

# Enhancing Cyber Awareness in ASEAN

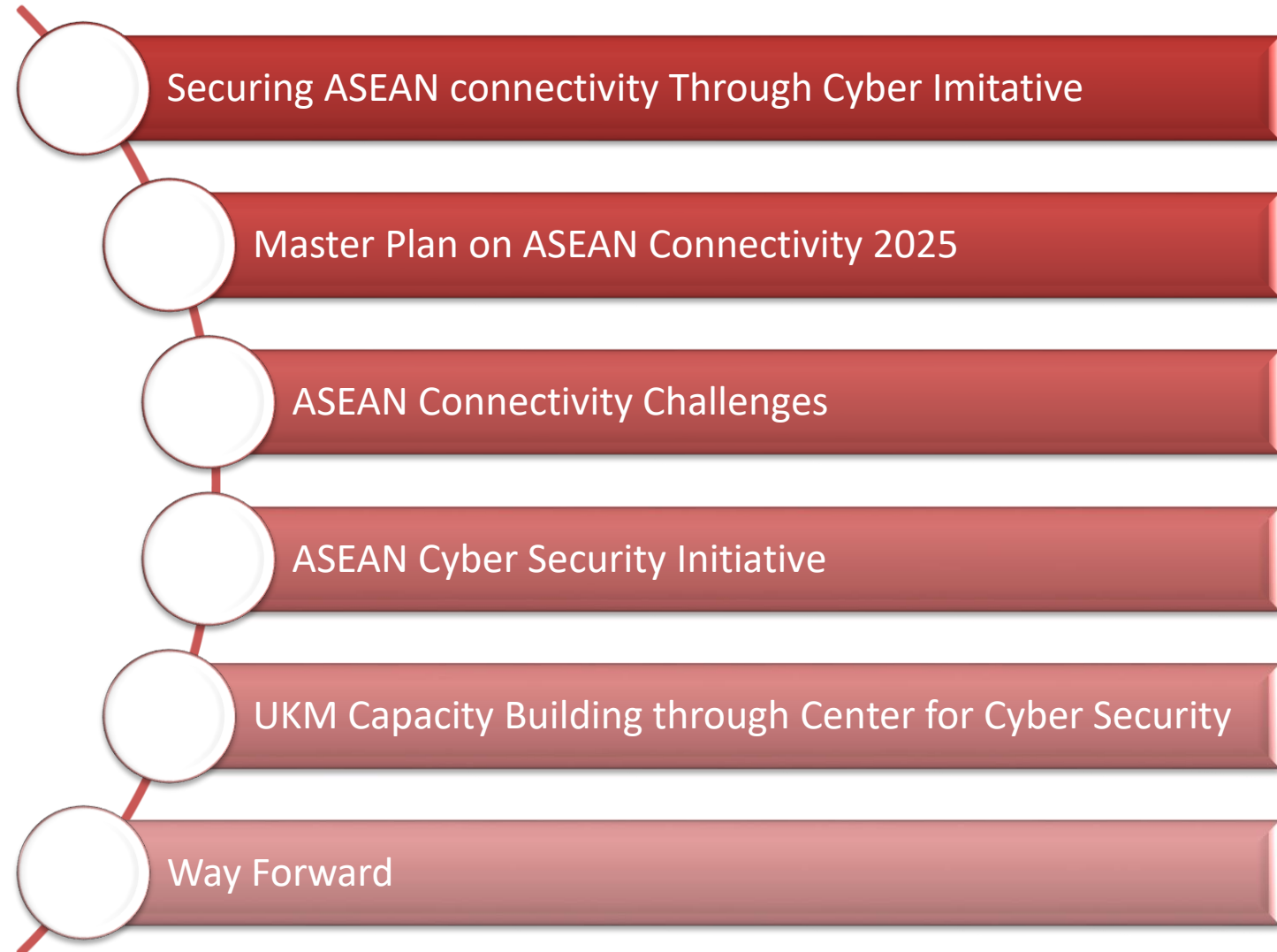
CENTER FOR  
**CYBERSECURITY**  
UNIVERSITI KEBANGSAAN MALAYSIA

PUSAT  
**KESELAMATAN SIBER**  
FAKULTI TEKNOLOGI DAN SAINS MAKLUMAT



UNIVERSITI KEBANGSAAN MALAYSIA  
*The National University of Malaysia*

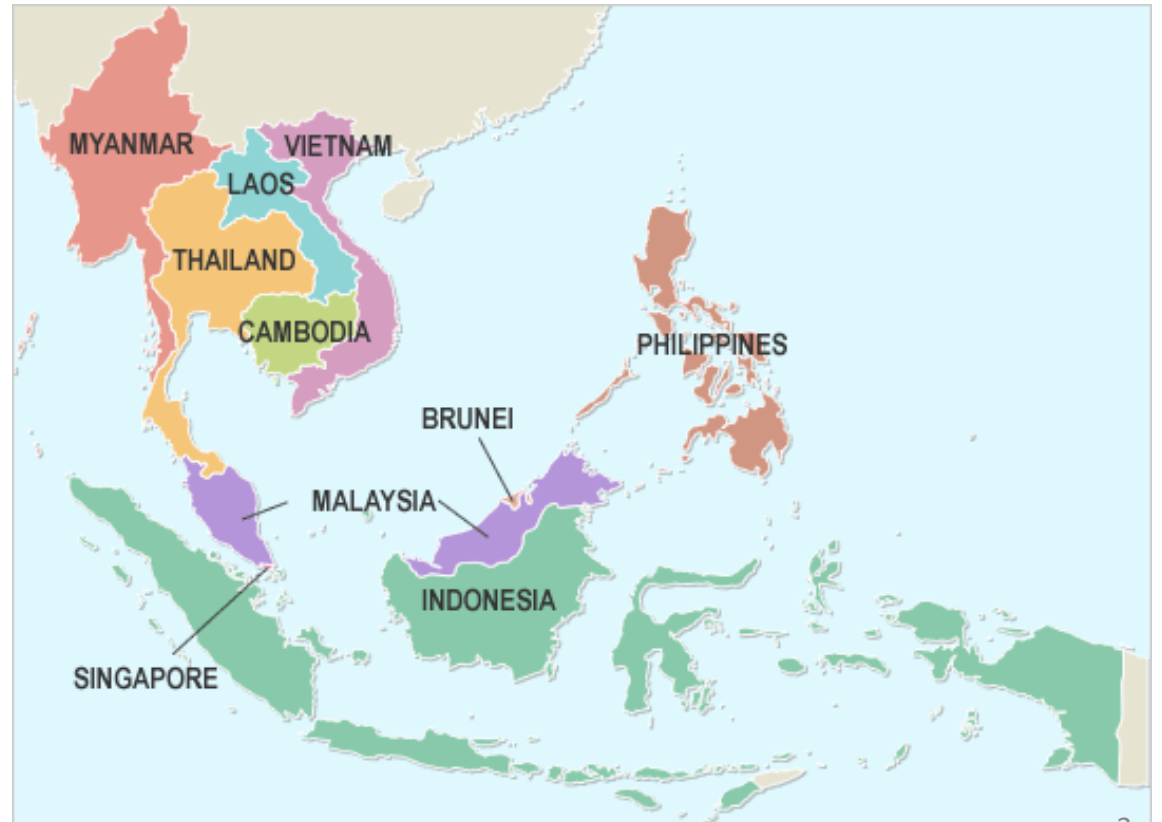
# Overview





# Securing ASEAN Connectivity Through Cyber Initiatives

**Siti Norul Huda Sheikh Abdullah  
Abdullah Mohd Zin  
Center for Cyber Security  
Faculty of Information Science and Technology,  
Universiti Kebangsaan Malaysia.**



# Economic Community at a Glance

## ASEAN Economy

A Highly Competitive Economic Region

With a combined GDP of **US\$2.6 trillion** in 2014, ASEAN was the **7th largest in the world** and the **3rd largest in Asia**

## ASEAN Population

A Fully Integrated Community

In 2014, ASEAN was the **3rd largest market in the world** with **622 million people** behind only China and India

## ASEAN Trade

A More Integrated Market

Total trade increased by nearly **US\$1 trillion**

between 2007 and 2014, with **intra-ASEAN** trade comprising **the largest share** of ASEAN's total trade by partner.



## ASEAN FDI

A World Class Investment Destination

ASEAN attracted **US\$136 billion** in FDI in 2014, accounting for **11%** of global FDI inflows, up from only **5%** in 2007.

## ASEAN Connectivity

A More Connected Community

Annual tourist arrivals were up from **62 million** in 2007 to **105 million** in 2014, **almost half** of which were **intra-ASEAN**

The rate of internet subscription **more than doubled** from **11.8** per 100 inhabitants in 2007 to **28.6** in 2014.



# Dynamic Environment Challenges

A doubling of the number of ASEAN households that are part of the “consuming class” over the next 15 years;

The challenge of improving productivity to sustain economic progress as growth in the size of the workforce starts to slow;

The movement of 90 million more people to cities within ASEAN by 2030;

The need for infrastructure spending to more than double from the historical levels;

The challenge of equipping the world’s third-largest labour force with the skills needed to support growth and inclusiveness;

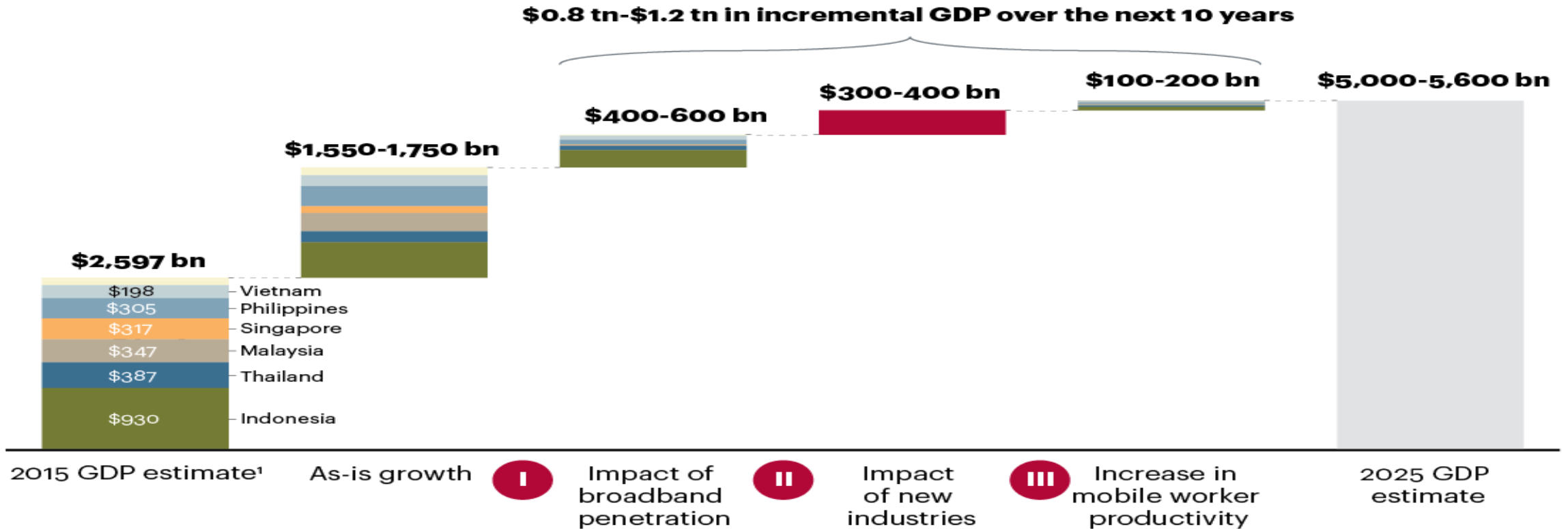
The emergence of disruptive technologies;

the opportunity to transform natural resource efficiency in the region;

the imperative to understanding the implications for ASEAN as the world shifts towards a multipolar global power structure.

