



National eCommerce Strategic Roadmap **NESR PROGRESS REPORT 2017**



MINISTRY OF
INTERNATIONAL TRADE AND INDUSTRY



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PREAMBLE

Global eCommerce reached the US\$10 trillion-mark in 2017 after growing at a phenomenal rate of almost 25% year-on-year, according to statista.com. The statistics website has projected that growth rates for global eCommerce will exceed 20% in 2018 and 2019 before dipping just below the 20 percentile mark in 2020.

B2B transactions continue to be the dominant eCommerce activity, accounting for US\$7.7 trillion with B2C or retail eCommerce reaching US\$2.3 trillion in 2017. Retail eCommerce is expected to surge over the next few years to rake in an estimated US\$4.1 trillion worldwide by 2020.

Global market size 2017



Infographic 1.1 - Source: statista.com

This robust growth for retail eCommerce is attributable to the steadily increasing internet penetration rate throughout the world as well as rising share of eCommerce to total retail sales. As of end 2017, an estimated 54% of the global population are using the internet, according to internetworldstats.com.

Equally as important is the migration of shoppers online, who in 2017 accounted for 10.2% of total retail sales as compared with 7.4% in 2015. Statista.com has projected that the eCommerce share of total retail sales will reach 15.5% by 2020.

Retail eCommerce sales as proportion of total retail sales - world



Infographic 1.2 - Source: statista.com

Meanwhile, Asia Pacific continues to be the fastest growing region for retail eCommerce. Estimates from statista.com show that Asia Pacific accounted for almost two thirds of global retail eCommerce transactions amounting to US\$1.5 trillion. Within Asia Pacific, Southeast Asia is considered the retail eCommerce market with the most potential. A study by Google highlighted the fact that the region's 330 million internet users contributed US\$10.6 billion to online sales in 2017.

Retail eCommerce sales 2017



Infographic 1.3 - Source: statista.com, Google Inc.

In the case of Malaysia, statista.com has estimated that retail eCommerce sales amounted to US\$2.4 billion in 2017. All indicators show that the country is poised to be the fastest growing consumer base in Southeast Asia. According to WeAreSocial and Hootsuite, the number of internet users in Malaysia account for almost 80% of the population at the end of 2017.

The Department of Statistics Malaysia (DOSM) has projected that the eCommerce contribution to gross domestic product (GDP) would increase markedly in 2017 from RM74.6 billion in 2016.

It is pertinent to point out that in 2016, Malaysia's digital economy contributed 18.2% (RM224.0 billion) to national GDP (RM1.23 billion) with eCommerce accounting for 6.1% of the national economy and about one third the digital economy.

Given the ever growing importance of eCommerce to both the digital as well as national economy, the Malaysian Government had established a National eCommerce Strategic Roadmap (NESR) to double the GDP contribution of eCommerce as a 'way to protect its existing businesses and a means to pursue new opportunities'.

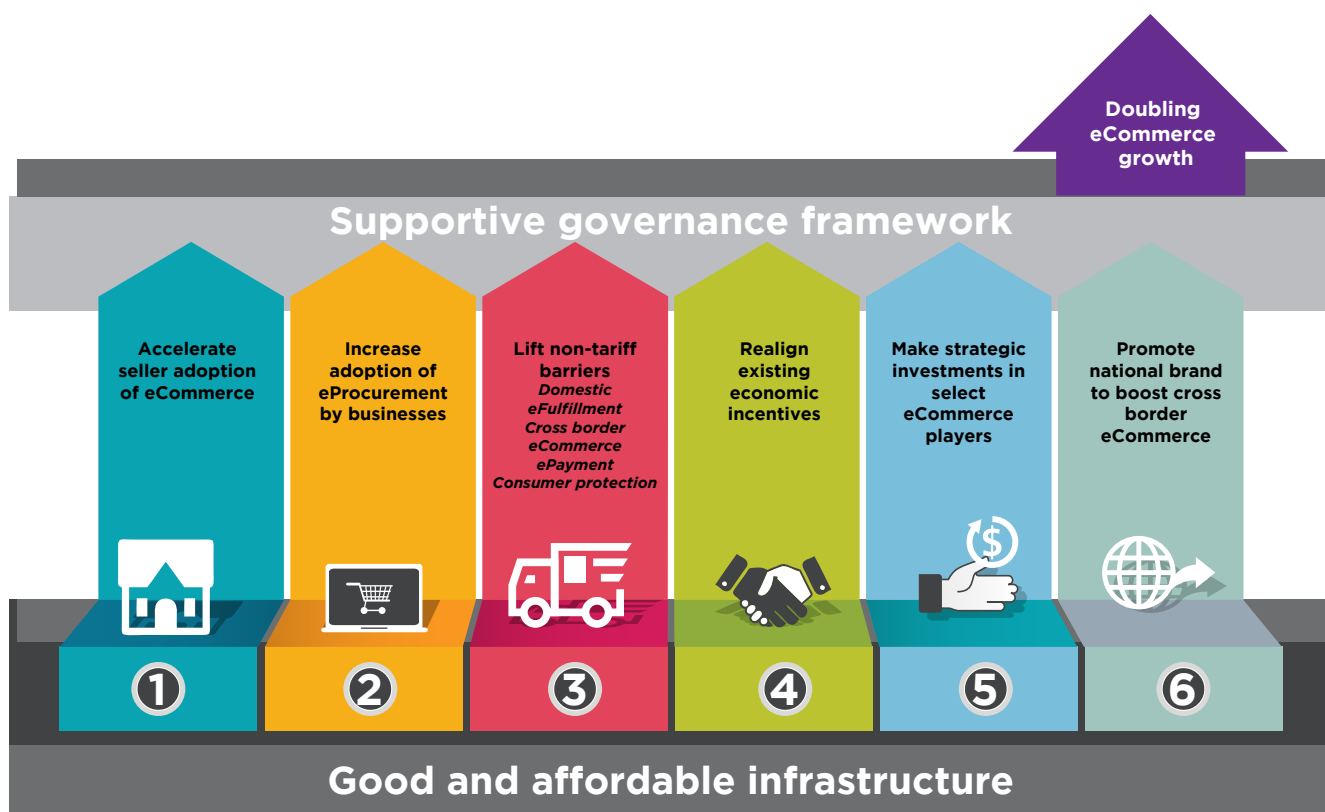


NESR – THE BACKGROUND

The NESR was developed in 2016 following a series of strategic mini-labs, focused interviews and inputs from over 100 stakeholders from both the public and private sectors. A total of 54 organisations came together to formulate a comprehensive set of plans and initiatives to drive the country’s eCommerce ambitions, among them the doubling of growth through to 2020.

In essence, the roadmap outlined intervention is six key thrust areas anchored on a platform of affordable infrastructure and supportive governance framework. The thrust areas represent pathways through which all key stakeholders can contribute to the development of a robust eCommerce ecosystem.

Six thrust areas of NESR



Infographic 2.1



The six thrust areas are:

1. Accelerate seller adoption of eCommerce

This is intended to increase product availability and range via online channels in order to facilitate local SME participation in global digital commerce.

2. Increase adoption of eProcurement by businesses

This is to enhance operational efficiency. B2B eCommerce already accounts for the majority of transactions in Malaysia.

3. Lift non-tariff barriers in key parts of the value chain

- (a) To increase the level of maturity in the domestic eFulfillment sector;
- (b) To facilitate cross-border eCommerce movement of goods;
- (c) To increase adoption of ePayments in Malaysia; and
- (d) To augment and increase mass awareness of consumer protection measures.

4. Realign existing economic incentives

This is to ensure effective delivery of incentives to stakeholders and areas with higher potential multiplier benefits.

5. Make strategic investments in select eCommerce players

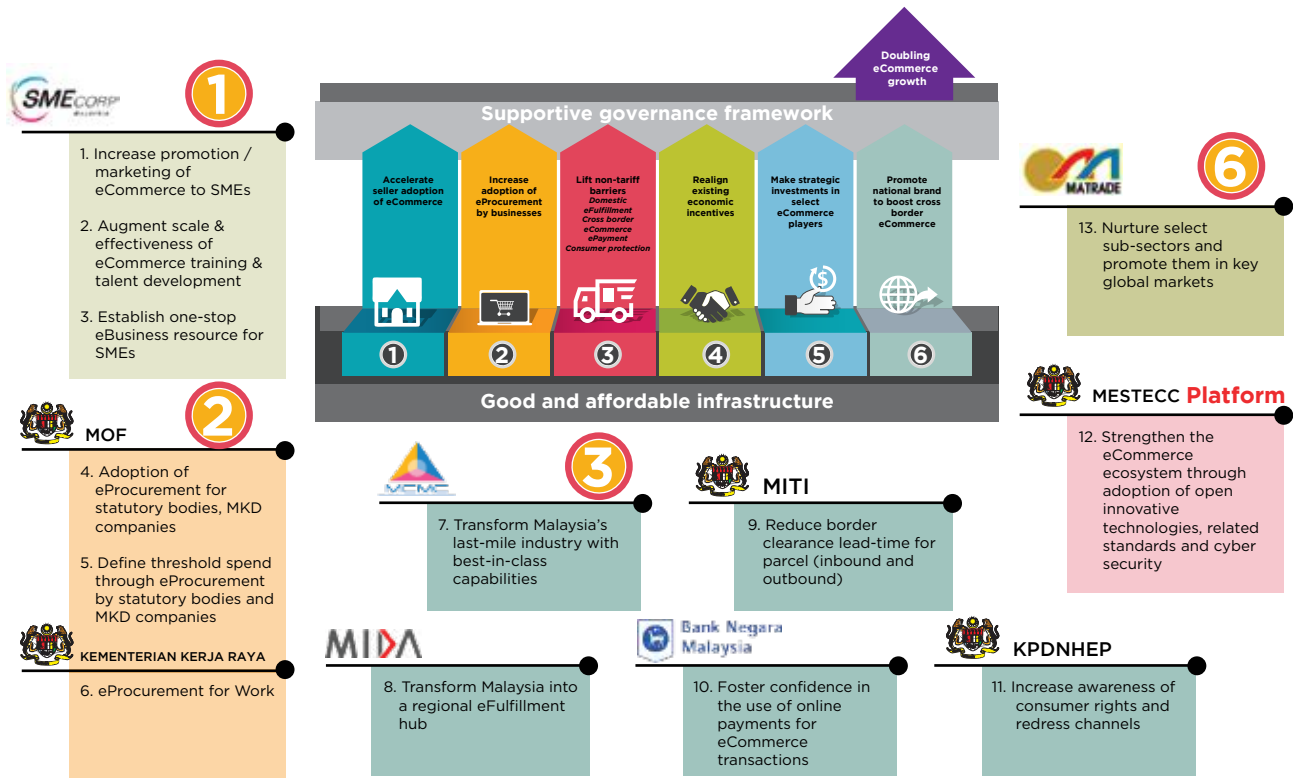
This is targeted at operators involved in key parts of the value chain so as to increase eCommerce adoption and enhance the multiplier benefits to the country.

6. Promote national brands to boost cross-border eCommerce

This will assist domestic players operating in strategic sectors to fully capture the vast opportunities available in the global arena.

