

Regional Forum on Emerging Technologies

IoT as an enabler for a better life

Place: Tunis, Tunisia

Date: 23-24 April 2019

Abderrazak HACHANI
ITU expert

AGENDA

- 1. Introduction**
- 2. IoT for a better life**
- 3. IoT adoption challenges**

Introduction

The 3 Tsunamis of Internet



Fixed Internet



Mobile Internet



Internet of Things (IoT)

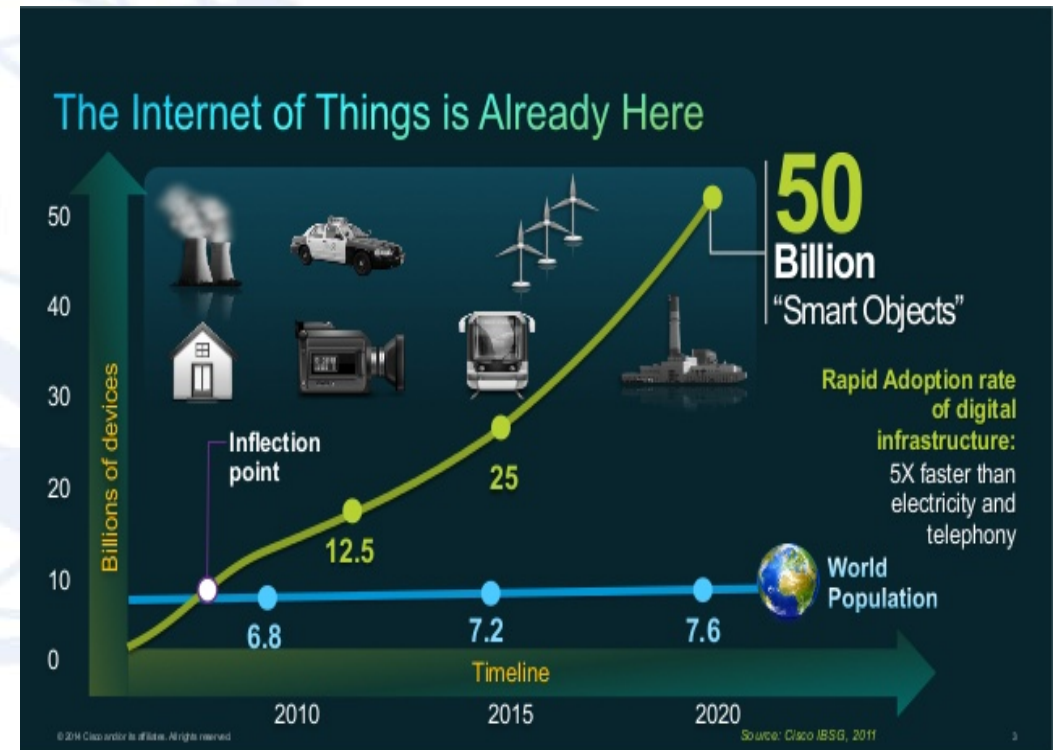


What is IoT ?

“a global infrastructure for the information society, enabling advanced services by interconnecting (physical and virtual) things based on existing and evolving interoperable information and communication technologies”
[ITU-T Y.2060]



- More connected devices than humans !!