Figure 9

**ASEAN’s digital economy has potential to add an incremental \$1 trillion in GDP by 2025**



<sup>1</sup>Based on current prices; uses 2015 as baseline to project future real GDP growth; as-is growth based on five-year GDP forecasts

<sup>2</sup>Process productivity improvements, innovation via new consumer applications and services, efficient deployment of enterprises via enhanced access to consumer, labor, and raw materials

<sup>3</sup>Building automation and emergence of integrated facilities management

<sup>4</sup>Increased consumption, productivity increase from sales digitization and increased contribution from complementary industries

<sup>5</sup>Creation of formal savings channels and improved insurance usage

<sup>6</sup>Resource efficiency improvement and product/process improvements via R&D innovation

Sources: GSMA, World Bank, Broadband Commission for Digital Development, IMF, ITU, Deloitte, Telenor, Jones Lang LaSalle, Warsaw Institute for Economic Studies; A.T. Kearney analysis

# Challenge 1: Cyber Connectivity

## A HIGHER THREAT POTENTIAL

### SPEED OF DIGITAL TRANSFORMATION

#### MORE INTERNET USERS GLOBALLY<sup>16</sup>



#### GREATER INTERCONNECTIVITY AMONG 4G MOBILE DEVICES<sup>17</sup>



#### HIGHER MOBILE NETWORK TRAFFIC<sup>18</sup>



## ASIA PACIFIC LEADS INTERNET-of-THINGS (IoT) MARKET

#### TECHNOLOGY ADOPTION PIONEERS<sup>19</sup>

Japan and South Korea pioneered the adoption of IoT and machine-to-machine technology

#### TOP BROADBAND (INTERNET) SPEED



compared to global average of 5.6 Mbps

#### GLOBAL IoT CONNECTIVITY<sup>22</sup>



#### EXPONENTIAL GROWTH IN IoT MARKET REVENUE<sup>23</sup>



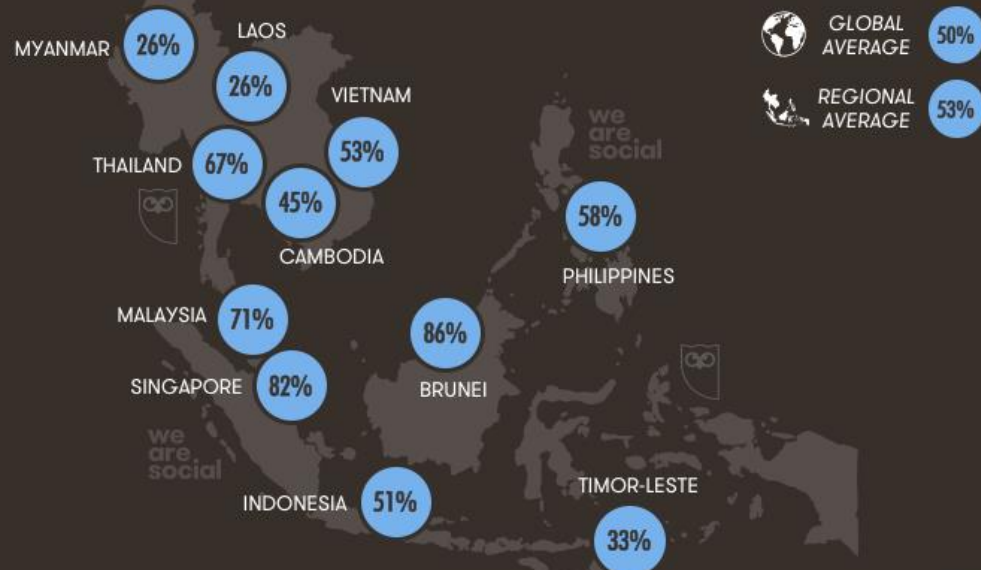
China and Japan alone account for a quarter of global revenue, followed by the US

# Challenge 1: Cyber Connectivity

JAN  
2017

## INTERNET PENETRATION IN SOUTHEAST ASIA

THE NUMBER OF INTERNET USERS IN EACH COUNTRY, COMPARED TO THE TOTAL NATIONAL POPULATION



SOURCES: INTERNETWORLDSTATS; INTERNATIONAL TELECOMMUNICATION UNION (ITU); INTERNETLIVESTATS; CIA WORLD FACTBOOK; FACEBOOK; NATIONAL REGULATORY AUTHORITIES.

Hootsuite we are social

## ASEAN-6 digital population 2018

### Indonesia

Population	265.4 M
Internet users	132.7 M
Social media users	130.0 M
Mobile users	177.9 M
Mobile social users	120.0 M

### Thailand

Population	69.11 M
Internet users	57.00 M
Social media users	51.00 M
Mobile users	55.56 M
Mobile social users	46.00 M

### Malaysia

Population	31.83 M
Internet users	25.08 M
Social media users	24.00 M
Mobile users	21.62 M
Mobile social users	22.00 M

### Singapore

Population	5.75 M
Internet users	4.83 M
Social media users	4.80 M
Mobile users	4.71 M
Mobile social users	4.30 M

### Philippines

Population	105.7 M
Internet users	67.0 M
Social media users	67.0 M
Mobile users	61.0 M
Mobile social users	62.0 M

### Vietnam

Population	96.02 M
Internet users	64.00 M
Social media users	55.00 M
Mobile users	70.03 M
Mobile social users	50.00 M

