

Internet of Things - A GAME-CHANGER FOR OMNI-CHANNEL RETAILERS

Speaker: Mr Tom Tong, Project Manager,
Hong Kong Internet of Things Centre of Excellence
tom.tong@gs1hk.org



Optimizing business, creating value

www.gs1hk.org



Internet of Things - A GAME-CHANGER FOR OMNI-CHANNEL RETAILERS

- Speaker: Mr Tom Tong, Project Manager, Hong Kong Internet of Things Centre of Excellence
 - In this session the speaker will share with you the trend of Internet of Things and also the potential business impact to the retailers. Consumers are now accustomed to an “always-on, always-open” shopping experience due to the accessibility offered by online shopping. Omni-channel fulfillment has created a whole new class of competitors pushing traditional channels into digital channels. Customers are going to continue to want seamless shopping from the time they start researching a product online through to final delivery. The speaker will share with you how these Omni-channel opportunities can be fulfilled by the latest Internet of Things Technology.





Introduction of GS1



Global Standard, Local Services

1 federated organization

110+
national chapters

150+
countries served

“GS1 is a globalized standard organization with presence in 150 countries, and is dedicate to make supply chain **SIMPLIED and more EFFICIENT.**”

GS1 Hong Kong



6,500+

local corporate members

2,000,000+

global registered companies

11,000,000+

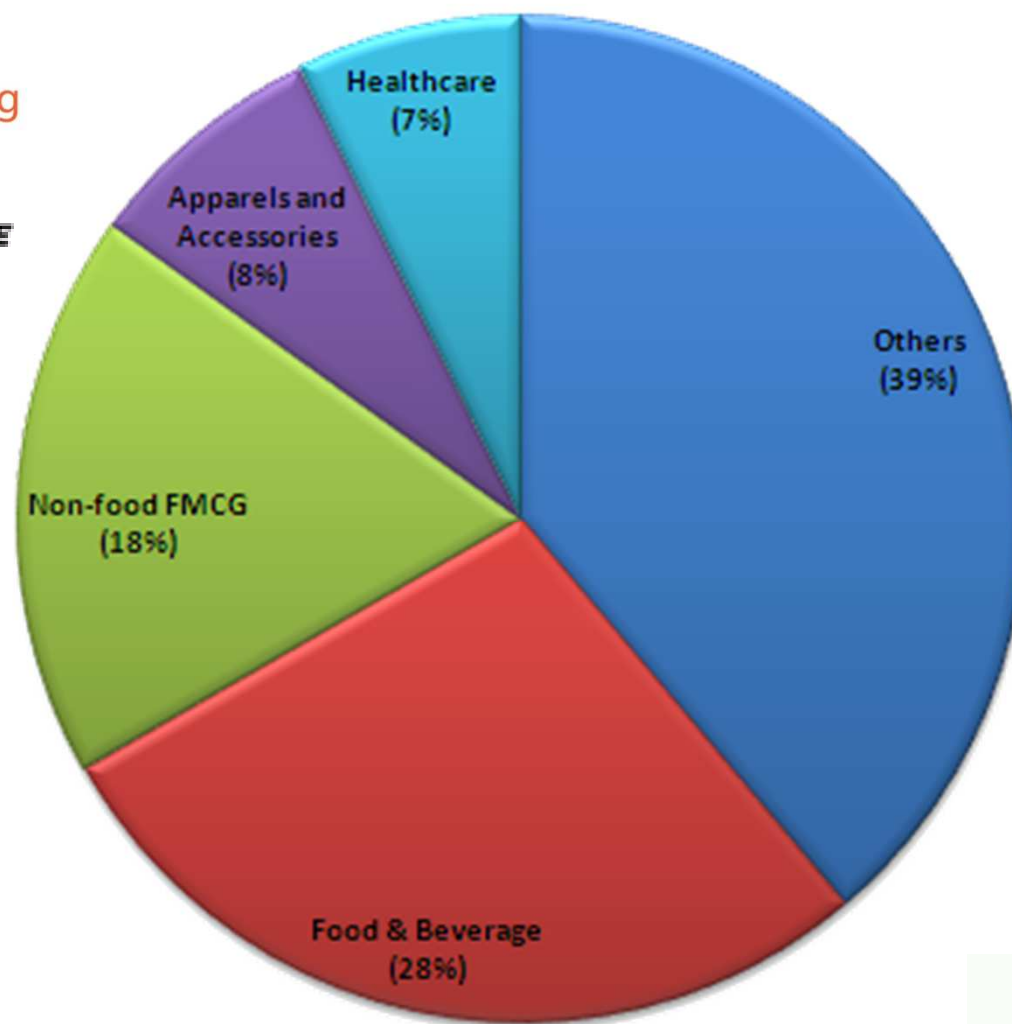
unique article numbers registered

5,000,000,000+

barcode beeps every day

Trusted by Thousands of Companies

(as of April 2013)



- Apparel 590+
- FMCG 1,300+
- F&B 2100+
- Healthcare 550+

**Total
6,500+**



Evolution of GS1

Standards & Technologies



GTIN &
Barcode



EDI / eCom &
GS1 Identification
(GTIN, GLN, SSCC)



RFID
(EPC Standard
including
EPCIS network)



BarCode / QR
Code (GS1
Trusted Source of
Data)

Business Applications



Retail Point of
Sales scanning



Procurement,
Replenishment,
Supply Chain
Management



Supply Chain
Visibility



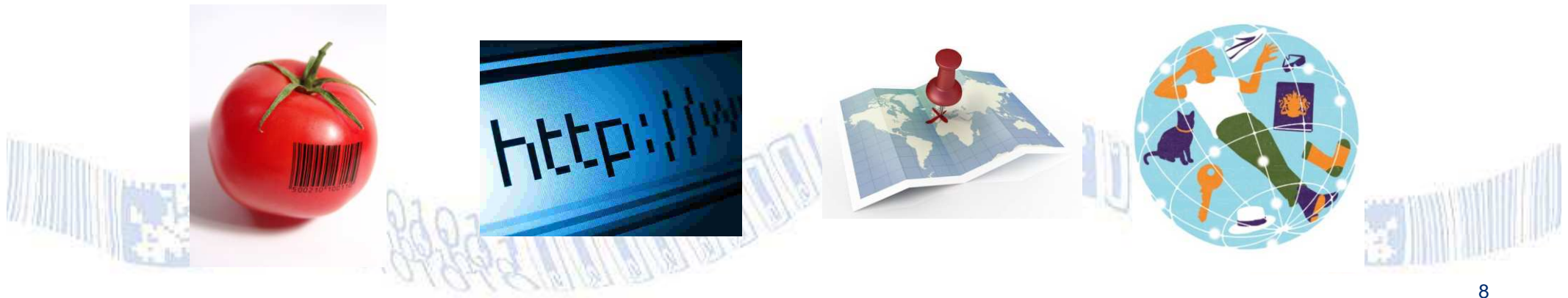
Connect to
Consumers via
Mobile / Smart
Kiosk by providing
extended product
information

Introduction to Internet of Things



What IoT means for business?

IoT (Internet of Things) refer to any **smart interconnected devices** (e.g. RFID, sensors, etc.) that enterprises or organization adopted to obtain more **visibility** into the **identification, location, and condition** of products, assets, transactions, or even people with the ultimate goals to be able to **trace** their **pedigree** and to drive **more effective, timely business decisions** or to **improve customer interactions**.