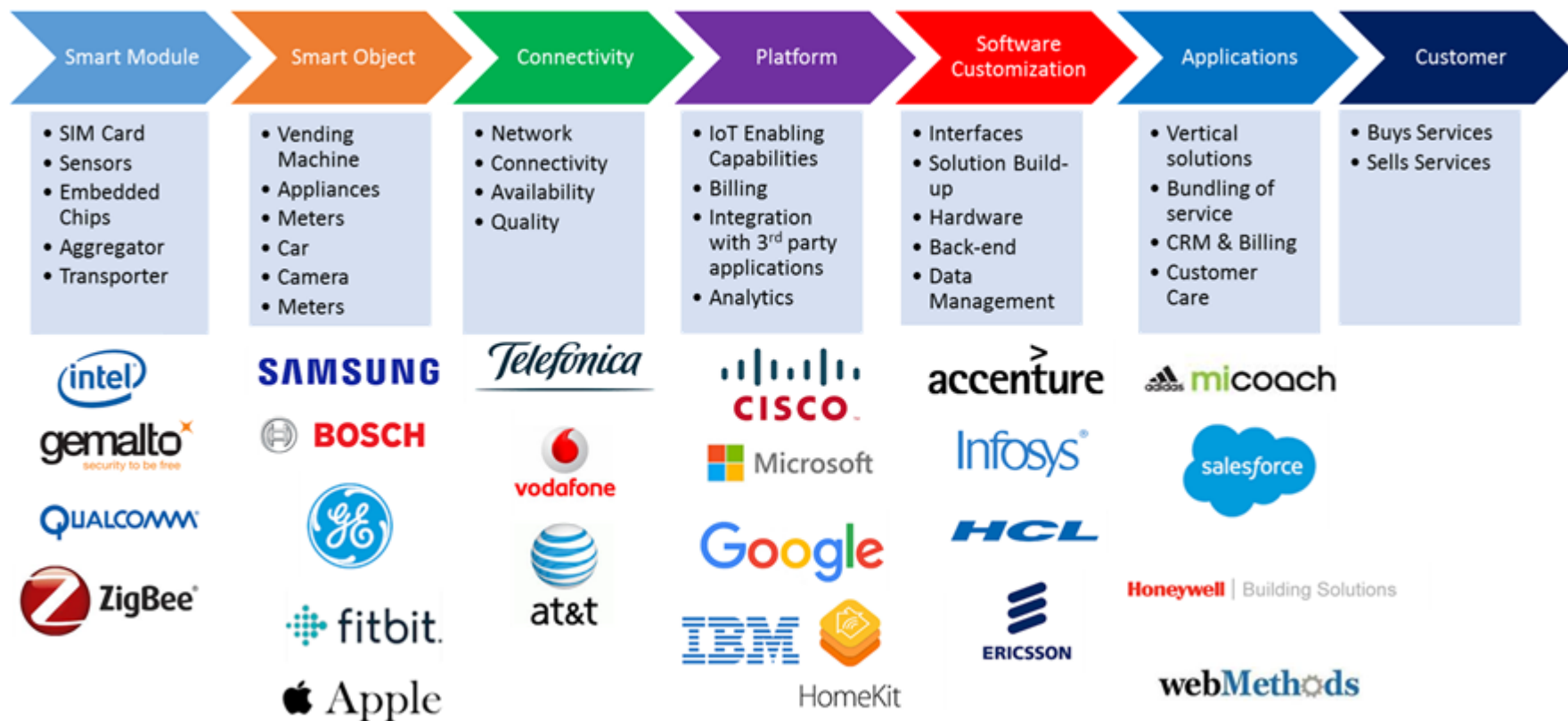
Source: CISCO

IoT alliances & consortia

Handbook: Internet of Things Alliances and Consortia

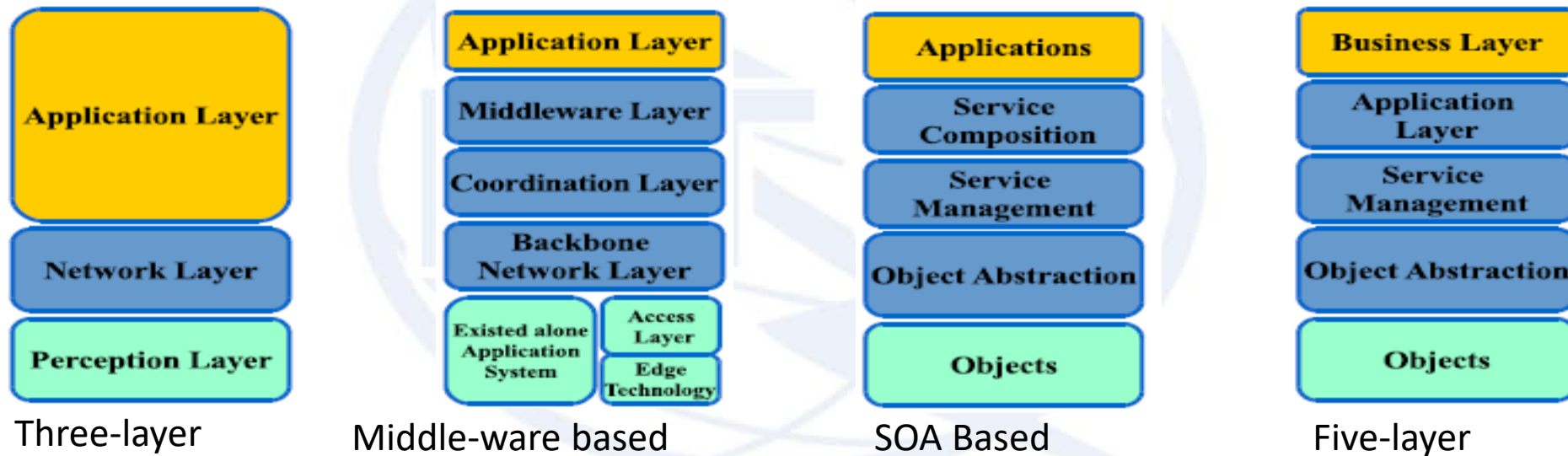


IoT value chain



Note, the above is not an exhaustive list of companies and any company may have play in more than one component of value chain
 Copyright: Telecomcircle.com