Source: WeAre Social, Hootsuite Jan 2018

ASEAN<sup>up</sup> Empowering business in Southeast Asia - aseanup.com



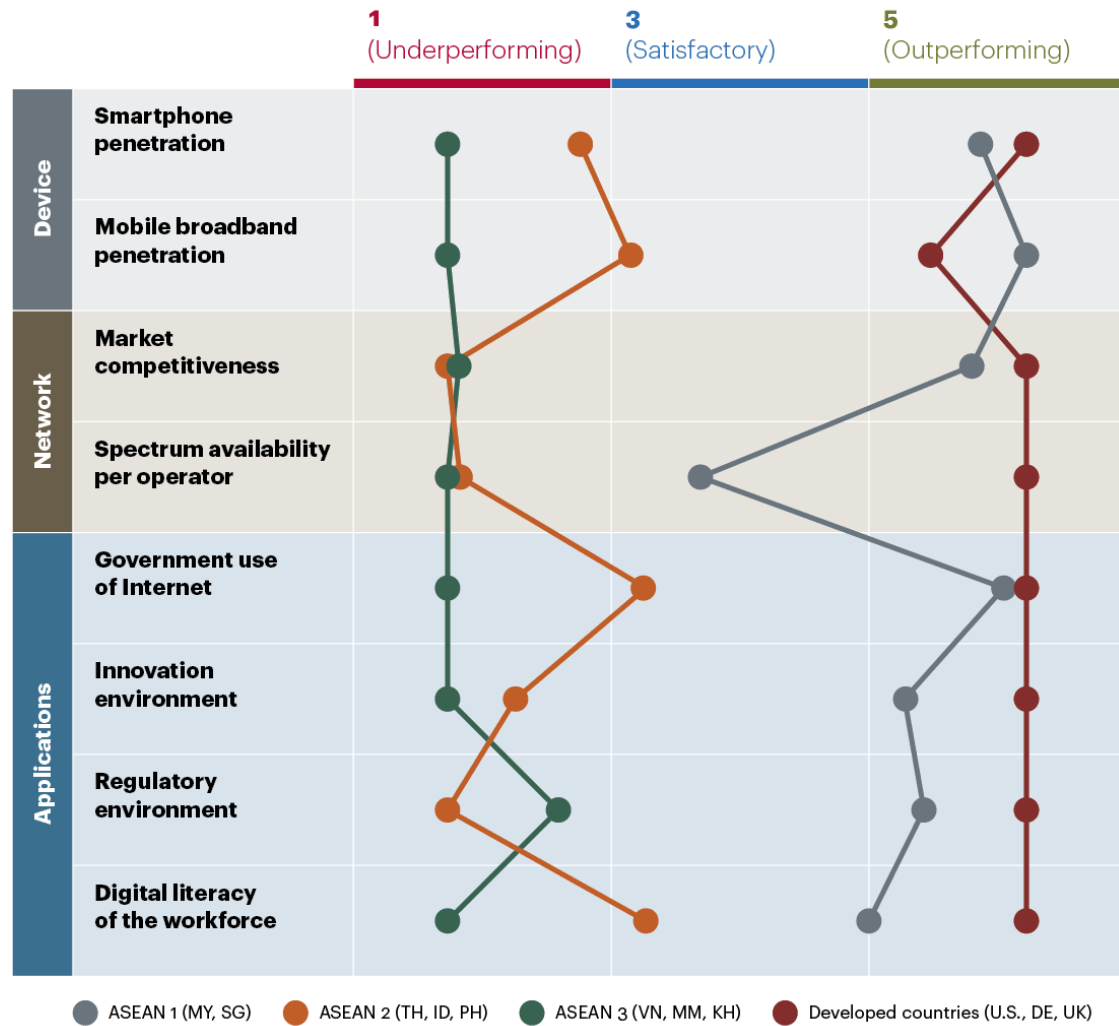
Challenge 1:  
Cyber  
Connectivity

# ASEAN INTERNET USE, POPULATION DATA AND FACEBOOK STATISTICS - DECEMBER 2017

<u>ASEAN</u>	Population	Internet Users,	Internet Users	Penetration	Users	Facebook
	( 2018 Est.)	(Year 2000)	31-Dec-17	(% Population)	% Asean	31-Dec-17
<u>Brunei Darussalam</u>	434,076	30,000	410,836	94.60%	0.12%	350,000
<u>Cambodia</u>	16,245,729	6,000	8,005,551	49.30%	2.40%	6,300,000
<u>Indonesia</u>	266,794,980	2,000,000	143,260,000	53.70%	42.96%	130,000,000
<u>Laos</u>	6,961,210	6,000	2,439,106	35.00%	0.73%	2,200,000
<u>Myanmar</u>	53,855,735	1,000	18,000,000	33.40%	5.40%	16,000,000
<u>Malaysia</u>	32,042,458	3,700,000	25,084,255	78.30%	7.52%	22,000,000
<u>Philippines</u>	106,512,074	2,000,000	67,000,000	62.90%	20.09%	62,000,000
<u>Singapore</u>	5,791,901	1,200,000	4,839,204	83.60%	1.45%	4,300,000
<u>Timor-Leste</u>	1,324,094	0	410,000	31.00%	0.12%	390,000
<u>Vietnam</u>	96,491,146	200,000	64,000,000	66.30%	19.19%	50,000,000
<u>TOTAL ASIA</u>	586,453,403	9,143,000	333,448,952	58.81%	100.00%	293,540,000

Figure 6

**ASEAN is not a monolithic block; there are significant variations across devices, networks, and applications**



Source: A.T. Kearney analysis

## Challenge 2: Internet Speed

### Southeast Asia's Mobile Internet Speed

Average Connection Speeds (IPv4)  
for Mobile Connections in Q1 2017

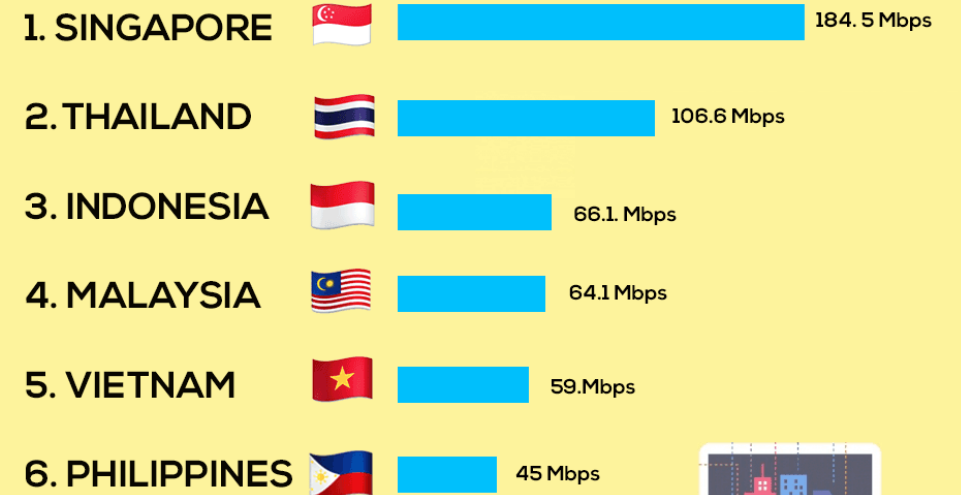


Source : akamai's [state of the internet] Q1 2017

seasia

### Southeast Asia's Non-mobile Internet Speed

Peak Connection Speeds (IPv4)  
for Mobile Connections in Q1 2017



Source : akamai's [state of the internet] Q1 2017

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# Challenge 3: Cyber Risk

## CYBER RISK: ASIA-PACIFIC IN NUMBERS

### THE SEVERITY OF CYBERATTACKS



In business revenues lost to cyberattacks<sup>1</sup>

Ranked **5<sup>th</sup>** among Asian top risks<sup>2</sup>



Ranked **6<sup>th</sup>** among Global top risks<sup>2</sup>

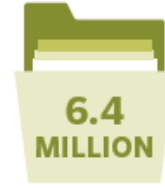
### RECENT CYBERATTACKS EXAMPLES IN ASIA



personnel stolen from Singapore's defense ministry online database portal in Feb 2017<sup>4</sup>



stolen from cyberattack on a bank in Bangladesh in May 2016<sup>5</sup>



Children's data stolen in Hong Kong hacking of a digital toymaker firm in Dec 2015<sup>7</sup>



Philippine government websites simultaneously hacked in July 2016<sup>6</sup>

### CHALLENGES FOR FIRMS IN MANAGING CYBERSECURITY



**70%** of firms do not have a strong understanding of their cyber posture



of organisations found it "difficult-to-extremely-difficult" to recruit cyber talent<sup>11</sup>



Primary Insurers are reluctant to provide single coverage above **\$100 MILLION**

### ASIAN FIRMS LAG IN CYBERSECURITY



Asian organisations take **1.7 times** longer than the global median to discover a breach<sup>8</sup>

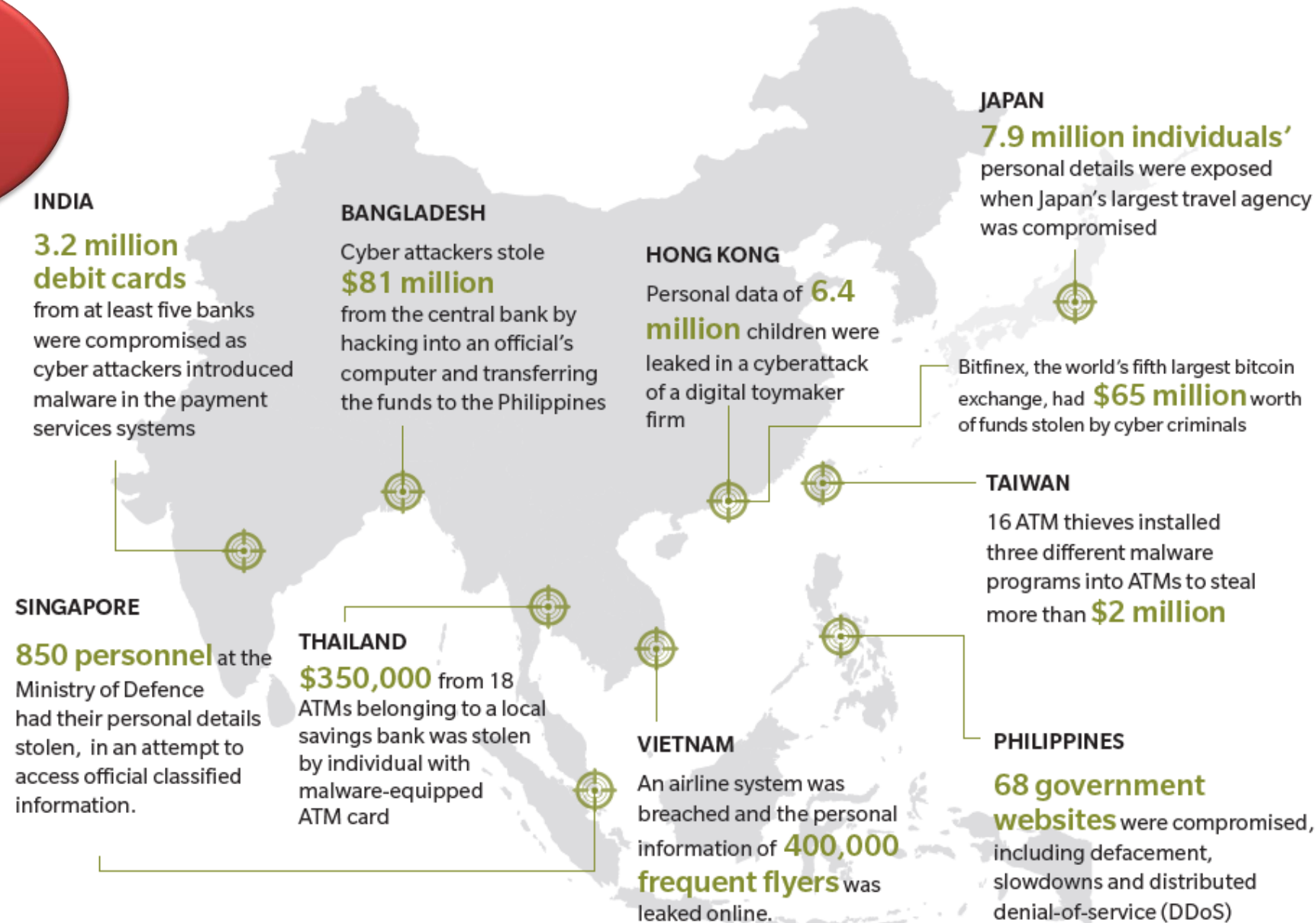


of Internet users in Asia have **not received any education** on cybersecurity<sup>10</sup>



Asian firms spent **47%** less on information security than North American firms<sup>9</sup>

# Challenge 4: Cyber Attacks



## Challenge 5: Cyber Law

### PM: Anti-Fake News Act to protect Malaysians from security threat (Updated)

Posted on 16 April 2018 - 04:13pm

Last updated on 16 April 2018 - 08:03pm

Haikal Jalil

newsdesk@thesundaily.com



Prime Minister Datuk Seri Najib Abdul Razak with Defence Minister Datuk Seri Hishammuddin Tun Hussein at the Putrajaya Forum 2018 in conjunction with the Asian Defence Services (DSA) exhibition and the National Security Exhibition (Natsec) Asia 2018 at the Malaysian International Exhibition and Trade Centre (MITEC) on April 16, 2018.