The IoT Market Potential

Gartner forecasts that **by 2020** there will **26 billion installed IoT devices**, dwarfing the 7.3 billion mobiles, tablets and PCs that should be in use. And Internet of Things will become **a \$309 billion business by 2020**,



Forrester : Top Technology Trends for 2014 And Beyond :
6. Sensors And Devices Draw Ecosystems Together

The *Internet-of-Things* will move from hype to reality with the ubiquity of connectivity and proliferation of devices, and wearable computing will go from niche to broader use.

Cisco estimates there are already 2.9 billion connected "things" and predicts **50 billion will be connected by 2020**.



Business Values of IoT

- **Smart Supply chain:** To provide an 'electronic pedigree' or history/movement of product from origin to destination
- **Smart Product safety:** To enable full visibility in the manufacturing and shipment process of temperature sensitive food products and enable product recalls in case of incidents
- **Smart Consumers:** Enable product authentication and direct individual based consumer engagement or marketing campaigns
- **Smart Manufacturing:** Internet-managed assembly lines, connected factories, and warehouses,
- **Smart Energy:** Smart electricity grids that adjust rates for peak energy usages.
- **Smart City:** Applications such as toll-taking and congestion penalties

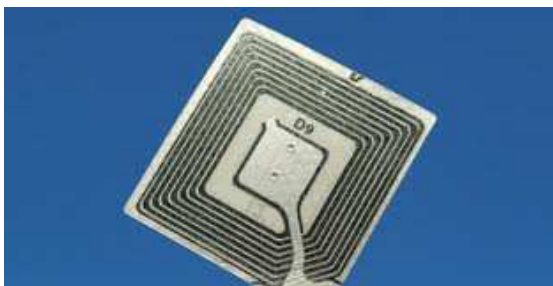
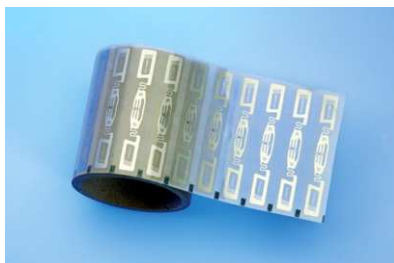