IoT Architecture : quick overview



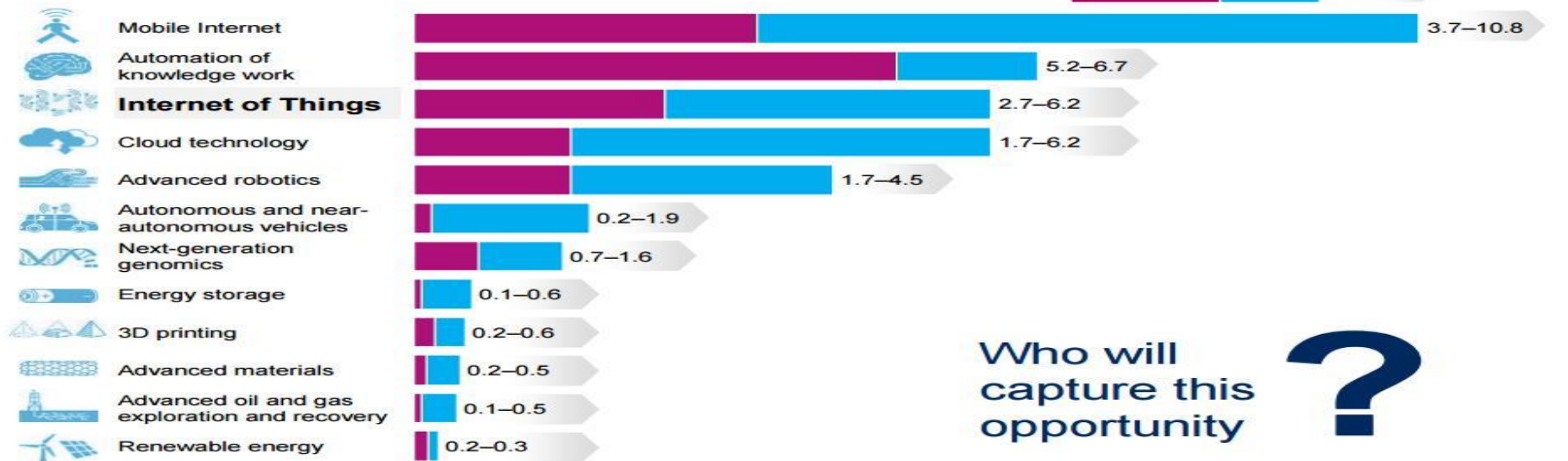
https://www.researchgate.net/profile/Mohd_Rahul/publication/317570955/figure/fig8/AS:529047734439936@1503146217383/Fig-8-Architecture-of-IoT-with-IoT-Elements.jpg

IoT Markets forecast

THE IoT PLATFORM OPPORTUNITY

The Internet of Things (IoT) has a potential economic impact of 2.7-6.2 trillion USD until 2025

