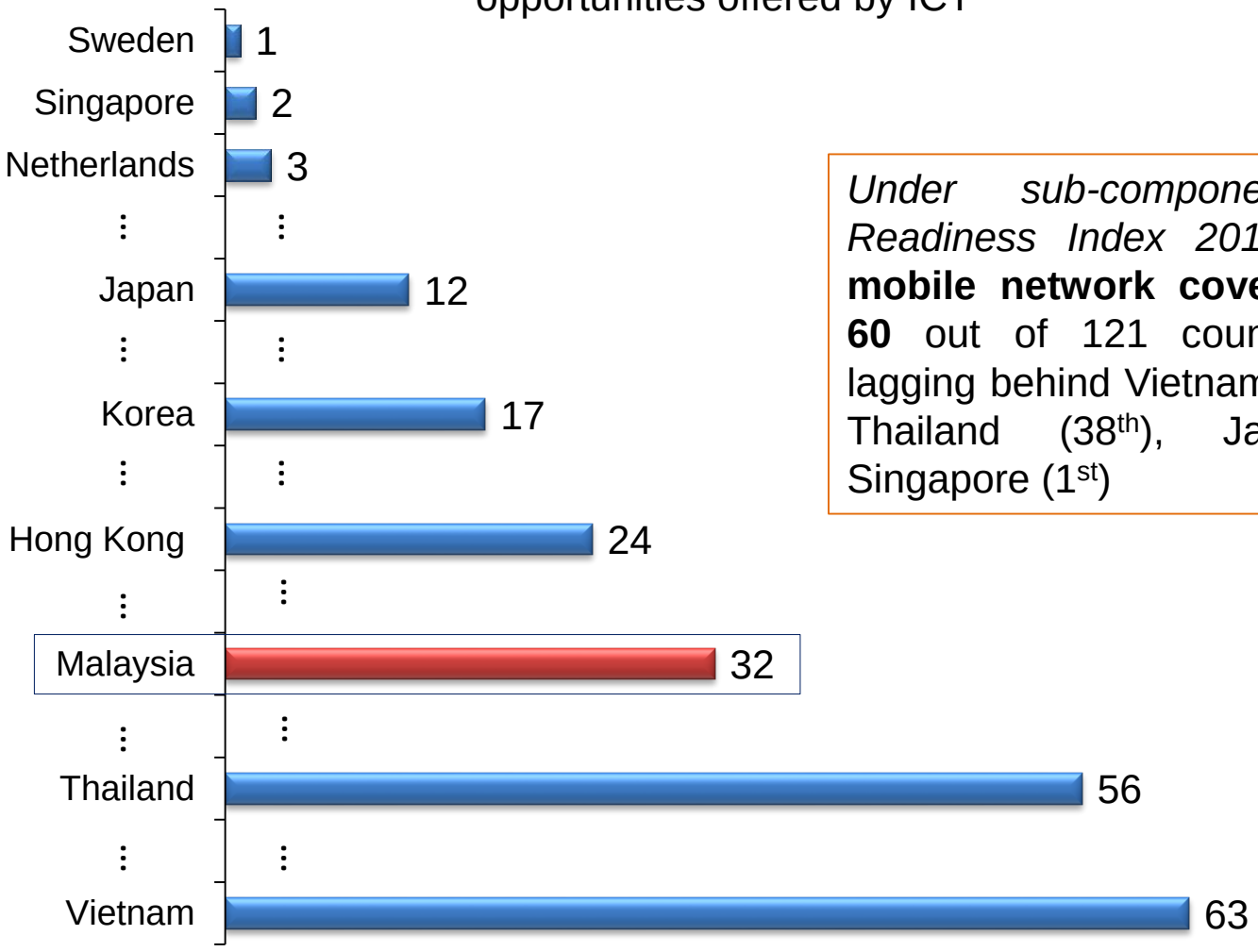


Source: United Nation e-Government Survey 2018

Network Readiness Index (NRI) 2019

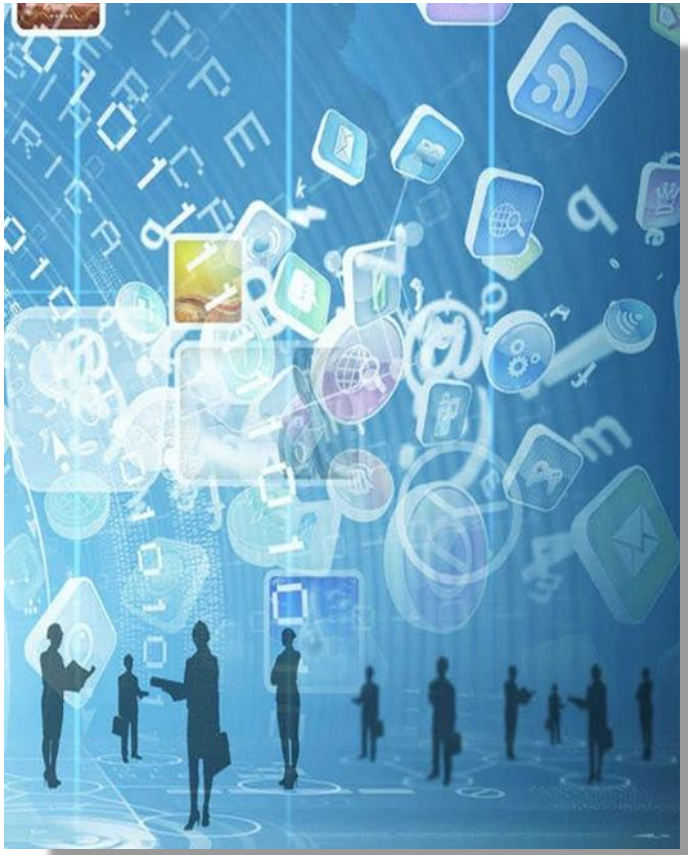
Ranking

NRI measures the propensity for countries to exploit the opportunities offered by ICT



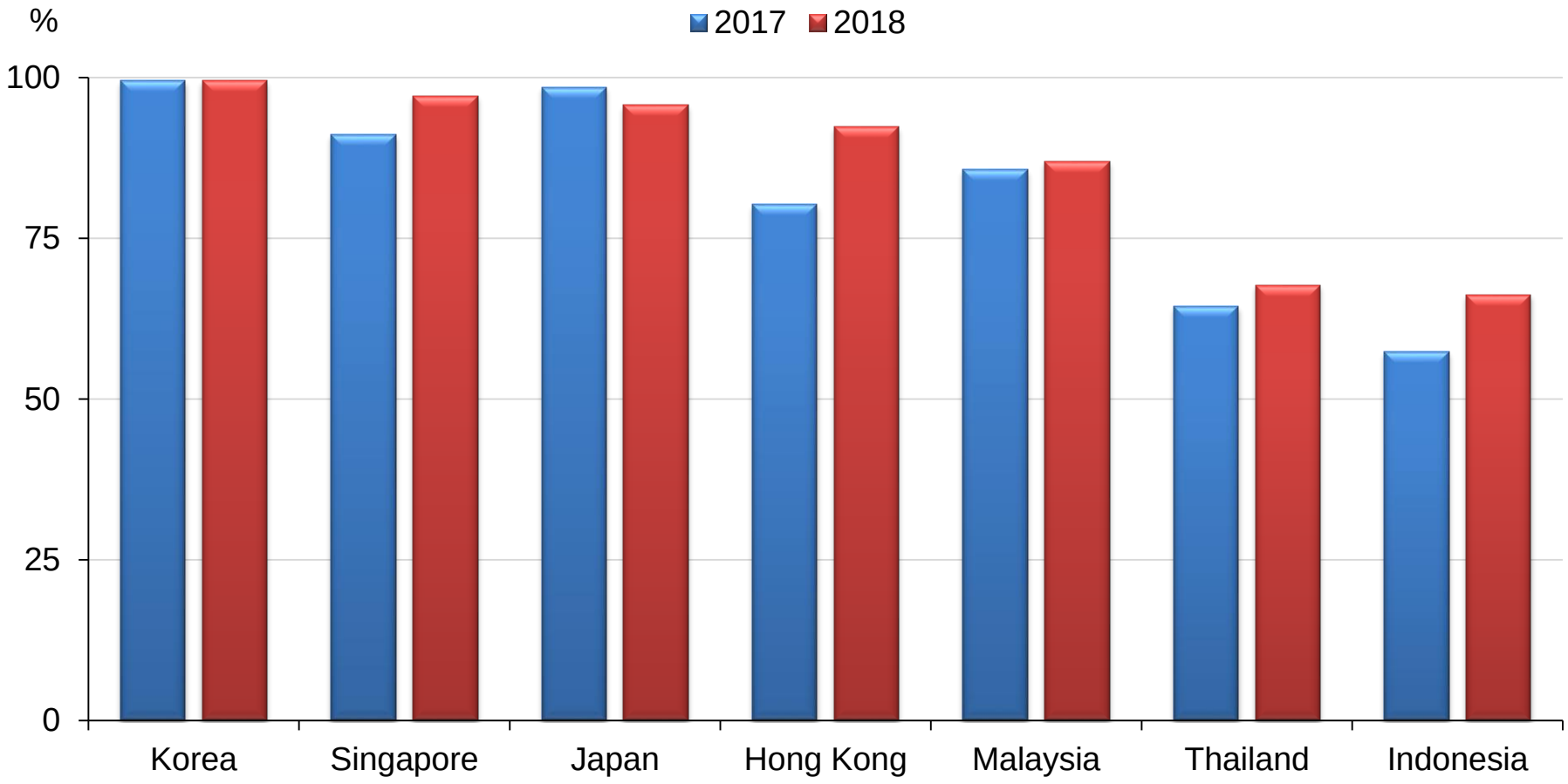
Under sub-component of Network Readiness Index 2019, **Malaysia's 4G mobile network coverage was ranked 60** out of 121 countries. Malaysia is lagging behind Vietnam (56th), India (54th), Thailand (38th), Japan (24th) and Singapore (1st)

