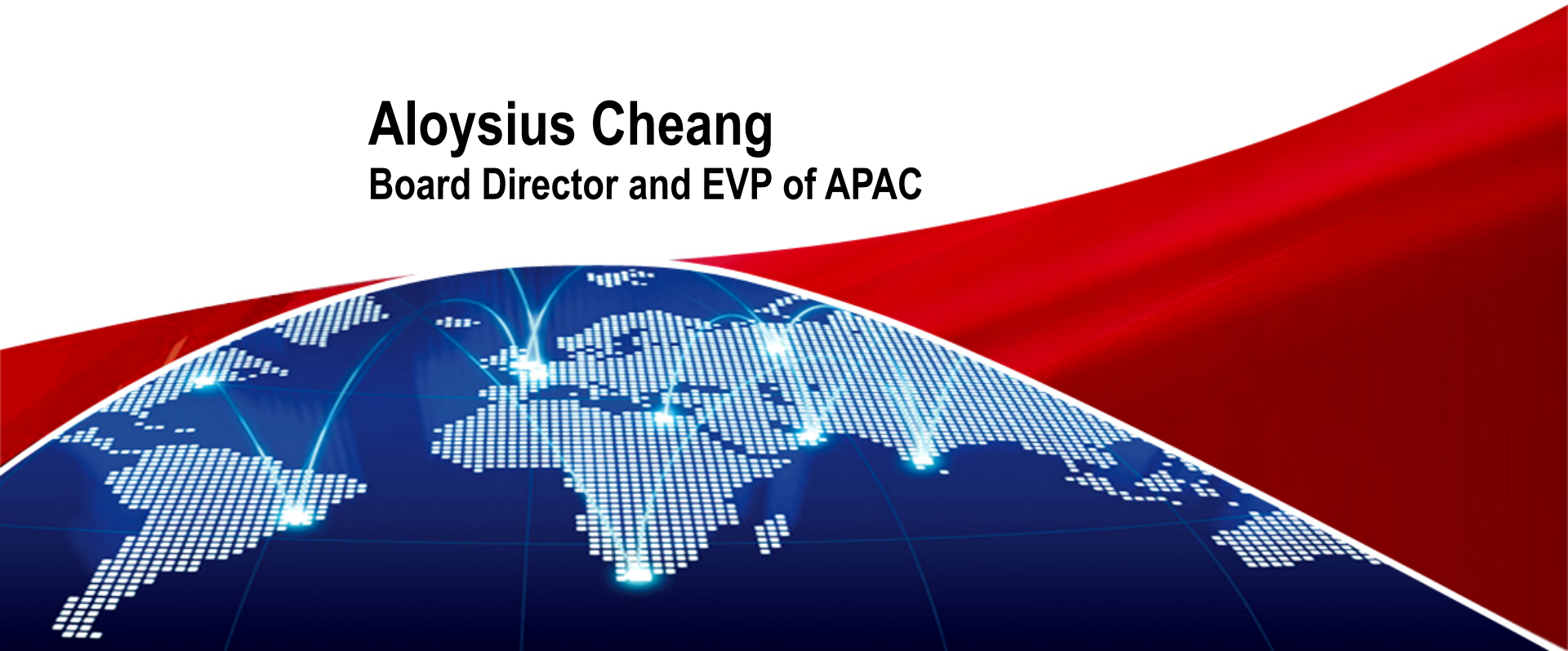


SMART NATION?

How to design a smart nation securely

Aloysius Cheang

Board Director and EVP of APAC



Evolution in ICT

“Change is the only constant in life.”

- Heraclitus

- Towards a pervasive computing era
- Laziness is the only driving force behind all these innovation
- IT is not part of life anymore, IT IS our life!

The road goes ever on and on

- From an *Internet connected* state, to a *digital economy* to a ***smart economy***
- Cost of ICT has been ***reducing*** at an ***exponential rate*** with the proliferation of cloud computing and IoT (Internet-of-Things)
- Big data has also changed the way that company work; it is the new ***gold!***
- Brought about a whole new way how to do things
- And also change the risk perspective along the way! So what works in the past, may not now!