\$ trillion, annual



Who will capture this opportunity



SOURCE: McKinsey Global Institute analysis

McKinsey & Company 3

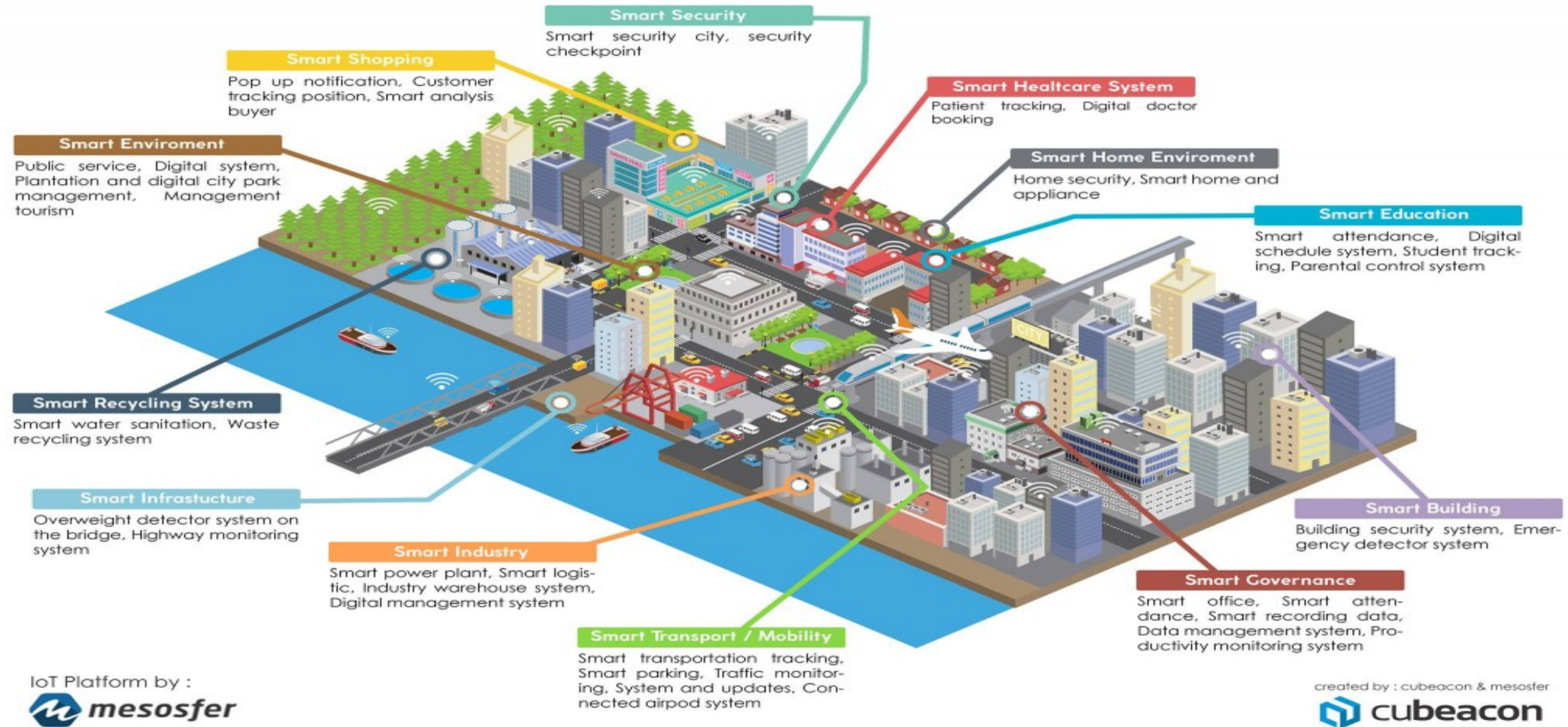
Source: <https://blogs-images.forbes.com/louiscolumbus/files/2016/11/McKinsey.jpg>



