

# Creating a Smarter Caribbean through Collaboration

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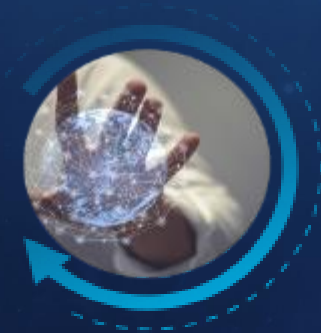
# The Economic Transformation



**Digital transformation is the vision; IoT is the enabling base, smartest cities and industries are the results**



# We Are Entering an Intelligent World



## All Things Sensing

Sensing the physical world,  
mapping it to digital signals

Temperature, space, and touch  
Sense of smell, hearing, and vision



## All Things Connected

Data goes online to power machine intelligence

Ubiquitous connection, wide connections,  
multiple connections, and deep connections



## All Things Intelligent

Big data and AI power new applications

Digital twin  
Digital survival



ICT infrastructure will be the foundation of the intelligent world

In 2017 in Antigua and Barbuda, CARICOM Heads of Government approved the Roadmap for the CARICOM Single ICT Space. There, the CARICOM Governments, CTU, Huawei and other private sector participants agreed to the following 6 principles:

***Principle 1: Putting Caribbean Citizens first***

***Principle 2: Putting ICT at the centre of our national socio-economic development agenda***

***Principle 3: Improving access to ICT especially Broadband***

***Principle 4: Improve accountability, efficiency and openness through ICT***

***Principle 5: Engaging the Private Sector***

***Principle 6: Leveraging ICT to promote sustainable development***

# ***fastforward II***

## **Trinidad and Tobago's Draft National ICT Plan 2017 – 2021**

***Empowered People. Competitive Businesses. Transformational Government.***

***March 2017***

# 5 Strategic Thrusts

## 1. Improving Connectivity

*Advancing the deployment of ICT infrastructure to support securely connected people, businesses, and government*

## 2. Increasing Human Capacity

*Enhancing digital literacy and developing the skills to enable productivity and innovation*

## 3. Enhancing Public Service Delivery

*Ensuring the use of ICT to transform the delivery of public goods and services and achieve institutional strength and capacity*

## 4. Fostering Economic Development

*Creating an environment for eBusiness and ICT Sector advancement*

## 5. Advancing Environmental and Societal Benefit

*Managing the use of ICT to minimize environmental impact and to tackle the most pressing social challenges facing the country*

# Digital Transformation DO IT!



# How do you do a Smart Nation?





# Overall Structure of Huawei Smart City Solution: Converged Structure and Application Enablement



# Major challenges of broadband roll-out

Principle 3: Improving access to ICT especially Broadband

Trust 1: Improving



Huge capital investment



Long construction period



Difficult to have Rights of way

Network



Urban communications network



Urban IoT

# Government plays a critical role of broadband development





# Funding models of national broadband development



## Wholly funded by government

The Smart Nation Platform (SNP) is an infrastructure being built by Gov. to enable greater pervasive connectivity.



## Public-Private Partnership



Malaysian government

**21%**  
\$0.54 Billion

PPP model for HSBB  
High Speed Broadband

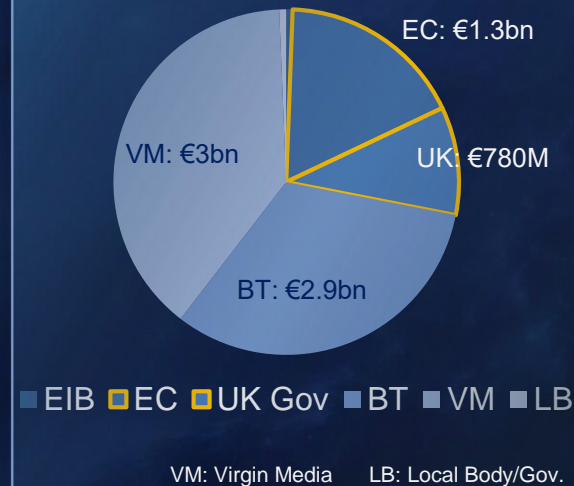


**79%**  
\$2 Billion



## Public subsidy

UK broadband funding attracted more investments from operators.



## Universal access and service funds adopted

In 2015, ToT started providing broadband services in rural areas as part of the USO for USD 13.6 million.

