



# Internet of Things and the infrastructures for smartness

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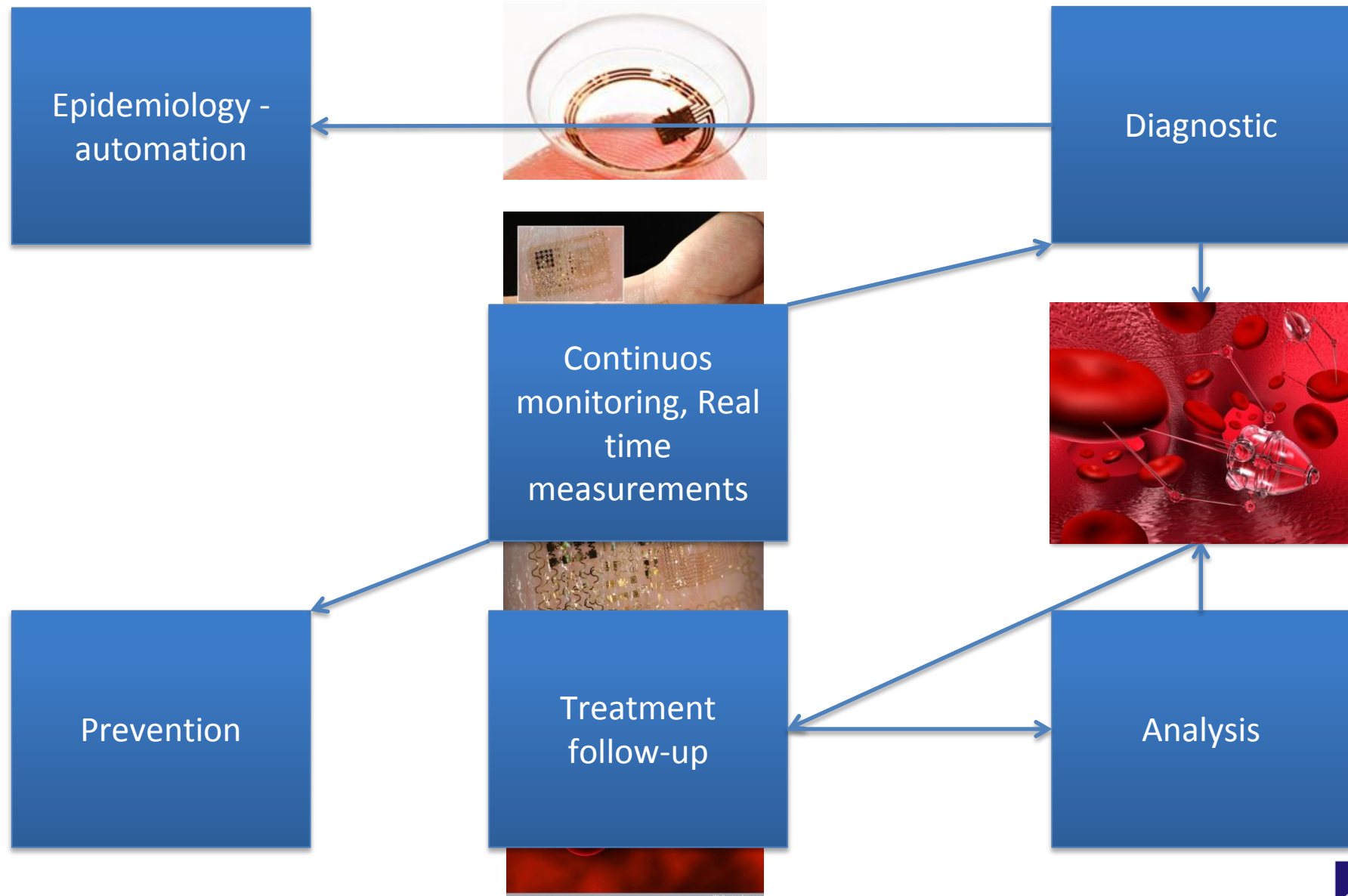