Strategy

**“Hope is not a strategy. Luck is not a factor.
Fear is not an option”**

- James Francis Cameron

- Secure the cloud!
- Secure the edge!
- Build an advanced early warning system
- Resolve cross-border jurisdiction issues

Embracing the cloud

“Keep your head in the clouds, and your feet on the ground.”
- Adapted from Theodore Roosevelt

CSAAPAC *cloud security alliance*SM
ASIA PACIFIC REGION

CCMTM
Cloud Controls Matrix

CAITM
Consensus Assessments Initiative

CCSKTM
Certificate of
Cloud Security Knowledge

STARTM
CERTIFICATION

Embracing the cloud

- Malaysia
 - Awareness and visibility
 - Standards
 - Building a pool of qualified cloud professionals
 - Adoption
 - Innovation





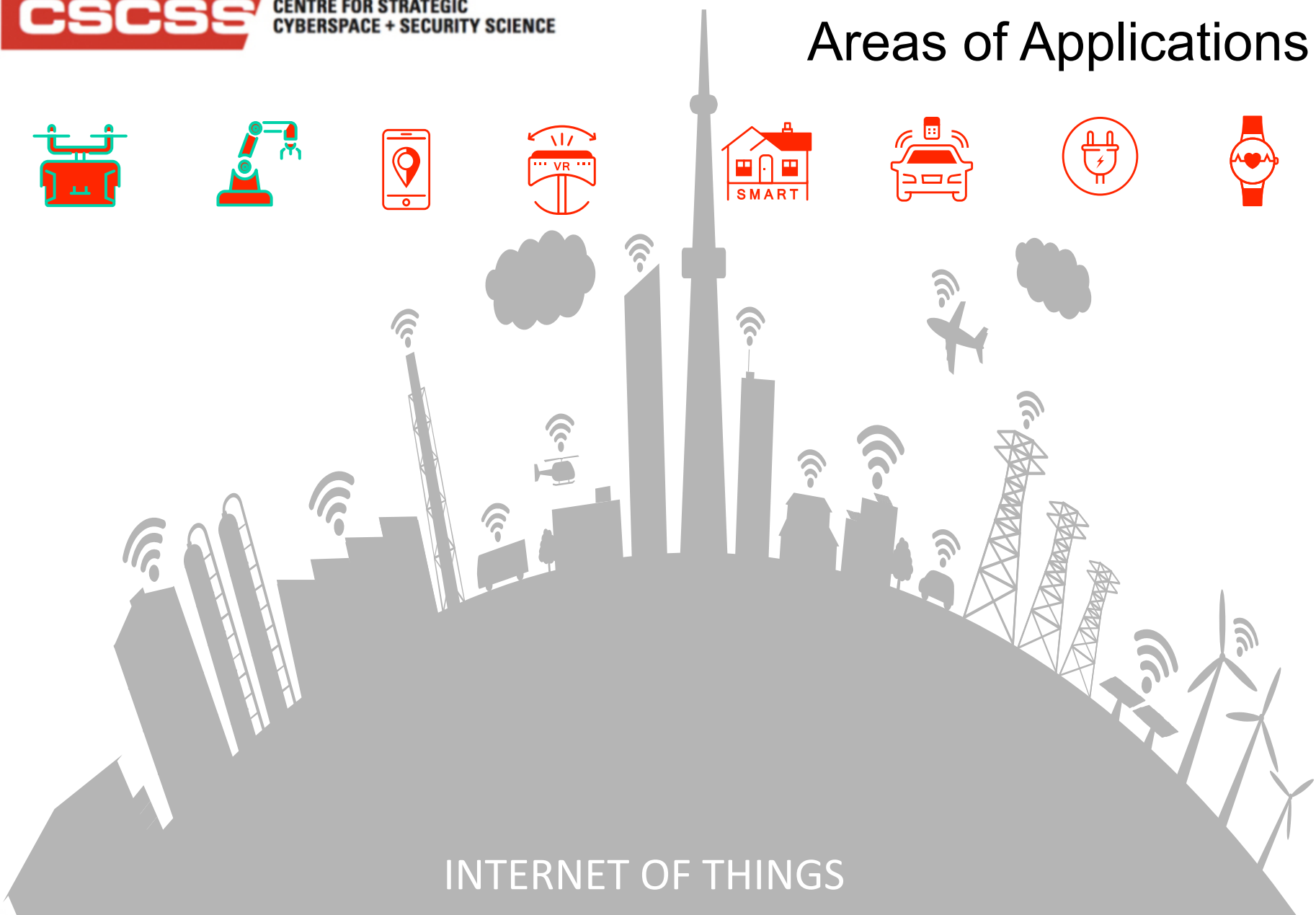
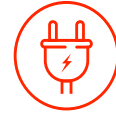
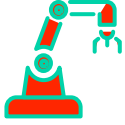
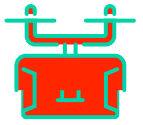
IoT – the potential is limitless