Identify

Capture

Object Big Data

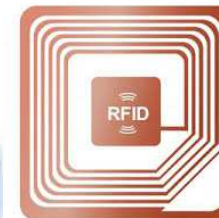
Identify and Capture



Object Big Data and Business Analytics



**GS1 Big
Data Keys**



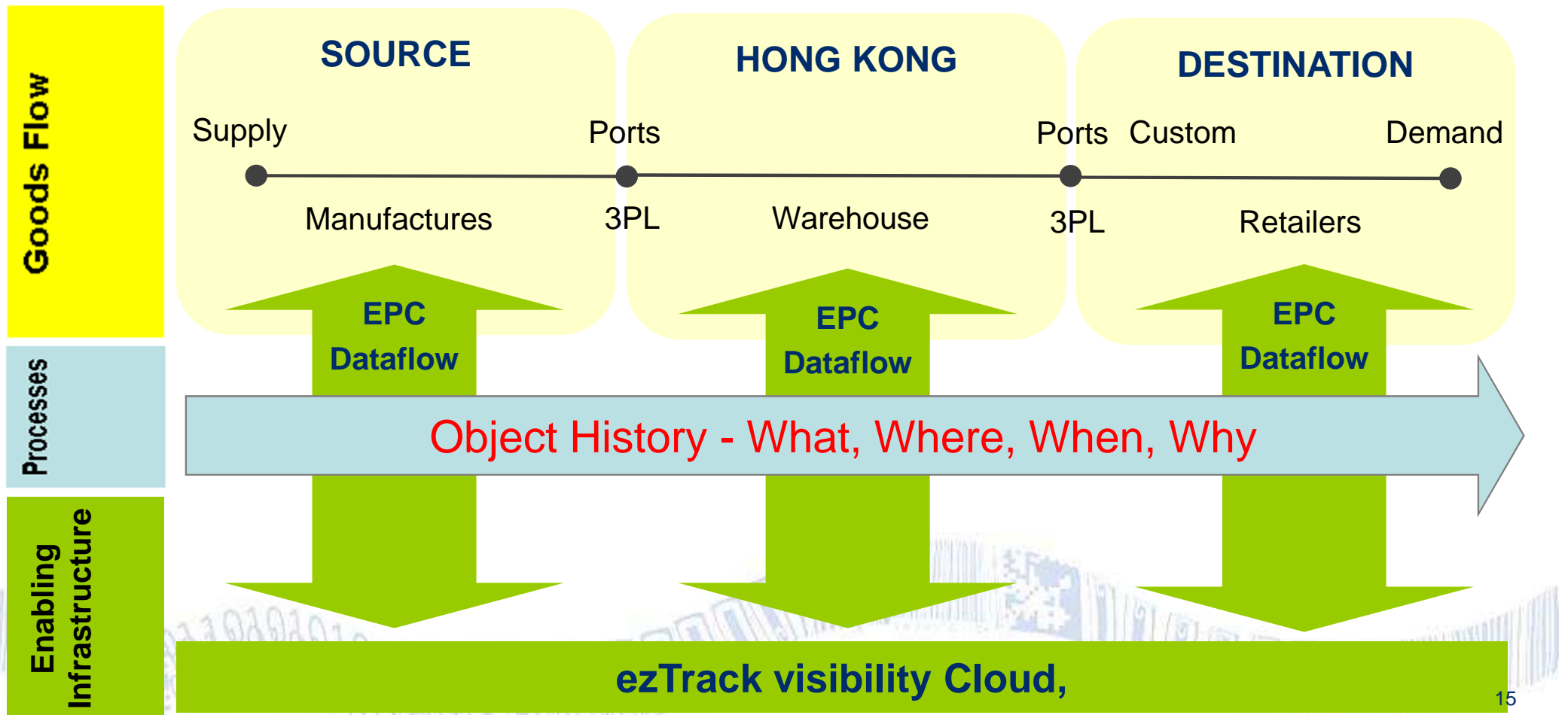
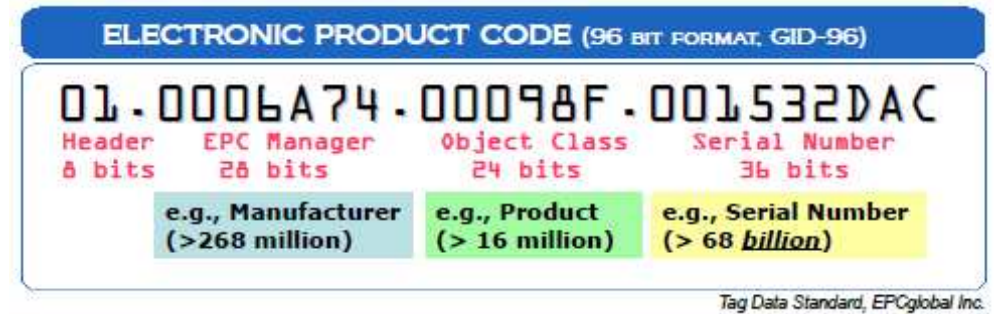
Object Traceability = EPCIS

- **Electronic Product Code Information Services (EPCIS)** is an open standard used to track progress of objects as they move through the supply chain.
- The data shared at each read point in the supply chain provides **WHAT**, **WHEN**, **WHERE** and **WHY** of each read.

