The Internet of Things (IoT)
How Korean companies can tap onto the growing opportunities

The Internet of Things (IoT)

Objects that are connected, virtualized, and imbued with **data measurement** capabilities

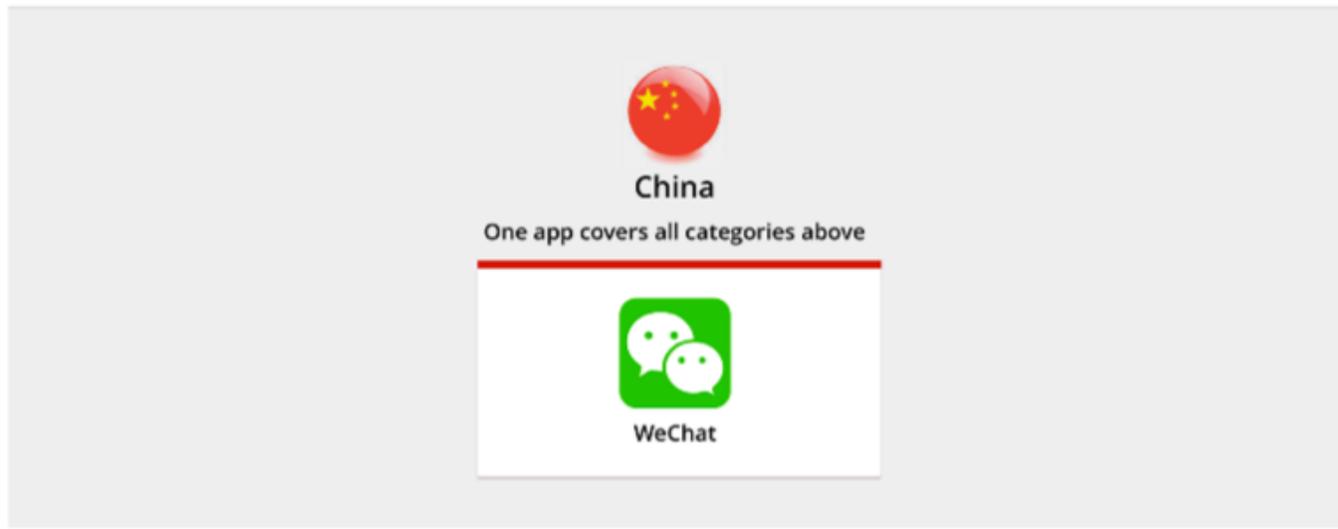Giving physical and virtual objects an **identity**

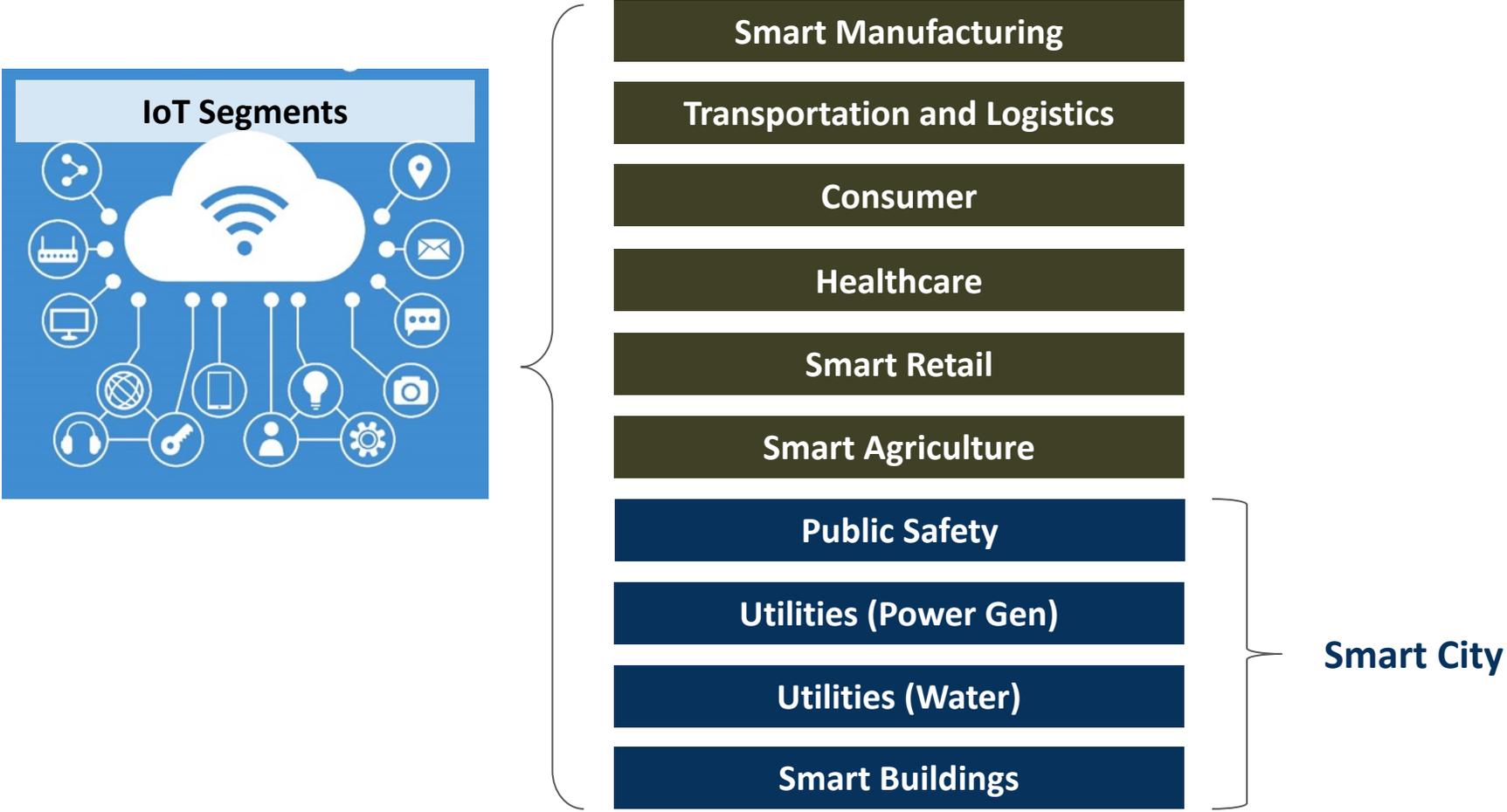Interconnecting the objects that can **monitor and interact** with each other

