

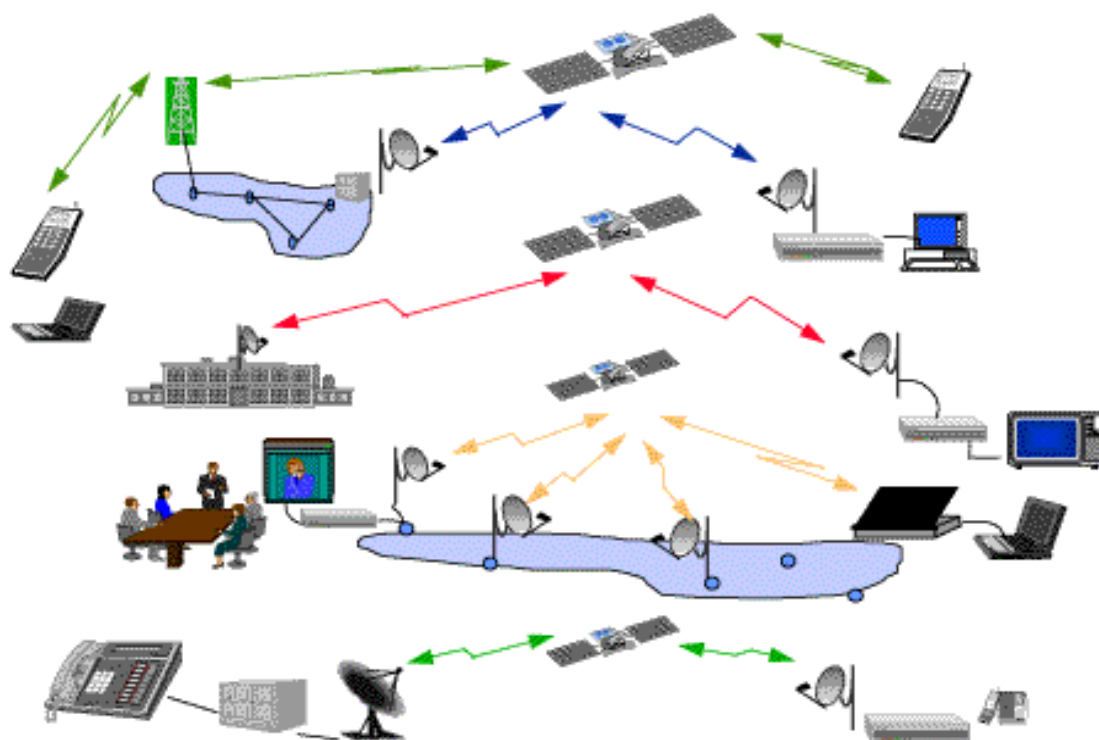
## C05\_Anexa

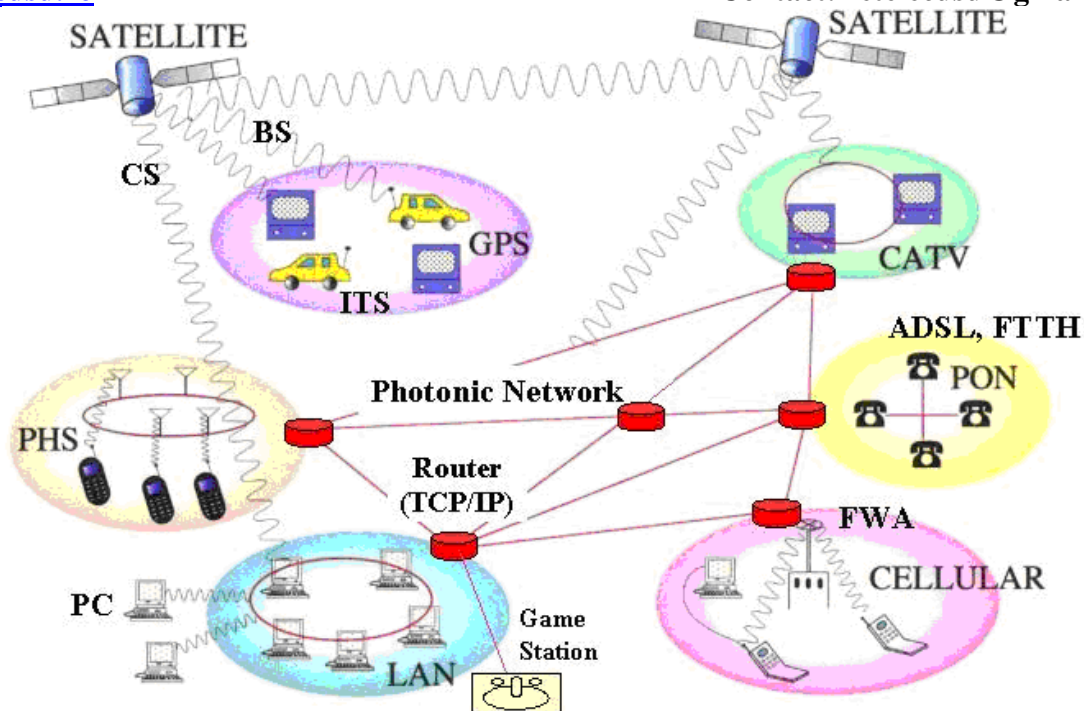
Comunicatii de  
Date si  
Sisteme  
Distribuite