Source: The 2019 Network Readiness Index



Households & Businesses: Internet adoption

Malaysia has high percentage of households with internet access compared to selected countries in the region



Source: International Telecommunication Union (ITU)

90% of Malaysian households have internet access in 2019

Malaysia's internet access (%)

In 2019, 9.9% of households not having internet access at home:

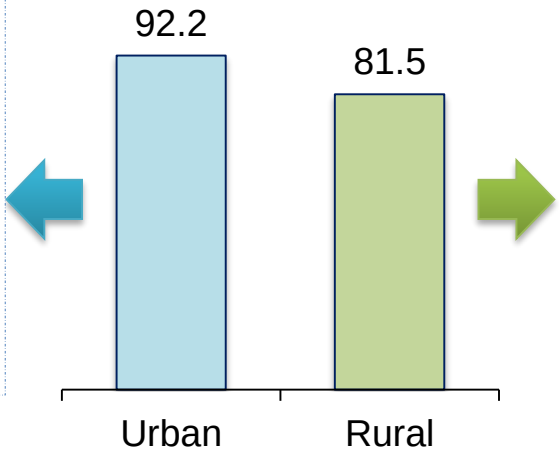
- Do not need internet (77.3%);
- Lack of confidence, knowledge or skills to use internet (71.0%); and
- Cost of equipment is too high (59.4%).

By strata, 20% of households in majority states can't access internet

State below the urban average point

		%
1.	Sarawak	91.5
2.	Pulau Pinang	90.0
3.	Melaka	89.1
4.	Pahang	89.0
5.	Kelantan	86.9
6.	Kedah	84.3
7.	Perak	83.9

Internet access (%) – 2019



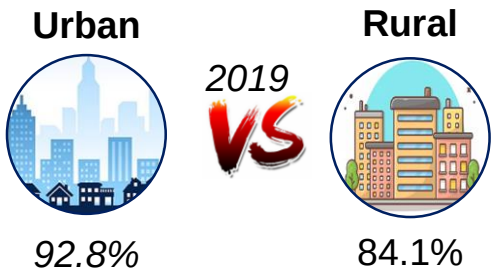
State below the rural average point

		%
1.	Kelantan	79.5
2.	Pahang	78.9
3.	Perak	78.8
4.	Kedah	77.7
5.	Sarawak	70.7

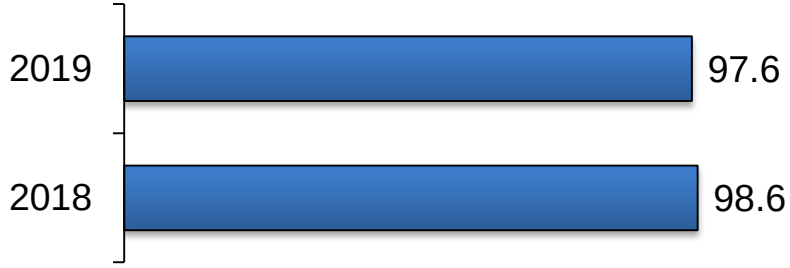
Source: ICT use and access by individuals and households survey report 2019

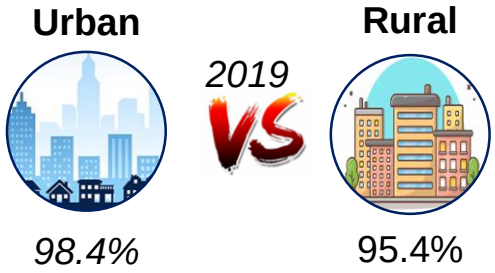
Households access to selected ICT equipment

Smart Phone (%)

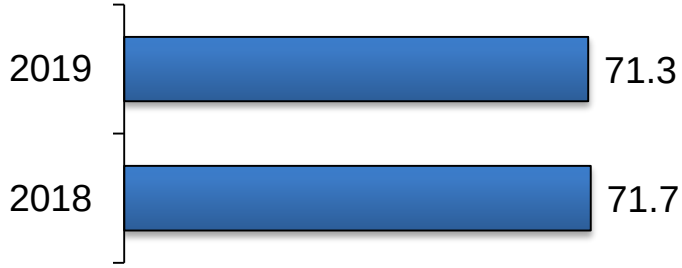


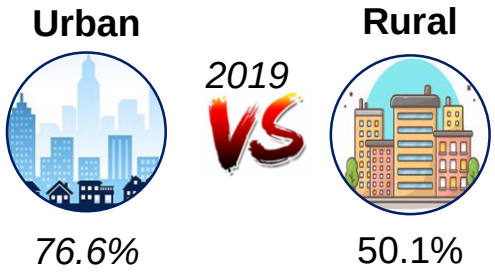
Television (%)





Computer (%)