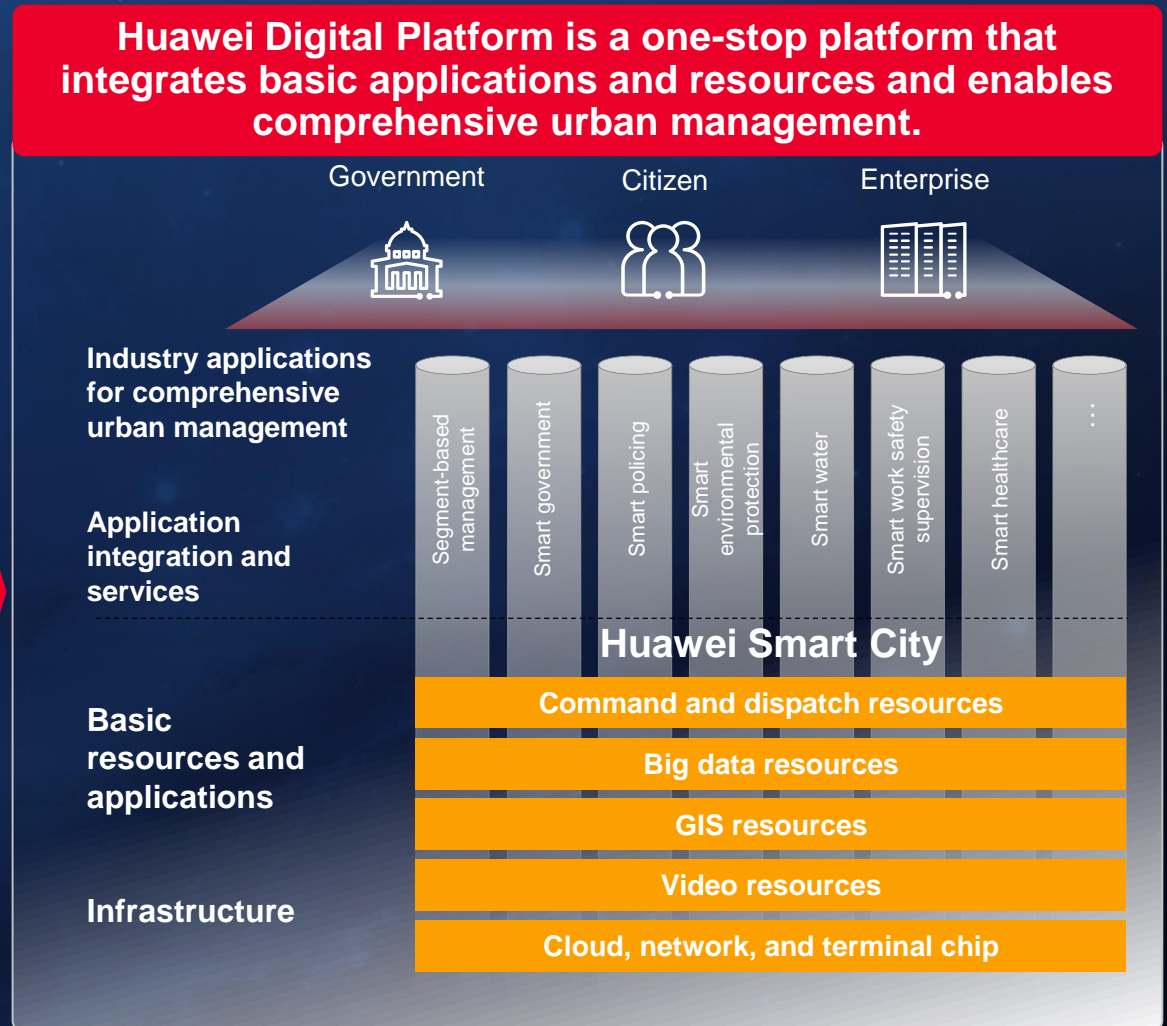