Subsequently, a total of 13 programmes were developed and prioritised to deliver significant impact on these six thrust areas and supporting platform. These programmes are championed by 10 ministries / agencies.

6 thrust areas, 13 programmes, 10 agencies



Infographic 2.2

There are three programmes to **accelerate seller adoption (Thrust Area 1)**, all of which are led by SME Corporation. They are:

- To increase promotion and marketing of eCommerce to SMEs;
- To augment the scale and effectiveness of eCommerce training and talent development; and
- To establish a one-stop eBusiness resource for SMEs.

The Ministry of Finance (MOF) and Ministry of Works (KKR) are driving efforts to **increase adoption of eProcurement (Thrust Area 2)** through two programmes under the former and one programme under the latter:

MOF

- To drive adoption of eProcurement for statutory bodies and MKD companies; and
- To define the threshold expenditure through eProcurement by statutory bodies and MKD companies.

KKR

- To implement eProcurement for projects under the Ministry.

Five ministries / agencies are helping a single programme each to **lift non-tariff barriers (Thrust Area 3)** and they are the Malaysian Communications and Multimedia Commission (MCMC), the Malaysian Investment Development Authority (MIDA), Ministry of International Trade and Industry (MITI), Bank Negara Malaysia (BNM) and the Ministry of Domestic Trade and Consumer Affairs (KPDNHEP):

MCMC

- To transform Malaysia's last-mile industry with best-in-class capabilities.

MIDA

- To transform Malaysia into a regional eFulfillment hub.

MITI

- To reduce border clearance lead-time for parcel (inbound and outbound).

BNM

- To foster confidence in the use of online payments for eCommerce transactions.

KPDNHEP

- To increase awareness of consumer rights and redress channels.

Meanwhile, the Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC) is championing the task of sustaining a platform for a good and affordable infrastructure with a single programme:

- To strengthen the eCommerce ecosystem through adoption of open innovative technologies, related standards and cyber security.

The remaining programme to **promote the national brand (Thrust Area 6)** is led by the Malaysian External Trade Development Corporation (MATRADE):

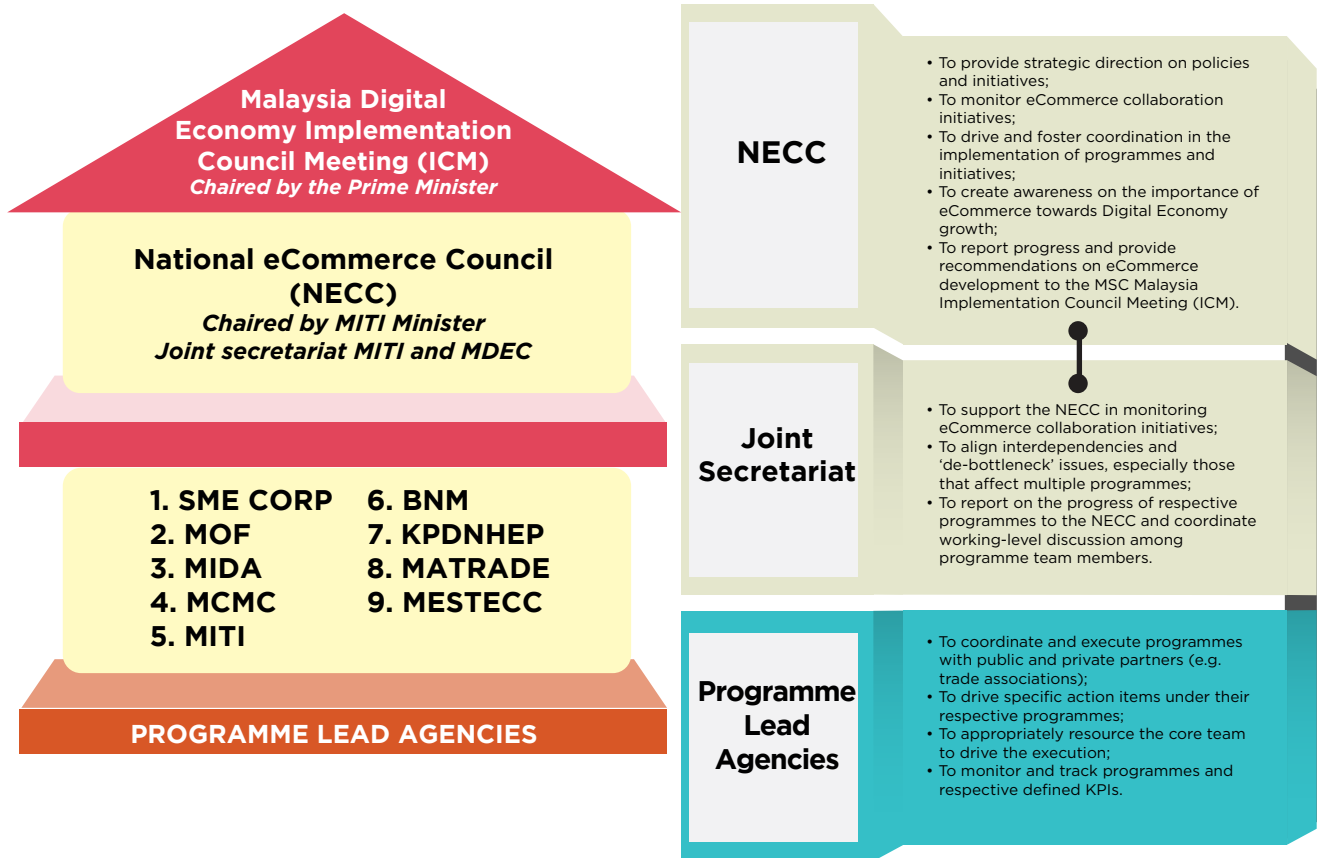
- To nurture select sub-sectors and promote them in key global markets.

Thrust Area 4: Realign economic incentives and Thrust Area 5: Strategic Investments in select players cut across all programmes.

Governance of NESR

A National eCommerce Council (NECC) was established to drive the implementation of the NESR, with the council consisting of various ministries and agencies. Within this structure, the roles of the NECC, the joint secretariat and programme lead ministries / agencies are spelt out.

NESR governance structure



NECC Members		
MITI	MDEC	MOF
EPU	MOHR	MESTECC
KPDNHEP	MOT	KKR
KKMM	KKLW	MAMPU
MITeC Sarawak	BNM	JKDM
LHDN	DOSM	SSM
MCMC	Tourism Malaysia	CSM
MIDA	SME Corp	MATRADE
MPC	HIDC	

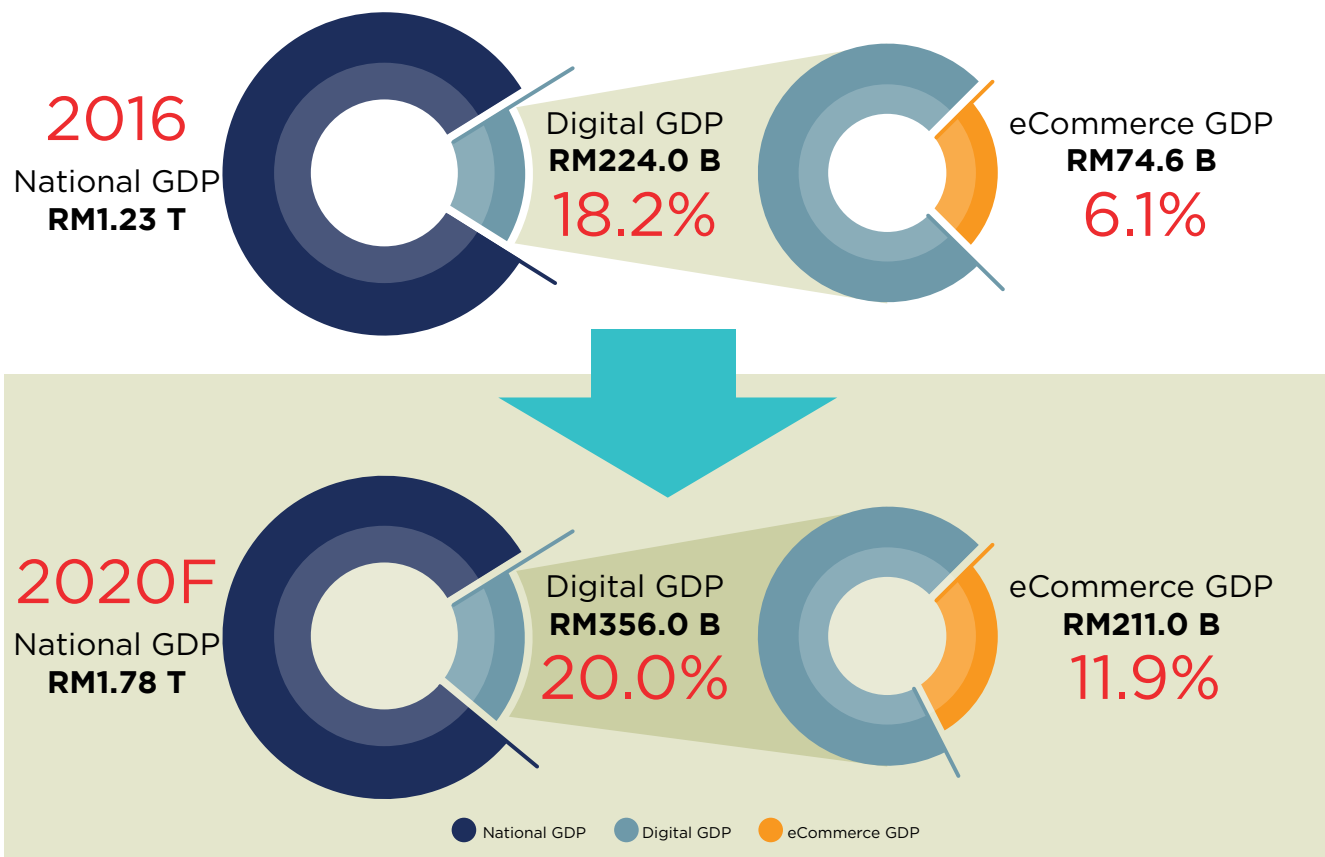
Infographic 2.3

ASPIRATIONS AND TARGETS

The NESR was established with the overriding objective of doubling Malaysia's eCommerce contribution to GDP from 6.1% in 2016 to a desired 11.9% by 2020. This translates to a GDP contribution of an estimated RM211.0 billion as compared with RM74.6 billion in 2016.