Source: ICT use and access by individuals and households survey report 2019

Every individual too has high internet access

Malaysia

2019: 84.2%
2018: 81.2%

Urban

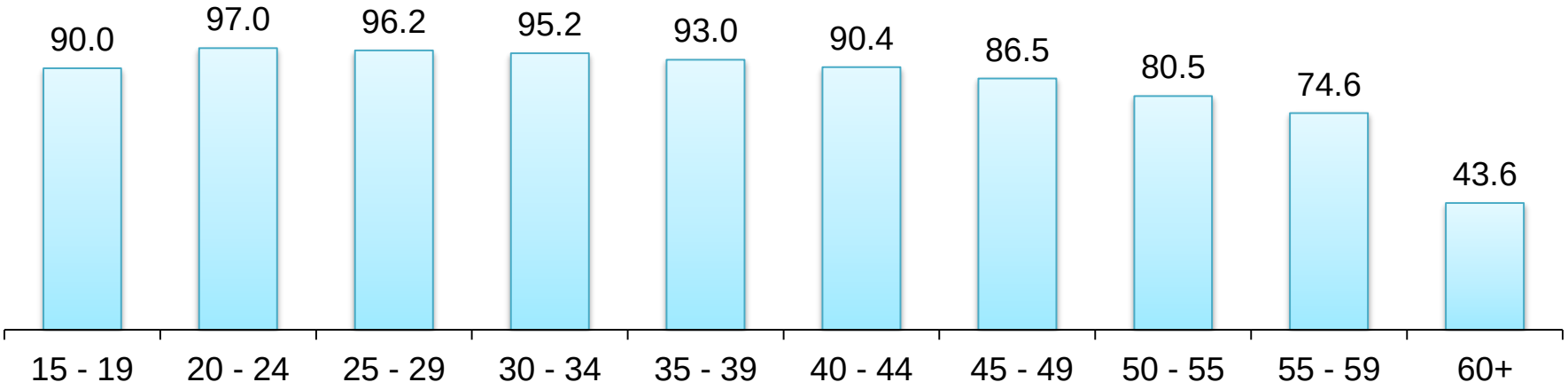
2019: 87.5%
2018: 84.9%

Rural

2019: 72.7%
2018: 69.4%

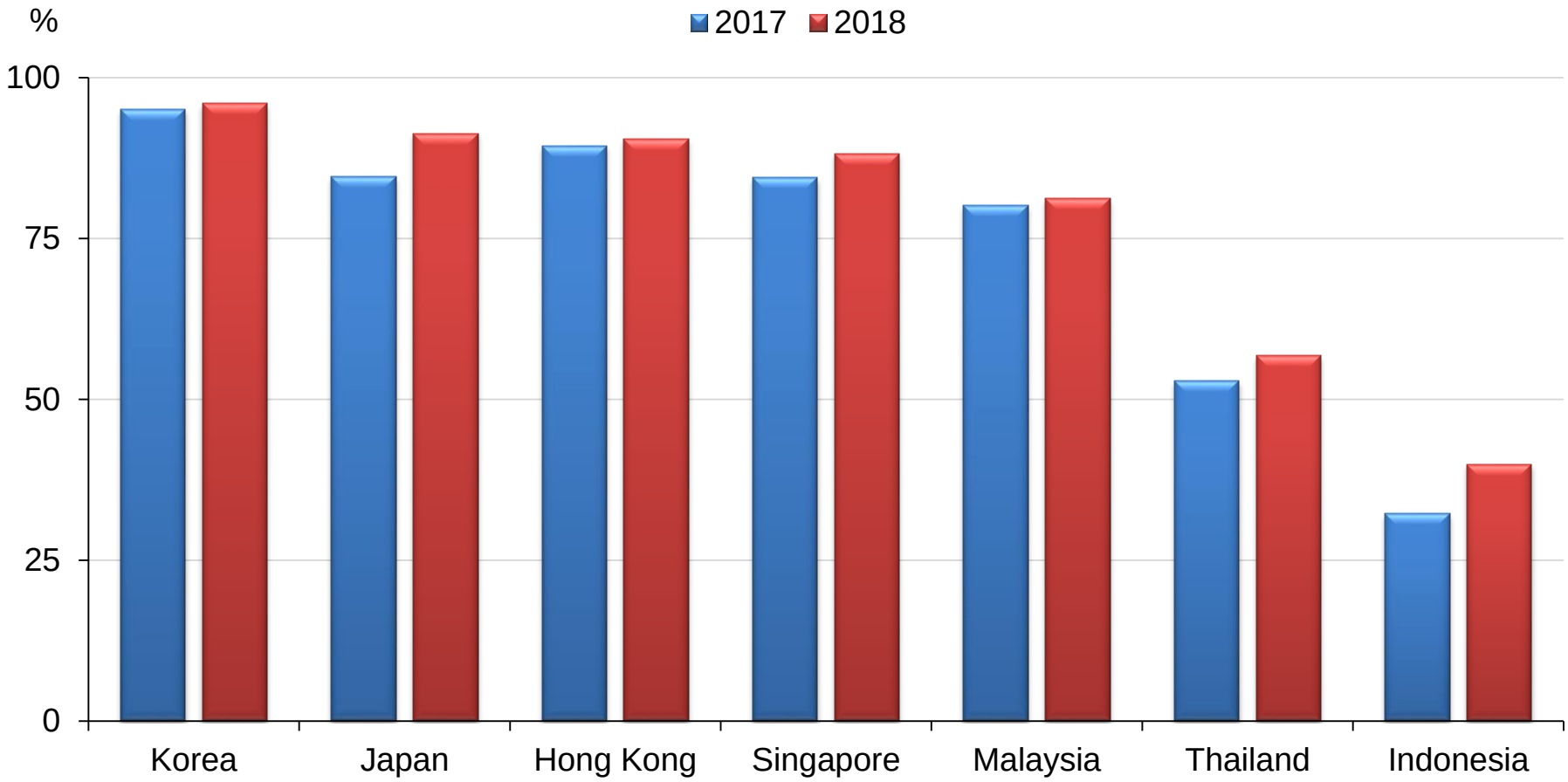
Individuals using internet by type of portable devices (2019)	
Mobile phone	99.6%
Tablet	13.0%
Portable computer	35.6%
Other portable devices	7.0%

Individuals using internet by age group (%) – 2019



Source: ICT use and access by individuals and households survey report 2019

Malaysia has high percentage of individuals having internet access



Source: International Telecommunication Union (ITU)

Top 15 activities performed by individuals using internet (2019)

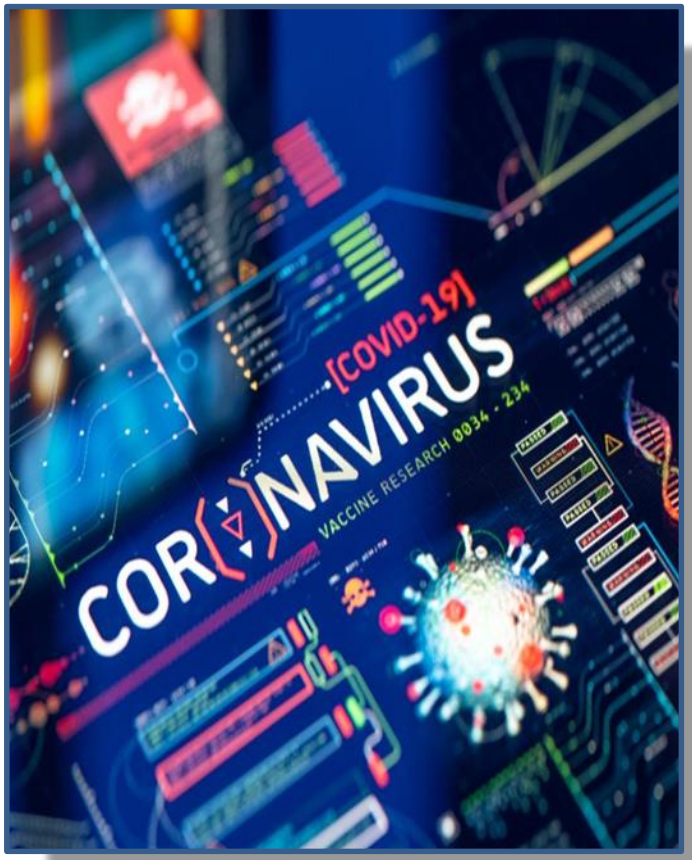
Rank	Type of activities	%
1	Participating in social networks	97.1
2	Downloading images/ movie/ games	84.7
3	Finding information about goods/ services	83.5
4	Telephoning over the Internet	77.4
5	Downloading software/ applications	77.1
6	Sending e-mail	76.3
7	Reading newspaper/ magazines online	66.2
8	Using storage space on the Internet	52.5
9	Listening to radio online	50.7
10	Using Internet banking	50.5
11	Watching television online	47.8
12	Getting information from government organizations	45.5
13	Seeking health information	45.2
14	Consulting websites for formal learning purposes	39.9
15	Interacting with government organizations	39.4

Source: ICT use and access by individuals and households survey report 2019

Business establishments' internet usage by purpose

	2015	2017
Sending or receiving email	70.6%	92.1%
Internet banking	41.3%	70.9%
Getting information about goods and services	38.9%	67.3%
Posting information or instant messaging	36.%	65.6%
Getting information from government organizations	23.5%	40.5%
Interacting with government organizations	16.5%	32.5%
Providing customer service	10.3%	29.6%
Telephoning over the internet	18.6%	25.8%
Internal or external recruitment	10.8%	22.1%
Accessing other financial services	9.9%	14.6%
Delivering products online	5.7%	13.5%
Staff training(e-learning application)	2.5%	8.9%
Others	12.5%	19.0%

Source: Usage of ICT and e-Commerce by establishment 2018



The COVID-19: Accelerate the ICT adoption

COVID-19 induces digitalised strategies for survival

- The Covid-19 global pandemic has **forced protocol and behavioural changes on governments, consumers and businesses**. They have to **adopt digitalised network and digital solutions for innovation and for development as well as in the conduct of daily dealings**.
- In this on-going health pandemic's inflicted hard time journey, **many companies and businesses have learned and developed "digital covid-19 survival strategies"** and have become more **aware of the need for digital skills and digital competitiveness**.
- **Delivery applications, contact-less payments and mobile banking** have emerged to be important tools for transactions between individuals, companies, traders, businessmen and governments. **Cross border e-payments and transactions (B2B, B2C, B2G, G2G) have gathered momentum**.
- The new normal is that countries, which are **ahead of the curve in adapting and applying digitalised-technology mechanisms**, is more likely to **succeed in the new digital paradigm**.
- Businesses are focusing on **the deployment and upgrading of digital solutions** to keep pace with **rising consumer expectations for fast, cost-efficient and quality delivery services**.

COVID-19 induces digitalised strategies for survival (cont.)

- **Robots, drones with sensors can be deployed to complete the delivery of physical goods while contact-less mechanisms** using big carriers can be used for large machinery delivery. **E-commerce will flourish with the support of digital orders**.
- Except for physical goods that need to be transported, most other underlying workflows are likely to be digitized to avoid human-to- human contacts.
- As Malaysia races to contain COVID-19, it had implemented the Movement Control Order (MCO) - a necessary but costly move that comes with devastating economic costs. The Government, people and businesses are forced to move all possible economic activity online.
- During the MCO period, the **usage of digital technology applications and data solutions has increased**. We are witnessing three major occurrences in day-to-day life, workplace and business:

  a) **Increasing acceptance of online and e-services**;

  b) **A humongous requirement for internet services, IT and data solutions** for conventional industries; and

  c) **Rise in seamless technology connectivity and communications** between people and businesses among many industries.

COVID-19 induces digitalised strategies for survival (cont.)

- The following findings are indeed interesting not only for the households and business sector, but also from a future policy-development viewpoint.

  a) In 2019, **only 23.1% of Malaysians "accessed online discussion"** and **11.0% "working from home".**

  b) **35.2% of Malaysians will purchase goods/services via e-Commerce**. **Most of them are from the age group (20-44)**.

  c) **Nine out of ten children aged 5 to 17 were using internet**. The use of smartphone for online activities amongst the children was omnipresent whereby 91.8% of them accessed internet from the devices. Text communication, social networking, getting information and watching videos were the top online activities for children. (Source: MCMC's Internet User Survey 2018).

  d) In 2019, the **age group of 15-24 has the highest percentage** on **"Consulting websites for formal learning purposes"** compared to other age groups.

  e) For **doing formal or informal online courses**, **less than 10% of Malaysians will participate into those courses**. This may refer that Malaysians have yet to be ready for e-learning situation.

Selected professional & communication activities using internet

- In 2019, **only 11% of Malaysians stated they are working from home**. However, the age group **(25 to 55) had a higher percentage** compared to the average point.
- **Still low level of "accessing online discussion"** (> 23.1% of Malaysians).

Year 2019	Malaysian	By Age Group									
		15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 55	55 - 59	60+
Participating in social networks	97.1	96.6	98.8	98.9	98.7	98.6	97.3	97.1	95.8	93.7	89.2
Telephoning over the Internet	77.4	79.1	82.1	82.0	80.9	76.9	77.1	75.4	74.2	71.3	62.5
Accessing online discussion	23.1	17.3	23.4	24.9	25.7	27.5	25.1	26.1	22.4	19.9	12.6
Work from home	11.0	1.6	7.2	12.6	13.8	15.5	16.3	14.7	12.2	10.3	4.6
Participating in professional networks	8.5	4.3	11.6	12.4	10.8	9.6	7.9	6.6	6.2	4.7	3.5

Source: ICT use and access by individuals and households survey report 2019

Learning activities and entertainment activities using internet by age group (cont.)

