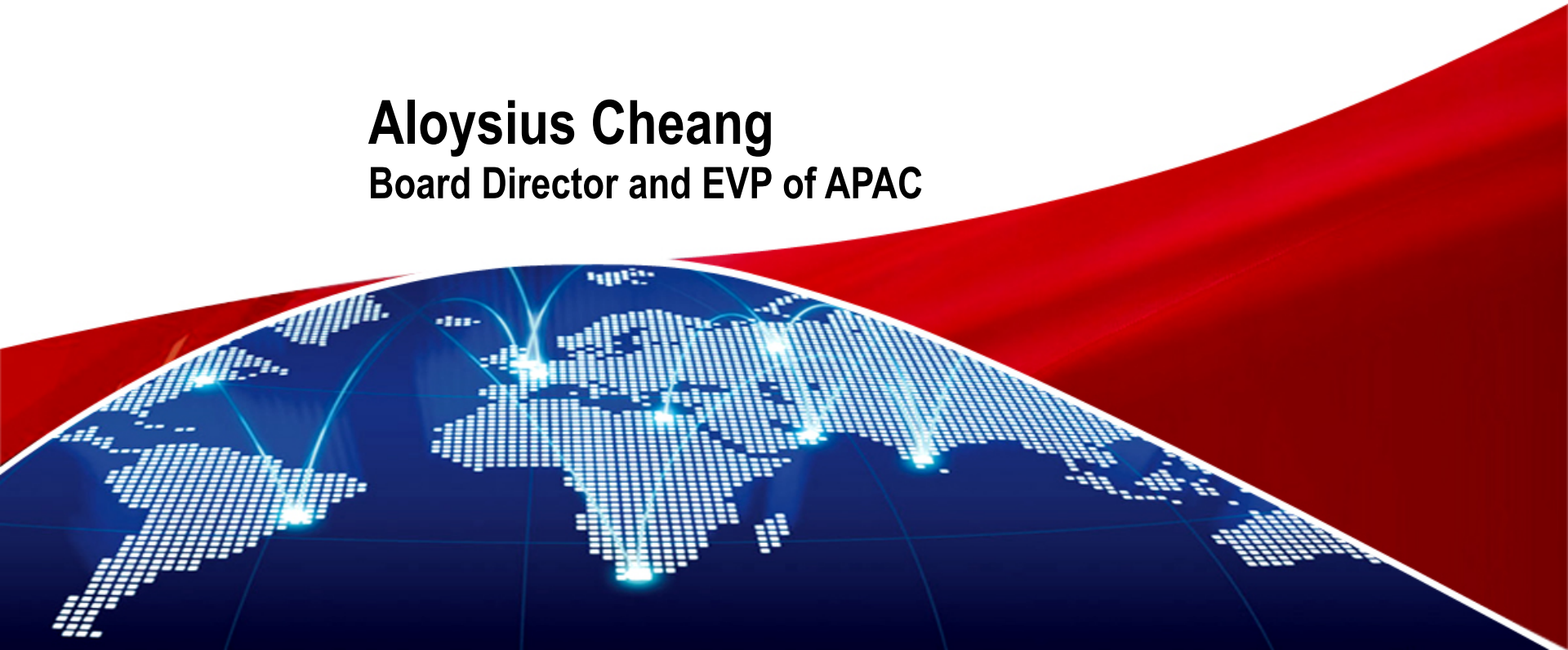


# DIGITAL TRANSFORMATION

## *Security considerations in IoT today*

**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!