# Content

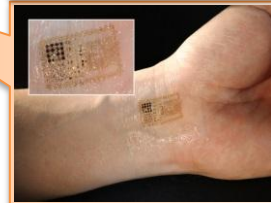
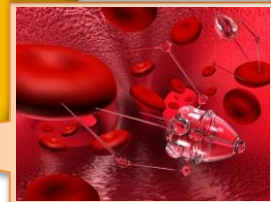
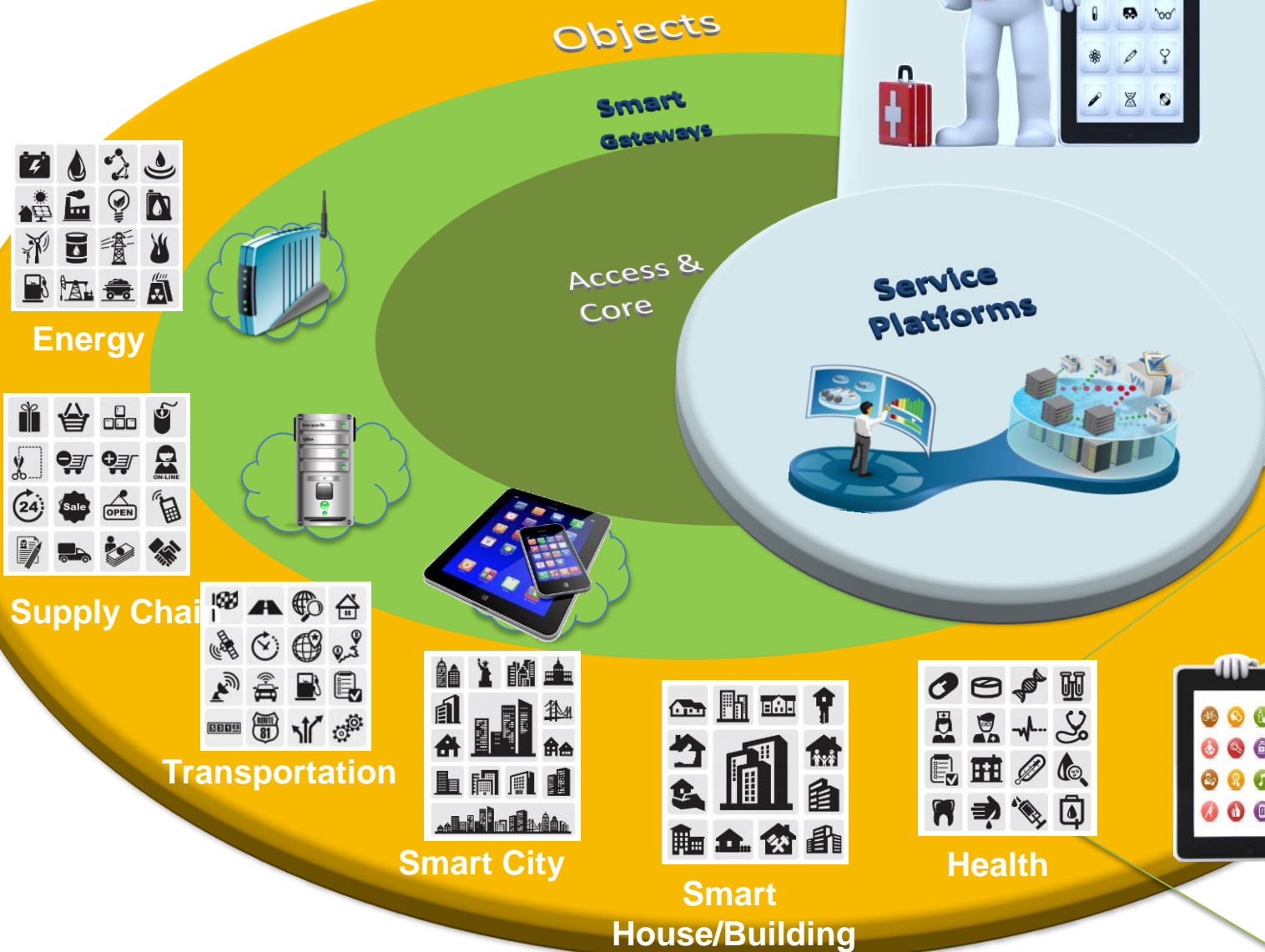
Internet of Things: from Examples to Definition

Internet of Things: a Driver for Disruptive Transformations  
in most Society and Industry Sectors