Year 2019	Malaysian	By Age Group									
		15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 55	55 - 59	60+
Learning Activities											
Consulting websites for formal learning purposes	39.9	50.5	51.2	43.1	39.7	38.0	38.4	36.5	33.9	28.6	20.3
Doing an informal online course	9.5	9.0	10.6	9.7	11.6	10.4	8.6	9.8	8.6	6.4	6.1
Doing a formal online course	8.1	6.6	8.9	8.4	8.5	11.0	9.1	9.1	7.5	5.8	2.7
Entertainment											
Listening to radio online	50.7	57.7	60.1	57.7	55.7	52.0	50.4	44.5	38.5	33.8	29.7
Watching television online	47.8	54.2	56.3	54.2	51.4	48.7	47.1	42.6	36.9	35.8	28.2
Downloading images/ movie/ games	84.7	91.1	91.8	91.6	89.8	86.6	83.5	80.7	74.4	69.9	61.8

Source: ICT use and access by individuals and households survey report 2019

Trading activities using internet by age group (cont.)

- Overall, **35.2% of Malaysians will purchase goods/services via e-Commerce**. Most of them are from the age group (20-44).
- Malaysians have yet getting use to posting their second-hand products online or via e-Commerce.

Year 2019	Malaysian	By Age Group									
		15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 55	55 - 59	60+
Purchasing goods/ services via e-Commerce	35.2	24.9	43.0	45.1	42.6	40.0	36.8	32.4	26.2	22.6	15.7
Ordering goods/ services online	22.5	16.9	25.5	27.3	26.7	27.2	23.9	22.0	18.2	15.1	9.7
Selling goods/ services	4.0	2.5	5.0	5.1	4.8	4.6	3.7	3.9	3.6	4.0	1.2
Selling goods/ services via e-Commerce	2.0	1.6	2.2	2.5	3.1	2.1	1.7	2.2	1.6	0.9	1.1
Other											
Using Internet banking	50.5	22.9	56.5	61.5	59.9	58.1	55.8	53.6	47.7	43.5	29.8

Source: ICT use and access by individuals and households survey report 2019

Top three types of goods and services purchased by age group

(2018)
By age group

Below 20's

64.9% Fashion apparel
35.1% e-ticket & e-booking
31.5% Food and beverages

20's

63.6% Fashion apparel
37.0% Food and beverages
35.1% e-ticket & e-booking

30's

56.7% Fashion apparel
39.6% Food and beverages
37.1% Children's products

40's

51.1% Fashion apparel
42.7% e-Government services
40.3% e-ticket & e-booking

50's

42.8% Fashion apparel
34.2% e-Government services
32.9% Accommodation

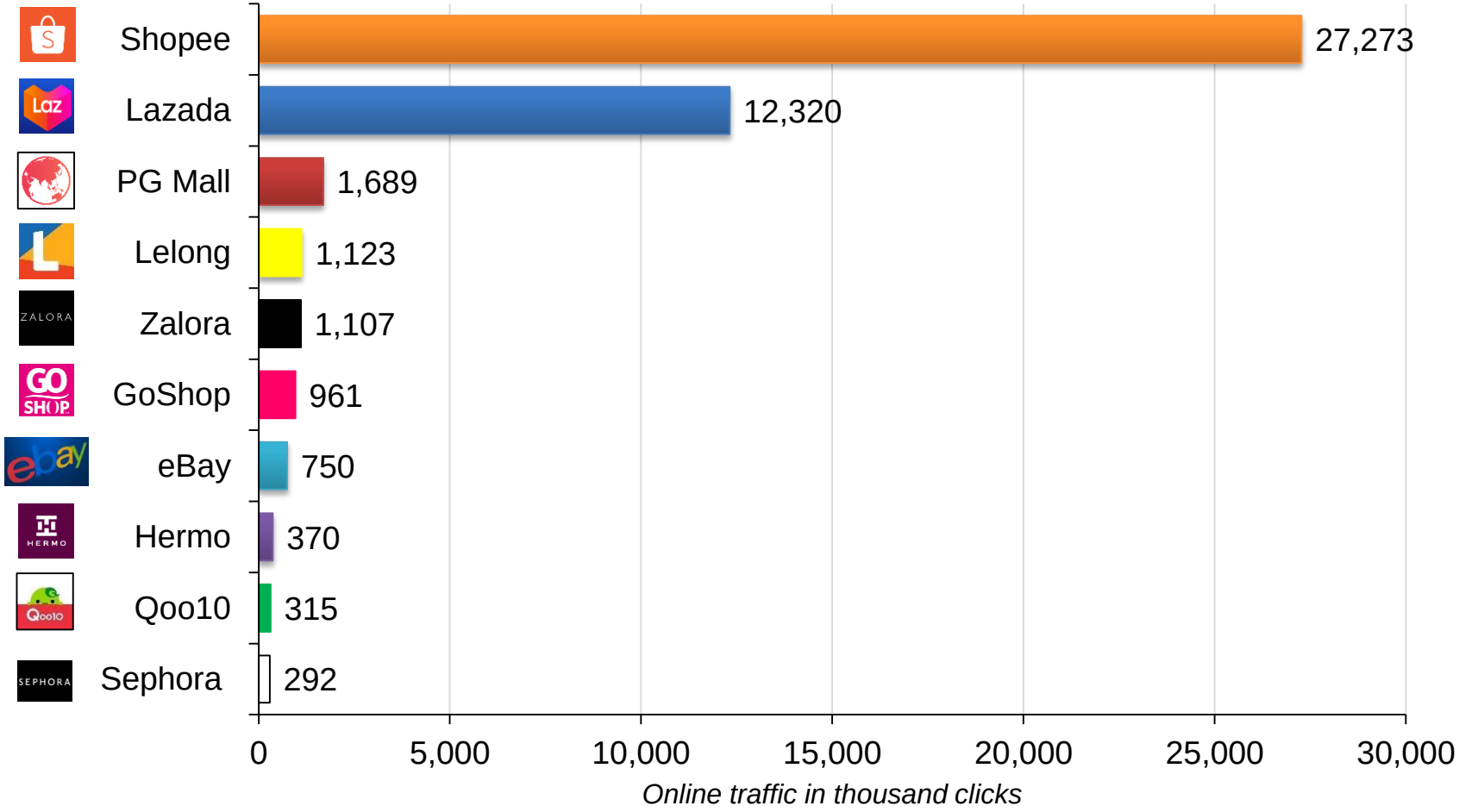
Above 60's

42.1% Travel tickets
34.2% Accommodation
34.2% Fashion apparel

Source: e-Commerce Consumers Survey 2018

Malaysia's top 10 e-Commerce sites in Q1 2020

- **Seven famous e-marketplaces** (*except Zalora, Hermo and Sephora*) allowing local businesses to display their products.