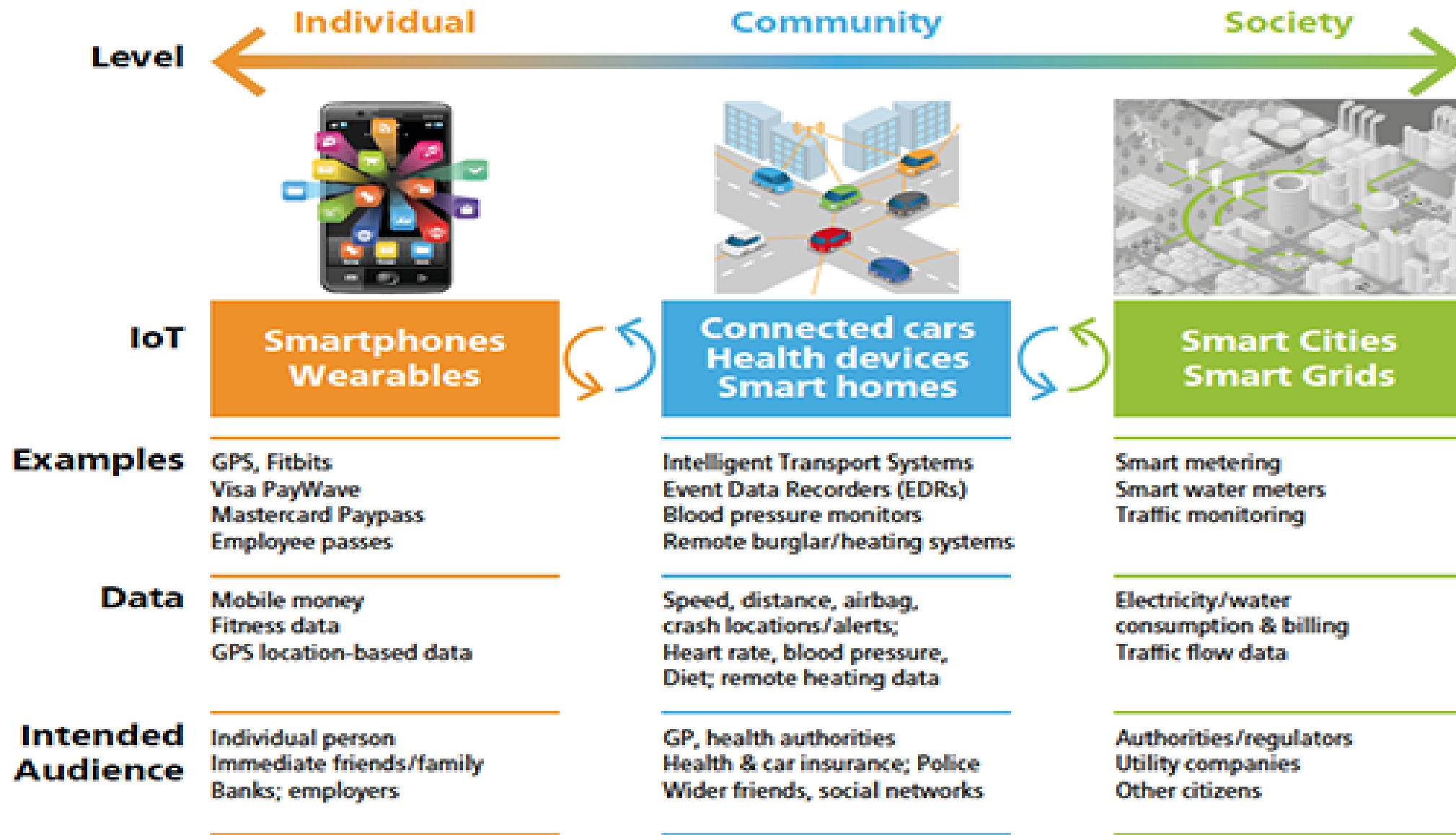
IoT as an enabler for a better life

IoT as an enabler for a better life

SMART DIGITAL LIFE



Source: <https://blog.cubeacon.com/wp-content/uploads/2017/06/cubeacon-digital-life-1024x728.jpg>



IoT enables city digital transformation

- Retail
- Healthcare
- Administration
- Environment
- Security
- Industry
- Defense
- Etc



NFC enabled mobile

- Near field communication
- Mobile phone, is an enabler of new smart services
- Mobile operator ecosystem



Towards a better customer experience



Smart Payments

Tolls, Tickets, vending
Goods, services, ...