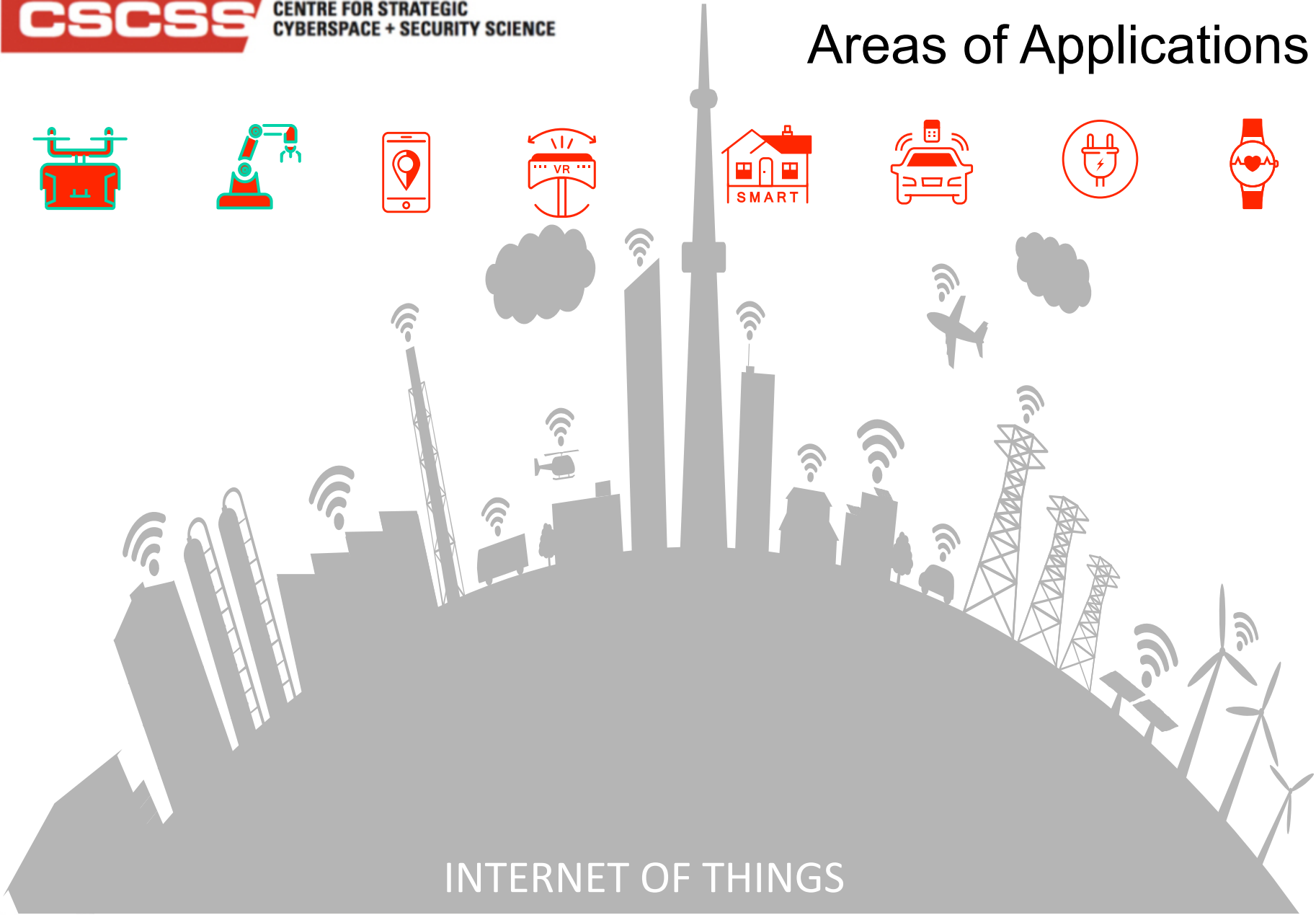
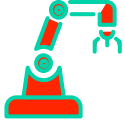
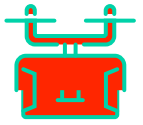
## IoT – the potential is limitless