With the doubling of eCommerce's GDP contribution, DOSM has projected a national GDP of RM1.78 trillion with the digital economy contributing a share of 20% or an estimated RM356 billion. In comparison, the respective figures in 2016 were a national GDP of RM1.23 billion and a digital economy share of 18.2% amounting to RM224 billion.

eCommerce contribution to GDP



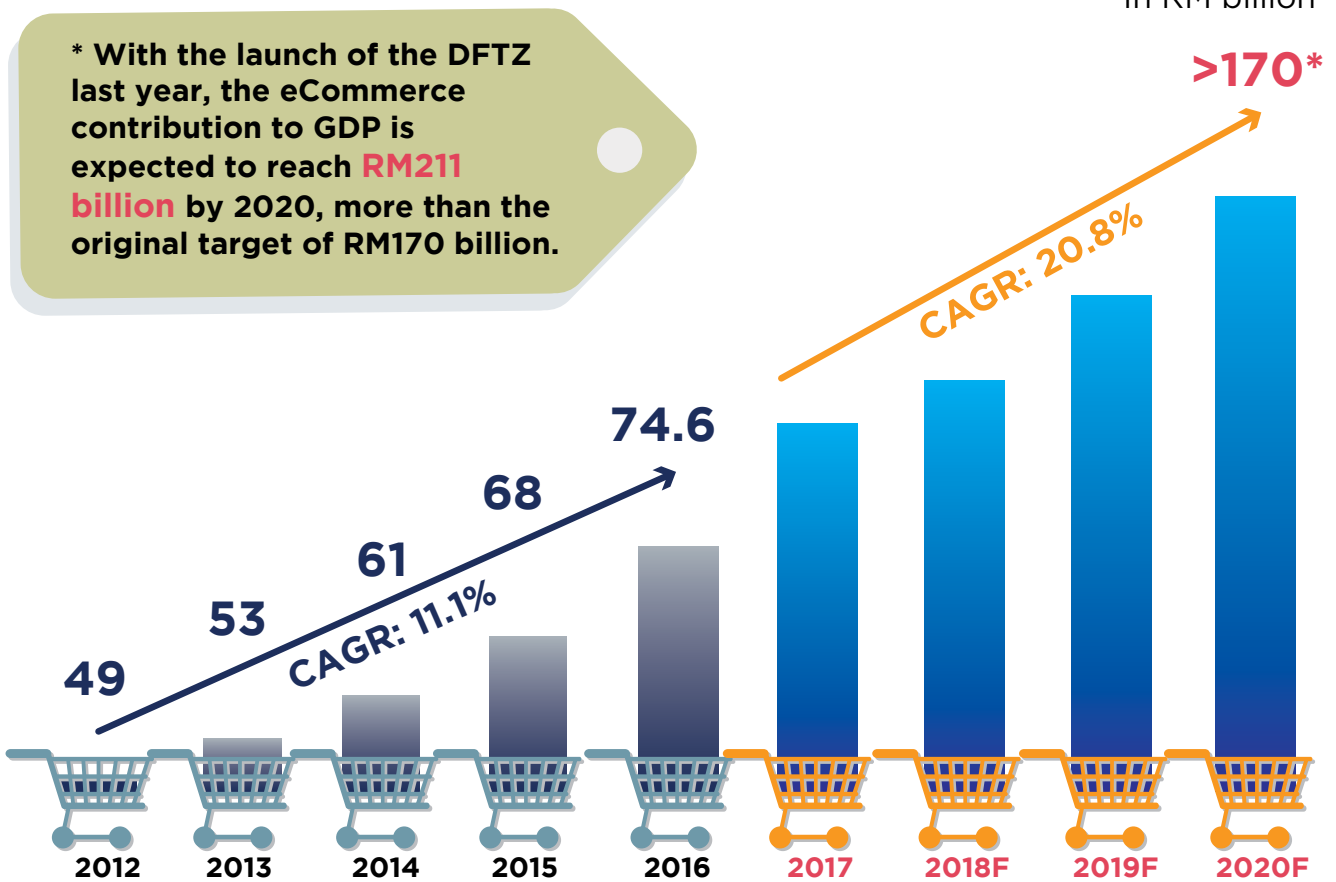
Infographic 3.1 - Source: DOSM, NECC

At the outset, it was clear that any increase in GDP contribution by eCommerce would require intervention. The status quo of sustaining a growth rate of an estimated 11% would have resulted in a GDP contribution of only RM114 billion by 2020.

The following two infographics illustrate how a 'business unusual' as opposed to a 'business as usual' approach is necessary to achieve a higher growth rate and in doing so, expand and extend the GDP contribution of eCommerce.

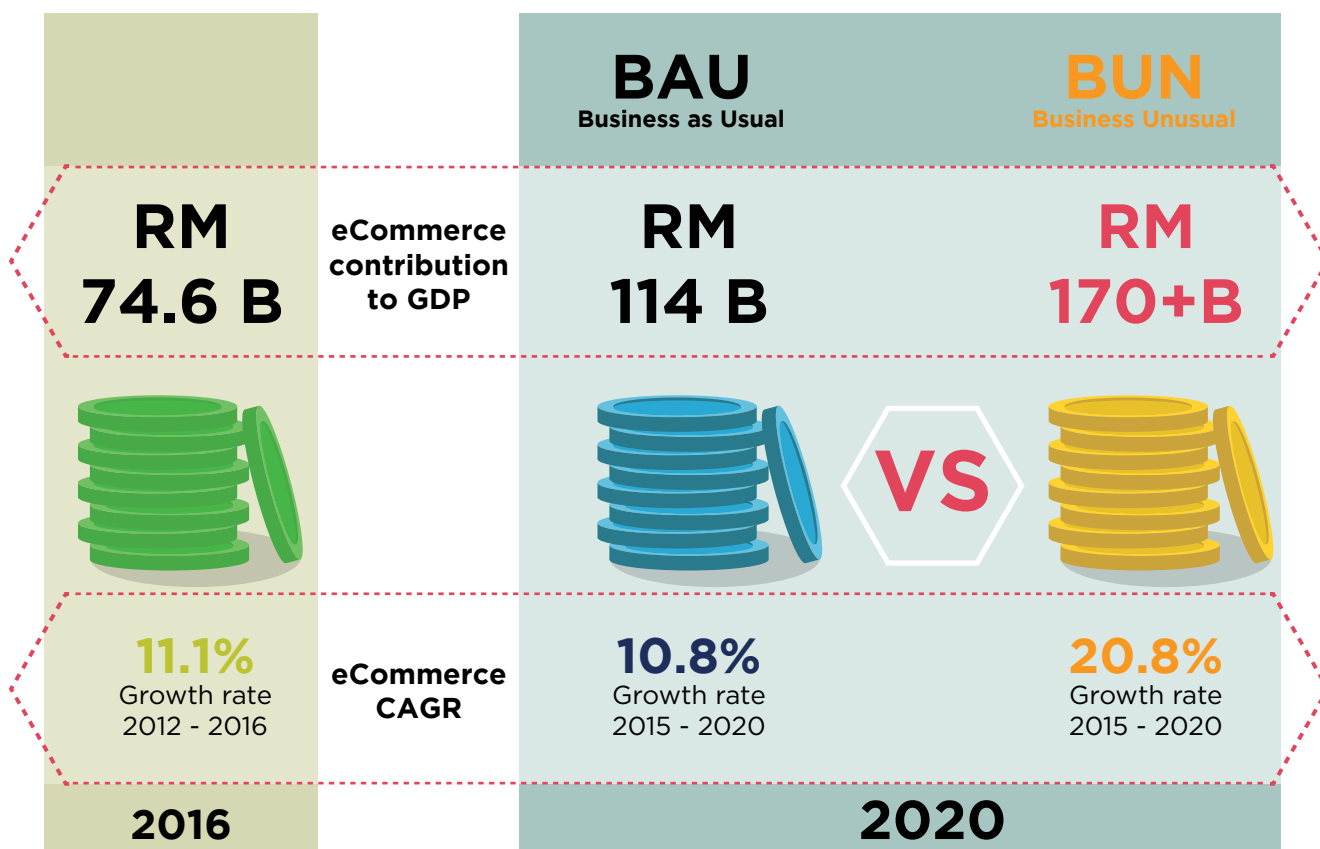
Growth of eCommerce contribution to GDP

In RM billion



Infographic 3.2

BAU vs BUN



Infographic 3.3

Intervention Programmes and Set Targets

The NESR developed a total of 13 programmes to impact the thrust areas and supporting platform. The achievements of these programmes are tracked by a total of 19 KPIs as follows:

- SME Corp**
 The agency leads the efforts in three **programmes** to accelerate seller adoption (Thrust 1):
 - Increase promotion / marketing of eCommerce to SMEs;
 - Augment scale and effectiveness of eCommerce training and talent development;
 - Establish one-stop eBusiness resource for SMEs.

A total of four **KPIs** have been set to gauge progress of these three programmes:

1. To register 400,000 users of www.GoeCommerce.my by 2020, with the 2017 interim target set at 20,000 users;
2. To train 200,000 SMEs in using www.GoeCommerce.my by 2020, starting with 4,000 in 2017;
3. To train 160,000 SMEs via workshops and outreach programmes by 2020, with a target of 10,000 by 2017;
4. To facilitate eCommerce adoption by 350,000 SMEs via programmes by agencies, eCommerce partners, associations etc. by 2020, with a 2017 target of 20,000.

- **Ministry of Finance (MOF)**

The Ministry is the champion of two **programmes** to increase adoption of eProcurement (Thrust 2):

1. Adoption of eProcurement for statutory bodies, MKD companies;
2. Define threshold spend through eProcurement by statutory bodies and MKD companies.

A single **KPI** has been set for Programme 1 under the MOF. There are no KPIs for Programme 2:

1. Adoption of eProcurement by 50% of statutory bodies and MKDs by 2020, with an initial target of 81 organisations by 2017.

- **Ministry of Works (KKR)**

The Ministry is responsible for the adoption of eProcurement (Thrust 2) for its own projects.

1. eProcurement for Works Ministry projects.

- **Malaysian Communications and Multimedia Commission (MCMC)**

The agency is responsible for a single programme aimed at lifting non-tariff barriers (Thrust 3):

1. Transform Malaysia's last mile industry with best-in-class capabilities.

There are 2 KPIs under this programme:

1. To improve the rate of delivery within 3 days to 90% by 2020, starting with 88% by 2017;
2. To increase the number of last mile delivery service providers to 10 by 2020, with an initial target of 8 by 2017.

- **Malaysian Investment Development Authority (MIDA)**

This is the lead agency tasked with carrying out a single **programme** aimed at lifting non-tariff barriers (Thrust 3):

1. To transform Malaysia into a regional eFulfillment hub.

The KPI under this programme is:

1. To attract 30 international brands in using Malaysia as their eFulfillment centres by 2020, with a 2017 target of 5.

- **Ministry of International Trade and Industry (MITI)**

The Ministry is charged with a single **programme** aimed at lifting non-tariff barriers (Thrust 3):

1. Reduce border clearance lead-time for inbound or outbound parcel.

A single **KPI** has been set for this programme:

1. To reduce the average time taken for express parcels to and from the Digital Free Trade Zone (DFTZ) to clear cross-border processes, i.e. cargo clearance from 6 to 3 hours in KLIA by 2017.

- **Bank Negara Malaysia (BNM)**

The agency is responsible for leading a single **programme** aimed at lifting non-tariff barriers (Thrust 3):

1. To foster confidence in the use of online payments for eCommerce transactions.

There are three **KPIs** under this programme:

1. To increase the number of ePayment transactions to 200 per capita by 2020, with an initial target of 115 by 2017;
2. To raise the proportion of active internet banking subscribers to 65% by 2020, and reach 50% by 2017;
3. To ensure that all Financial Service Providers (FSP) publish info on redress channels by 2017.