Ability to generate real-time **insights from data** and incorporate into existing business processes
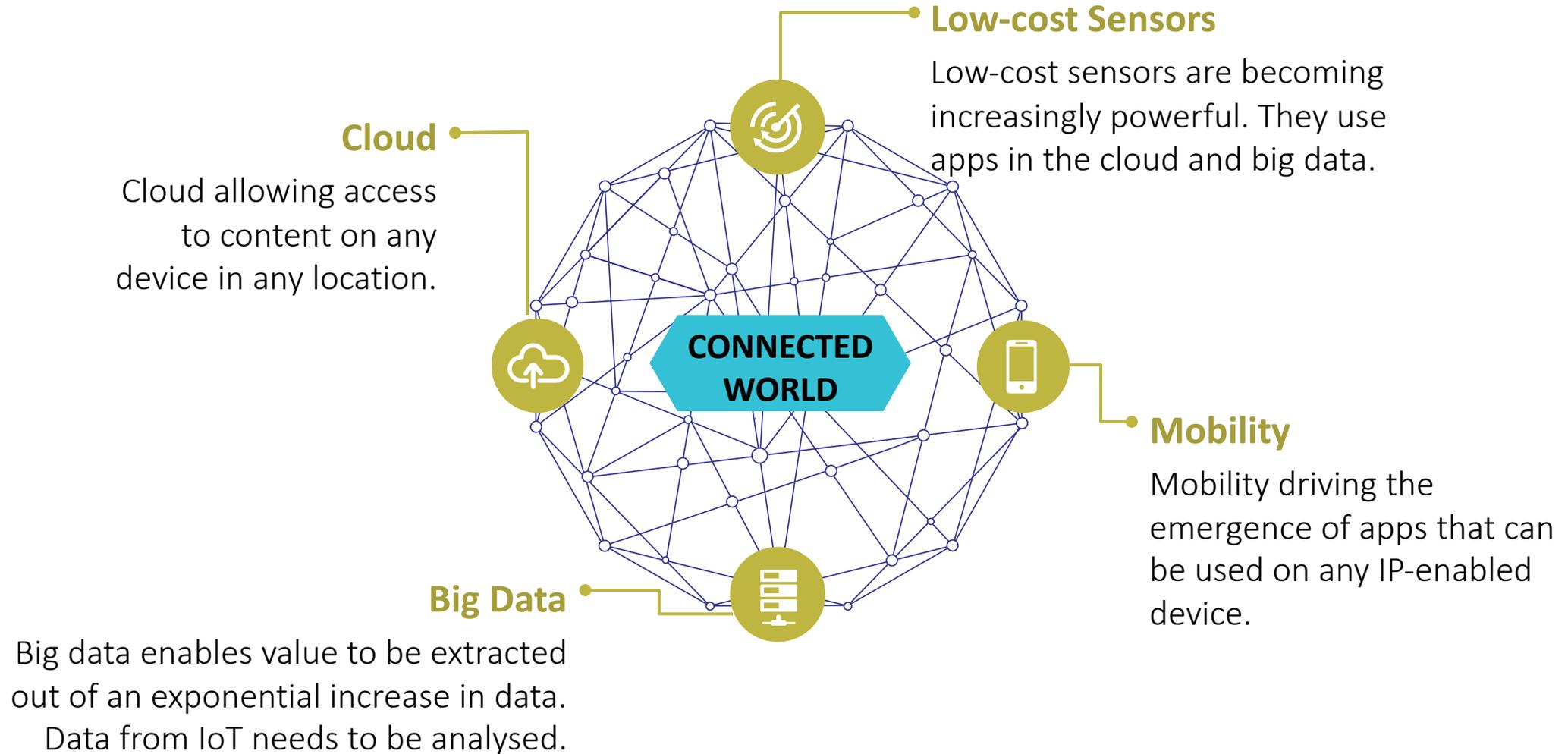
FROST & SULLIVAN