— Bernama

## Malaysia Legislation Updates

### CHINA

- Introduced a sequence of legislative reforms in recent years that seek to ensure stronger data protection
- Complex overlay of piecemeal regulations as there is no single dedicated regulator, rendering it difficult to interpret and implement

### THAILAND

- Drew up a draft data protection bill in 2015, but that has come under criticism for placing undue responsibility on third-party providers to ensure data privacy
- Bill is still in the midst of revisions

### MALAYSIA

- Introduced Personal Data Protection Regulations in 2013 but only came into effect in December 2015, with penalties of up to US\$70,000

### SINGAPORE

- Introduced the Personal Data Protection Act (PDPA) in 2014 that has a penalty of up to \$800,000
- Singapore's central bank, the Monetary Authority of Singapore, requires that financial institutions notify it of any "adverse development" – events that could lead to prolonged service failure or disruption, or any breach of customer information
- New standalone Cybersecurity Act to be enacted in 2017 to report incidents and proactively secure critical information infrastructure

### HONG KONG

- The Personal Data (Privacy) Ordinance has been in effect since 1995, but it has not been strongly enforced
- Enforcement has picked up in recent years with reported incidents to the Commissioner increasing by 40 percent year-on-year in 2015 and four offenders being convicted and fined
- Hong Kong Monetary Authority, in collaboration with the banking industry, launched the "Cybersecurity Fortification Initiative", where the *Cyber Resilience Assessment Framework* will be completed by mid-2018

### VIETNAM

- Introduced the Law on Cyber Information Security in July 2016, although there are questions about what constitutes compliance for many of the standards

### AUSTRALIA

- The Privacy Amendment (Notifiable Data Breaches) Bill 2016 was enacted in February 2017<sup>31</sup>
- Australian organizations will now have to publicly disclose any data breaches, with penalties ranging from \$360,000 for responsible individuals to \$1.8 million for organizations

### INDONESIA

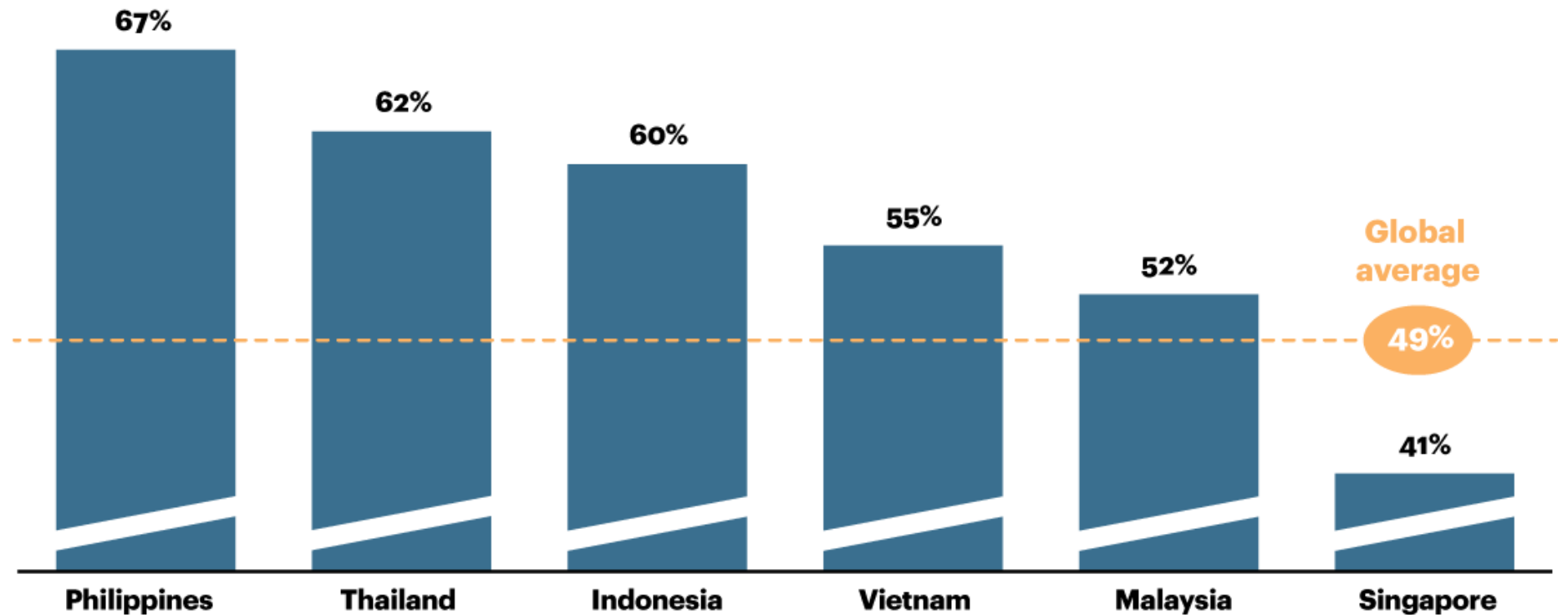
- No general law on data protection, although discussions of a draft bill have been in progress for over a year

Challenge 5:  
Cyber Security

# Low consumer awareness and trust hindering the uptake of digital services

Figure 19

**ASEAN digital buyers are reluctant to share their financial information online**



Sources: Nielson; A.T. Kearney analysis

## Other Challenges

- Issues related to the connectivity agenda will be central:
  - for example, policy makers will need to prioritise building the backbone infrastructure (including fibre connections and mobile networks) that can provide universal and low-cost Internet access.
- As private players are unlikely to undertake the full scope of the build-out, governments will have to drive this effort forward; those that do, could secure a deep and lasting advantage.
- Establishing a policy framework for data sharing, online privacy, and cybersecurity, as well as supporting MSMEs in technology adoption.



# Master Plan on ASEAN Connectivity

- 8th ASEAN Connectivity Symposium to Discuss Master Plan on ASEAN Connectivity 2025 Implementation
- **MANILA, 13 July 2017** – The Philippines as Chair of the ASEAN Connectivity Coordinating Committee (ACCC) will host the 8<sup>th</sup> ASEAN Connectivity Symposium on 14 July 2017 in Alabang, Metro Manila, Philippines to socialise the Master Plan on ASEAN Connectivity (MPAC) 2025, and discuss issues related to implementation, monitoring and evaluation of the MPAC 2025.



# ASEAN Connectivity 2025: An Integral Part of ASEAN Community Vision 2025



Infrastructure that will support greater connectivity among and within ASEAN Member States



Aspects which improve the regulatory environment which can enhance connectivity between ASEAN Member States

Promoting exchange of culture, tourism, education, and know-how

# ASEAN Political-Security Community (APSC)

## B.3. Enhance ASEAN capacity to address non traditional security issues effectively and in a timely manner

- B.3.6.
  - Strengthen cooperation in combating cybercrimes
- B.3.6.i
  - Strengthen cooperation in combating cybercrimes, including timely sharing of relevant information and best practices among law enforcement agencies, taking into account the need to develop or improve appropriate laws and capabilities to address cybercrimes
- B.3.6.ii
  - Strengthen the capacity of criminal justice authorities to apply the laws and legislation on cybercrimes and electronic evidence
- B.3.6.iii
  - Promote law enforcement training on cyber security and cybercrimes
- B.3.6.iv
  - Strengthen public private partnership to enhance information sharing between the private sector and law enforcement agencies to identify and mitigate cybercrime threats
- B.3.6.v
  - Raise awareness and understanding of ASEAN Member States on cybercrimes and cyber terrorism

# ASEAN Connectivity 2025

*Vision: "To achieve a seamlessly and comprehensively connected and integrated ASEAN that will promote competitiveness, inclusiveness, and a greater sense of Community."*





# Digital Innovations

- Support the adoption of technology by micro, small and medium enterprises (MSMEs)
- Support financial access through digital technologies
- Improve open data use in ASEAN Member States
- Support enhanced data management in ASEAN Member States

# Cyber Initiatives

- Adopted by the 10th ASEAN TELMIN (Telecommunication and IT Ministers Meeting) held on 13-14 January 2011 in Kuala Lumpur, Malaysia.



# ASEAN Connectivity

## Linkages among MPAC 2025 strategies

Relevance

Large
Medium
Limited
N/A

Impact on other strategies

ASEAN Connectivity 2025 strategies	Sustainable infrastructure	Digital innovation	Seamless logistics	Regulatory excellence	People mobility
1 Sustainable infrastructure	N/A	Development of ICT-related infrastructure	Development of infrastructure to support logistics	Limited	Development of aviation, road, rail and maritime links
2 Digital innovation	Development of regulatory frameworks to support ICT	N/A	Support ICT solutions for logistics growth (e.g., IoT)	Limited	Support growth of new digital education solutions through open data
3 Seamless logistics	'Soft infrastructure' focus to support efficiency of infrastructure usage	Support development of e-commerce	N/A	Provide objective measures of progress and bottlenecks by ASEAN Member States	Limited
4 Regulatory excellence	Limited	Limited	Support on addressing NTBs and standards	N/A	Limited
5 People mobility	Visa liberalisation creates demand for travel and related infrastructure	Limited	Limited	Limited	N/A

# To provide mechanism for combatting cyber crimes within ASEAN countries

May 2014: An ASEAN roadmap on combating cyber crime was finalized in Singapore by the SOMTC Working Group on Cybercrime.

The objectives of the roadmap was to enhance regional cooperation on capacity building and training, law enforcement, regulation and legal matters, information exchange and extra-regional cooperation

Cyber Security and Cybercrime in ASEAN  
International Symposium on “ASEAN Cyber Security and Cyber Crime Center: Possibility and Way Forward”  
Bangkok, Thailand, 16 September 2016. Objective is to study benefits, constraints and possibility of establishing ASEAN Cyber Security Centre by sharing information on current situation on cyber security and cybercrime of ASEAN, exemplary of ASEAN Member States, Japan and the European Union.