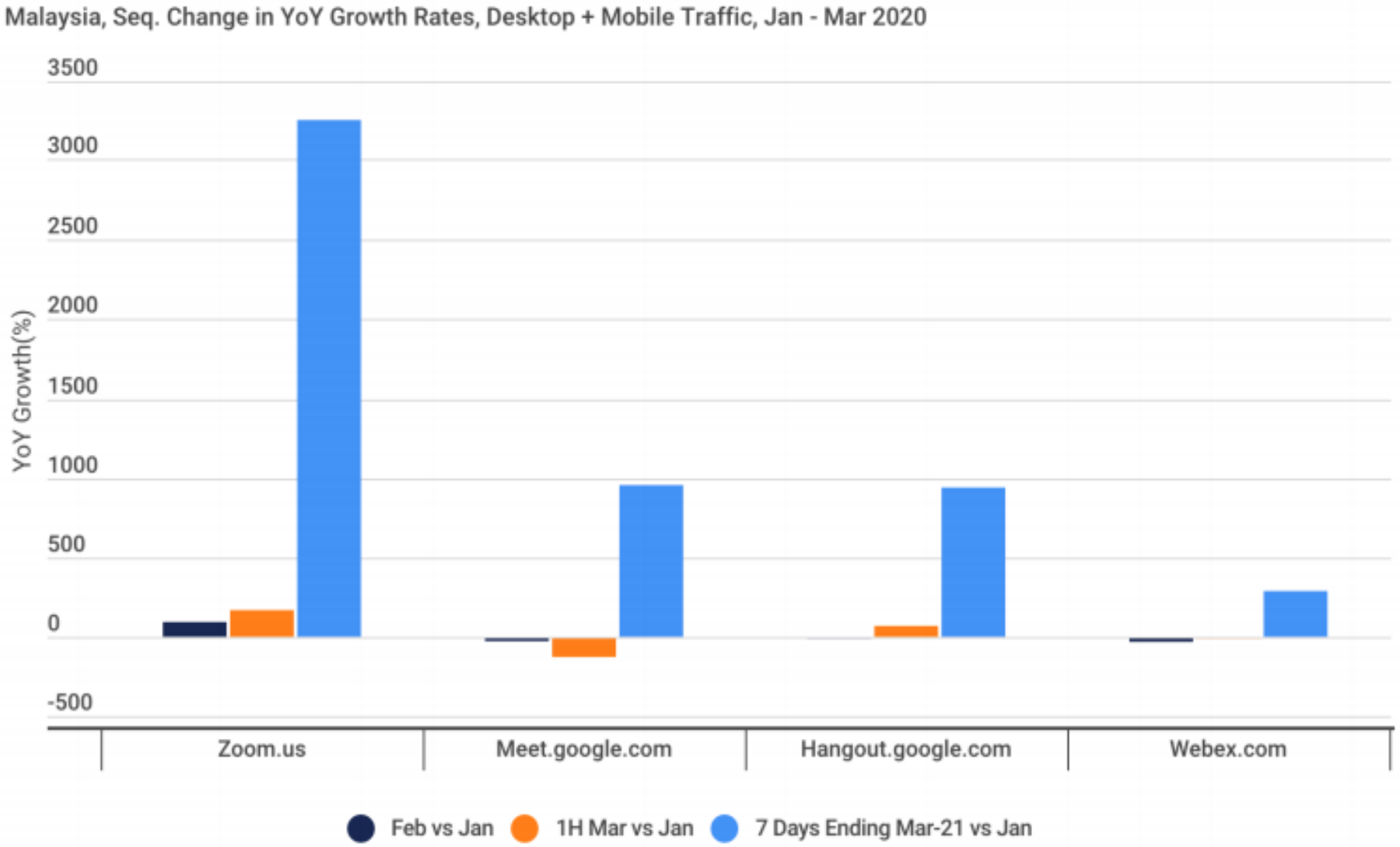


Source: Statista

COVID-19 induces digitalised strategies for survival (cont.)

- But this Covid-19 crisis has forced a change in lifestyle and work process.
- **A shift in working patterns has also emerged as employees and companies are compelled to embrace remote working**, building on pre-existing infrastructure such as office chat groups, remote access to critical tools.
- With the lockdown, companies, employers and employees continued to toil at home, with conducting discussions and business meetings via WhatsApp and other messaging apps. Business meetings and forums as well as video conferencing are now conducted using the tools provided free by start-ups, such as Slack and Zoom, and established giants (Google and Microsoft and Webinars).
- The volume on Google's Meet and Hangouts (meet.google.com and hangout.google.com) surged ~950% in sequential traffic in March on a rolling 7-day period while rival Zoom (zoom.us) saw a phenomenal burst of traffic, growing in excess of 3,180% compared to a sequential traffic in 1H March.

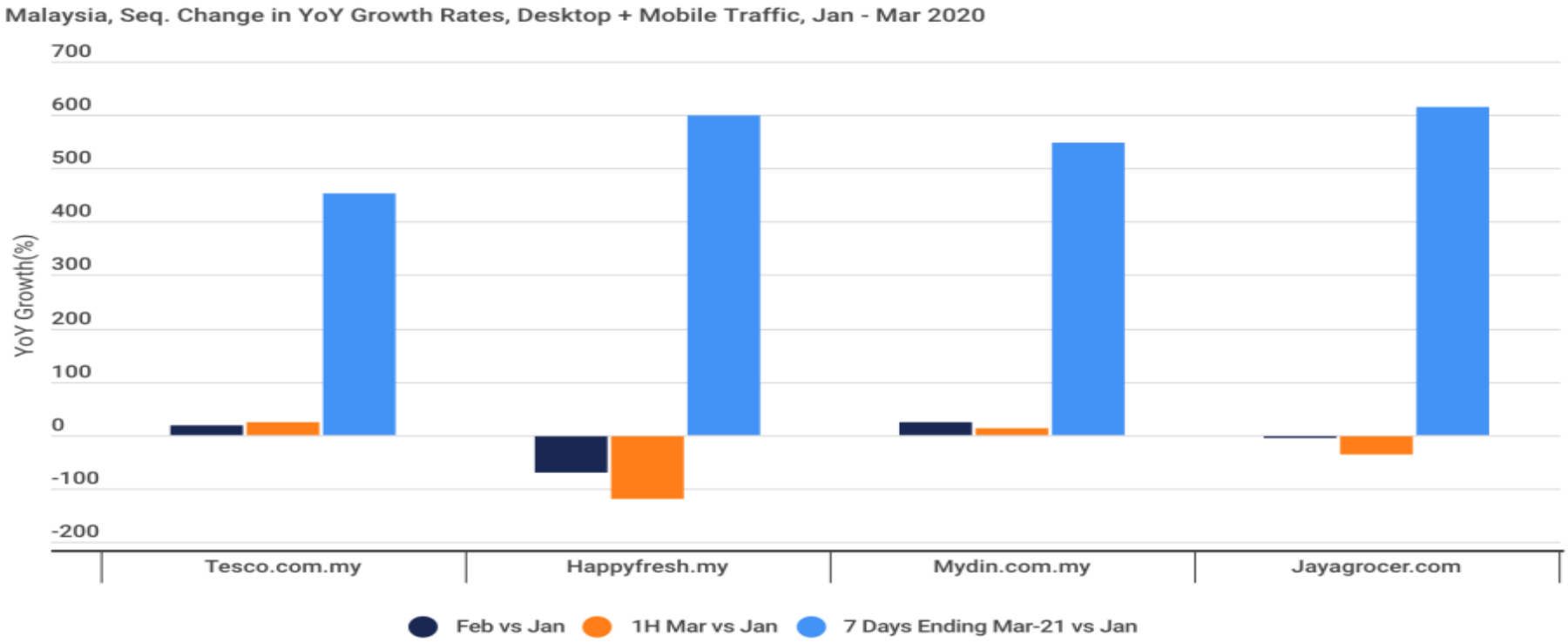
Selected web conferencing platforms during first 7-days of MCO



Source: Malaysian Digital Association (MDA)

Selected grocery delivery platforms during 7-days of MCO

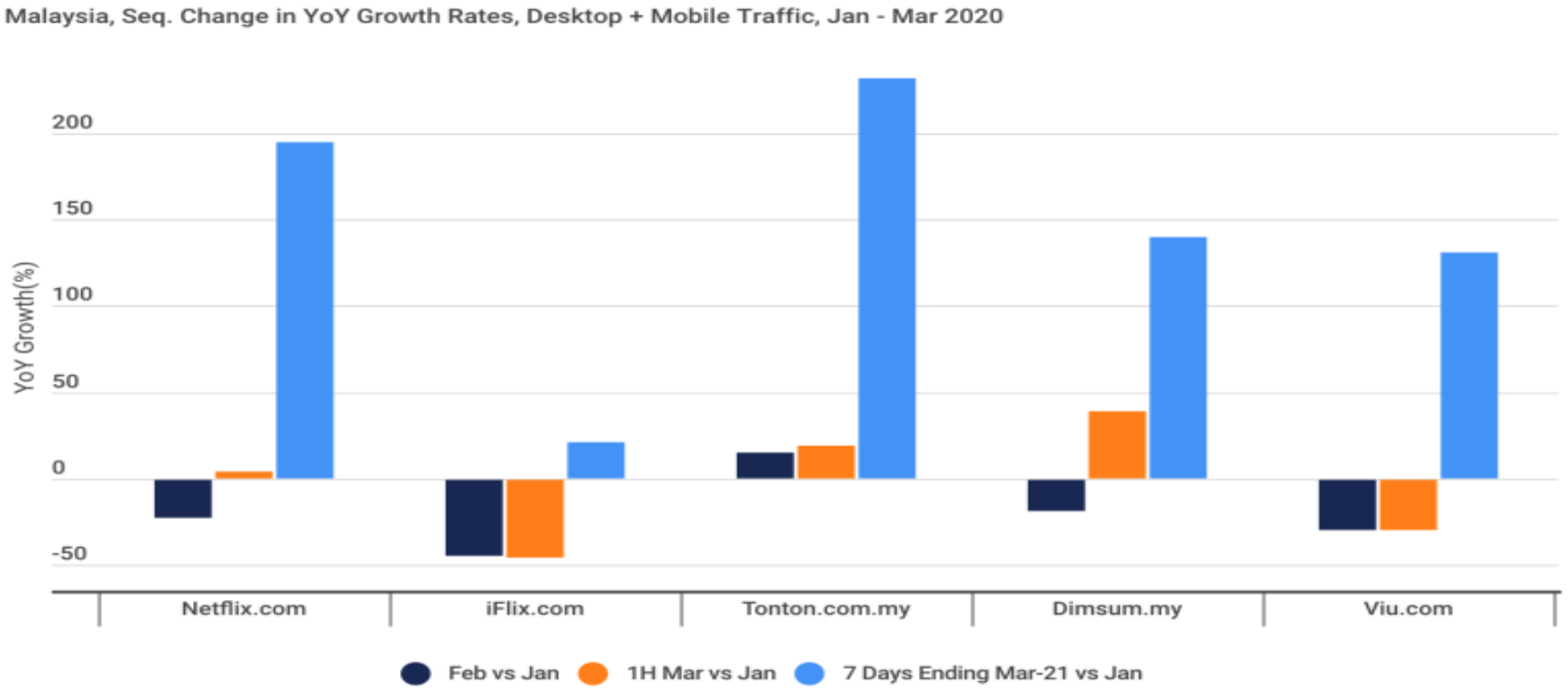
- **Food delivery and grocery shopping applications have witnessed a surge of clients**. Owing to restrictions on movement and limited business operating hours, Malaysian households have made large orders of on-line purchases (from supermarket chains such as **Jaya Grocer (jayagrocer.com)** and grocery delivery service (such as **HappyFresh happyfresh.my**). There were biggest jumps in sequential traffic in the third week of March, with **activity up by 600%,** compared to the first two weeks of the month.