“A lot of problems in the world would disappear if we talked to each other instead of about each other.”

- unknown

- Boundless applications
- Unlimited scenarios
- It is part of the basic blocks powering Smart Nation

Areas of Applications



INTERNET OF THINGS

Smart Farming

Analyzing satellite images



In-field monitoring



Assessing crop/soil health



eMarketplace



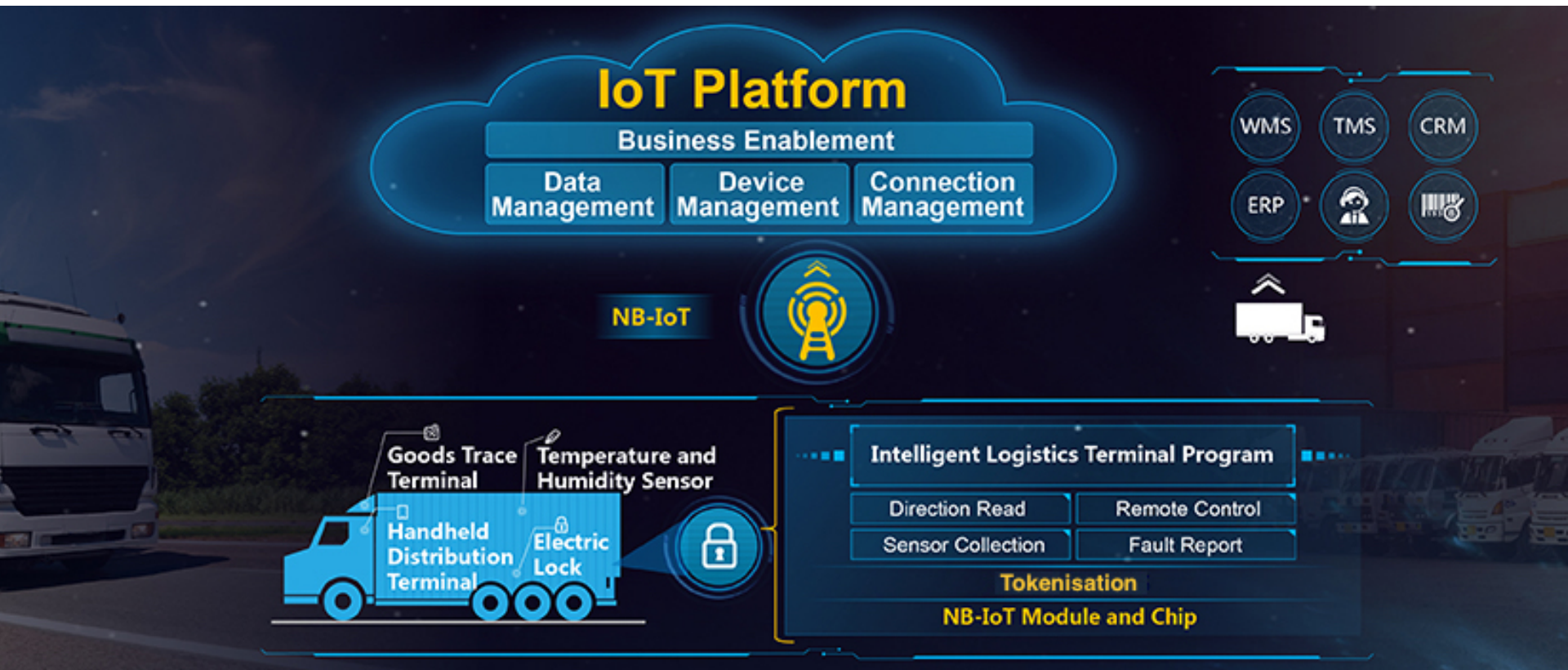
Predictive Analytics



Agricultural robots