# To fight againsts cyber menace such as cyber pornography

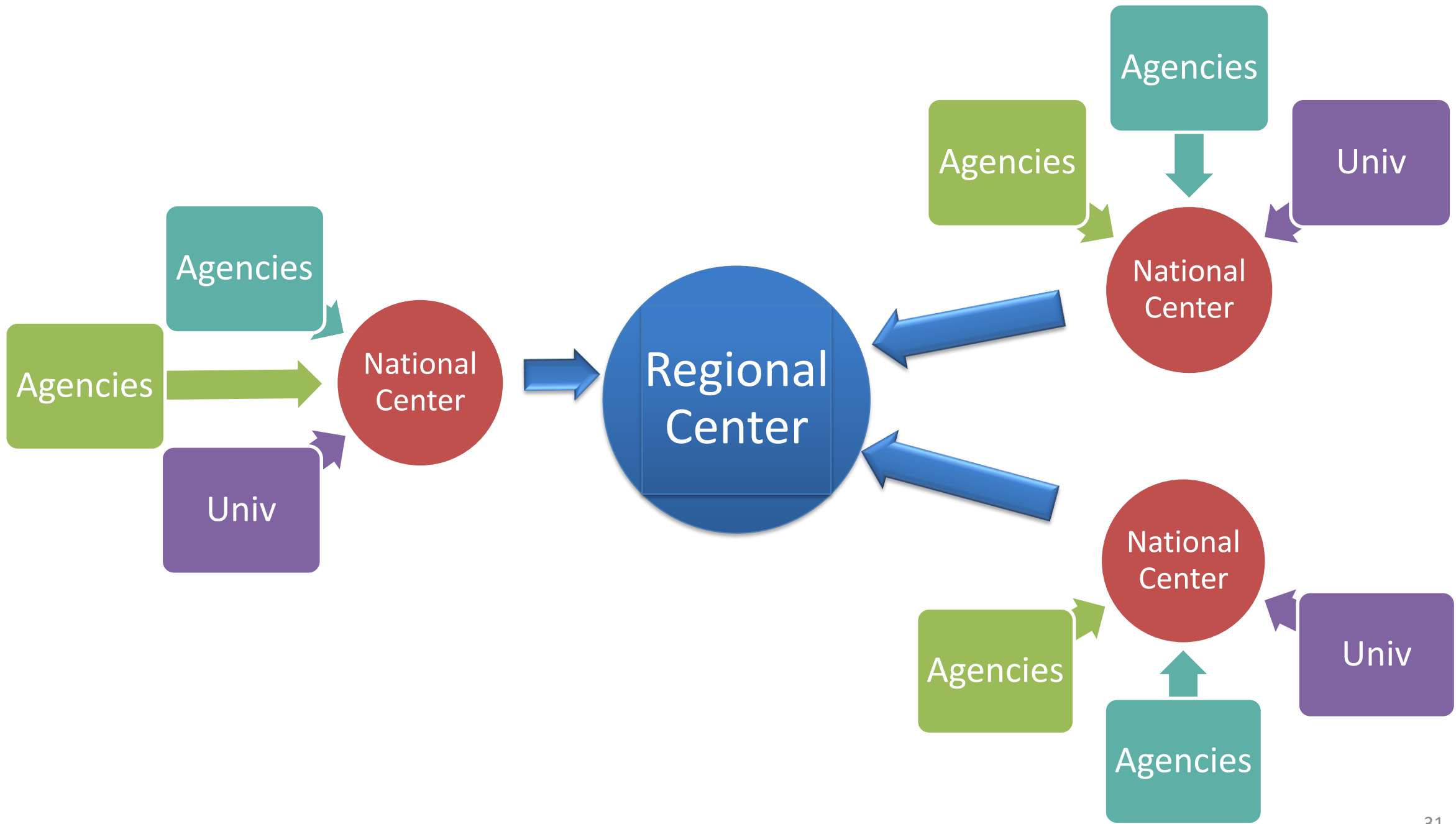
ASEAN Senior Officials Meeting on Social Welfare and Development (SOMSWD).

ASEAN Conference on Working Toward a Cyber Pornography and Cyber Prostitution-Free Southeast Asia, Manila, Philippines, 18-22 June 2012

2nd ASEAN Conference on Working Toward a Cyber Pornography and Cyber Prostitution-Free Southeast Asia, Tagbilaran, Bohol, Philippines, 22-26 April 2013.

4<sup>th</sup> ASEAN Children's Forum , June 2016 in Hanoi, Vietnam expressed ideas on issues such as violence against children, trafficking-in-persons, cyber-bullying and online child pornography among others.

ACWC presented the outcomes of the Inter-Sectoral Dialogue on Integrated National Responses to End Sexual Exploitation and Abuse of Children Online in ASEAN 7<sup>th</sup>-8<sup>th</sup> February 2018 in Jakarta, Indonesia.

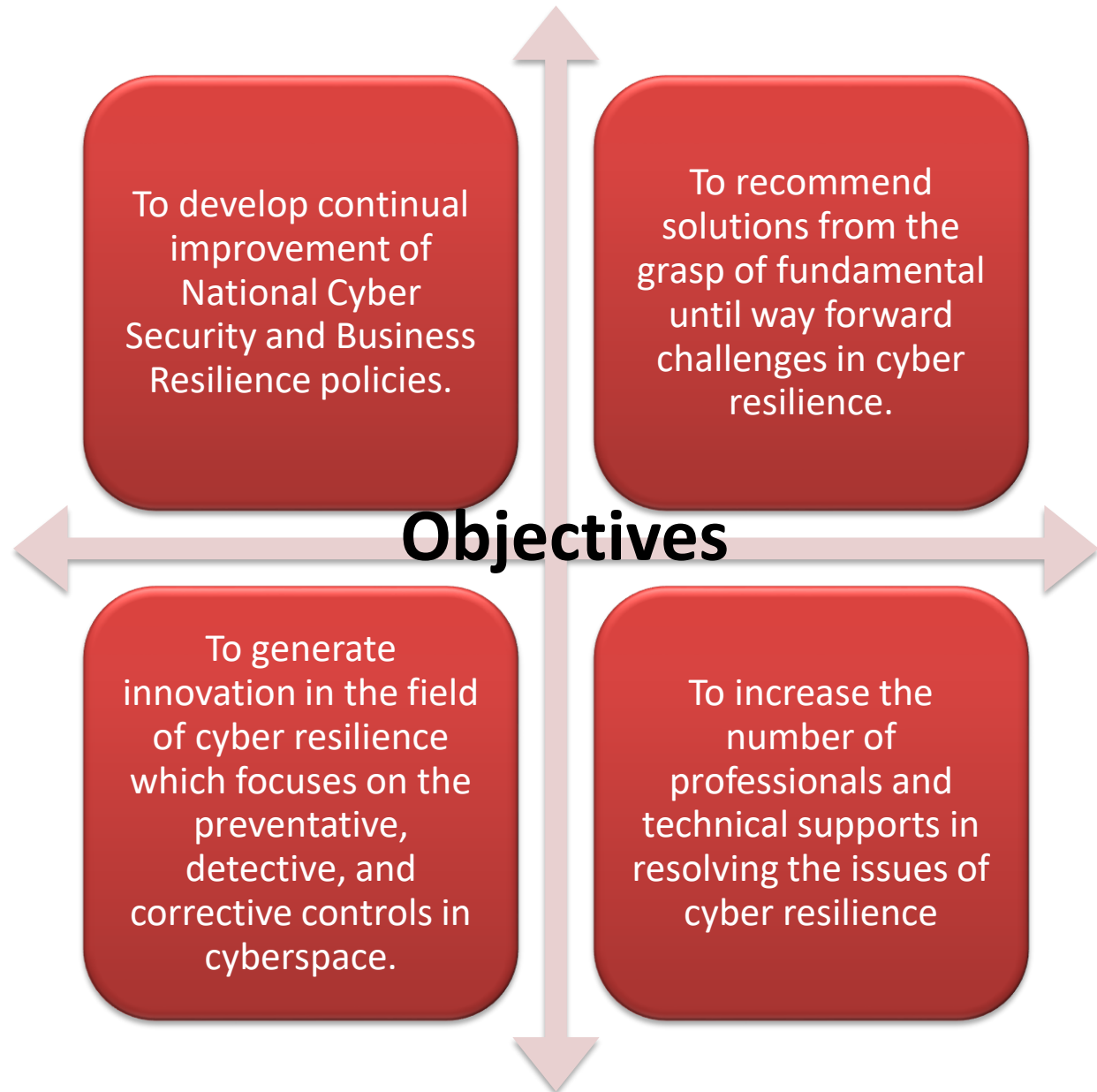


## Vision

- A national reference center for cyber resilience that able to sustain communities and organization from modern cyber threat landscape.

## Mission

- To provide cyber resilience models and solutions of sustainable cyber ecosystem in the service of mankind through consultation, education and research.

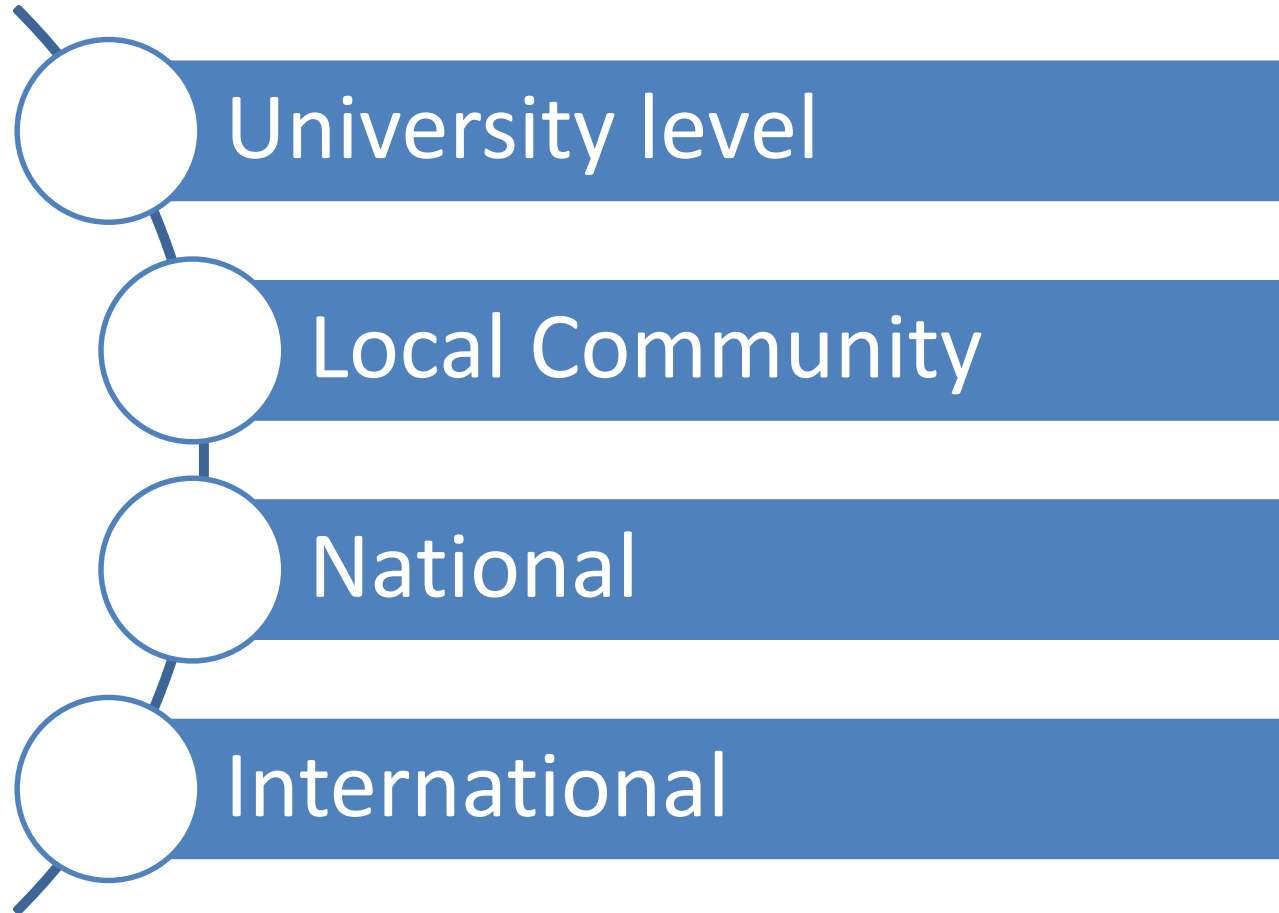


# Introduction



- UKM and Cyber Security Malaysia (CSM) collaboration has started since 2010 under Unit of Cyber Security.
- In 2013, a MOA agreement was signed between UKM and CSM to implement programs in UKM:
  - Master of Cyber Security
  - Cyber Security Professional Certification programs
- Later, Center for Cyber Security was established after the proposal was agreed unanimously in the Senate meeting dated 24 January 2017.
- UKM signed MOUs with CyberSecurity Malaysia and Standard Chartered Global Business Services in 2017 for Fintech Security Master Program.

