

الأكار متت العربة تللع لوم والنكنولو جتا والنعل البحري

Arab Academy for Science, Technology & Maritime Transport



#### International Maritime Transport and logistics Conference Toward Smart Ports

13-15 March 2016 Hilton Green Plaza – Alexandria - Egypt

#### **Presentation Title:** INTERNET OF THINGS IN LOGISTICS: TOWARDS AUTONOMOUS LOGISTICS & SMART LOGISTICS ENTITIES

Name

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# **IOT Connecting the Unconnected**

#### It's often said that we are witnessing the next

major st

When w

Connecting all things is possible. Change is coming.

Expand your reach.



industry

ve light

up "dark assets" - DHL

## Contents

Concept & Vision?

What Made IOT Possible?

Applications & Best Practices

IOT in Logistics & Supply Chain

A Case of Collaborative Supply



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#### **Concept & Vision**



The term was first coined by Kevin Ashton – Auto ID center MIT

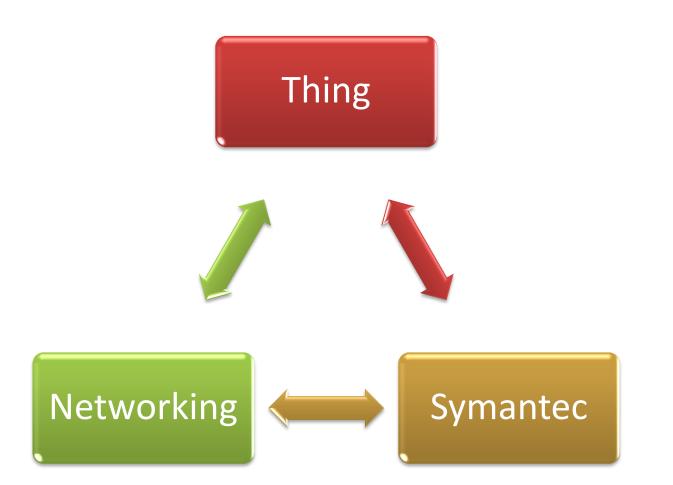
First official use in 2005 by International

Telecommunication Union (ITU)

IOT has so many definitions depending on the perspective.

Three perspectives of IOT

## **Major Perspectives of Viewing IOT**



## **IOT or IOE**



CISCO: IoE, the Networked Connection of People, Process, Data, and Things

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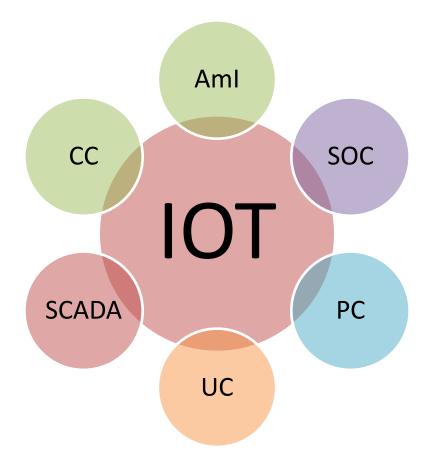


# What Made IOT Possible

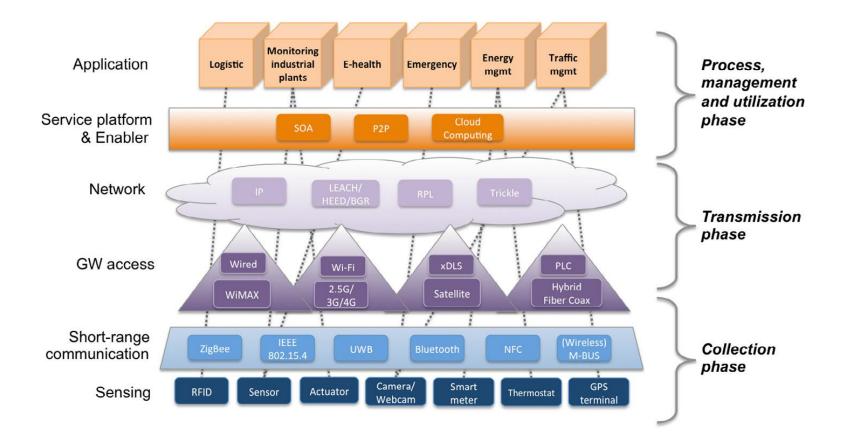
- Integrated circuit technology
  - Miniature
  - High computing capability
  - Low power
- Wireless technologies
  - Reaching everywhere
  - Low power