- **Ministry of Domestic Trade and Consumer Affairs (KPDNHEP)**

The Ministry is tasked with leading a single **programme** aimed at lifting non-tariff barriers (Thrust 3):

1. To increase awareness of consumer rights and redress channels.

A total of three **KPIs** have been set for this programme:

1. To develop a Rectification Report on strengthening policies for online sellers by 2017;
2. To reach 1,500 consumers on awareness of consumer protection in the digital economy through public and private collaboration by 2017, with a 100% increase over the 2018 number by 2020;
3. To improve the current consumer guideline / and incorporate new online business regulation modules for online sellers by 2017.

- **Malaysian External Trade Development Corporation (MATRADE)**

The agency is carrying out a single **programme** to promote national brands (Thrust 6):

1. To nurture select sub-sectors and promote them in key global markets.

There are three **KPIs** for this programme:

1. To select and promote brands from 7 sub-sectors by 2020, and at least 4 by 2017;
2. To reach out to and promote at least 20,000 companies by 2020, with an initial 3,000 by 2017;
3. To increase the number of export-ready or exporting companies using eCommerce for exports to more than 11,000 by 2020, and 1,000 by 2017.

There are no programmes or KPIs for Thrust 4: Realign existing economic incentives, and Thrust 5: Strategic investments in selected players.

- **Ministry of Science, Technology and Innovation (MOSTI)**

The Ministry is responsible to carry out a single **programme** to reinforce the platform of a good and affordable infrastructure for eCommerce:

1. To strengthen the eCommerce ecosystem through adoption of open innovative technologies, related standards and cyber security.

This programme has a single **KPI**:

1. To prepare a report on this issue by 2017.

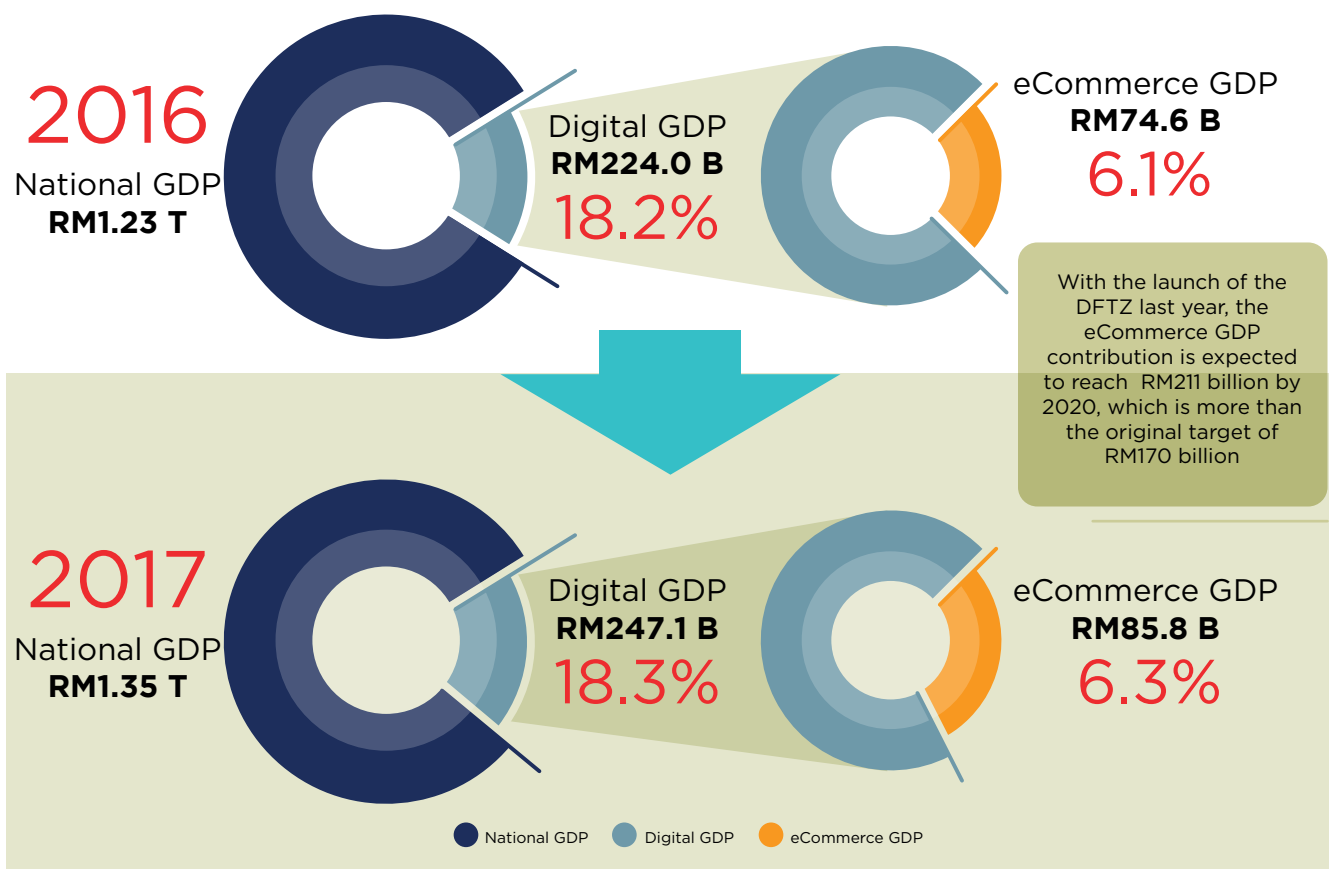


ACHIEVEMENTS IN 2017

eCommerce in Malaysia grew at a healthy rate in 2017, according to the latest figures released by DOSM. The industry contributed RM85.8 billion to national GDP, representing a year-on-year growth of 14.3% from RM74.6 billion in 2016.

The double-digit growth also increased the eCommerce contribution to GDP to 6.3% of national GDP. The steady rise in eCommerce contribution was a key reason the digital economy grew to account for 18.3% of the national economy.

eCommerce contribution to GDP 2017



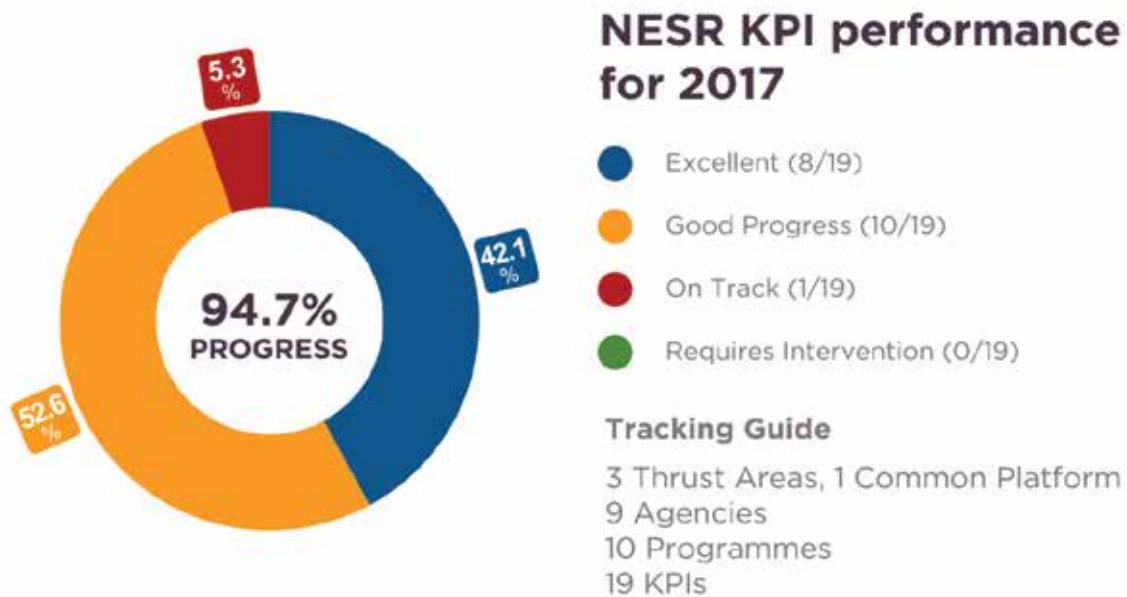
Infographic 4.1 - Source: DOSM, NECC

Overall Performance and Highlights

The NESR covered significant ground in advancing the growth of eCommerce in Malaysia during 2017, with satisfactory to excellent progress achieved in all measurable thrust areas and programmes.

A total of 12 of 13 programmes took off during the year in review as all relevant ministries and agencies proceeded to drive their respective programmes and lend support to others. Their concerted efforts resulted in a high success rate in meeting the key performance indicators (KPIs).

In all, 19 KPIs were tracked and these were related to 10 programmes assigned to 9 agencies under 3 thrust areas plus the common platform of a 'good and affordable infrastructure'. Expectations were exceeded in 8 KPIs and met in 10 KPIs with only one KPI failing to reach its target for the year. However, this lagging KPI is considered on track and does not require any intervention.

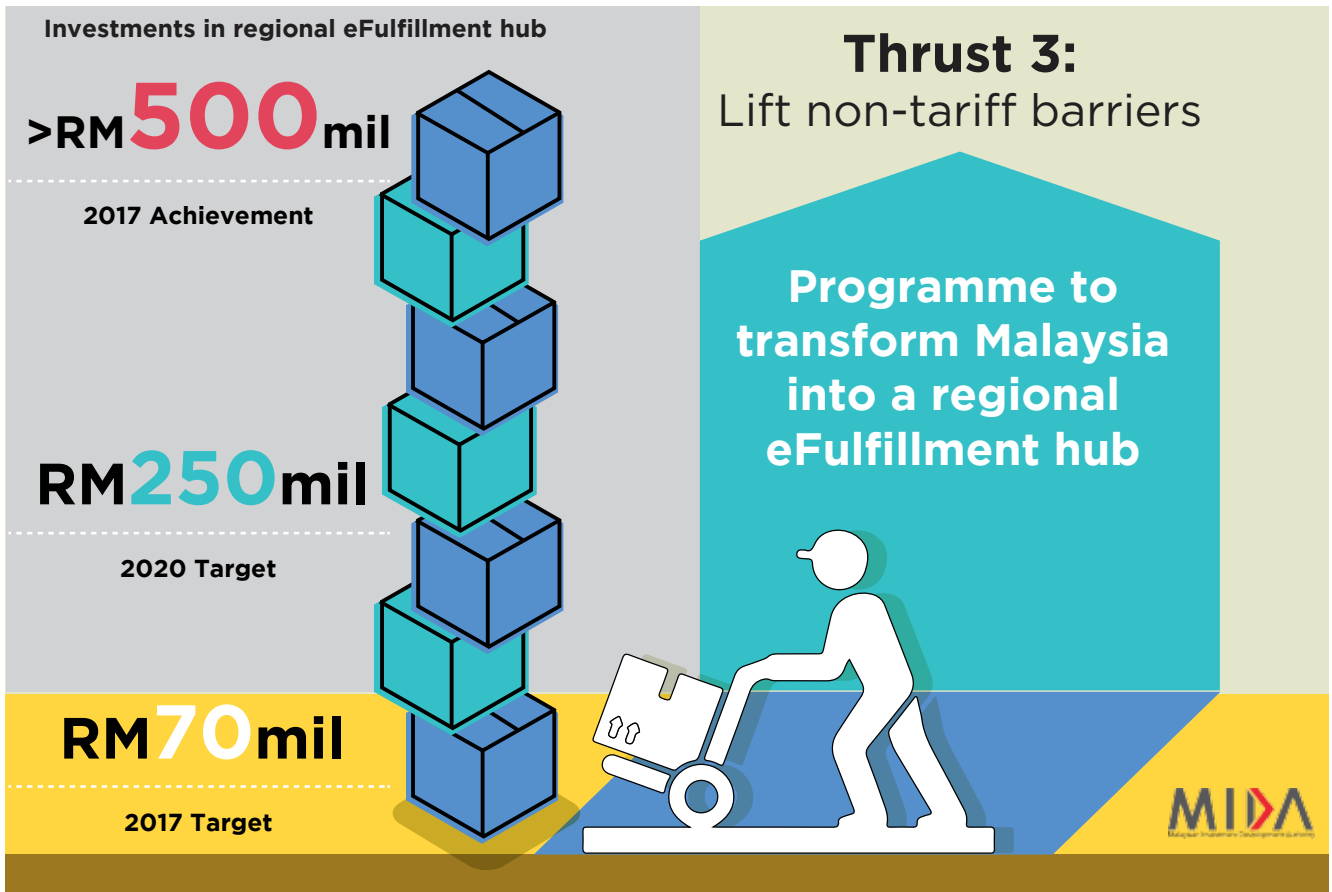


Infographic 4.2

The top-performing KPIs were:

1. Value of investments in regional eFulfillment hubs, which comes under the **Transform Malaysia into a regional eFulfillment hub (Thrust Area 3: Lift non-tariff barriers)** programme led by MIDA (See Infographic 4.3):

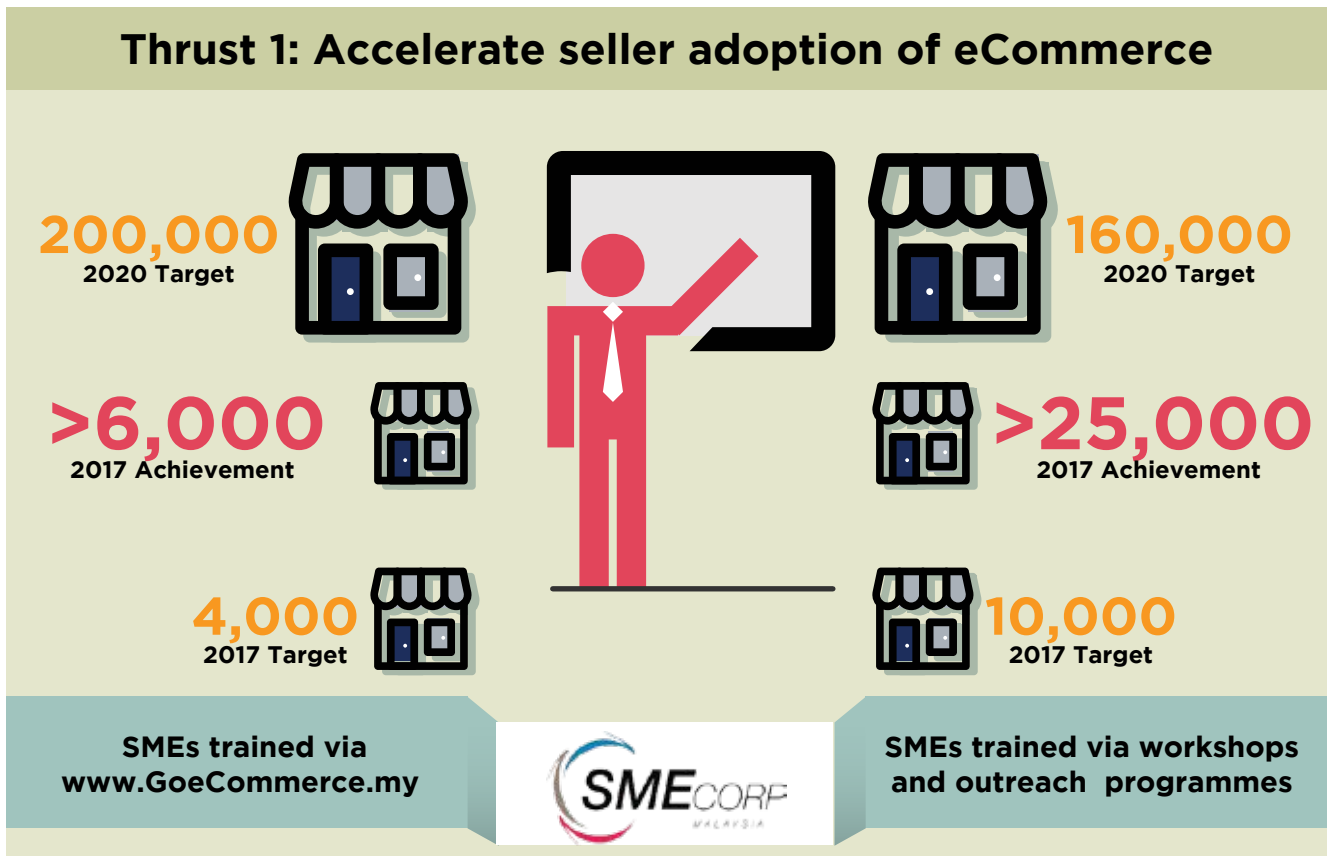
KPI highlights 2017



Infographic 4.3

- Number of SMEs trained in eCommerce via workshops and outreach programmes under **Thrust Area 1: Accelerate seller adoption of eCommerce** led by SME Corp (See Infographic 4.4):

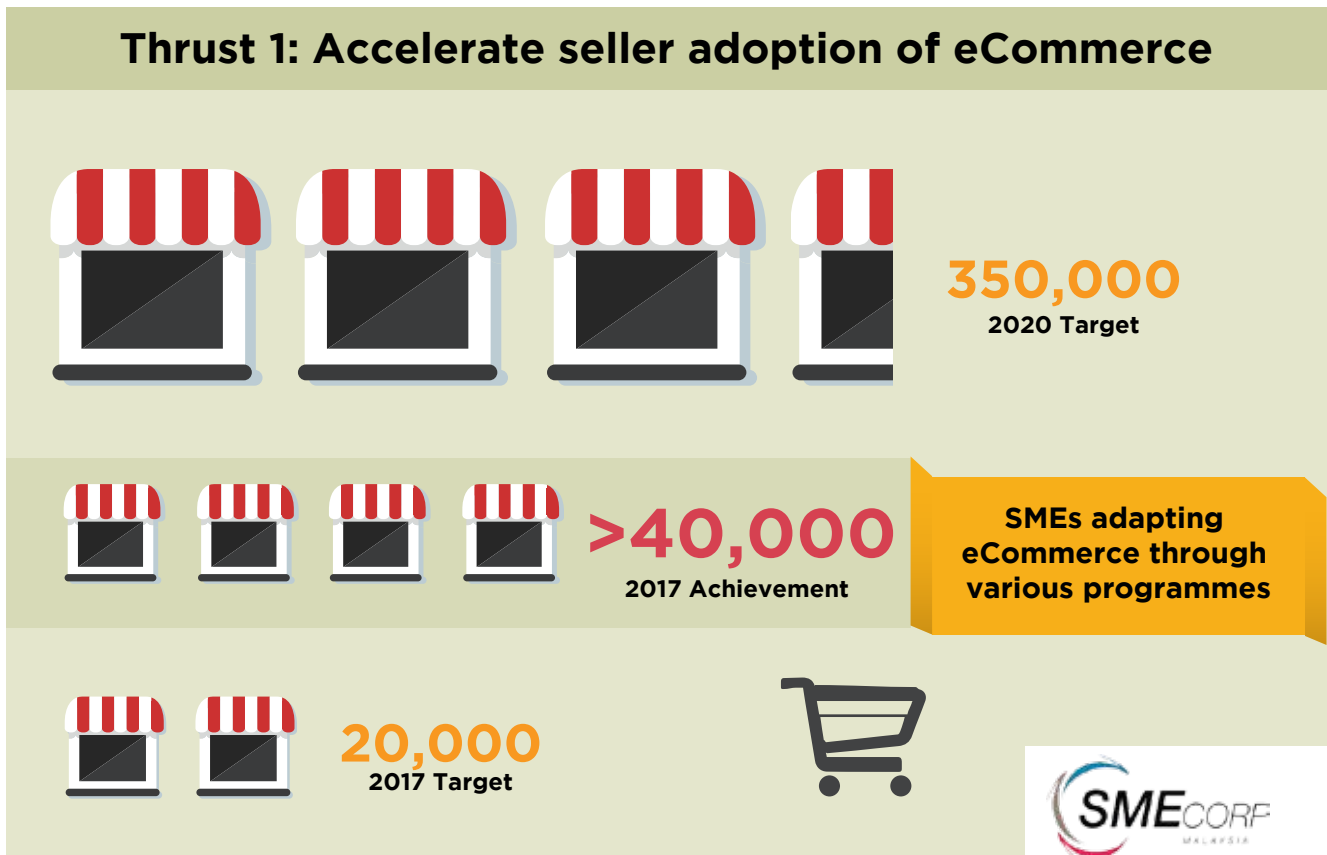
KPI highlights 2017



Infographic 4.4

- 3.. Number of agencies, eCommerce partners, associations and other parties which adopted eCommerce via programmes under Thrust Area 1: Accelerate seller adoption of eCommerce led by SME Corp (See Infographic 4.5):

KPI highlights 2017



Infographic 4.5

4. Number of SMEs trained on [www,GoeCommerce.com](http://www.GoeCommerce.com) (**Thrust 1: Accelerate seller adoption of eCommerce**) (See Infographic 4.4):
5. Number of companies outreached under the programme to **Nurture select sub-sectors and promote them in key global markets (Thrust 6: Promote the national brand to boost cross border eCommerce)**, led by MATRADE (See Infographic 4.6):
6. Number of export-ready or exporting companies adopting eCommerce for exports under the same programme and thrust area as '5' above (See Infographic 4.6):