# Capacity Building



CENTER FOR  
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# Capacity Building @University Perspective



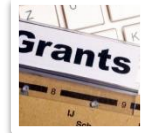
## Research Labs

- Computer Security & Software Verification
- Information Governance
- Cyber Intelligence
- Digital Forensics



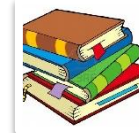
## Specialists

- CNNA – 2
- Digital Forensics - 2
- CEH – 2 Experts (in progress)
- ISMS – 1 (upcoming)



## Grants

- 15-Ministry of Higher Education
- 10-Research university grants
- 1- International grants



## Publication

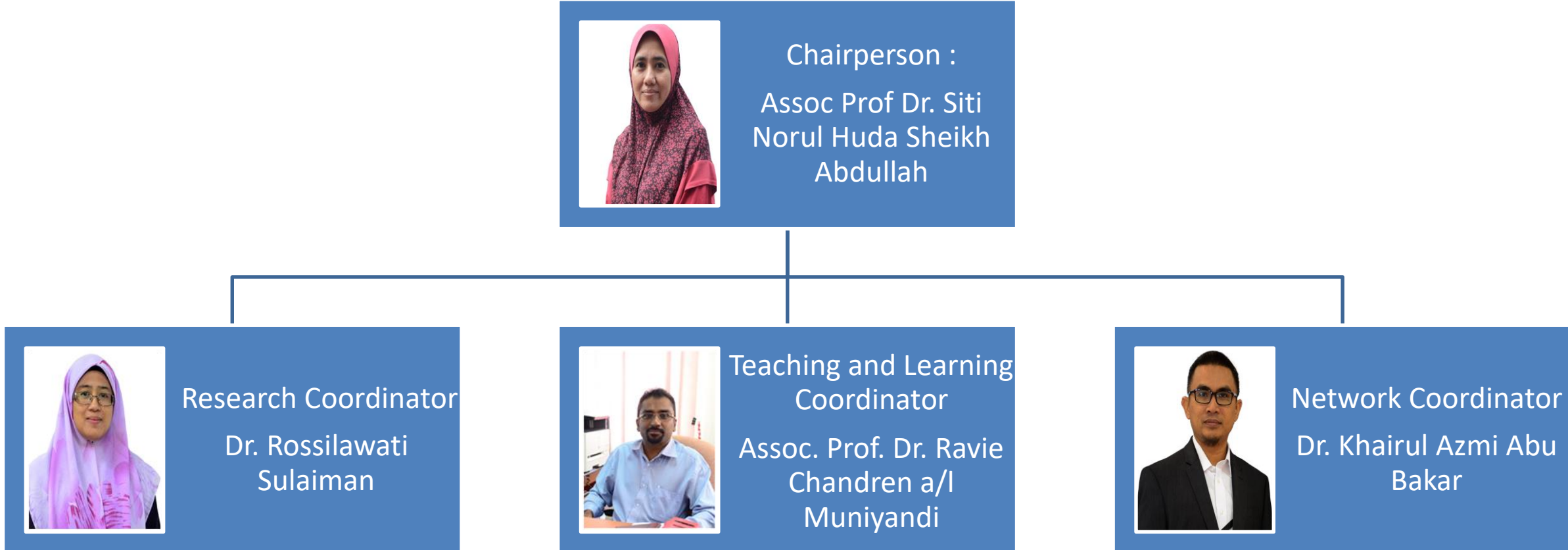
- 1 Book
- 150 Journals papers
- 500 Conference papers
- 20 Technical Reports
- 10 Cyber News



## Innovation

- CenterYou
- MyVis
- Simulation Tools
- iLPR
- 2.5D facial forensics framework

# Organization Chart





# Research Labs at Center for Cyber security

**Computer Security &  
SOFTWARE VERIFICATION**



**Computer Security &  
Software Verification**

- Head: Prof. Dr. Zarina Shukur



**Information  
Governance**

- Head: Prof. Dr. Zawayah Mohammad Yusof



**Cyber Intelligence**

- Assoc. Prof. Dr. Masnizah Mohd.



**Digital Forensic**

- Assoc. Prof. Dr. Siti Norul Huda Sheikh Abdullah



# Associate Fellows



Prof. Dr. Mahamod Ismail  
(Electrical and Communication  
Engineering)



Dr. Aswami Ariffin (Cyber Security  
Malaysia)



Dr. Eddie Shahril Ismail (Science and  
Technology)



Prof. Dr. Nazura Abdul Manap  
(Cyber Law )



Dr. Mohamad Salleh Mohd Azul  
(Human Science and Social  
Communication )



Dato' Dr.  
Amiruddin  
Abdul  
Wahab

(CEO, Cyber  
Security  
Malaysia)-  
Adjunct  
Professor



Mahmud Ab. Rahman  
(NetByteSec)



Dr. Mohd Fadzli Marhusin  
(Malware Analysis , USIM)



Dr. Hoo Chiew Ping (Politics  
and International Relation)



Dr. Adawiyah Ismail (Islamic  
Studies)



Dr. Azianura Hani Shaari ( School of Language Studies )



En. Nazri Ahmad  
Zamani(Digital Forensics)

# RESEARCH ACTIVITIES

## FTSM GRAND CHALLENGES

FTSM Grand Challenges bring research priorities into focus, supporting the 7 UKM Grand Challenges. FTSM research utilize the faculty's fundamental and applied research strengths by gathering the best minds across disciplines to formulate solutions to address the nation's problems through our 6 grand challenges.

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LARGE SCALE SERIOUS GAMES



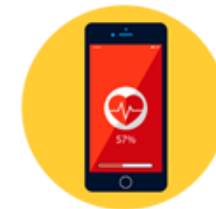
DATA DRIVEN AUTONOMOUS ROBOT



NATIONAL DIGITAL ASSETS SECURITY



DIGITAL CAMPUS



IoT IN HEALTHCARE



NATIONAL WELLBEING ANALYTICS

# Research Grants and Projects

- CP- Model Kelestarian Penggunaan Siber untuk B40 (*B40 Cyber Usage Sustainability Model*)
- AP-2017-005/2, Using STEM data through Smart self-crime prevention at Schools for open data readiness
- AP-2017-003/1, ENHANCING CONNECTIVITY TOWARDS ASEAN INTEGRATION: A MULTIFACETED APPROACH
- AP-2017-006/4, Resilience and Regenerative Tropical Smart Building: Smart & Responsive Facade, , 01/09/2017-31/08/2017
- AP-2017-003/2, Connectivity through Software Standardization: Metrology Software Certification Criteria8, A Trusted Digital Islamic Legacy Model
- KRA-2017-008, MODUL GRADUAN UKM GLOBAL BERINOVASI FUTURISTIK REVOLUSI INDUSTRI KE-4
- GUP-2017-046: Information Governance in the Gov 2-0 Environment
- GGPM-2017-024, Crowd Scenes Understanding via Convolutional Neural Network (CNN) for Visual Surveillance
- GGPM-2017-026, Tracking Social Media and Cloud Application Based On Network Packets in Computer Memory Image, UKM
- INOVASI-2017-015, CenterYou:Upgrading to Commercial Prototype
- GGP-2017-022, Romance Scam Detection
- FRGS/1/2016/ICT01/UKM/01/1, Process Mining Algorithm based on the Learning Automata Families for Detecting Anomalous Event
- PRGS/1/2016/ICT02/UKM/02/1, Intelligent Vehicle Identity Recognition for Surveillance
- PRGS/1/2015/ICT01/UKM/01/1, Software Tampering Solution for Malaysian Regulated Digital Device
- FRGS/2/2014/ICT01/UKM/01/1: Electronic Records and Information Management (e-RIM) Framework for Empowering Information Governance in Public Agencies
- UKM-AP-ICT-21-2010, An Interactive & Personalized News Content for Crime Investigation (i-Pcrime)

# Knowledge Transfer Program



## Master in Cyber Security

### WHY CHOOSE US?



## Professional Development Course in Cyber Security

# Master of Cyber Security

CENTER FOR  
**CYBER**  
SECURITY  
FACULTY OF INFORMATION SCIENCE AND TECHNOLOGY



**Tenagawan Daily** Edisi Pagi  
21 September 2017  
Edaran Dalam dan Sahaja | Saluran Informasi Anda

## Bantu Program Master (Cyber Security) UKM

**BANGSAR** - Universiti Kebangsaan Malaysia (UKM) mendapatkan kepakaran Bahagian ICT TNB apabila Ketua Pegawai Maklumat, Fazil Ibrahim dilantik sebagai ahli Lembaga Pengajian (Board of Studies Members) bagi Program Master (Cyber Security) institut pengajian tinggi awam itu.

Beliau antara tujuh yang dilantik termasuk Ketua Pegawai Eksekutif Cyber Security Malaysia (CSM), Dato' Dr. Amirudin Abdul Wahab dan wakil dari Polis Diraja Malaysia (PDRM), Unit Pemodenan Tadbiran dan Perancangan Pengurusan Malaysia (MAMPU) serta Suruhanjaya Komunikasi dan Multimedia Malaysia.