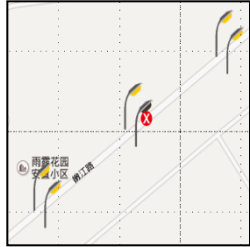


Smart Logistics





Street Light Management



- Street light control
- Lamp failure notification
- Real-time energy monitoring
- Cable theft alarm system

Environmental Surveillance



- Anticipate disasters
- Flood monitoring
- Flood warning system

Security Surveillance



Manhole Cover Theft



Pothole Inspection



Illegal Street Vendors

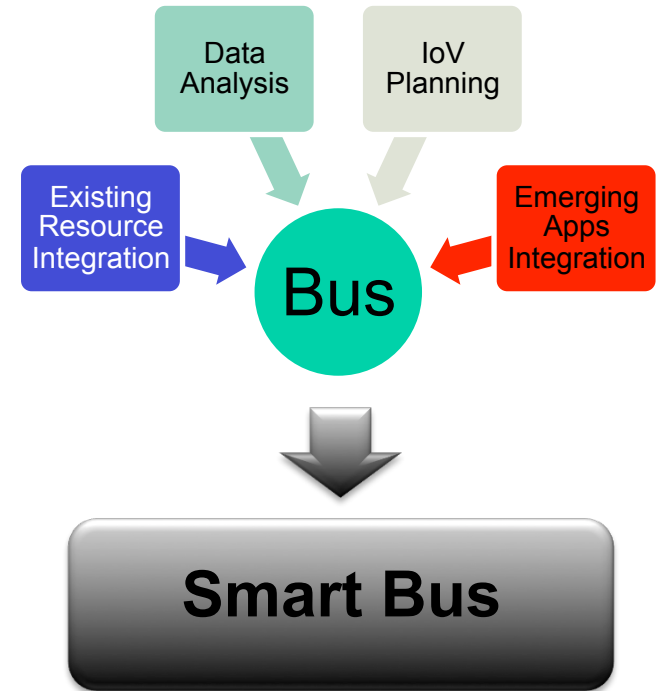
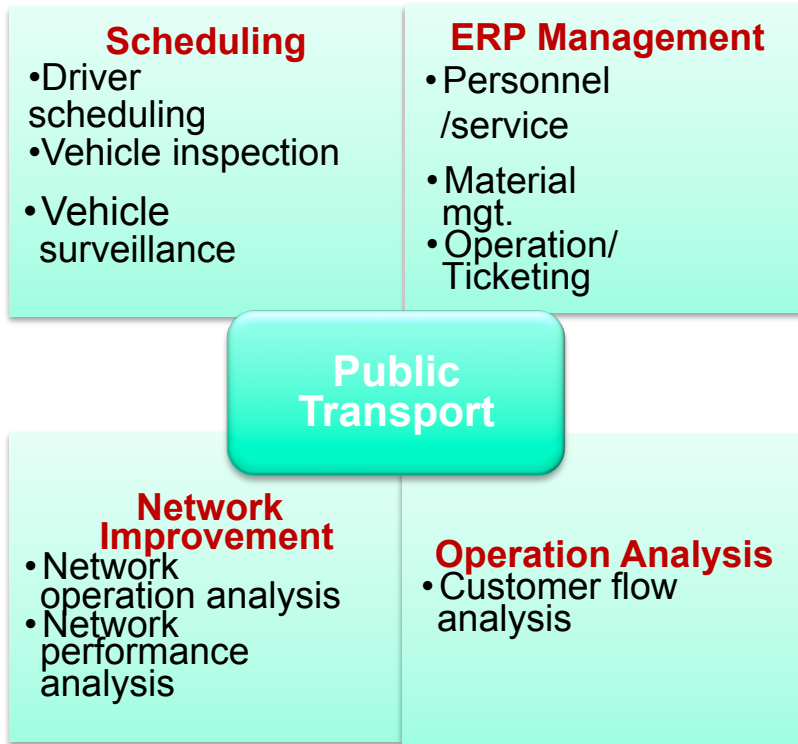