IoT powered by EPCglobal standard	Internet
ONS (Object Name Service)	DNS (Domain Name System)
EPC Code (Serialized product code)	IP address
EPCIS (Electronic Product Code Information Services)	HTTP (Web service defined by W3C)
Discovery Service	Internet Search Engine



GS1 Traceability Cloud - ezTrack

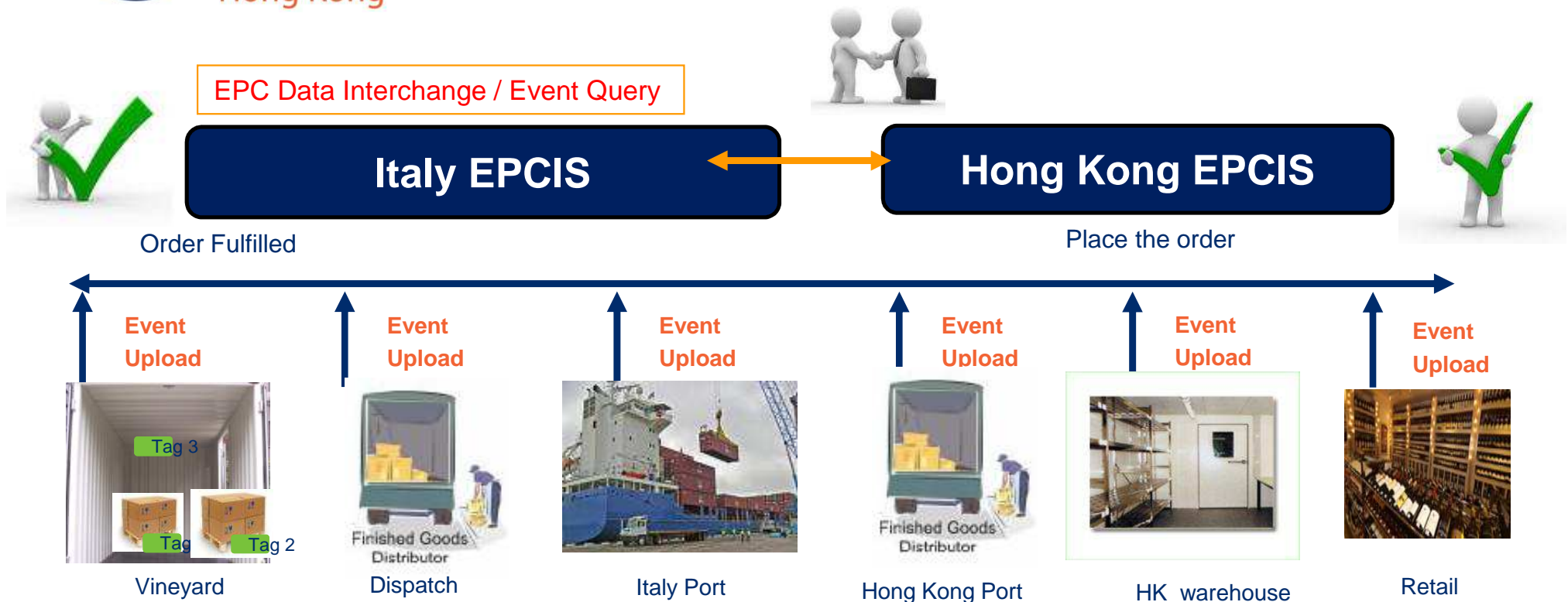




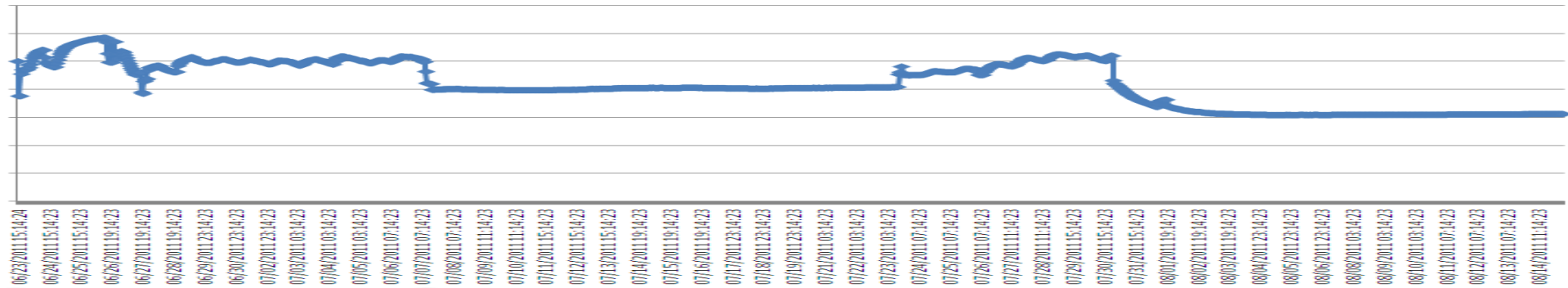
ezTrack use case - GENUINE Product Authentication