Menurut sumber Bahagian ICT, pelantikan dibuat pada Mesyuarat Lembaga Pelajaran UKM, dipengerusikan oleh Dekan Fakulti Sains Maklumat Teknologi, Prof. Dr. Abdullah Mohd Zin, di Bangi, baru-baru ini.

Mesyuarat turut membincangkan mengenai hala tuju pembelajaran *Cyber Security* di UKM agar dapat melahirkan graduan yang kompetitif melalui penghasilan kajian dan penyelidikan yang bermutu tinggi.

Hasil penyelidikan diharapkan seiring dengan perkembangan teknologi dan nilai yang diperlukan oleh pihak industri, pihak penyelidikan mahupun sektor-sektor awam dan swasta yang lain.

Seramai 34 orang penyelidik dan pelajar berada dalam bidang berkenaan dengan pengajiannya bertumpu kepada *Platform Security, Cyber Intelligence, Digital Forensic, Cyber Information Strategy dan Financial Technology Strategy*.

- Lapok Khalid Ishak/BB/SA/AD | Layout - AH

# Professional Development Series in Cyber Security

## Overview

- The Cyber Security Series are designed for accountable and ethical individuals. Each independent course is conducted within 5 full days which include active learning, lab activities, discussion and case studies. The course is jointly conducted by research-trained professionals from Universiti Kebangsaan Malaysia and qualified professionals mainly from CyberSecurity Malaysia.

## Course Detail

- The course will be conducted either at Universiti Kebangsaan Malaysia or CyberSecurity Malaysia.
- Certificate of Attendance will be awarded at the end of the course. Furthermore student who completed his assignments and pass his written exam will obtain a Certificate of Completion.

## Our mission

To produce dynamic, creative and noble professionals and leaders in the field of Cyber Security.



### Fundamental of Digital Forensics [Code: TD6104]

This course covers the introduction to investigation, the methodology of conducting forensics related cases and the standards, guideline and handling quality cases. This course also includes forensic laboratory and challenges in present and future digital forensics.

### Digital Media Forensic Analysis [Code: TD6314]

This course is about forensics analysis on various types of digital files; including documents, audio, video and images. This course also discusses about file structure and analysis method. At the end of the course, participants will be exposed to digital forensics case solution and writing forensic case report.



CENTER FOR  
**CYBER**  
**SECURITY**  
FACULTY OF INFORMATION SCIENCE AND TECHNOLOGY

# Professional Development Series in Cyber Security

*Inspiring futures, nurturing possibilities*



# Government Agencies Engagement



Polis Diraja Malaysia (Royal Police Malaysia)



Standard and Industrial Research Institute of Malaysia (SIRIM)



National Archives of Malaysia (NAM)



Pusat Perubatan UKM (Medical Center)



Ministry of Education



The Malaysian Administrative Modernization and Management Planning Unit (MAMPU)



Malaysian Communications And Multimedia Commission (MCMC)



**16 OCT '17**  
**2.30 PM**  
**BILIK SENAT**  
**BANGUNAN CANCELORI**

**MOU SIGNING CEREMONY**  
 BETWEEN  
**UNIVERSITI KEBANGSAAN MALAYSIA**  
 AND  
**STANDARD CHARTERED GLOBAL BUSINESS SERVICES SDN. BHD.**

**SYARAHAN PROFESOR ADJUNG**  
 YBHG. DATO' DR. AMIRUDDIN ABDUL WAHAB  
*CEO CyberSecurity Malaysia*

*"Strengthening National Cyber Defence via Research Collaboration"*

**24 Oktober 2017** | 09:00 pagi | Dewan Multimedia, FTSM

www.ftsm.ukm.my | computing.ftsmukm

**CYBERHEROES**  
**CYBER HEROES**  
**COMPETITION 2017**  
**"RAISE YOUR SHIELD"**

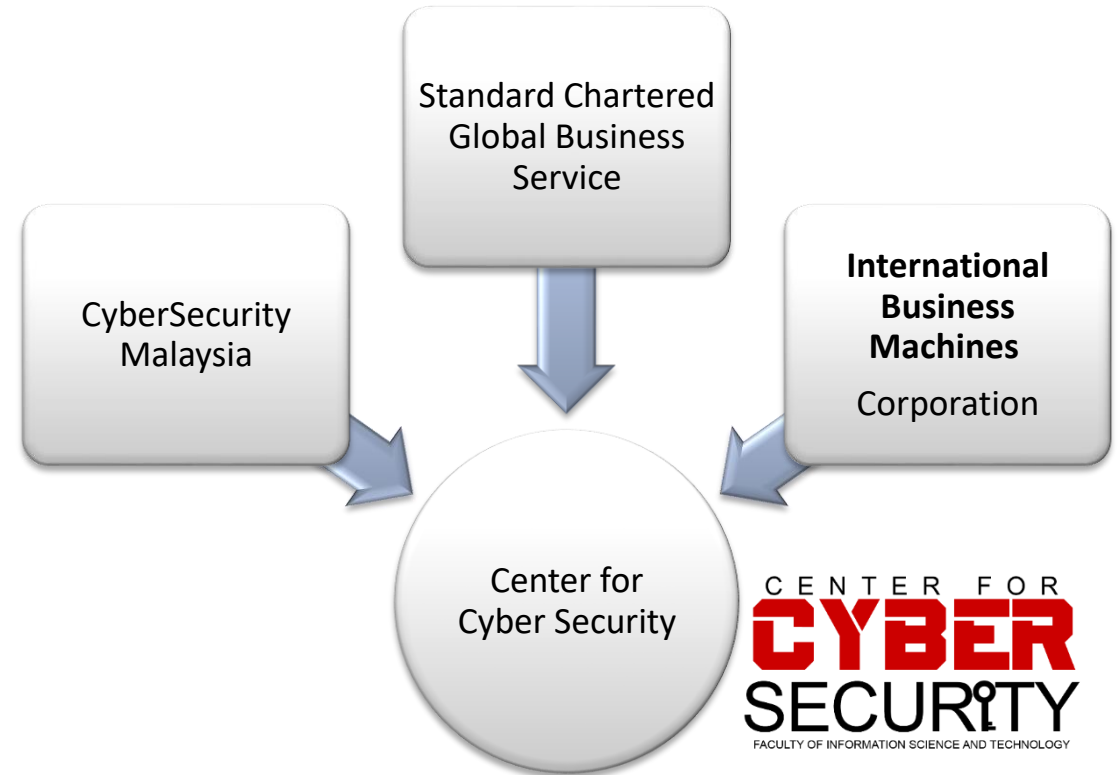
DEFENSE & FORENSICS CHALLENGE SEMINARS

4<sup>th</sup> - 5<sup>th</sup> DECEMBER 2017 | FAKULTI TEKNOLOGI & SAINS MAKLUMAT, UKM

FOR ENQUIRY, CALL:  
 019-2377984 (Dr. Huda)  
 012-2848697 (Dr. Hizam)  
 016-6926191 (Jason)

www.ftsm.ukm.my / chc

# Industrial Engagement



**Workshop on**  
**BLOCKCHAIN**  
 Using IBM Blockchain Platform

30<sup>th</sup> January 2018 (Tuesday) at BK-9, FTSM

Limited seats, register at <https://goo.gl/o2T6G4>

[Click here for registration](#)

# International Engagement



Standard Chartered Global  
Business Service



Japan Advanced Institute of  
Science And Technology

The logo for InterPARES Trust, featuring the text "InterPARES Trust" in green and blue, with a graphic of two hands shaking below it.

InterPARES  
Trust

InterPares Trust



Evault

# COMMUNITY

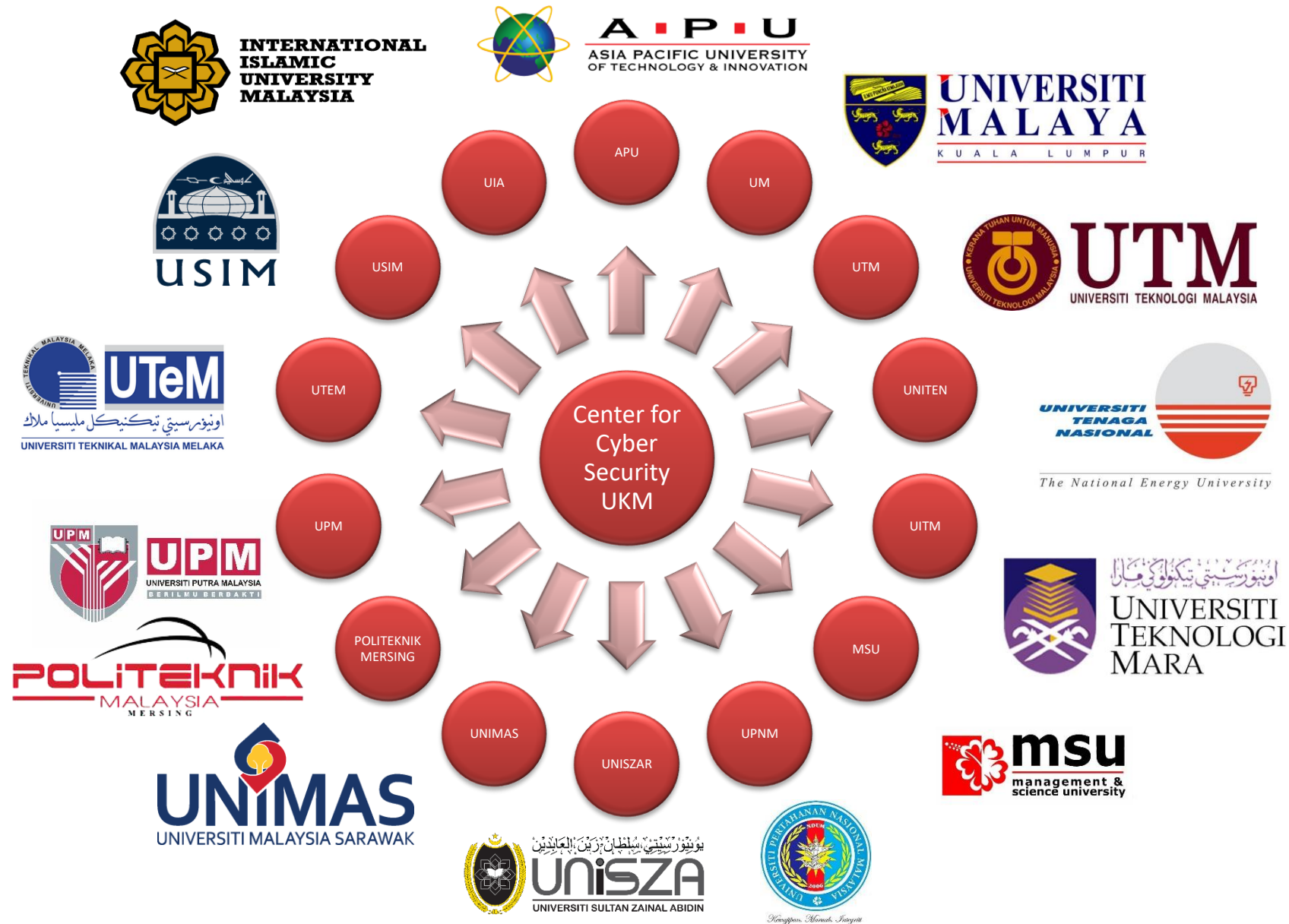
## COMPETITION

- CYBER HEROES COMPETITION
- F-Secure
- HACK@10
- CTF UNIKL
- CTF AND Security Day- Mersing Politechnique
- ICTFF Jasin
- iHack UiTM