KPI highlights 2017



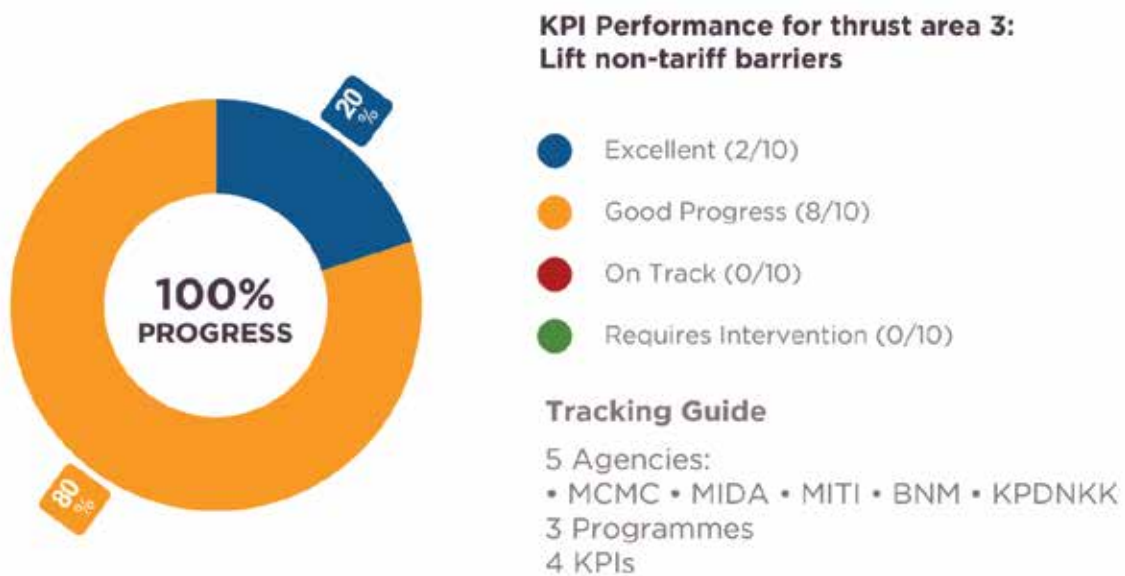
Infographic 4.6

7. Number of international brands using Malaysia as their eFulfillment centre under the programme to **Transform Malaysia into a regional eFulfillment Hub (Thrust Area 3: Lift non-tariff barriers)**:
 - MIDA succeeded in attracting 6 international brands (2017 target: 5, 2020 target: 30).
8. Number of MKD companies and statutory bodies that adopted eProcurement under **Thrust Area 2: Increase adoption of eProcurement** by businesses led by the MOF:
 - 83 organisations (2017 target: 81, 2020 target: 50% of all MKDs and statutory bodies).

Performance of Thrust Areas and Common Platform

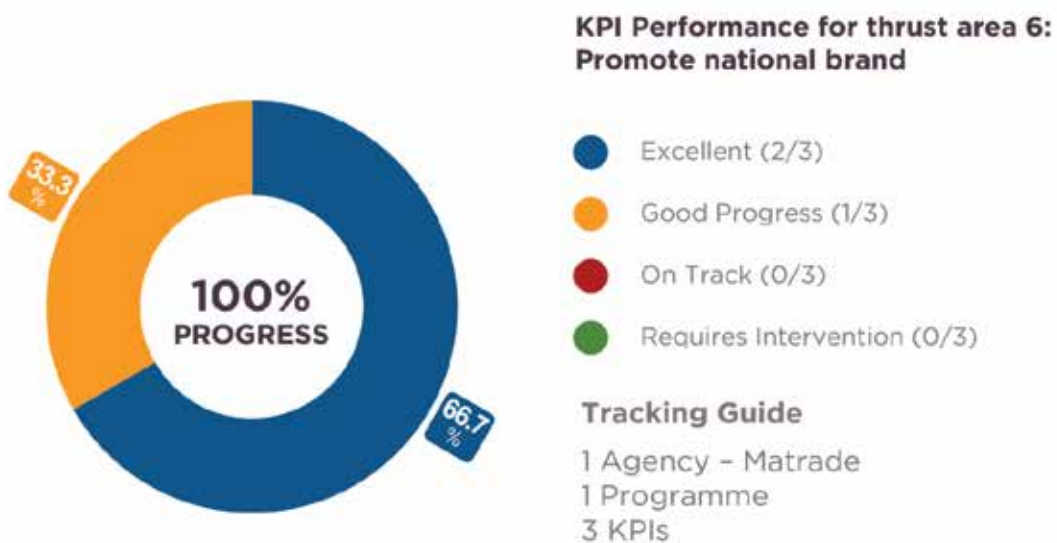
Total progress was recorded for 3 out of the 4 thrust areas that had measurable KPIs and the common platform. They were:

- Thrust 3: Lift non-tariff barriers;



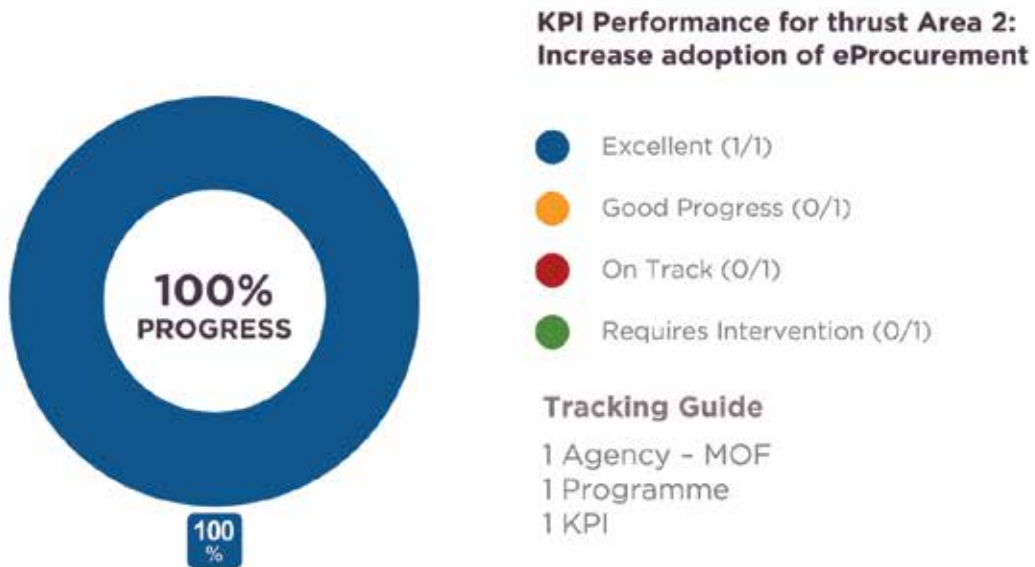
Infographic 4.7

- Thrust 6: Promote the national brand to boost cross-border eCommerce;



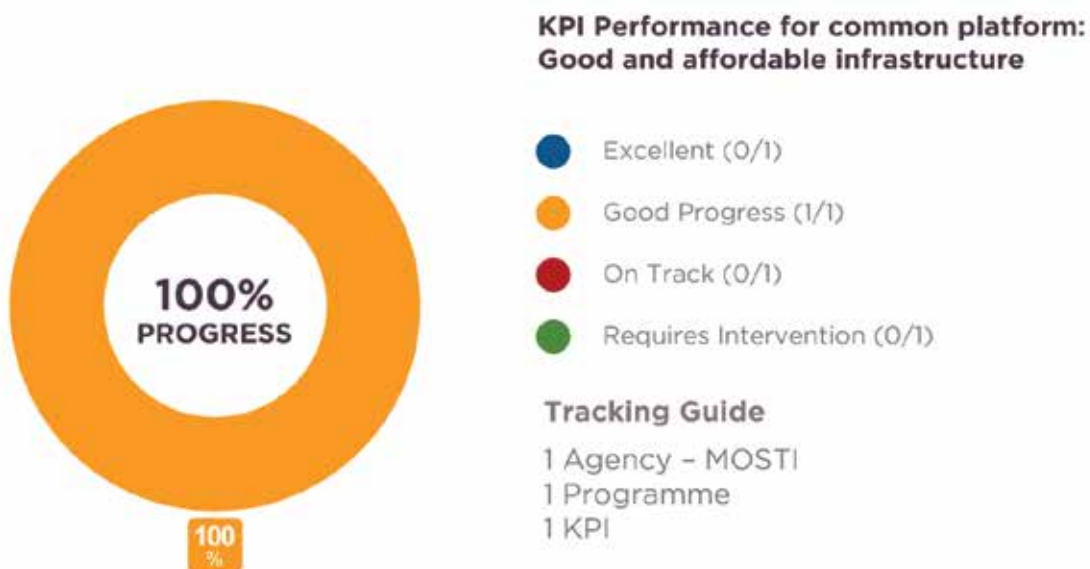
Infographic 4.8

- Thrust 2: Increase performance of eProcurement by businesses



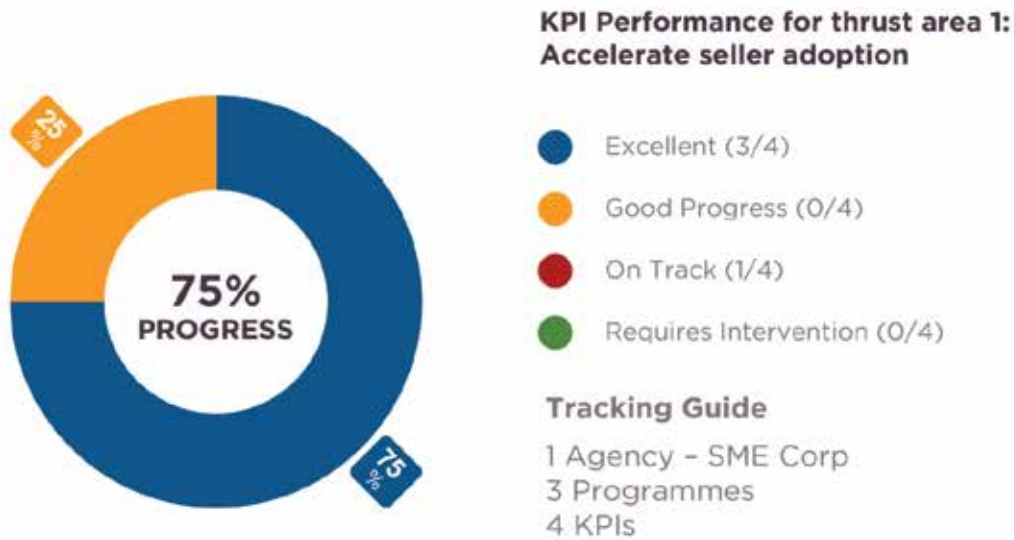
Infographic 4.9

- Platform: Good and affordable infrastructure.



Infographic 4.10

Thrust Area 1: Accelerate seller adoption of eCommerce achieved 75% progress owing to the performance of a solitary KPI. In this case, efforts by SME Corp to register users under www.GoeCommerce.com fell short by almost half, with slightly more than 10,000 users registered out of the 2017 target of 20,000.