Source: MDA

Selected entertainment platforms during first 7-days of MCO

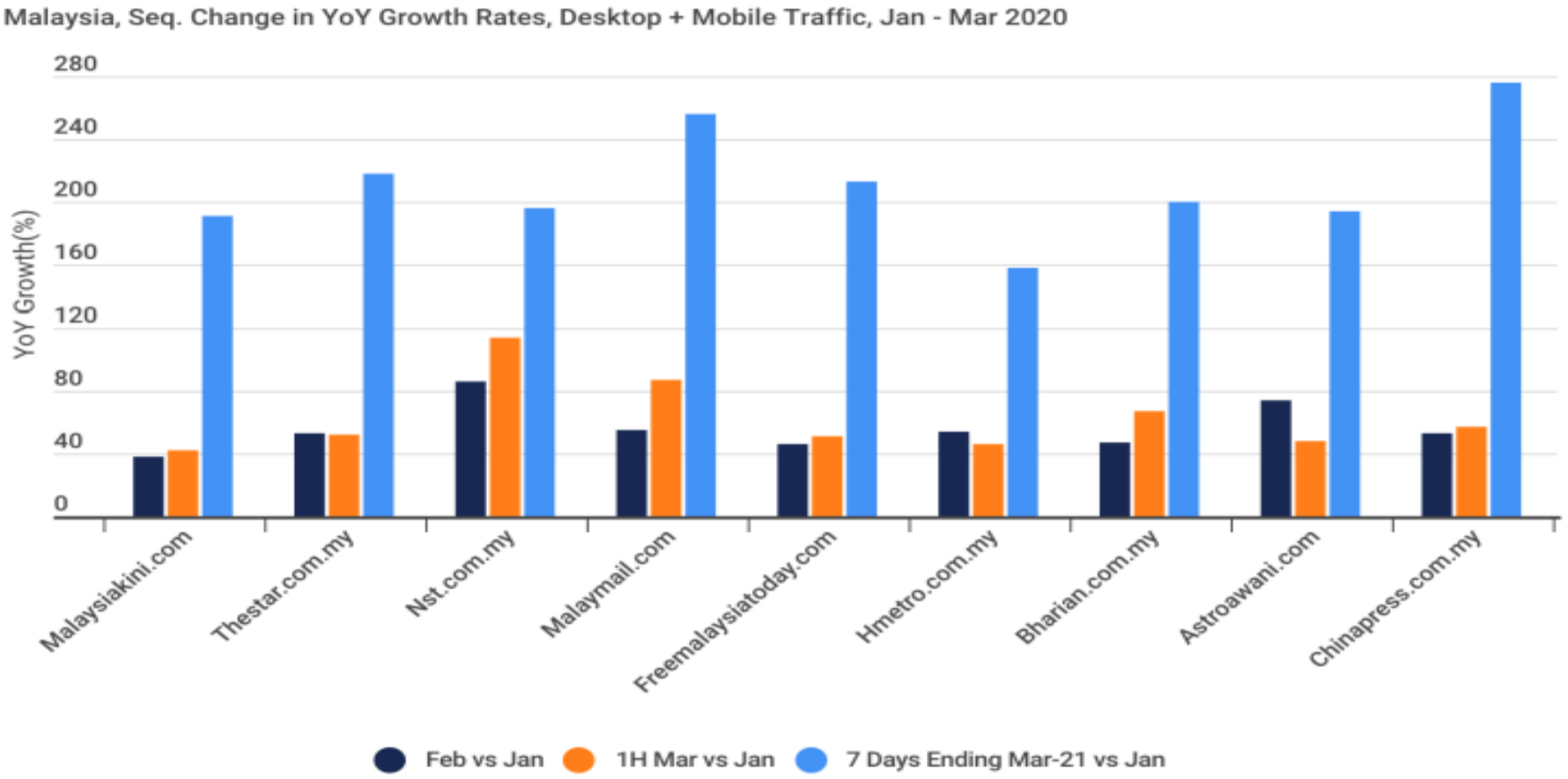
- As people are forced to stay home, there has been **an increased use of entertainment services such as streaming video on-demand** (+195% for **Netflix (netflix.com**); and +232% for **home grown video streaming service Tonton (tonton.com.my)** while local subscription service Dimsum (dimsum.my) and Asian drama streaming service Viu (viu.com) increased by 140%).



Source: MDA

Selected news media platform during first 7-days of MCO

- **Malaysia's eight key media publishers also see sequential traffic growth of between 190% and 250% in their platforms**. Readership in China Press (chinapress.com.my) jumped the most.