## ACADEMIC

- Cyber Resilience Conference
- Round table discussion
- Specialize Workshops
  - Image and Video Processing Workshop
  - Sentiment Analysis Workshop
- Practical Introduction to Open source Software Tools
- First Responder

# CYBERSECURITY HIGHER LEARNING COMMUNITY



# NATIONAL AND INTERNATIONAL DISCUSSIONS

**DISKUSI ISU-ISU SYARIAH DALAM TEKNOLOGI**  
**LOCKCHAIN BITCOIN**  
 9.00 PG - 1.00 PTG  
 23 NOVEMBER 2017 [KHAMIS]  
 DEWAN SARJANA, FAKULTI PENGAJIAN ISLAM,  
 UNIVERSITI KEBANGSAAN MALAYSIA



**Moderator :**  
 Prof. Madya. Dr. Saimy Edawati Yaacob  
 Jabatan Syariah, Fakulti Pengajian Islam, UKM

**Panel :**

- 1- BITCOIN: KONSEP DAN PROSES TRANSAKSI MELALUI BLOCKCHAIN  
 Suhairul Hanim Kamaruddin  
 Pengasas Blockchain Futus, Konsultan IT, cuBITC Solutions
- 2- ISU-ISU SYARIAH DALAM BITCOIN  
 Dr. Ahmad Darham Salleh  
 Penyarah Kajian, Jabatan Syariah, Fakulti Pengajian Islam, UKM
- 3- ISU-ISU KESELAMATAN CYBER DALAM TRANSAKSI BITCOIN  
 Prof. Dr. Zarina Shukur  
 Head of Computer Security and Software Verification Lab, FTSM, UKM

**MASUK PERCUMA**

**ANJUTAN** PROJEK PENYELIDIKAN PRGS PEMBINAAN PARAMETER SYARIAH PRINSIP PERMULAAN BERIMPAK SYARIAH & BERKUALITI ISLAM (PRGS/1/2015/250 /UKM/03/2)

JABATAN SYARIAH, FAKULTI PENGAJIAN ISLAM, UNIVERSITI KEBANGSAAN MALAYSIA

UNIVERSITI KEBANGSAAN MALAYSIA  
 The National University of Malaysia

FAKULTI TEKNOLOGI & SAINS MAKLUMAT  
 Faculty of Information Science & Technology  
 www.ftsm.ukm.my

**ROUNDTABLE DISCUSSION ON  
 CYBER SECURITY GRAND CHALLENGE  
 IN RELATION TO THE  
 NATIONAL AGENDA**



**15 FEBRUARY 2017  
 9.00 A.M  
 BILIK MESYUARAT 1,  
 FTSM**

**SPEAKERS**

**LT. KOL. SZALZI SUKARDI (RETIRED)**  
 VICE PRESIDENT,  
 CYBERSECURITY MALAYSIA

**DR. SUHAZIMAH DZAZALI**  
 CIO,  
 MALAYSIAN GOVERNMENT

**ASSOC. PROF. DR. MOHD JUZAIDDIN AB AZIZ**  
 DIRECTOR,  
 UKM PTM



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 The National University of Malaysia


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**24 Oktober 2017** | 09:00 pagi | Dewan Multimedia, FTSM

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# STUDENTS COMMUNITY



# Special Interest Group : Cyber Ethics



peserta 11 & 12 thn

Sebarang Pertanyaan :  
Atikah (017-5911606)  
Izzah (013-4192403)

# Kem Etika Siber

tempat Surau Al-Raudhah Bandar Baru Bangi

22 Disember 2015

dari 8.30 am sampai 4.30 pm

## Modul menarik

Selfie Syndrome	Cyber Shopping
Over Sharing	Cyber Addict
Piracy	Think Before Post
Cyberbullying	Digital Reputation

Saidina Omar " Ajarlah anak kamu ilmu berkata : di zamannya "

Anjuran: SIG CYBER ETHICS, Fakulti Teknologi & Sains Maklumat, UKM Bangi

Kerjasama: Surau Al-Raudhah Bandar Baru Bangi

## CYBER ETHICS, e-MANNERS, PROFESIONALISM & LEADERSHIP

20 DISEMBER 2014 • SABTU • 8:30 PAGI  
DEWAN MULTIMEDIA  
FAKULTI TEKNOLOGI & SAINS MAKLUMAT

**SEMUA DIJEMPUT HADIR**  
Untuk Pendaftaran Sila Hubungi Urusetia Program,  
Saudari Surita Sukri (013-5833977)

Anjuran :  
KELAB CYBER-ETHIC FTSM



# Special Interest Group : NUMOSS





# Upcoming Activities

[www.ftsm.ukm.my/crc2018](http://www.ftsm.ukm.my/crc2018)



The banner features a dark blue background with a night view of a mosque and a starry sky. A large, stylized 'CRC 2018' logo is centered, with 'CRC' in white and '2018' in blue. Below the logo, the text 'CYBER RESILIENCE CONFERENCE 2018' is written in white, followed by the tagline 'Towards a Resilient ASEAN'. The dates '13<sup>th</sup> - 15<sup>th</sup> NOVEMBER 2018' and the location 'PUTRAJAYA, MALAYSIA' are displayed in white. At the bottom, a row of logos includes the Center for Cyber Security, Universiti Kebangsaan Malaysia, CyberSecurity Malaysia, Standard Chartered, ASEAN University Network, and IEEE Computer Society.

**CRC 2018**

**HOME** **CALL FOR PAPER** **IMPORTANT DATES** **FEE** **PAPER SUBMISSION** **COMMITTEE** **VENUE** **CONTACT US**

**CYBER RESILIENCE CONFERENCE 2018**

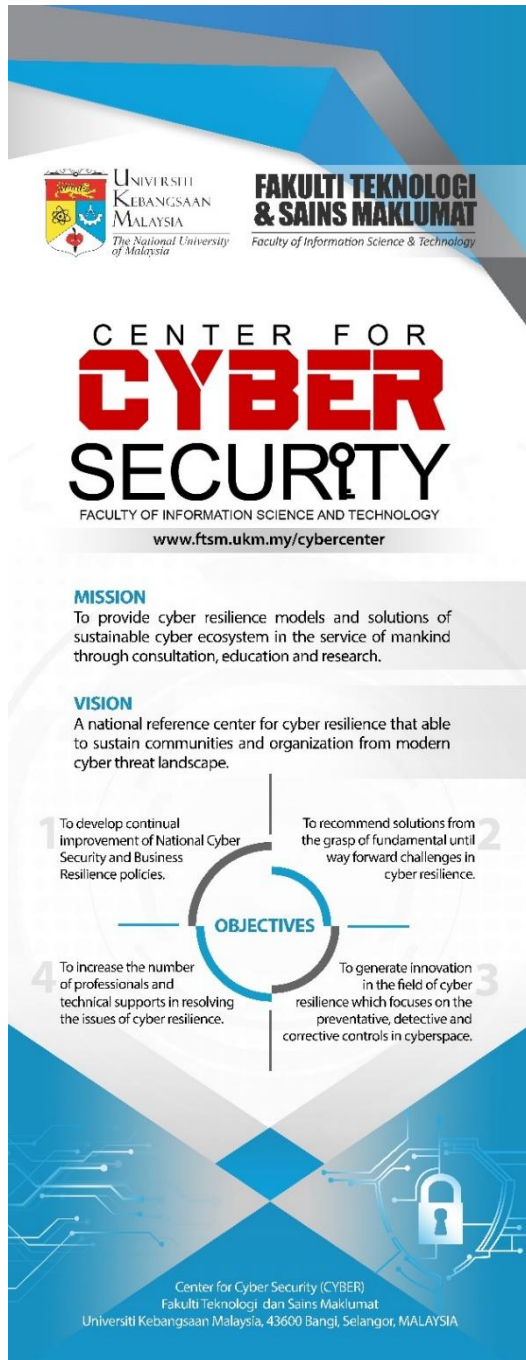
*Towards a Resilient ASEAN*

**13<sup>th</sup> - 15<sup>th</sup> NOVEMBER 2018** **PUTRAJAYA, MALAYSIA**

**CENTER FOR CYBER SECURITY** **UNIVERSITI KEBANGSAAN MALAYSIA** **CyberSecurity MALAYSIA** **Standard Chartered** **ASEAN University Network** **IEEE computer society**

## CRC2018

Cyber Resilience Conference 2018 will take place on 13<sup>th</sup> - 15<sup>th</sup> November 2018 in Putrajaya, Malaysia. This conference is organized by the Faculty of Information Science and Technology, Universiti Kebangsaan Malaysia in collaboration with CyberSecurity Malaysia and Standard Chartered Global Business Services together with the support from ASEAN University Network.



# Way Forward

## UKM Cybersecurity towards Guardian of Nation

Center for Cyber Security

UKMCert

### Research, Innovation & Network

#### Research Labs

- Products
- Framework,
- Model
- Policy
- Legislation

#### Service Labs

- Joint Labs
- Complimentary Labs

### Knowledge Transfer through Teaching and Learning

#### Undergraduate

- Special Interest Group

#### Postgraduate

- Master
- Phd

Global Certifications

#### Community

- Intervention Programs
- Policy Implementation

- <https://cltc.berkeley.edu/wp-content/uploads/2017/12/asianfutures.pdf>