- GS1 Hong Kong offers an EPCIS-based track and trace solution, namely ezTRACK™.
- Aiming at sharpening the supply chain edge of local businesses of any size, the globalized track and trace platform provides companies with real-time visibility of goods and product information flow at any point in the supply chain.
- GENUINE Product Authentication Solution via Cloud-based Traceability EPCIS Platform – ezTRACK
- <https://www.youtube.com/watch?v=KTiaHpaHU-A>

ezTrack use case - Traceability of Temperature Sensitive Food Product



Real time temperature monitoring along supply chain





Omni-channel and inventory visibility – Powered by IoT



Omini Channel Powered by Single Key



Omni-channel Retailing

... is a **strategy** offering a **choice** to the customer in buying through all available shopping channels:

- Brick & Mortar Store
- Website
- Mobile devices
- Interactive TV
- Telephone order
- Direct Mail / Catalogue
- Comparison shopping sites



- Focus on **Demand Fulfilment**
- It requires 100% inventory accuracy, which is supported by item-level tagging

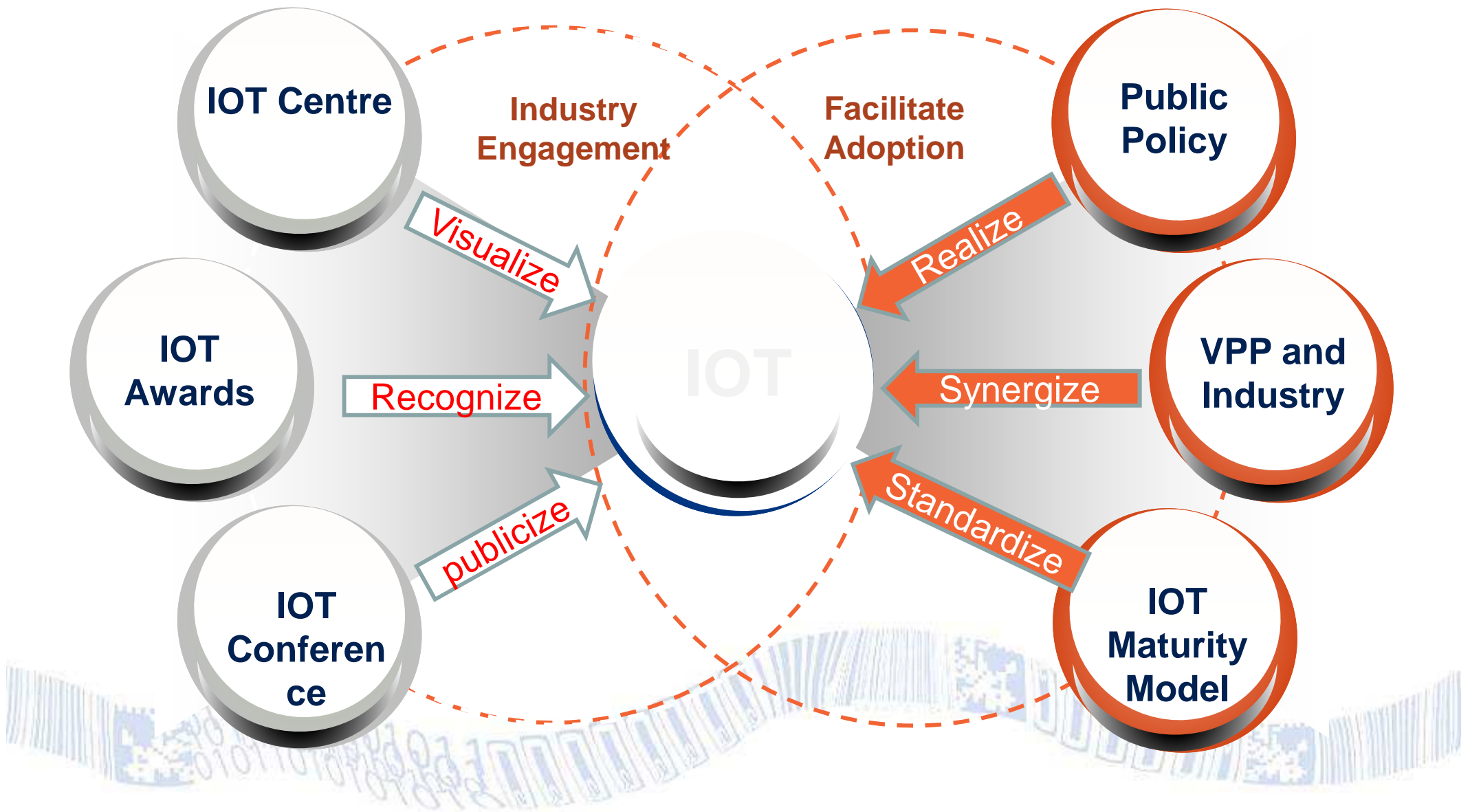
→ **EPC/RFID** enabled **REAL-TIME Inventory Visibility** which is **THE key enabler** in an company's **OMNI-CHANNEL strategy**