Littering

Integration with

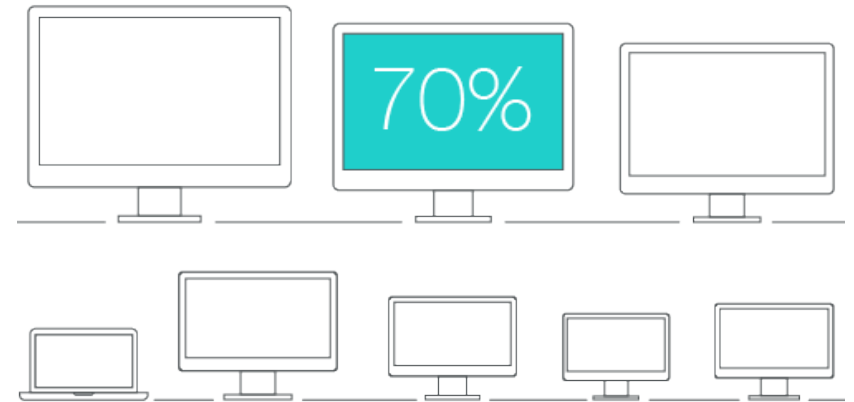
- Public Wi-Fi
- Local Business Promotion
- Tourism Functions
- Security Functions

Smart Public Transportation System



Smart Retail

- Increase footfall
- Differentiated marketing campaign
- Increase the customer stickiness (loyalty program)



1
4



Problems

“We cannot solve our problems with the same thinking we used when we created them.”

- Albert Einstein

- No one single standard internationally that binds us all
- Multiple communications protocols not making life any easier!
- Not recognizing that there is a problem in the first place!

Call to arms!!!

Disrupt the world together! Practical and a cyber-centric approach to harness the power of IoT in the most secure and trusted manner



IoT Security Standard Development Technical Committee (ISS TC)

“I think standardization is really the first step to something being commodified.”

- Chuck Palahniuk

- An initiative brought into action on 25 June 2018
- First kickoff meeting in Thailand on 5 July 2018
- Currently 7 participating countries globally
- Target for global release of the standard on Sep 19 in the week of Singapore International Cyber Week

ASEAN – towards a digital AEC

“Seek out strategic alliances; they are essential to growth and provide resistance to bigger competition”

- Richard Branson

- ASEAN is home to 227 of the world’s largest companies with US\$1,068 billion in revenue
- A combined ASEAN digital economy would unlock another US\$1,018 billion in value and reduce the divide among the people within ASEAN

Mr. S Iswaran
Minister for Trade and Industry
Singapore

Whilst there may be challenges from digitalisation, the opportunities and potential to unlock the potential of small and medium-sized enterprises, in particular, are enormous if on various efforts to do this. And if we can now bring it together and create an ASEAN digital value proposition, I think that will really unlock a new trajectory of growth.

ASEAN governments see cyberthreats as a critical issue that needs to be tackled, as frauds, hacking, system attacks and the use of malware for cybercrime and terrorism become increasingly common