#### **A Mirage of Different Technologies**



## **Application Architecture**



E. Borgia: Horizontal representation for IoT applications

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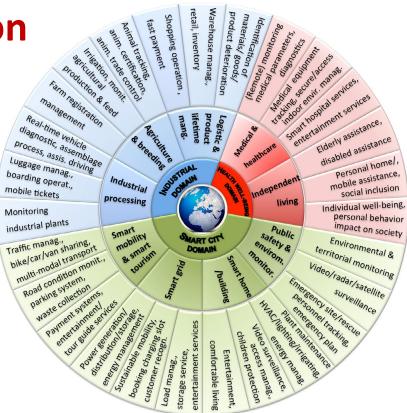


# **IOT Application & Best Practices**

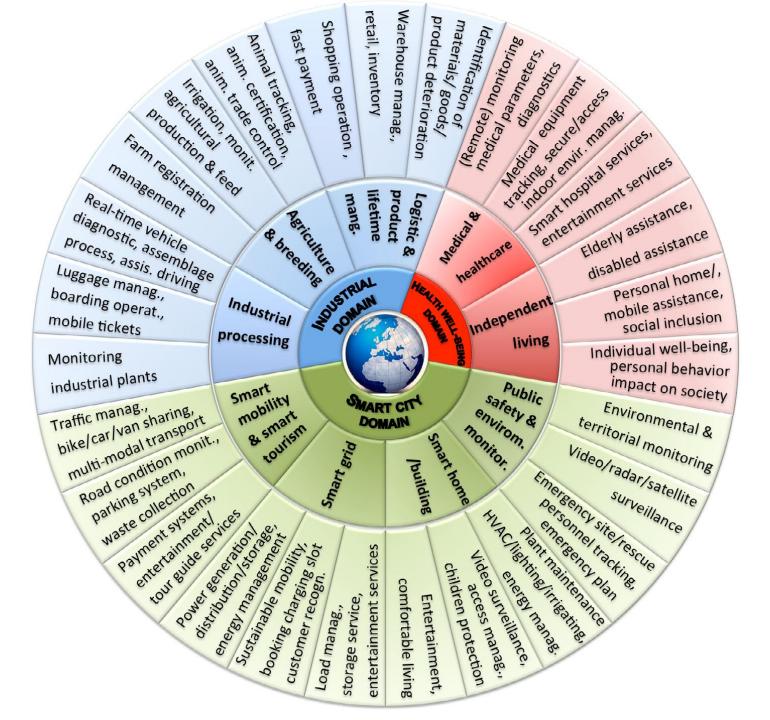
# Main domains of application

- Industrial domain
- Smart city domain
- Healthcare & well-being

domain



E.Borgia: IoT application domains and related applications



# **IOT Application & Best Practices**

#### **Best practices**

- Operational Efficiency
- Safety & Security
- Customer experience
- New business models

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## **IOT IN LOGISTICS AND SUPPLY CHAIN**

# IOT is Sensing & Sense Making in the world of

Logistics



Cisco Consulting Services, 2015

# **IOT IN LOGISTICS AND SUPPLY CHAIN**

#### Some use cases:

- Warehousing operations
- Freight transportation
- Last-mile delivery



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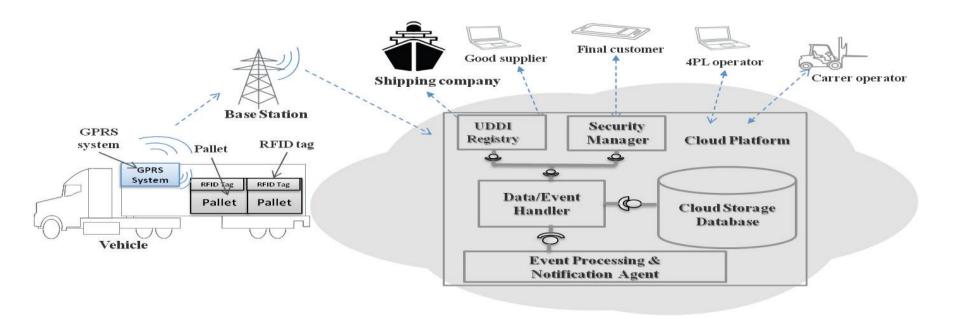
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# THE CASE OF COLLABORATIVE SUPPLY CHAIN FOR TRACKING PALLETS AND CONTAINERS:



D. R. Gnimpieba, A. Nait-Sidi-Moh, D. Durand, and J. Fortin, "Using Internet of Things technologies for a collaborative supply chain: Application to tracking of pallets and containers,"