# New health paradigms



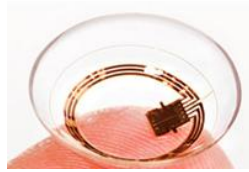
# Architecture Overview



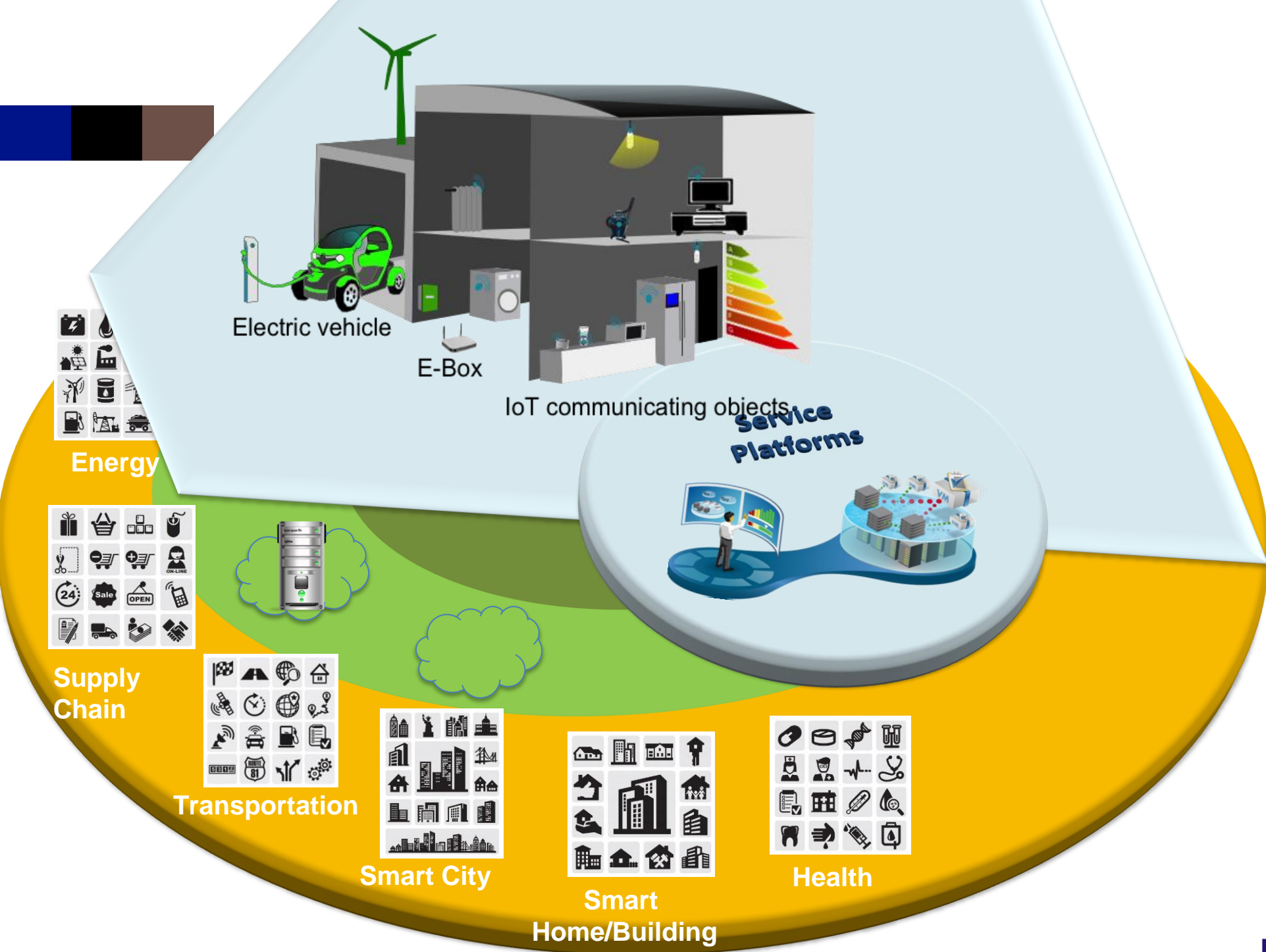
# Societal impact of near future services

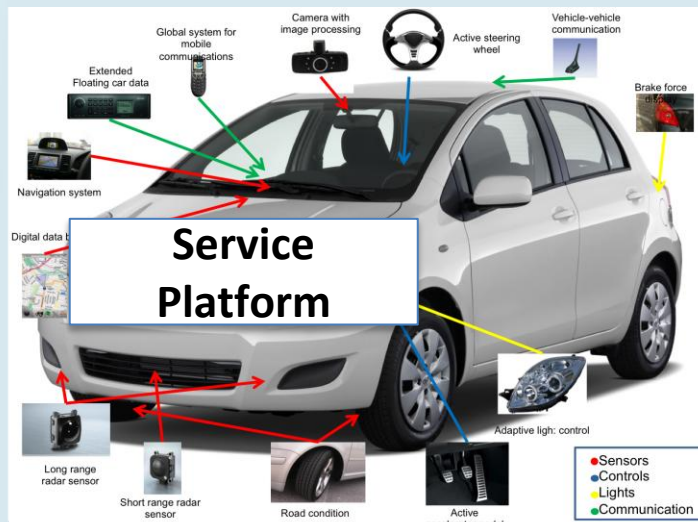
## ■ ICT : At the core of **key innovations with very high socio-economic impact**