GS1 Internet of Things



GS1 IoT Campaigns





GS1 IoT Showcases in IoT Centre



Cold Chain Management Solution

Offers exceptional supply chain visibility with a simplified, precise and cost-effective temperature monitoring of any goods in real time



Inventory Management Solution

Improve inventory management and enhance in-stock, out-stock and stock take efficiency



Genuine Product Authentication Solution

Help businesses increase brand integrity and bolster consumer confidence by enabling supply chain e-pedigree visibility

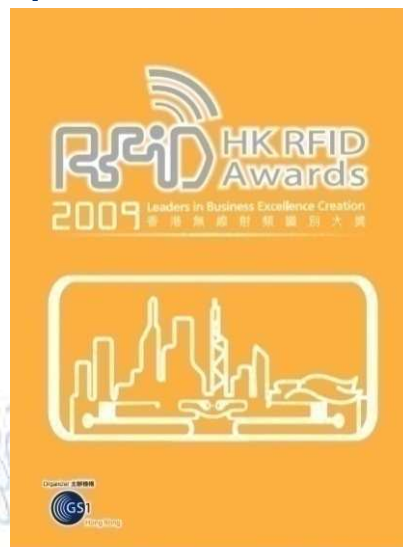


Consumer Mobile Application

Enables consumers to obtain trusted source of information and latest hot deal from brand owners by scanning barcode or QR code via smart phones

GS1 IoT Award

- **Objectives:**
 - Hong Kong's IoT Technology Leadership Position
 - Drive Technology Export:
 - Bridge Education with Business:
- IoT Awards winning cases will be highlighted in the IoT Awards Casebooks
- Regional promotions



Call to action

- Visit GS1 Hong Kong website to understand more usage cases of Internet of Things, www.gs1hk.org

GS1 IoT Casebook



- Schedule a visit to the IoT Center to TOUCH and FEEL the technology applications.
- Mr Tom Tong, Project Manager, tom.tong@gs1hk.org
- Booking hotline: (852) 2863 9709

IoT Center



Thank You