Enhanced user experience

Service notification
NFC connection Handover

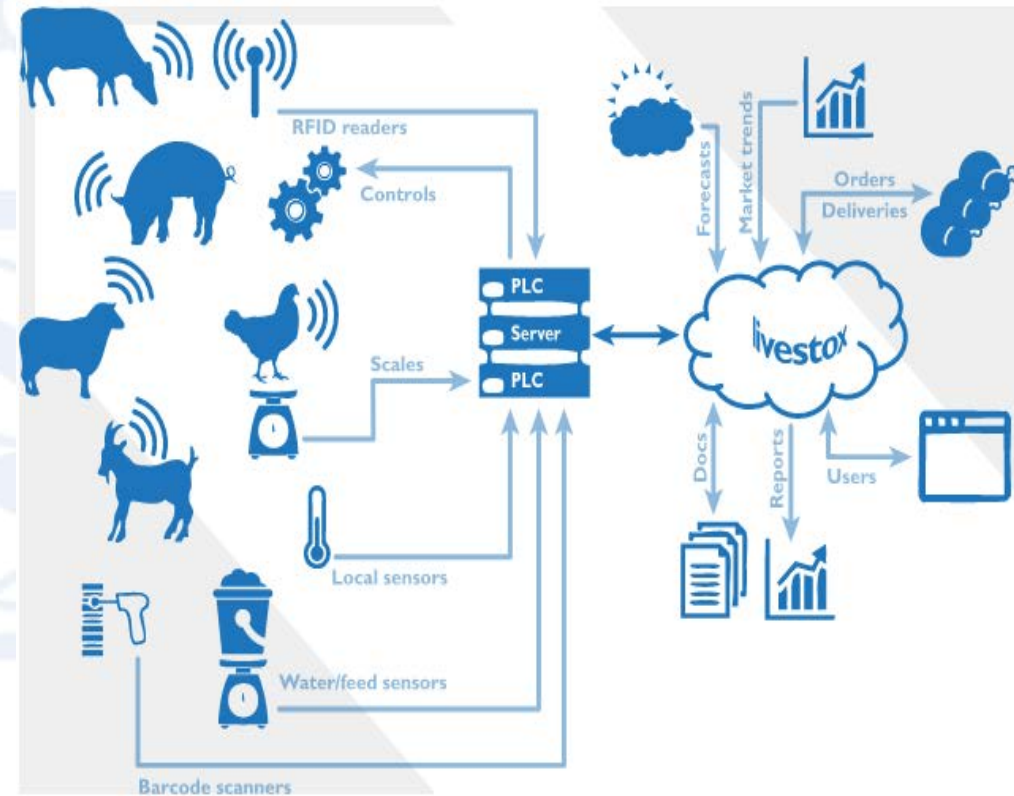
Customer analytics

Smart Authorization

Access to transport, buildings
Rental or sharing
Fleet management
VIP retail experience

Live stock traceability

- Livestock management.
- Optimizing productivity.
- Helping ensure food safety and quality.