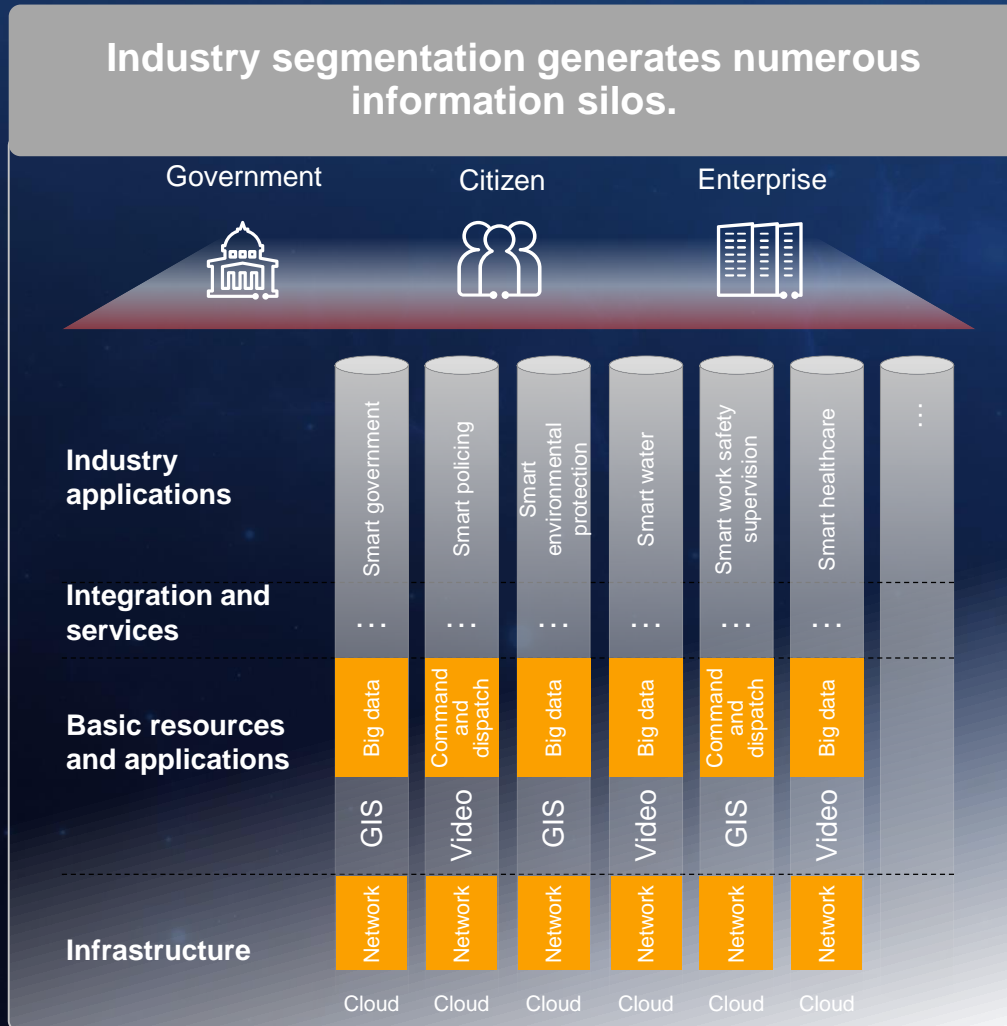