The rise of the super-app

IoT enabling data outcomes

IoT market segmentation

IoT Segments

- Smart Manufacturing
- Transportation and Logistics
- Consumer
- Healthcare
- Smart Retail
- Smart Agriculture
- Public Safety
- Utilities (Power Gen)
- Utilities (Water)
- Smart Buildings

Smart City

Convergence enablers

Low-cost Sensors

Low-cost sensors are becoming increasingly powerful. They use apps in the cloud and big data.

Cloud

Cloud allowing access to content on any device in any location.

CONNECTED WORLD

Mobility

Mobility driving the emergence of apps that can be used on any IP-enabled device.

Big Data

Big data enables value to be extracted out of an exponential increase in data. Data from IoT needs to be analysed.

FROST & SULLIVAN

IoT ecosystem

EDGE

- DEVICES*
- DEVICE GATEWAY*

PLATFORM

- CONNECTIVITY*
- DEVICE MANAGEMENT
- ANALYTICS
- DATA INGESTION
- DATA PROCESSING
- STORAGE

USER

- INTEGRATE WITH BUSINESS APPS
- INSIGHTS AND DECISION MAKING
- COMMAND AND CONTROL
- WORKFLOW AND RULES
- OPTIMIZATION

SECURITY*

Opportunities in Industrial IoT

Asia Pacific
Industrial
IoT market

3.5X
Growth

$24.4B
2022

$6.9B
2016

▪Industrial is underserved for IT

- More data that needs to be transmitted

- More data connections required

- More storage on private, hybrid or public clouds

- More system integration

- More cybersecurity advisory

IoT top 3 spending
Logistics
Transportation
Industrial

23B
Connected devices and sensors

Transportation and logistics use cases

Navigation and telematics devices
Electronic dashboards that track and show the geographical location of drivers and cargo in real time

Vehicle tracking and telematics services
Using data to track the utilization of commercial fleets and provide supporting services like predictive maintenance and driver safety
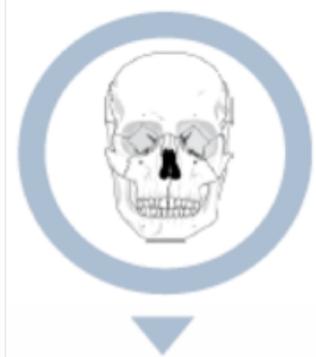
RFID in supply chain management
Using shared RFID applications to redesign new business processes with upstream and downstream partners for supply chain integration