**“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



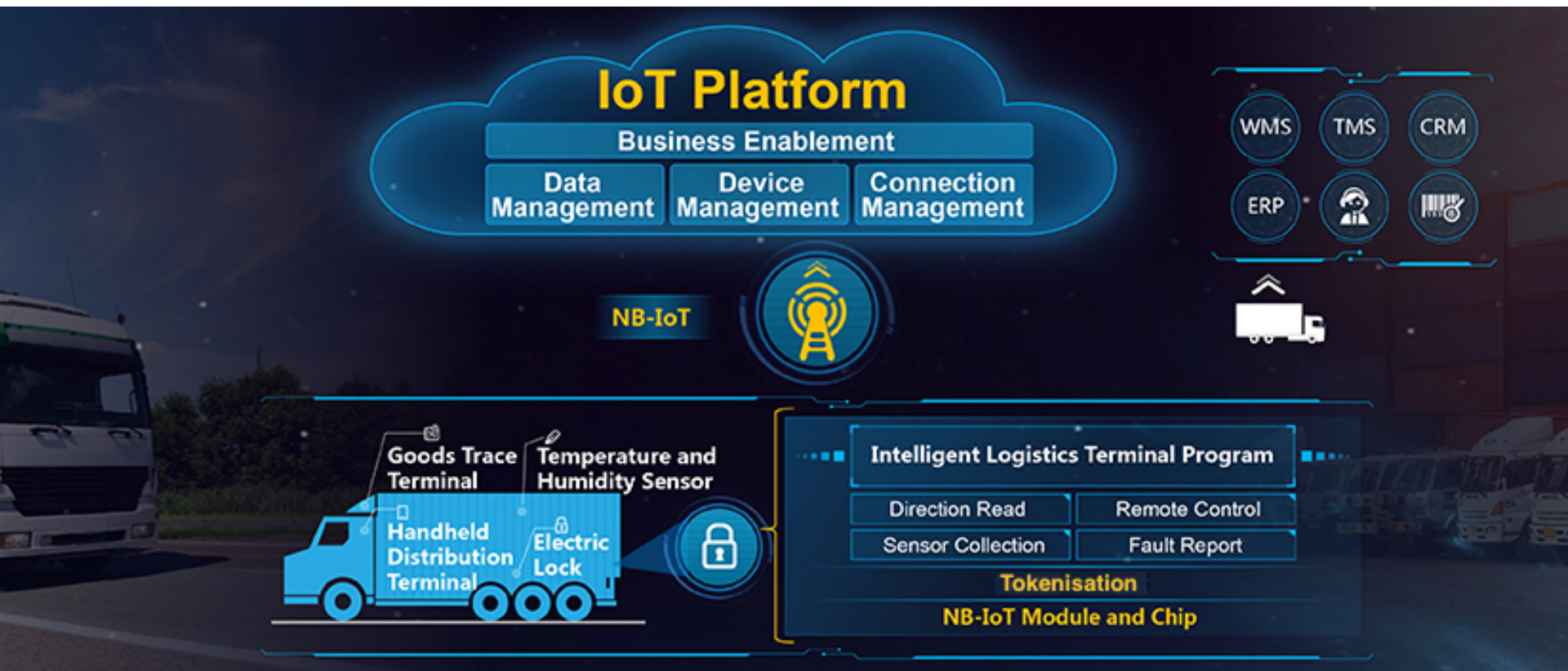
Predictive Analytics



Agricultural robots

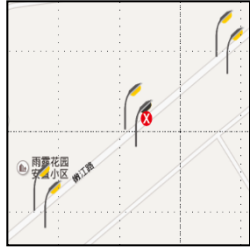


# Smart Logistics





## 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**

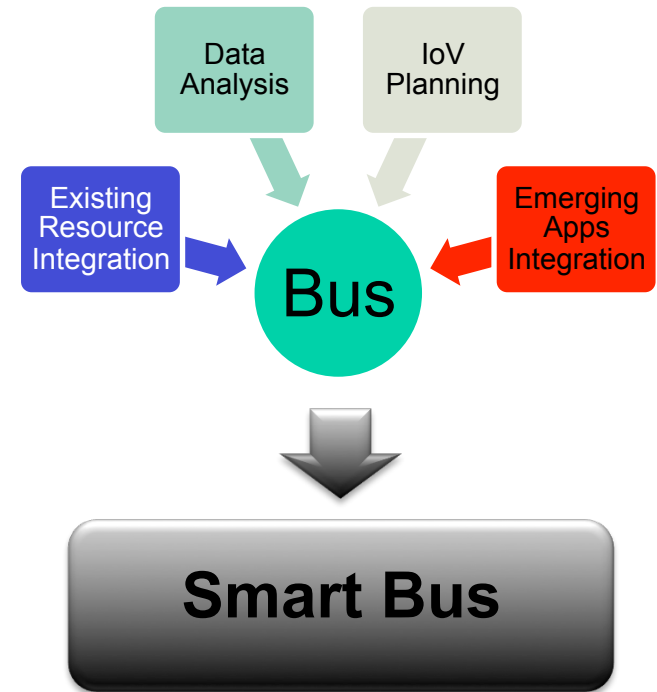
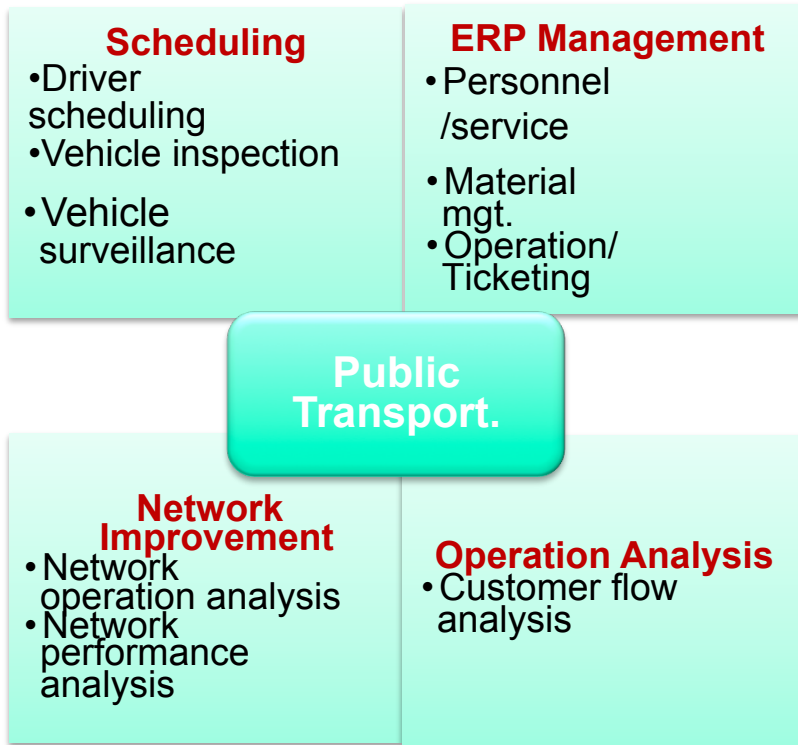


**Littering**

## Integration with

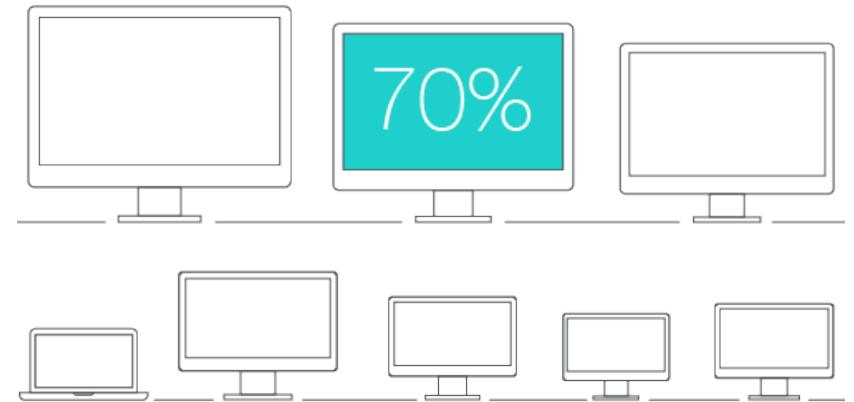
- Public Wi-Fi
- Local Business Promotion
- Tourism Functions
- Security Functions

# Smart Public Transportation System



# Smart Retail

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



9





# 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

- We do not want to be bogged down by established rules of the game
- We want quick, actionable plan
- We want global adoption
- We want involvement of all the actors
- We want to manage expectation
- We do not profess that we know everything
- We do not pretend that our way is the best
- We do not want to intrude other people's interest