- **Health** : distant and continuous monitoring of health state, support of elderly at home,...
- **Energy Optimization**: Energy grid, sensor and dynamic control of (home, building,...) automation systems, beyond smart metering ...
- **Transport** : Smart Electrical Vehicles, Vehicular networks for road security, Smart Cities, Multimodal Transports, Fleet Management ...
- **Disaster Management** : self-organized systems based on users' devices (smartphones and beyond), ...
- **Environment, Industrial Processes, Enterprise Service Oriented organizations, Surveillance/Tracking, ...**

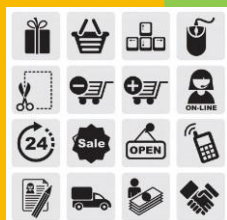








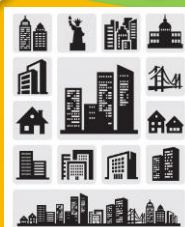
**Energy**



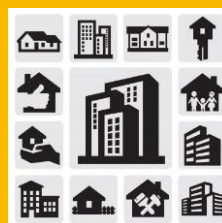
**Supply Chain**



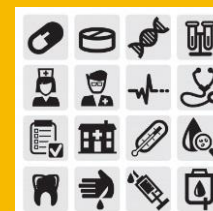
**Transportation**



**Smart City**



**Smart Home/Building**



**Health**

# Defining the Internet of Things

- A well understood fact: We observe a **progressive merge of the real world and the digital one**
- The « things » of the real world become connected and communicating
  - They communicate with Information Systems but also between each other
- They can :
  - identify themselves, describe their capabilities, present the services they can provide,
  - self-discover each other and geo-locate,
  - self-organize in order to dynamically create new services and answer all types of requests.







# Future Ecosystem

SERVICES & APPLICATIONS INTERFACES



FEDERATION / ORCHESTRATION

CLOUD  
FUNCTIONS

APPLICATION  
PLATFORMS  
COMPONENTS

NETWORK  
FUNCTIONS

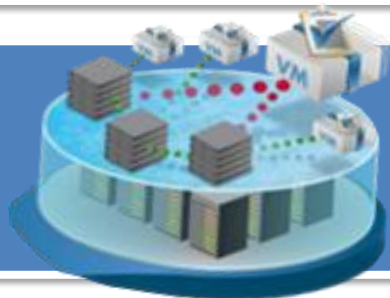
IoT  
GATEWAYS  
FUNCTION

NETWORK  
FUNCTIONS

CLOUD  
FUNCTIONS

CONTENT  
DISTRIBUTION  
FUNCTIONS

APPLICATION  
PLATFORMS  
COMPONENTS



VIRTUALIZED INFRASTRUCTURE



## From smart spaces to service platforms

The Internet of Things will enable disruptions in most industry sectors

We foreseen a digital world based on cross industry sectors applications -  
Enabled by advanced, highly distributed, service platforms

**Smart spaces could become critical components of service platforms,  
offering services far beyond those related with their basic target**

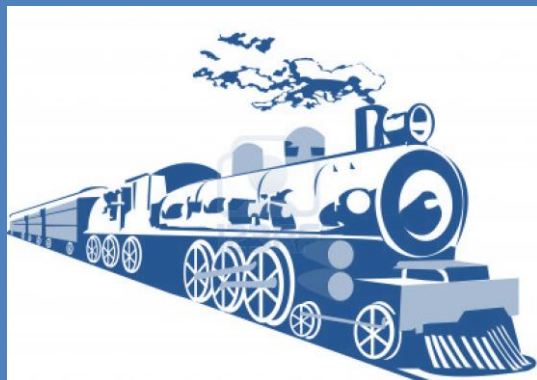
Disruptive opportunities and risks for the stakeholders  
Open Vs closed service platforms?  
Opportunities for new players?  
Which regulation regarding responsibilities?



Joint value creation: digital industry and vertical industries, Internet of Things, 5G.



« OTT » and « Cloud »  
Web 2.0 – Social Networks  
Mobile Internet and High Speed 2.0  
Skype-2003, Facebook-2003, YouTube-2005,  
AmazonEC2-2006,  
iPhone-2007, 4G-Mobile



~1969 - Ancestors  
~1984 - Internet  
~1992 – Open to mass market  
~1995 - Web 1.0  
~2000 – High speed 1.0  
Google-1998, Akamai-1999, Napster-1999





**Thank you for your attention**

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