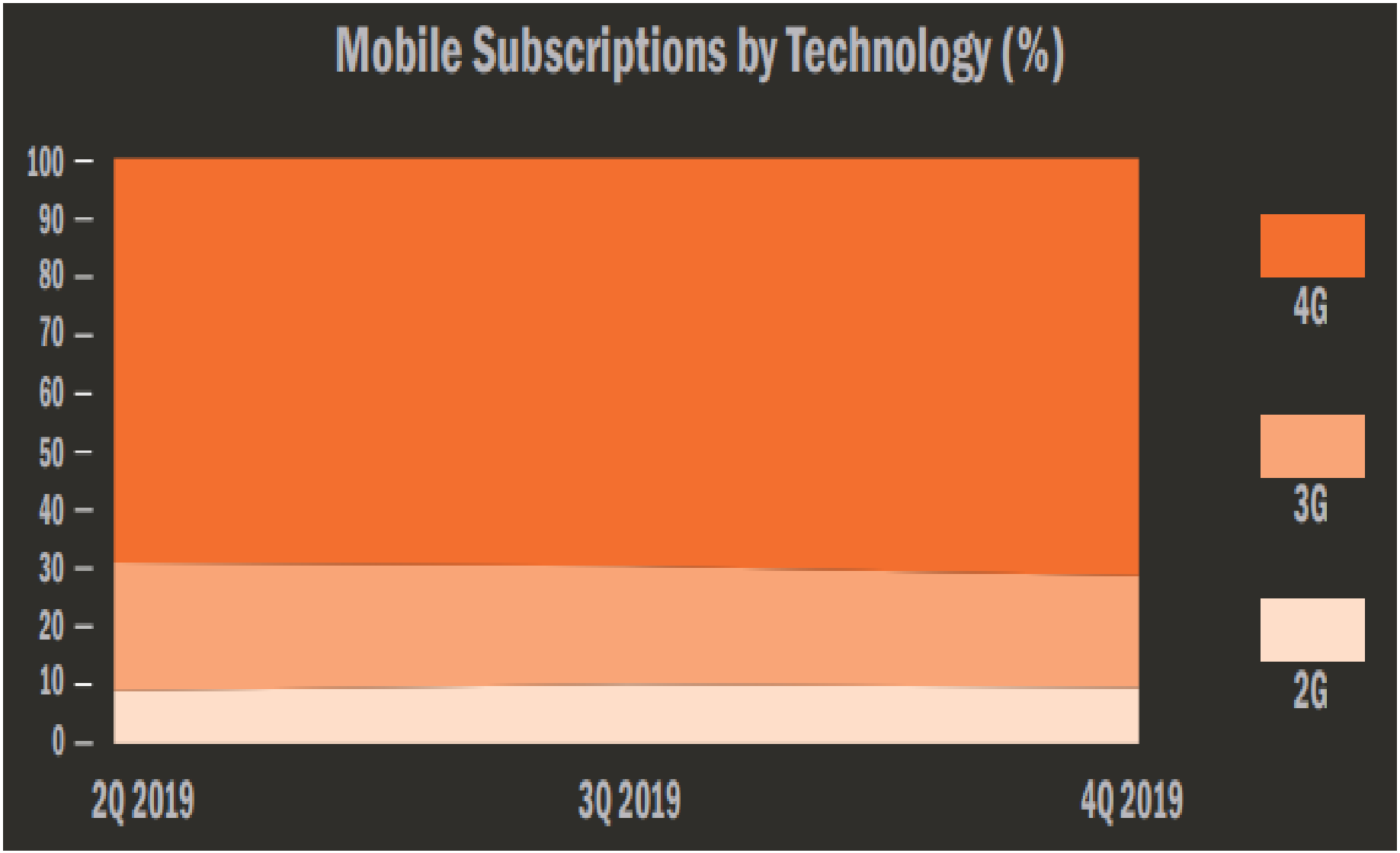
Source: MDA

Malaysia's National Digital Transformation: Now and Future

A new path for digital transformation

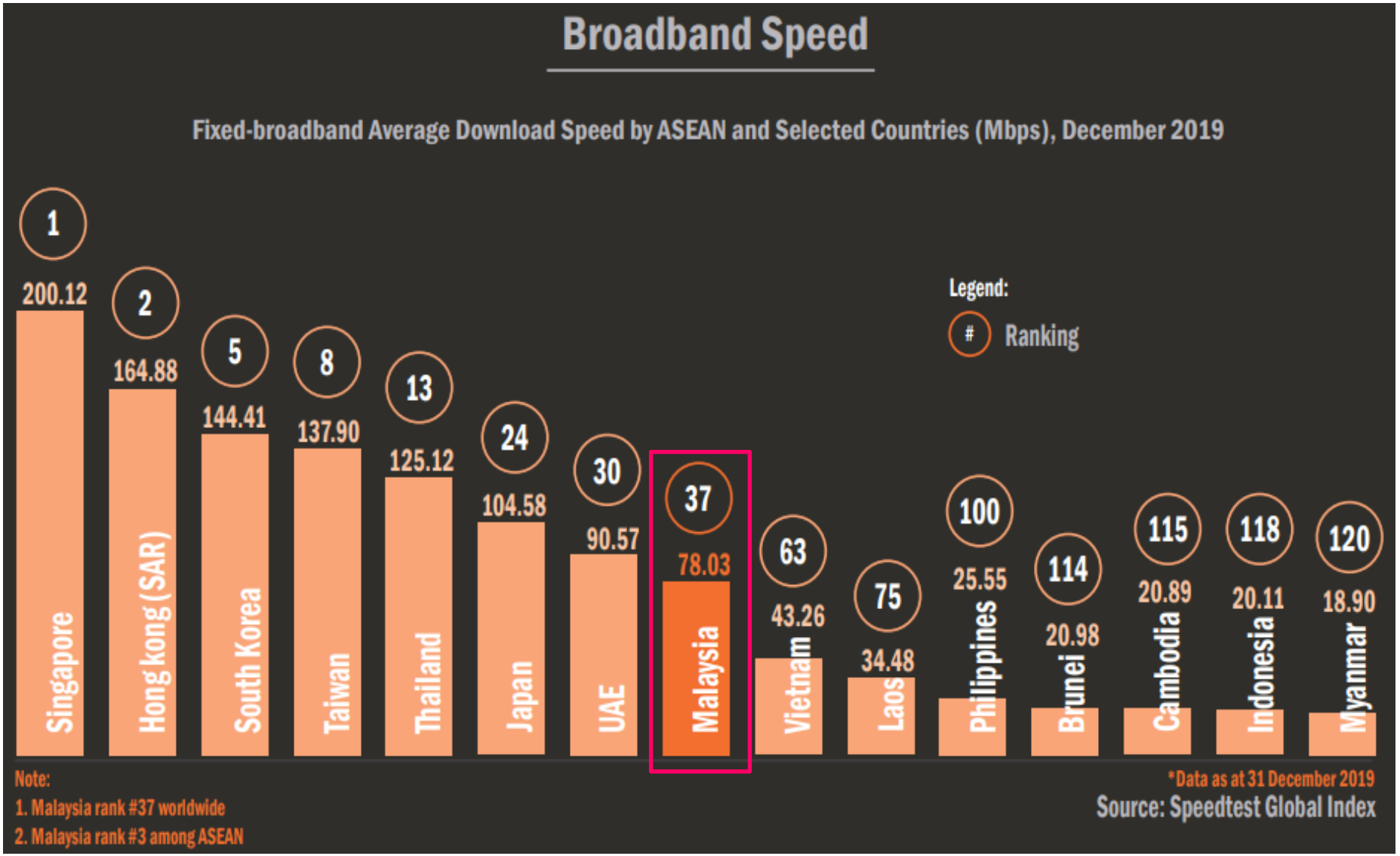
- With the **changes in behavioural protocols of households and businesses**, we will **see record number of people working remotely in the foreseeable future**.
- The challenge for Malaysia now is to **ramp up digital infrastructure and fix the technology gap as well as cybersecurity.**
- **Digital experience needs to be enhanced in terms of speed, reliability and coverage to narrow the urban-rural digital divides**.
- **Some systems are creaking at the edges**: corporate networks are unable to cope overloaded connections coming in over virtual private networks (VPNs). Internet service providers have come under pressure to lift bandwidth caps to minimise interruptions in video conferencing.
- **Malaysia has a lot to catch up in terms of broadband speed**. In December 2019, **its fixed-broadband average download speed of 78.03 (Mpbs) was ranked 37th** in Asean and selected countries. It is behind Singapore (1st, 200.12); Hong Kong (2nd, 164.88), South Korea (5th, 144.41); Taiwan (8th, 137.90); Thailand (13th, 125.12); Japan (24th, 104.58) and UAE (30th, 90.57).
- **In terms of mobile broadband average download speed**, **Malaysia's speed of 23.80 Mbps came in 83th** compared to UAE (2nd, 86.77); Singapore (12th, 57.16); Taiwan (30th, 45.58); Japan (56th, 32.95); Vietnam (61th, 30.39); Thailand (80th, 25.98); Laos (72th, 25.54); Brunei (79th, 24.35) and Myanmar (81th, 23.86)

Malaysia's mobile subscription by technology

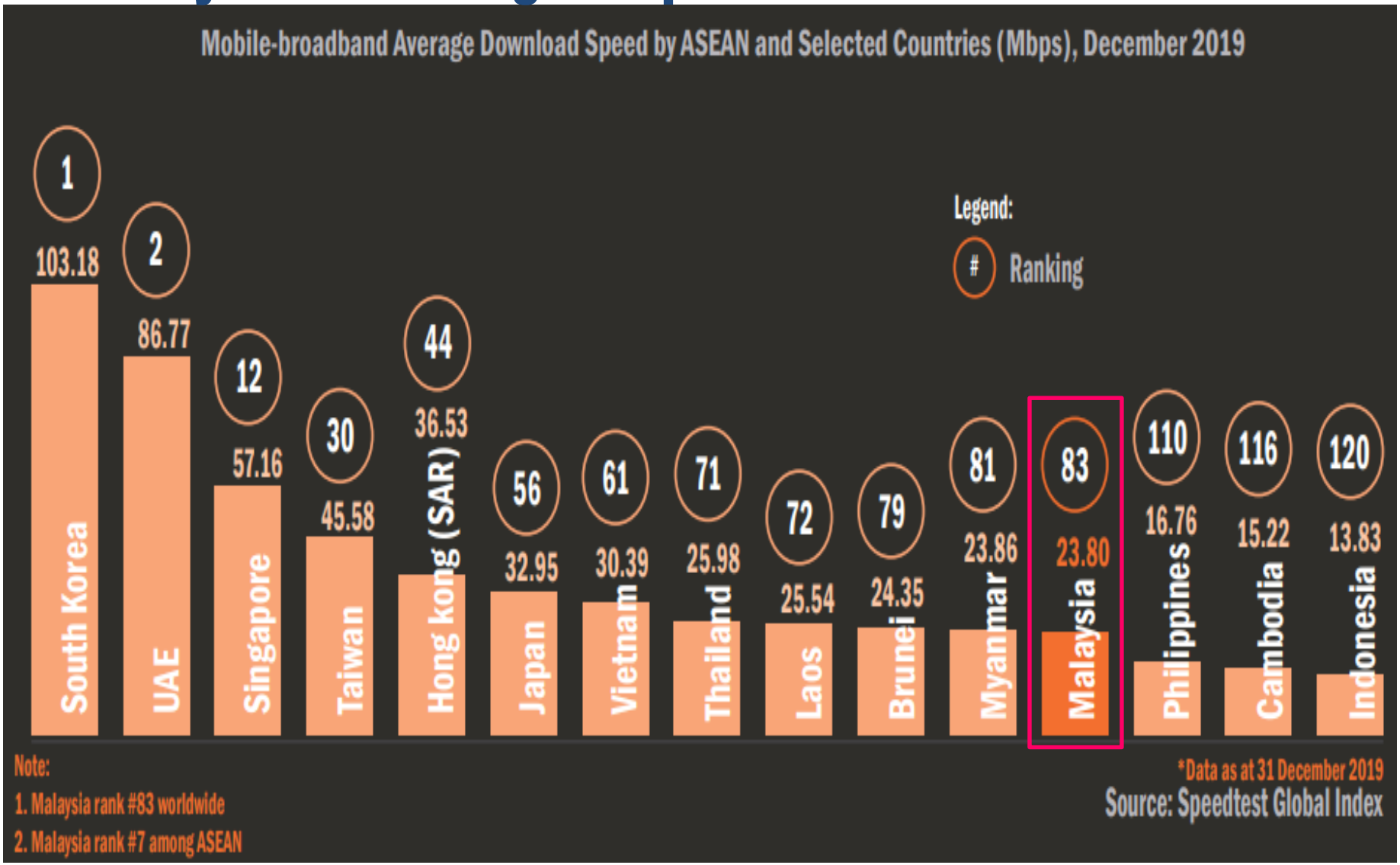


Source: MCMC

Malaysia's broadband speed needs further enhancement



Malaysia's mobile-broadband average download speed is markedly below her regional peers



A new path for digital transformation (cont.)

- Despite the variety in degree of maturity as well as in innovation and implementation capacity across sectors, companies, states, and rural-urban, it is clear that **Malaysia has made a long-term effort and prepared ground for a digital transformation now and in the future**.
- Malaysia's **new policy-thinking on the future digital transformation in a "post-COVID-19 era"** requires **Public-Private Partnership and collaborative as well as innovation in ICT development** and contribution to the digital transformation.
- We outline the following **TECHNOLOGY TREND, BUSINESS SCENARIOS AND MAJOR OBSTACLES** for future digital investments and transformation.

  a) **FIVE key technologies** for future digital investments and business development: **Sensing and Mobility**, **Big data, Internet of Things (IoT), Artificial Intelligence (AI), Cloud Computing and 5G.**

  b) **THREE most applied scenarios**: **marketing, customers' services delivery development, virtual communication /telecommuting**.

  c) **FIVE major obstacles** for **digital transformation: not conducive ecosystem, restrictive regulatory and the cybersecurity threat and risks, a lack of funds, talents and technical skillset shortage** and f**inding proper business models to ensure the optimisation of digital transformation**.