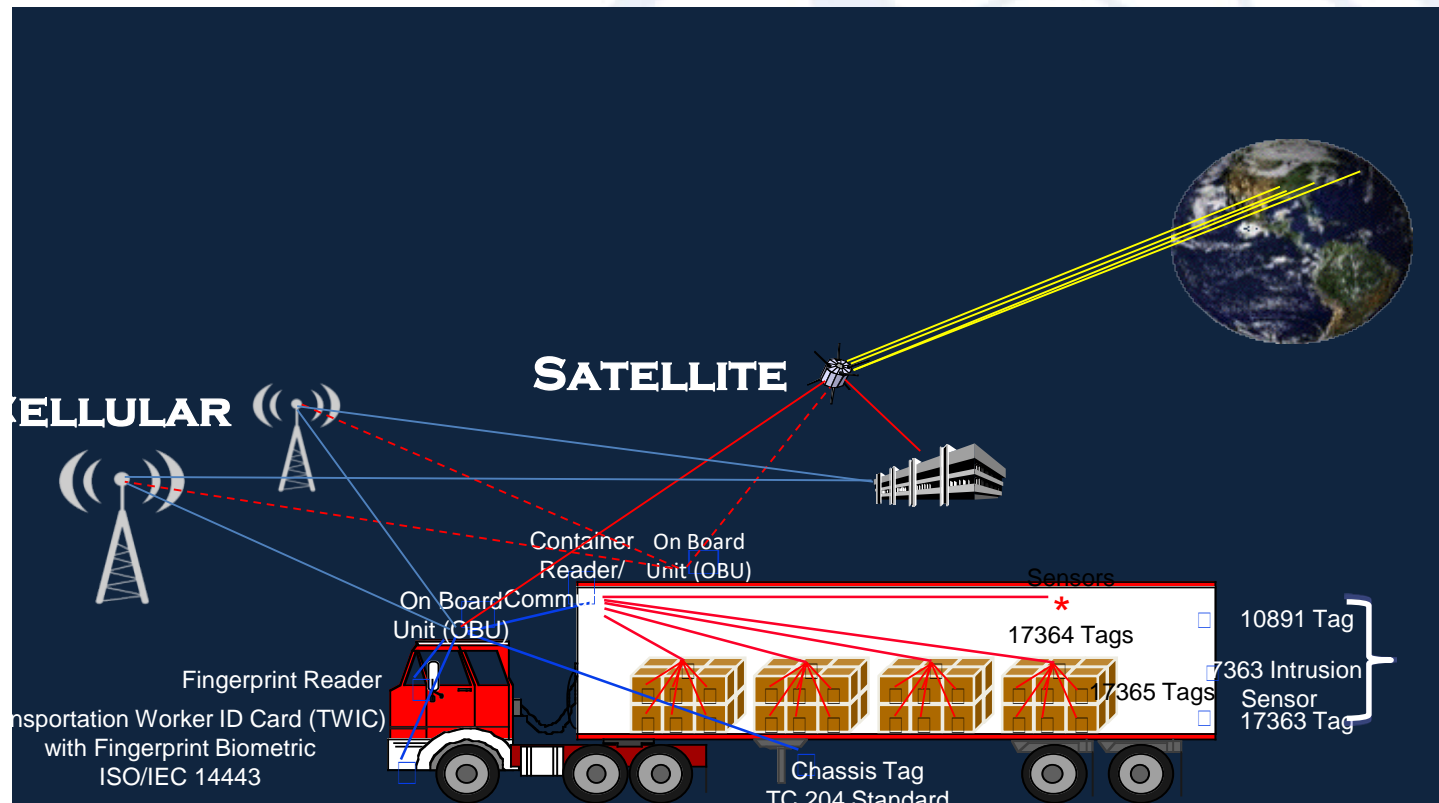


RETAIL

- EAS (Electronic Article Surveillance)
- Inventory management
- Information system visibility
- Increase work efficiency
- Boost sales



Supply chain monitoring



Reliable product life cycle tracking (status, inventory,...)

Smart Tooth Brush

The Beam Brush is a connected toothbrush that engages users with their daily hygiene routine.

<http://www.beamtoothbrush.com/toothbrush/>



Smart Washing Machine

Smart Aqualis is the first Indesit Company washing machine designed to be integrated in 'Smart' ecosystems, covering a wide range of use cases.

<http://zigbee.org/Products/ByStandard/AllStandards.aspx>

Bluetooth-Enabled Insoles

Shares navigation, directions and orientation.



<http://lechal.com/products.html>

Nod

Nod transforms your movements into commands. It brings the world around you to life, as you control everything from your laptop to your living room lights with a wave of your hand.