Impact of megatrends on industrial companies

Trends in safety and surveillance leading to the rise of IoT

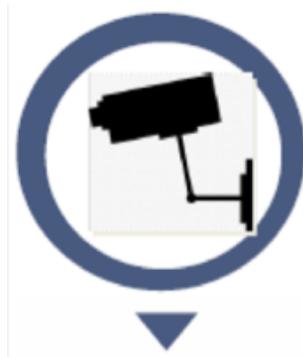| Need to Curtail the Crime Rate	Smart City Initiatives	IoT and Smart Analytics	Modernisation of Legacy Cameras	Efficient Storage Management
• The need to control the crime rate at a global level is an absolute necessity. • This calls for greater investments. • This in turn will open up opportunities for surveillance system suppliers.	• Smart city initiatives are being adopted by major cities at a global level. • These seek to ensure supreme standards of safety using the most advanced technologies. • This generates opportunities for surveillance system providers.	• Analytic solutions that are being deployed for surveillance systems are becoming smarter and moving towards the IoT. • With predictive and behavioural analytics expected to evolve in future, analytic solution suppliers can find a plethora of growth opportunities.	• Drawbacks of analogue cameras such as poor image quality and poor resilience have led to smarter and more robust digital cameras in the market. • Decreasing IP cameras prices are expected to create opportunities	• The increasing adoption of surveillance systems creates the need for efficient storage management. • Storage suppliers with smart multi-layered hybrid storage capabilities will find plenty of opportunities in the market.
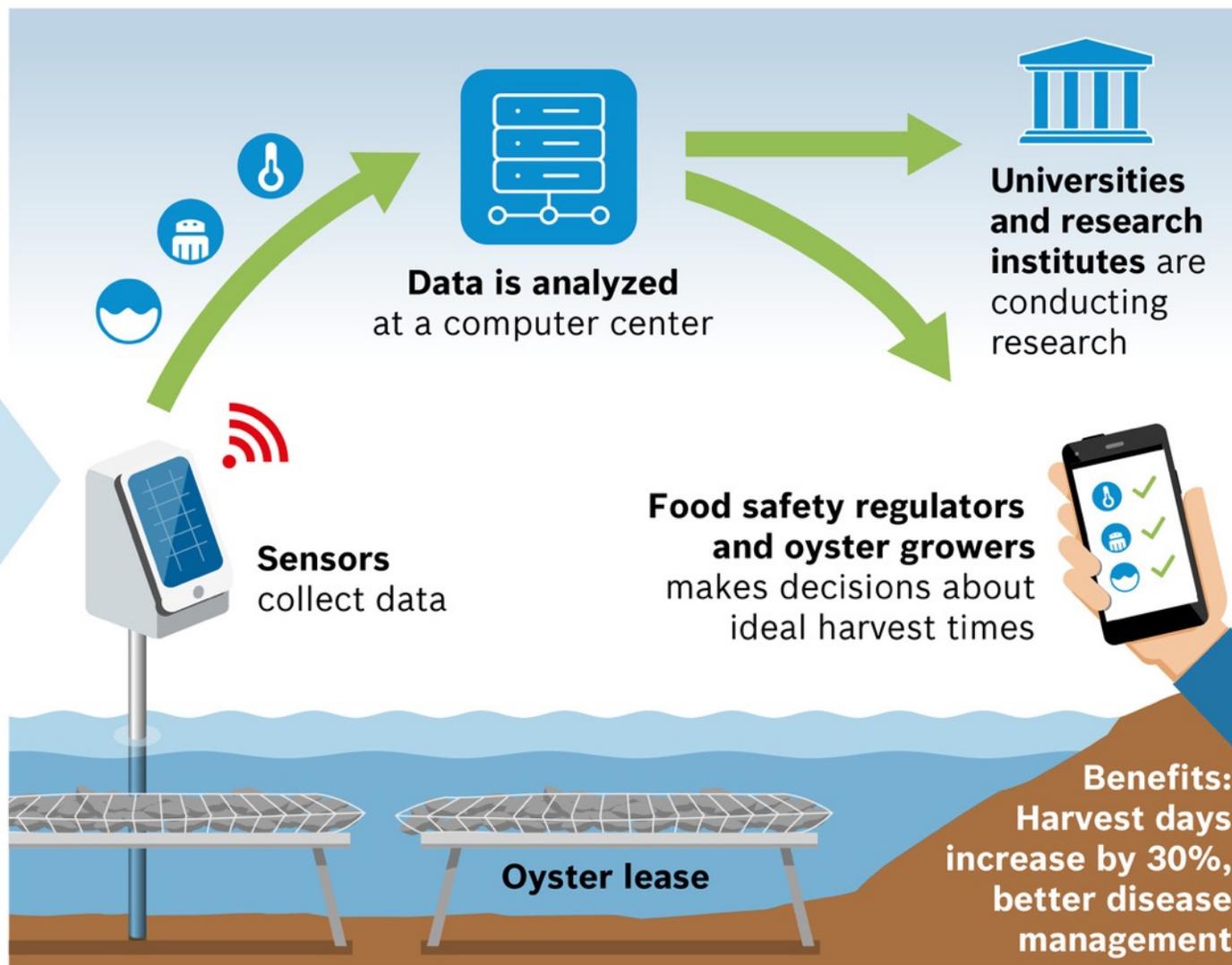
IoT-enabled smart retail project with Under Armour

Singapore's ultimate fitness performance + retail hub

Providing business outcomes through data

Management	**Marketing**	**Visual merchandizing**	**Retail operations**
Data to make operational and business decisions	Assess and optimize campaigns and community events	Enhance brand interaction and hot/cold zones	Identify popular items and seasonal trends

The Internet of Things (IoT)
How Korean companies can tap onto the growing opportunities

THE NEED

Industrial companies are starting to face challenges that require them to react and change in order to remain competitive.

To meet the needs of the consumers of tomorrow, industrial companies **need to adapt** and offer unique products targeted at profitable sub-segments, with **highly flexible and agile operations**.

THE OPPORTUNITY

How can your company help the **largest segment of the IoT market**?

What are some pilot projects you can start for this **new customer segment**?

THE APPROACH

What are the **data outcomes**?

How can this data be incorporated into my **business processes**?

The Internet of Things (IoT)
How Korean companies can tap onto the growing opportunities