A new path for digital transformation (cont.)

- **Government, people and businesses must work together with the parallel "policy push" in accelerating and deepening the evolution of how ICT and digital technologies** in the public delivery services, consumer, business and market dynamics.
- There must be a **clear interest and need from both public and private sectors** to fundamentally change Malaysia's role in the global digital transformation race as well as in the innovation landscape.
- We proposed the following strategic initiatives and measures to be incorporated in **MALAYSIA'S DIGITAL TRANSFORMATION PLAN**:

  a) **An Innovation Partnership Programmes between Government and Business Sector.**

  b) **Promote the long-term growth of digital services and digital economy**:

     i. **The Government needs to collaborate with other countries to remove barriers to cross-border accessing and enabling of the flow of data and services**.

     ii. **Create investment-friendly tax, legal and regulatory environments for digital services**.

     iii. **Remove policy, regulatory and financial impediments** to the expansion of digital infrastructure.

A Time Testing National Digital Strategy for Malaysia

- **Determined leadership and infrastructure are important prerequisites** for Malaysia to become the leading mover in harnessing the opportunities of sustainable digital transformation.
- In a fast-paced digital environment, we must be quick to adapt to the demands of people and businesses and deliver the goods and services in a fast, cost-efficient and quality manner.
- **Digitally skilled and digitally secure people are needed to lead and able to drive innovation** and translate that knowledge into leading others and forming effective team collaboration in the digital age.

FIVE PILLARS OF A NATIONAL DIGITAL STRATEGY

DIGITAL LEADERSHIP

DIGITAL INFRASTRUCTURE

DIGITAL SKILLS

DIGITAL SECURITY

DIGITAL INNOVATION

A Time Testing National Digital Strategy for Malaysia (cont.)

1. **DIGITAL LEADERSHIP** 

- The Government **takes the lead role to drive the catalysts of digital transformation through a well-executed plan with measurement outcomes**.
- One driver of a digital economy that is in the **hands of government is e-Government, from online procurement to e-services.**
- The **implementation and operational digital plan must be inclusive and wide-reaching** to ensure that companies, organisations and people realise the opportunities that can be harnessed and the risks minimised from the digital transformation.

KEY FOCUS AREAS

- **A strong and clearer mandate high ministerial council, to be led by Prime Minister** with senior representatives from both Government, private sector and chambers.
- **A well-coordinated approach cutting across the lead Ministries and agencies** to accelerate digital transformation in public delivery services.
- **Implement digital development programs through engagement with state governments** to narrow rural-urban digital divide, especially for the underserved group.
- **Clearly-defined structures of governance** are required to produce visionary digital plans, along with policies for their implementation and regulations to make them happen.

A Time Testing National Digital Strategy for Malaysia (cont.)

2. **DIGITAL INFRASTRUCTURE** 

- **The digital infrastructure (soft and hard), in particular high-speed broadband must be further enhanced** and **reinforced for electronic communications and applications** that are crucial for transmitting data.
- **The Government should indicate what they need from digital infrastructure.** For example, the network to provide education services, healthcare services, government services, IoT application for smart energy, automated vehicles, traffic and streetlighting managements etc. Let the ICT experts to work closely with the experts in the sectors to ensure the best service outcomes.
- The Government **can consider budget options as well as to foster Public-Private Partnership in the financing of digital infrastructure.**

KEY FOCUS AREAS

- **A well-developed broadband infrastructure is key to enhancing the connectivity of digital economy.** This entails improved access to 'hard' infrastructure; and continued development of 'soft' infrastructure.
- **Investment in digital infrastructure needs to include digital financial infrastructure** on four digital fronts: payments; currency; identity, and data.
- **Expedite the implementation of RM21.0 billion National Fiberisation and Connectivity Plan.**

A Time Testing National Digital Strategy for Malaysia (cont.)

3. **DIGITAL SKILLS** 

- **Innovating skills for a digital economy require everyone to get familiar with digital tools and services, communication applications, and networks** to access and manage information.
- **Digital skills have moved from 'optional' to 'critical'** and need to be complemented with transversal 'soft skills' such as the ability to communicate effectively in both online and offline mediums.
- **Entry-level digital skills** - basic functional skills to make basic use of digital devices and online applications, which is a critical component of a new set of literacy skills in the digital era, with traditional reading, writing, and numeracy skills.
- **The advanced spectrum of digital skills -** the higher-level abilities to make use of digital technologies in empowering and transformative ways such as professions in ICT.
- **Major digital transformations** such as Artificial Intelligence (AI), machine learning, Big data analytics, **require change skills requirements and, in turn, impact capacity building and skills development for the digital economy**.

A Time Testing National Digital Strategy for Malaysia (cont.)

KEY FOCUS AREAS

- **Modernising the education system, focussing on science, technology, engineering and mathematics (STEM)** in an interdisciplinary and applied approach as well as coding. To this end, **digital literacy should be seen as a core skill alongside English and Maths**.
- **Tackling inequalities and gender divide** (notably socio-economic status, race, gender, geography, age and educational background).
- **Government and state governments need to play a pivotal** role in setting up the fundamental principles for inclusive and equitable digital skills development.
- **Provide programmes and capacity development initiatives** for disadvantaged groups, and re-skilling adults at risk for job displacement.
- **Skills matching.** There must be a coordination between stakeholders (schools and higher learning institutions, employers and industry) to understand how the supply of educational courses, in terms of quality and quantity, can meet the demand for digital skills in the wider economy.
- **Digital curricula should be devised in partnership with industry,** to provide people with the skills they will need in their roles across the workforce.
- **Motivate and inspire young people, particularly females,** to consider digital careers.

A Time Testing National Digital Strategy for Malaysia (cont.)

KEY FOCUS AREAS (cont.)

- **Employers to lead on setting the minimum standards.** The employees are expected to acquire through education, reskilling and upskilling, training as well as lifelong learning, including the digital skills that are transferable across different roles, for example, cyber security, digital marketing etc. Soft grants for digital marketing and training services online.
- Provide **double tax deductions for investment in upskilling and reskilling of employees' digital skills. Incentives for employers to conduct online learning and e-learning.**
- **Digital skills in public sector and state-owned companies.** Public sector needs to bridge the digital skills gap to become a trend setter in a digital economy. These include the digitalisation and automation of processes in a seamless system to facilitate a smooth and cost-efficient delivery service to people, businesses and investors. This will definitely increase overall economy productivity.

A Time Testing National Digital Strategy for Malaysia (cont.)

4. **DIGITAL SECURITY** 

- **Digital issues are data privacy, data protection and cybersecurity** are of utmost importance and absolutely essential if Malaysia is to become a smart nation**.**
- People, companies and organisations must **have trust and confidence in the use of digital services and being able to use them easily.**
- As digital transformation changes society fundamentally in many ways, **the Government must have a broader security perspective** through engaging with people and companies on how to secure information security and personal privacy as well as handle the cybersecurity risks and thefts as well as breaches associated with digital transformation.

KEY FOCUS AREAS

- **Organisations must implement a robust cyber security framework** consisting of policies, procedures and practices to ensure identification, protection and detection of cyber security threats and adequately respond and recover from cyber security incidents.
- The policies and procedures cover **a digital identity; high security protection requirements; privacy in the digital society; and safeguard consumers in digital environments.**

A Time Testing National Digital Strategy for Malaysia (cont.)

KEY FOCUS AREAS (cont.)

- **Identify critical sectors.** Priority will be given to critical sectors of energy, water, transport, health, government, information communication, media, security and emergency services, and banking and finance.
- **Grow talent and manpower.** We should **place a strong focus on growing cyber security talent and manpower**. The Government to **seek international and regional cooperation as well as working with the private sector to raise public awareness of the importance of cyber security**.

A Time Testing National Digital Strategy for Malaysia (cont.)

5. **DIGITAL INNOVATION** 

- The Government to create a conducive ecosystem and competitive conditions for the creation and spread of new or improved products and services.
- Innovation and creation by combining knowledge in new ways or by completely new thinking can contribute to building a modern and sustainable digital economy.

KEY FOCUS AREAS

- **Foster Public-Private Partnership in data-and digitally driven innovation and research** that can be applied commercially.
- **Strengthen innovation climate for data-driven and digitally driven innovation through grants and incentives tailored outcome-based R&D and innovation** research in collaboration between academia and industry.
- **Implement an effective intellectual property law.** Robust intellectual property rights spur innovative activity by increasing the appropriability of the returns to innovation, enabling innovators to capture enough of the benefits of their own innovative activity to justify taking considerable risks.
- **Positioning Malaysia as one of the leading innovations and creativity hub in the region** through creating a conducive ecosystem (remove regulatory barriers, facilitation and financial supports, tax break, skills support etc).
- **Breeding an innovation culture in society** starting from schools, society and workplace.

谢 谢
THANK YOU

Address : 6th Floor, Wisma Chinese Chamber,
258, Jalan Ampang, 50450 Kuala Lumpur, Malaysia.
Tel : 603 - 4260 3116 / 3119
Fax : 603 - 4260 3118
Email : serc@acccimserc.com
Website : http://www.acccimserc.com