Infographic 4.11

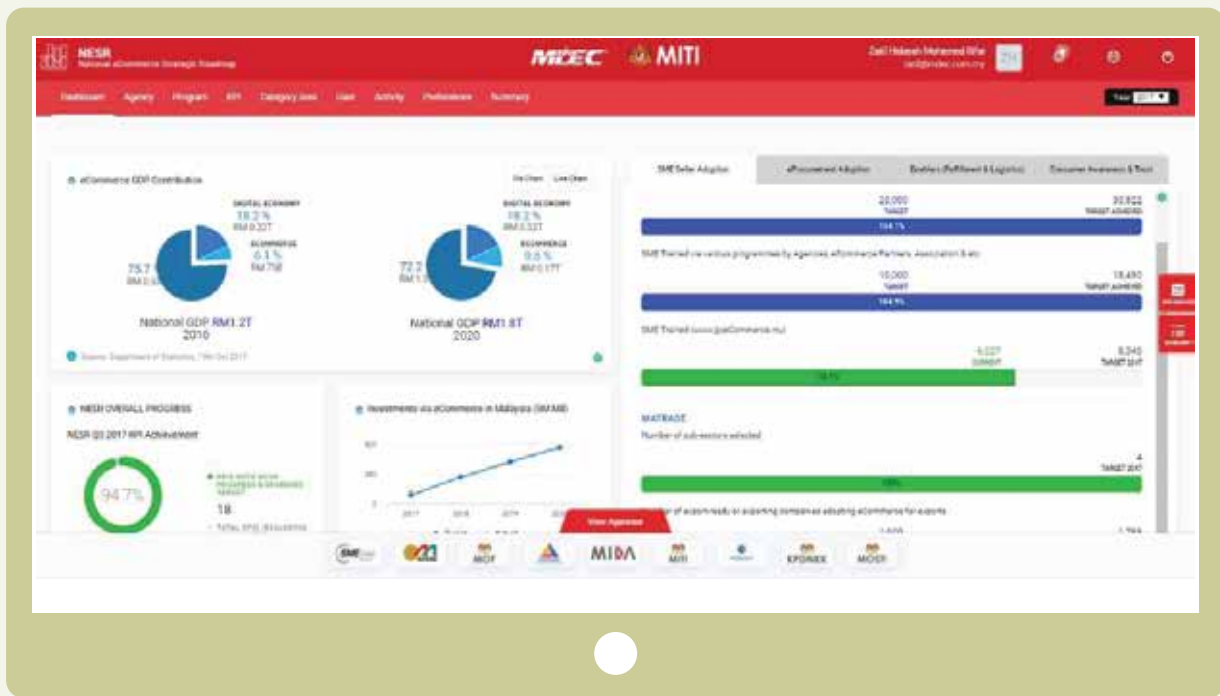
NESR Dashboard

A reporting dashboard was developed during the year in review to enable efficient and accessible monitoring of the NESR's progress. Hosted by MDEC, the dashboard tracks achievements of all programmes as well as KPIs.

NESR Dashboard:

<https://nesrdashboard.mdec.com.my>

A comprehensive reporting dashboard has been developed in 2017 for efficient programme monitoring and alignment



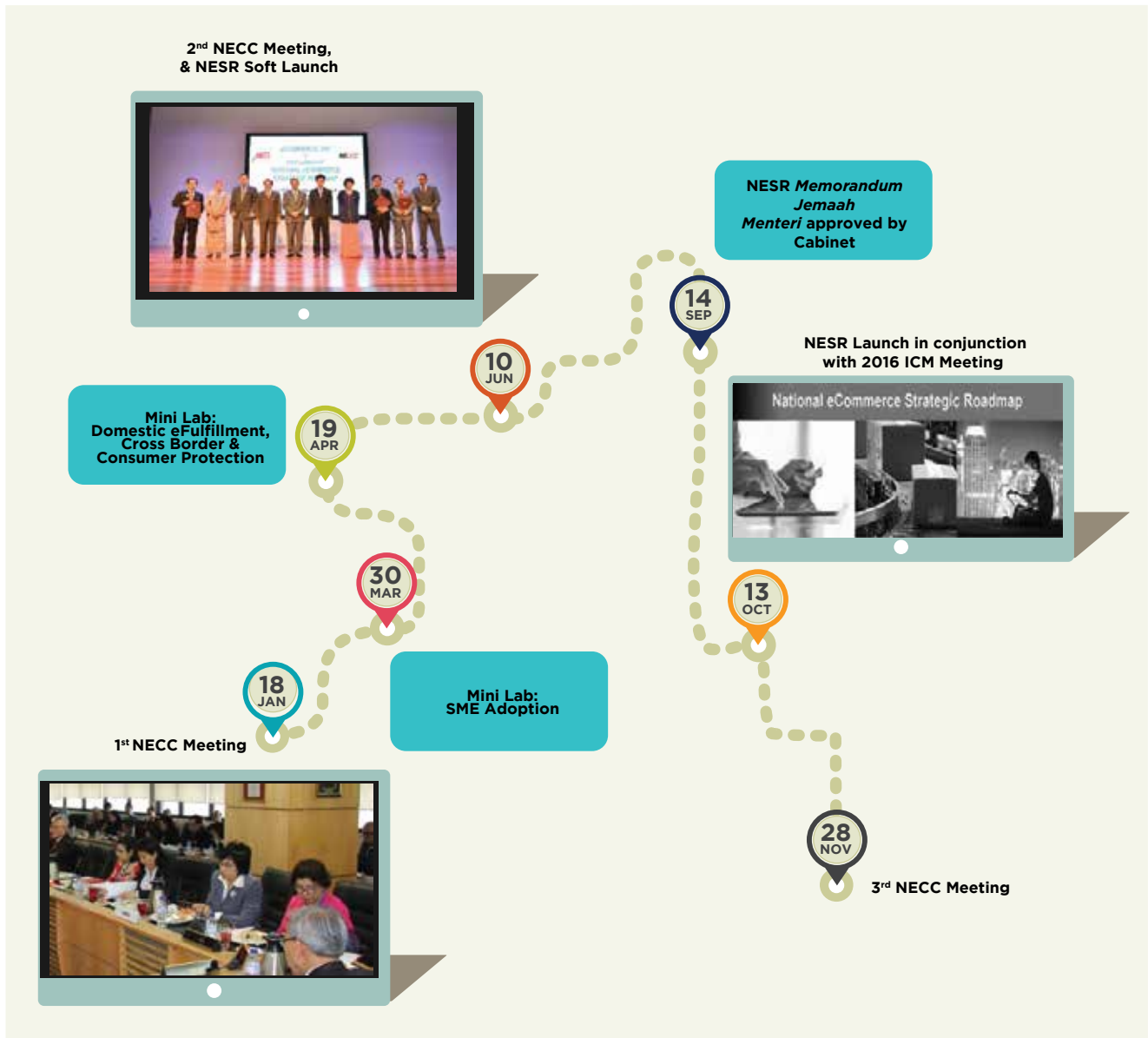
Progress of all NESR Programme and KPI is made via the NESR reporting dashboard <https://nesrdashboard.mdec.com.my>

Infographic 4.12

The NESR Journey & Milestones

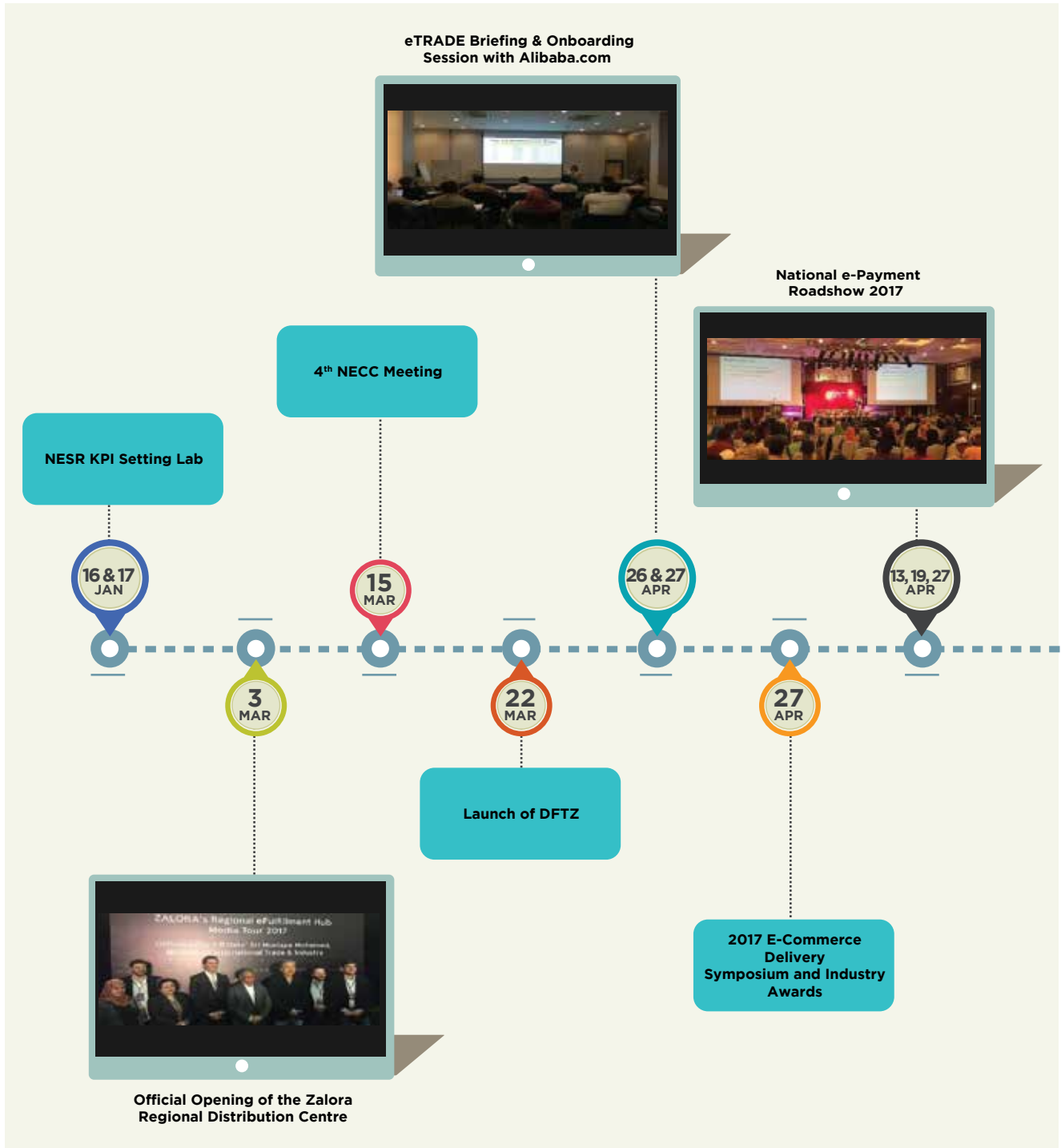
Now into its third year, the NESR has come a long way since the first meeting of the NECC in early 2016. Among the key events over the past few years that set the stage to meet national aspirations for eCommerce have been: the launch of the NESR in mid-2016; followed by opening of the Digital Free Trade Zone (DFTZ) in March 2017, which went live in early November the same year; as well as the launch of Go eCommerce in July 2017. The following infographics outline the journey and highlight key milestones in the NESR journey:

NESR & NECC milestones 2016



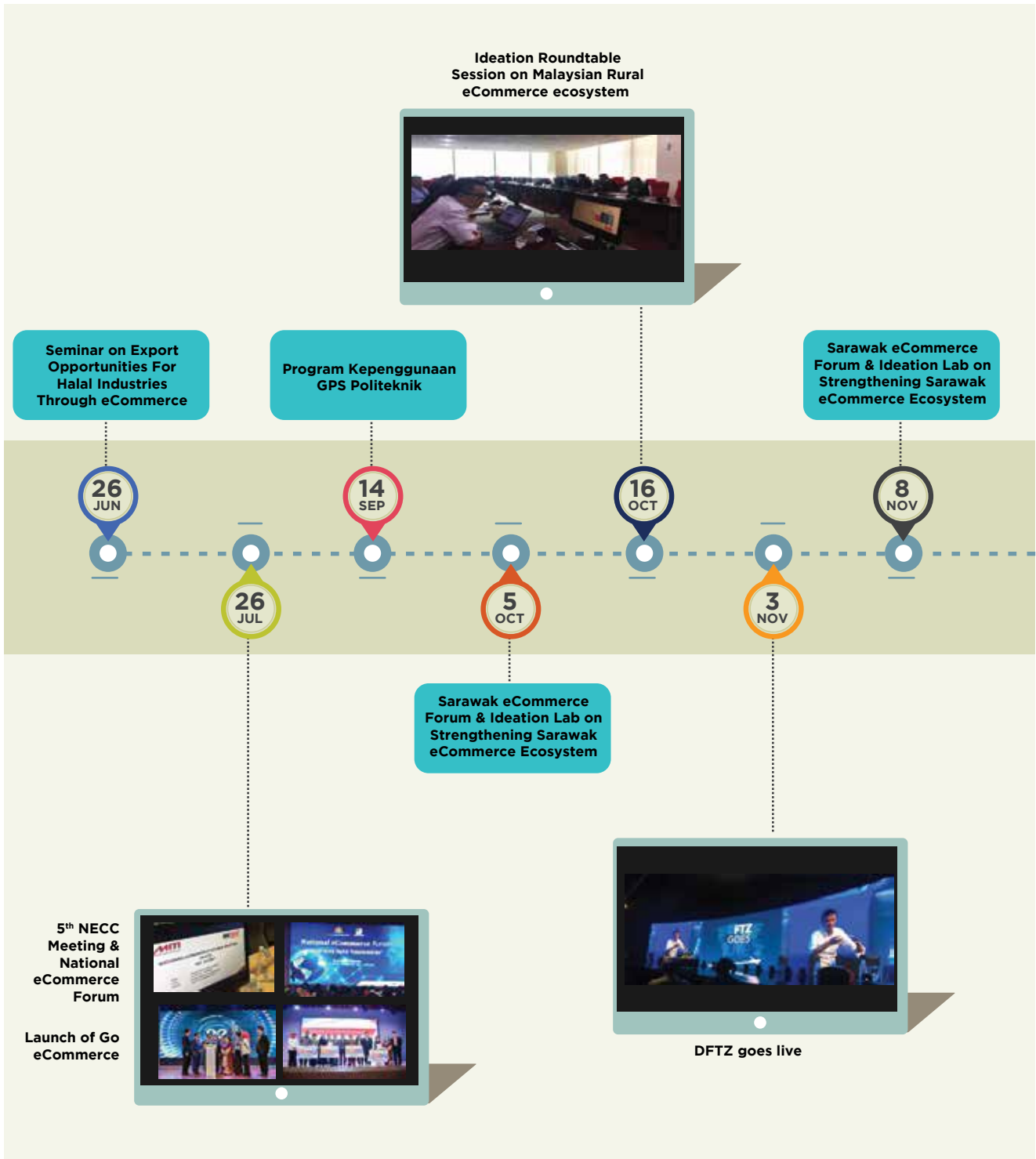
Infographic 4.13

NESR & NECC milestones 2017



Infographic 4.14

NESR & NECC milestones 2017



Infographic 4.15

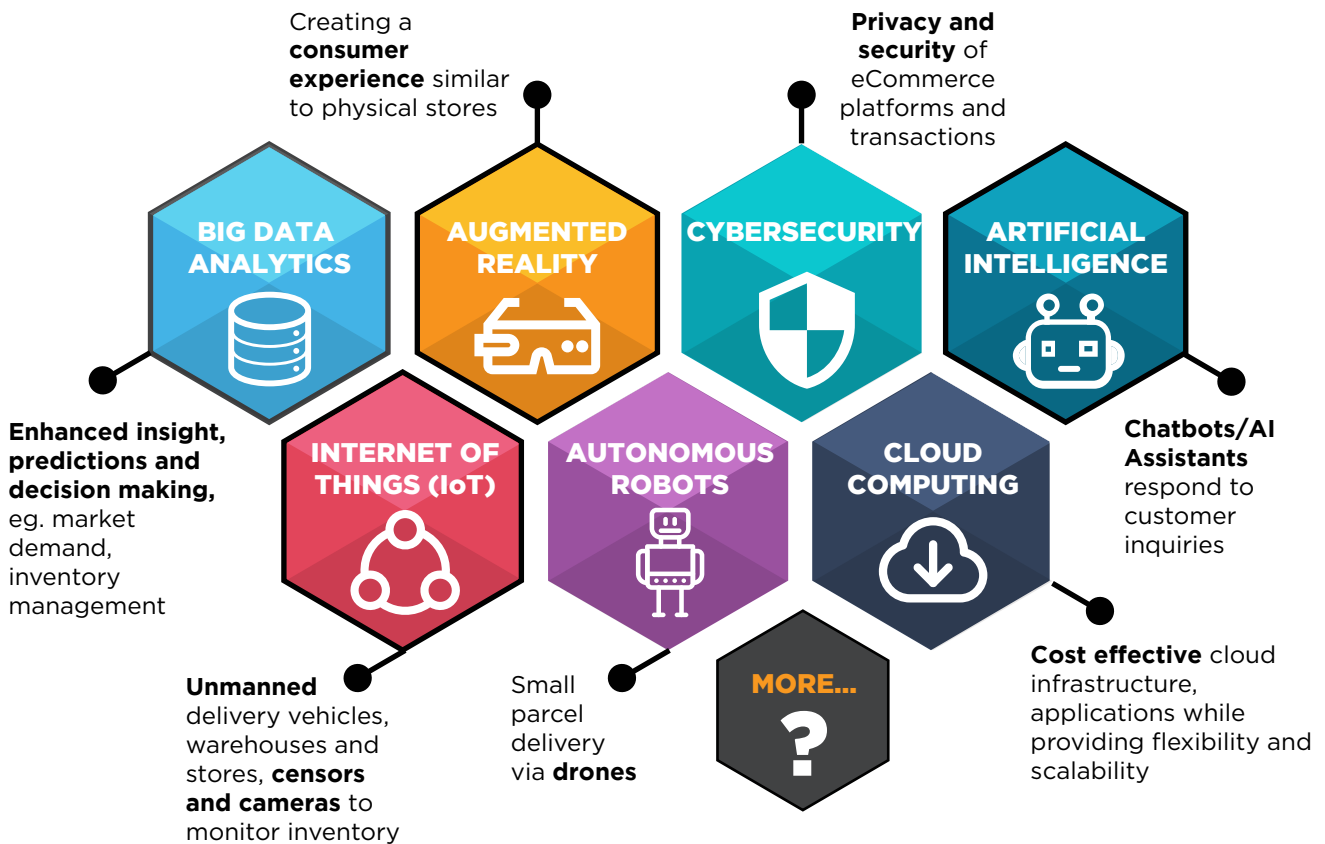
MOVING FORWARD

With the eCommerce contribution reaching RM85.8 billion in 2017, the goal in the years ahead is to double this amount to at least RM170 billion by 2020. Efforts to grow this sub-sector will continue to be underpinned by the thrusts and programmes spelt out in the NESR with due consideration given to new developments on both the domestic and international fronts.

The eCommerce landscape in Malaysia is maturing rapidly and is expected to be impacted by technology trends such as the infusion of new technologies that are driving the 4th Industrial Revolution (4IR) worldwide.

Such trends and technologies are rapidly shaping a strong digital ecosystem that can support the growth of eCommerce. These emerging technologies include big data analytics (BDA), artificial intelligence (AI), the internet of things (IOT), cloud computing, augmented reality (AR), cybersecurity, autonomous robots as well as blockchain and others.

Technologies affecting the evolution of eCommerce



Infographic 5.1

Emerging Technologies Impacting on the eCommerce Ecosystem

- ***BDA***

Many eCommerce companies in Malaysia are already tapping the capabilities of BDA to among others: make predictions on market demand; reduce costs for inventory management; provide customised client services; and speed up delivery along the entire supply chain.

BDA is expected to play a major role given that 45% of SMEs will establish online businesses in 2018 while the amount of curated video content from brands are projected to increase by 25%, according to Lazada. Elsewhere like in China, eCommerce companies like JD.com are already generating 15 petabytes of data, which with the aid of AI and machine learning tools can potentially generate unparalleled insights into consumer behaviour.

- ***AI***

AI has the potential to revolutionise the eCommerce process and experience from end-to-end. Chatbots and other forms of AI-powered assistants can interact with customers to provide product recommendations, as is already being done by eCommerce sites and businesses such as Alibaba and eBay.

- ***IOT***

IOT is increasingly utilised in eCommerce, particularly in improving last-mile delivery of products. IOT helps to minimise waste, control costs and reduce the risks of inventory shortage. For example, China's JD.com has already introduced unmanned delivery vehicles, warehouses and stores.

- ***Blockchain technology***

Blockchain is set to resolve many of the issues related to eCommerce. In doing so, the industry will be more cost-efficient and better placed to grow as the preferred method for doing business and retail. The issues in which blockchain can have a significant impact on include: payment solutions; supply chain management; data security; logistics; and marketplace transparency.

- ***AR***

AR and the related virtual reality have the potential to create a consumer experience similar to traditional brick and mortar stores. For instance, Sephora's makeup app uses facial recognition (AR) to empower customers to try on products anywhere.

- ***Autonomous robots***

These robots are primed to be a feature in the future. In 2016, Amazon partnered with the UK Government to perform small parcel delivery using drones. The company also developed a driverless delivery robot that help ship goods purchased online to customers more conveniently.



In addition to these emerging technologies, a number of market and industry trends are expected to directly impact eCommerce in Malaysia. They include such diverse factors as:

- Diversification of payment modes;
- Simplification of check-out process;
- Better consumer tracking of product delivery;
- Expansion of social commerce;
- Higher participation by SMEs;
- Enhanced loyalty programmes for repeat business;
- Integration of online with offline experience.

Next Steps

Clearly, eCommerce is a dynamic landscape that will continue to evolve and develop over time. The challenge for Malaysia going forward is to ensure there is a cohesive and coordinated approach to infuse emerging technologies into eCommerce platforms and business models in order to accelerate and sustain growth in this sub-sector.

It is imperative for domestic eCommerce to reach the adoption levels typical of economies with comparable per capita gross national income (GNI). To do so, it is critical that focus on the following factors:

- To expedite policy regulations for enablement of new technologies, such as for the usage of drones and autonomous robots;
- To create strategic investments in selected eCommerce players;
- To invest in new emerging technologies to expand the eCommerce ecosystem; and
- To increase private sector financing for eCommerce adoption initiatives via emerging technologies.

For these factors to coalesce and impact on the industry, it is necessary for greater and continued collaboration among all stakeholders, from the government to industry, SMEs, investors and the public.

The years ahead are expected to be challenging for this sub-sector as a key segment of the digital economy. Yet, with the NESR in full swing, eCommerce is poised to grow as a significant contributor to economic growth and consumer empowerment in Malaysia.

www.mdec.com.my

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