# IoT Security Standard Development Technical Committee (ISS TC)

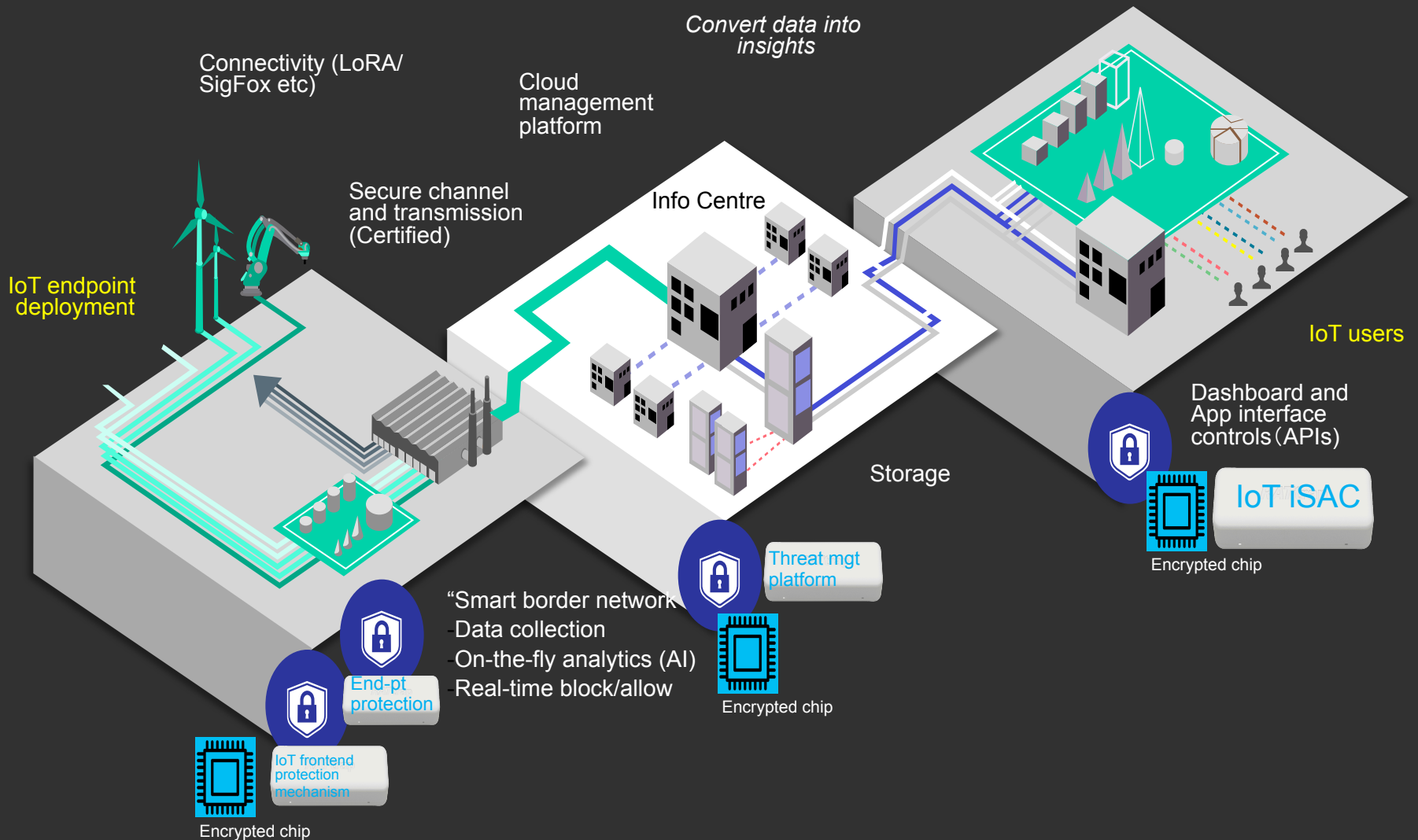
**“I think standardization is really the first step to something being commodified.”**

- Chuck Palahniuk

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

# 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**