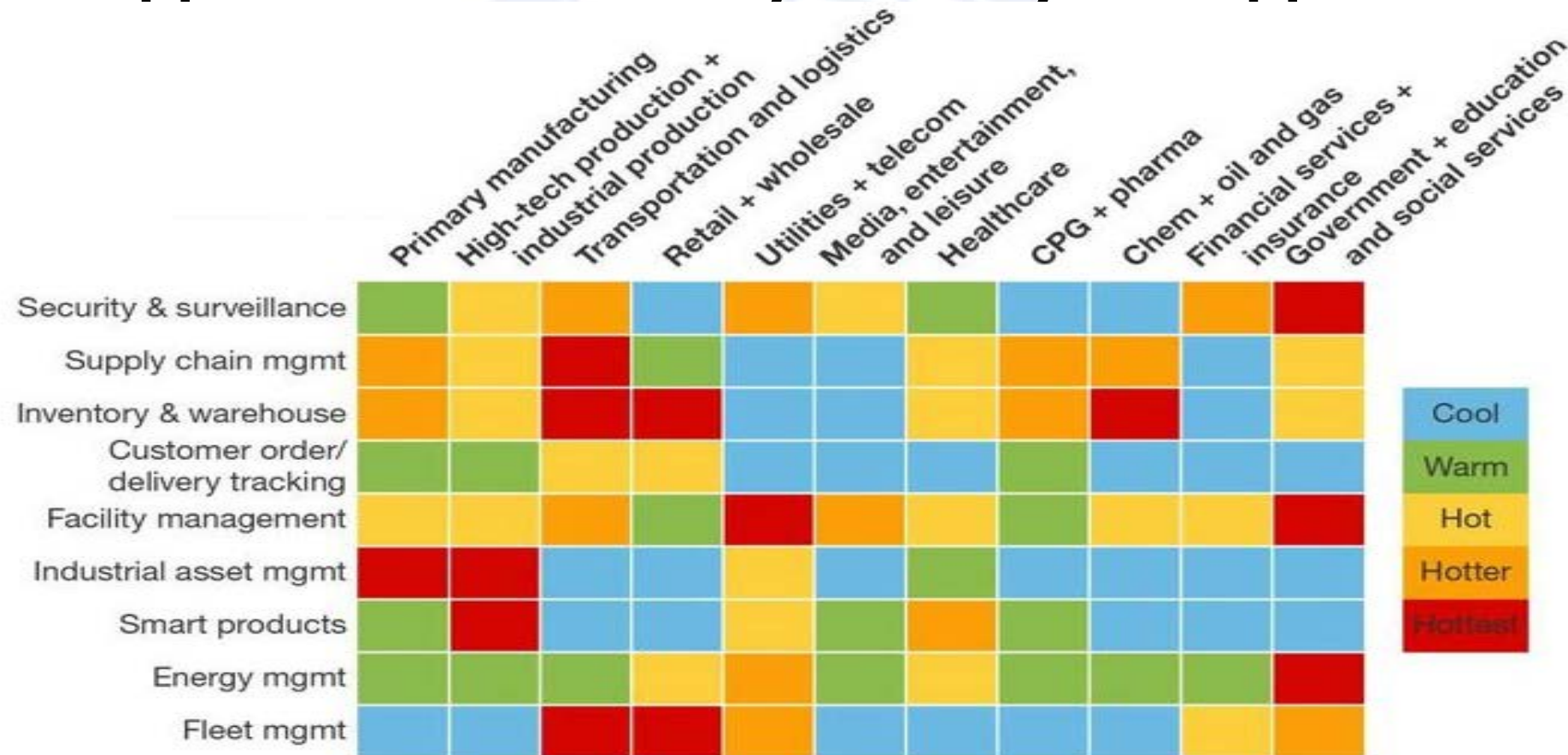
<https://hellonod.com/>



IoT adoption challenges

IoT is gaining adoption but challenges persist !

- Key IoT opportunities varies by industry and application



Source: the internet of things heat map, 2017 – Forrester report



Major challenges

- Lack of better understanding of IoT
- Lack of investment
- ROI concerns
- Workflows (not well defined)
- Lack of standardization
- Interoperability concerns/legacy systems
- Fear of change
- Inadequate infrastructure
- Security and data privacy concerns
- Non availability of skilled persons
- Capacity building

Key solutions

- Raising more awareness (capacity building program, Training...).
- Design of IoT curriculum programs.
- Support startup ecosystem (RDI,...).
- Governmental / private sector collaboration.
- Participate in WG activities.
- Interoperability issues (cross-platform, cross-standard cross-domain IoT services and applications).



Thank you