## *Principle 4: Improve accountability, efficiency and openness through ICT*

### **Thrust 3: Enhancing Public Service Delivery**



# Digital Platform: From Siloed Management to Integrated Governance





# Enabling "Single-Window" Government Services Through Cloud Transformation



Online services

Offline "single-window" handling



Cross-agency  
data sharing



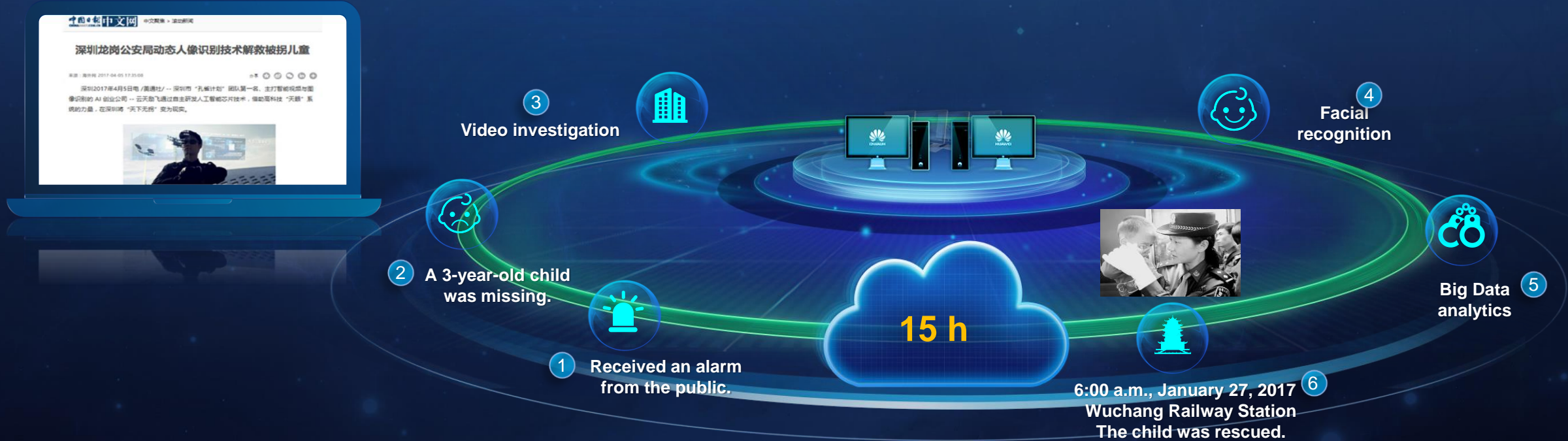
Approval  
process



Average  
waiting time



# Improving Public Safety with Video Cloud and Artificial Intelligence



2016–2017

The crime rate is decreased by  
**28.79%**.

The case handling efficiency  
is improved by **50%**.





## Principle 6: Leveraging ICT to promote sustainable development

### Thrust 4: Fostering Economic Development

### Thrust 5: Advancing Environmental and Societal Benefit



# Smart parking, offering new parking services

Regular el comportamiento de los conductores para asegurar un uso razonable del espacio de estacionamiento.

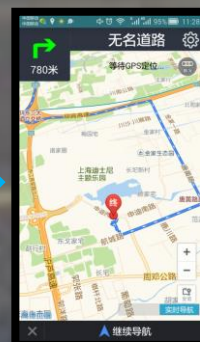
Consulta espacio



Reserva en teléfono



Conducción de navegación



Pago rápido



Detecta con precisión y rapidez el estado de ocupación del espacio de estacionamiento.

Yanbu, Arabia Saudita: Al usar eLTE, la ciudad ha mejorado la utilización del espacio de estacionamiento en un **25%** y reducido los costos laborales en un **30%**.



# Smart Water, that provides a complete real-time image of the city's lifeline



Monitoreo del estado del agua  
(velocidad de flujo y nivel de líquido)



Monitoreo de la calidad  
del agua



# Smart Streetlight, ideal for the construction of cities that save energy

More than **40,000** streetlights in Weifang have been reconstructed based on NB-IoT. As a result, the O&M efficiency is improved by **45%**, the lighting rate is increased by **25%**, and the annual electricity consumption is reduced by **6.8 million** kWh.

- Natural light sensing control
- IoT policy control



Information  
release/billboard



Air monitoring



Public Wi-Fi  
coverage



Video  
surveillance



Emergency  
call button

# Smarter Caribbean through Collaboration

## Intelligent Operation Center (IOC)



Safe City



Smart Pole



Commercial WiFi



Smart Transportation



Smart Stadium



Smart Access Control

## Smart City Digital Platform



BigData



IoT Platform



Video Cloud



GIS



Cloud data center



Wireless network



Wired network



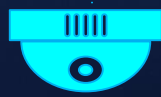
Lamps



Cameras



Access Control



Access Points



CO2



PM 2.5



Sensors

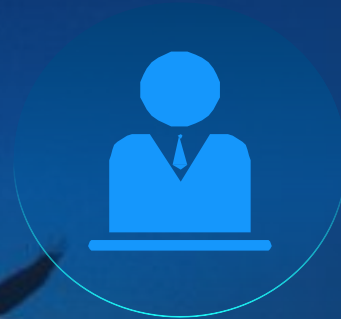


# The IOC acts as the brain and supports the scientific management and decision-making based on Big Data.



# Key Success Factors for Digital Transformation

## Top-leadership projects



Breaking data silos  
and restructuring  
processes

## Strong execution teams



High-level planning,  
coordinated  
construction, and  
iterative evolution

## Industry-leading digital partners



Technology,  
platform, ecosystem,  
and experience

## Solid investments



Sufficient investments  
with reasonable ROI



Bring digital to every person, home and organization  
for a fully connected, intelligent world

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