Dr Pichet Durongkaveroj
Minister for Digital Economy
and Society
Thailand

Digital AEC

ASEAN as

a single country, would rank

#2



in the world for
FDI inflow in 2013¹

#3

for global mobile subscribers:
10.2% (Behind China and India)¹



#3



largest population:
636m (8.60% of global population)²

#4



for global internet users:
7.60% (behind China, India and the US)¹

#7



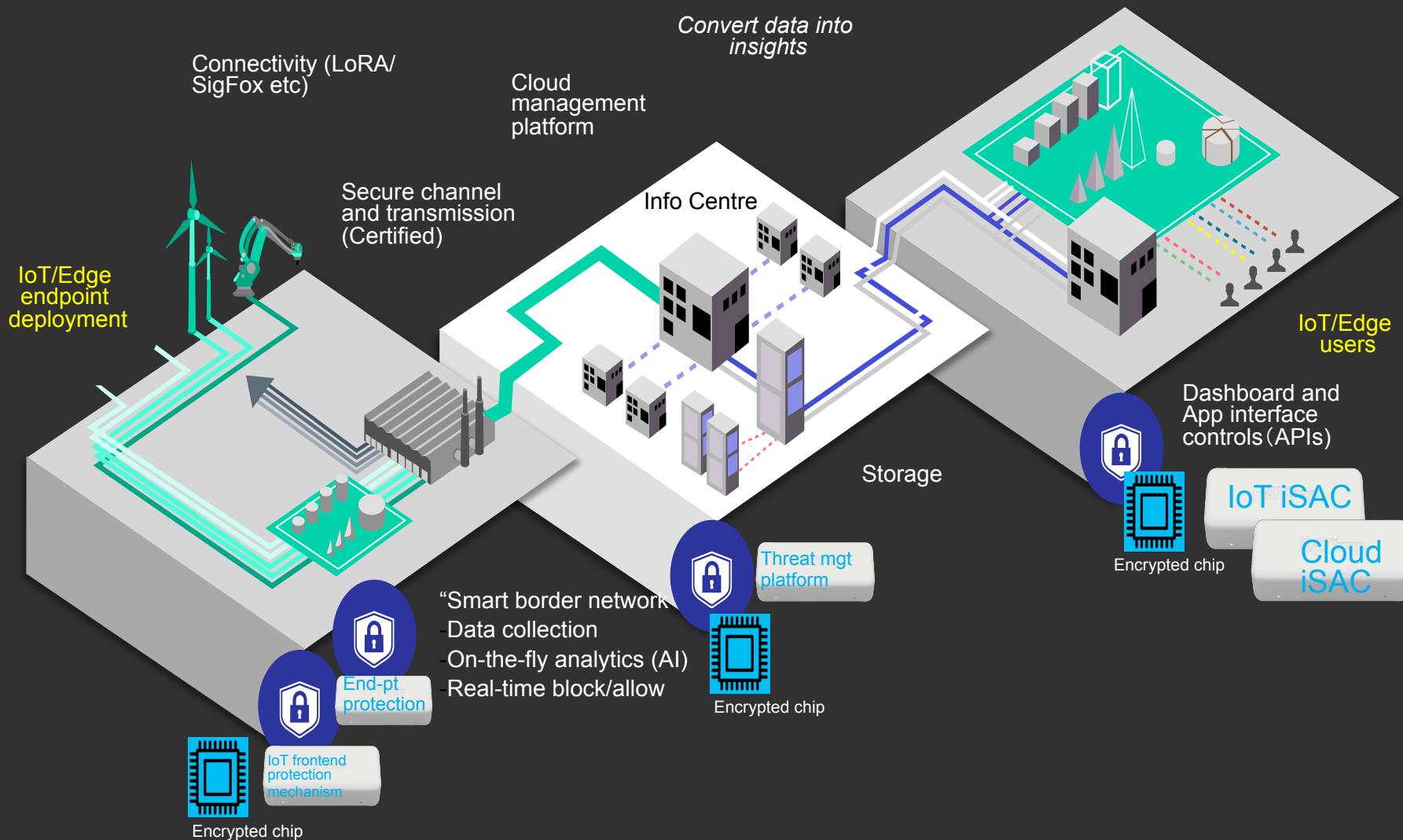
in GDP globally - behind US, China, Japan, Germany, UK and France²

Notes:

1. Simon Kemp. (2016). *Digital in 2016. We are Social*
2. A.T. Kearney. (2015). *The ASEAN Digital Revolution*. A.T. Kearney, Inc

End-to-End Model

AI and AI-driven service creation and automation





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Question & Answer

Thanks you for your attention!

CSCSS / Centre for Strategic Cyberspace + Security Science
Leadership / Research / Defence