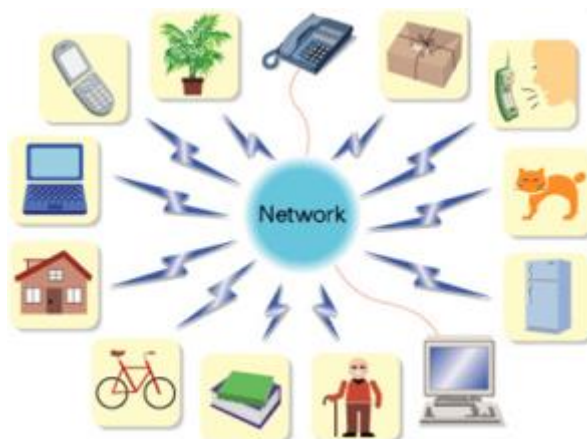
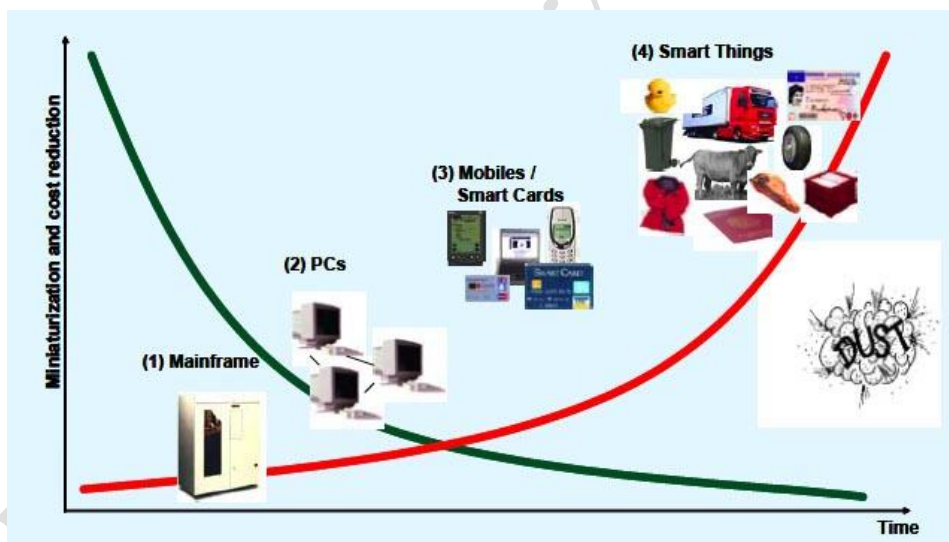
<http://www.cdscd.ro>

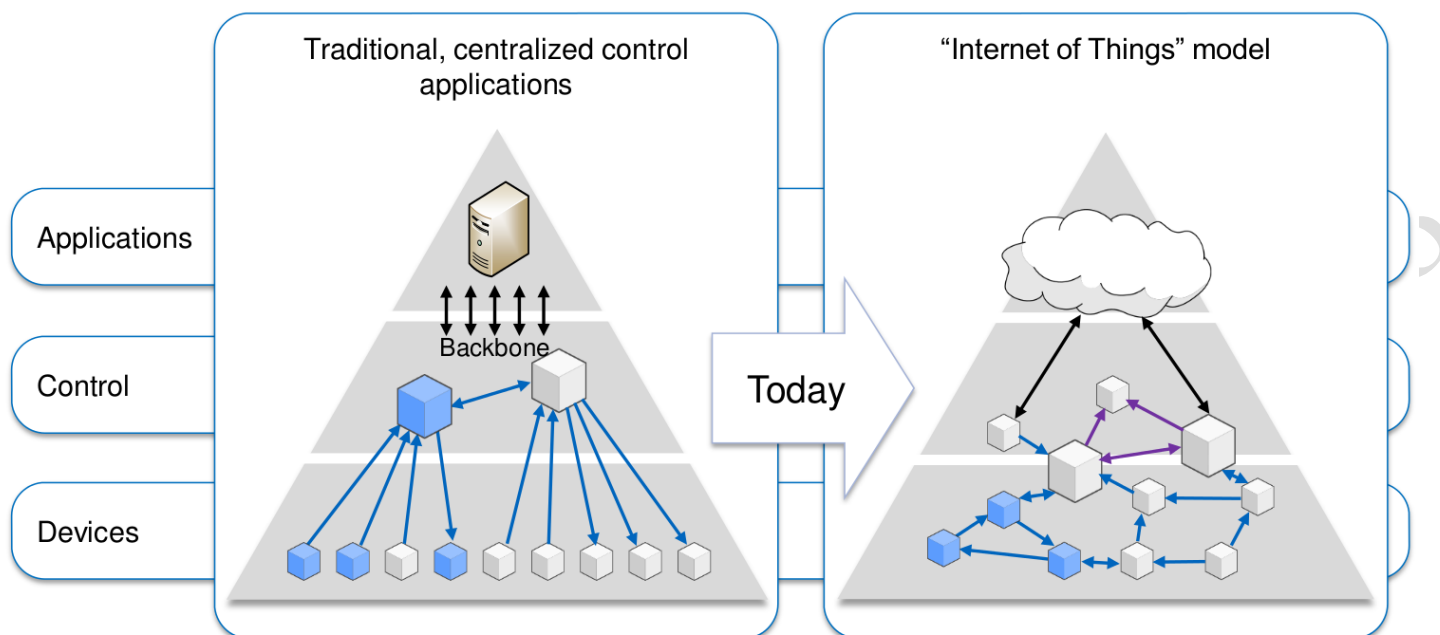
## Why NETWORKING?



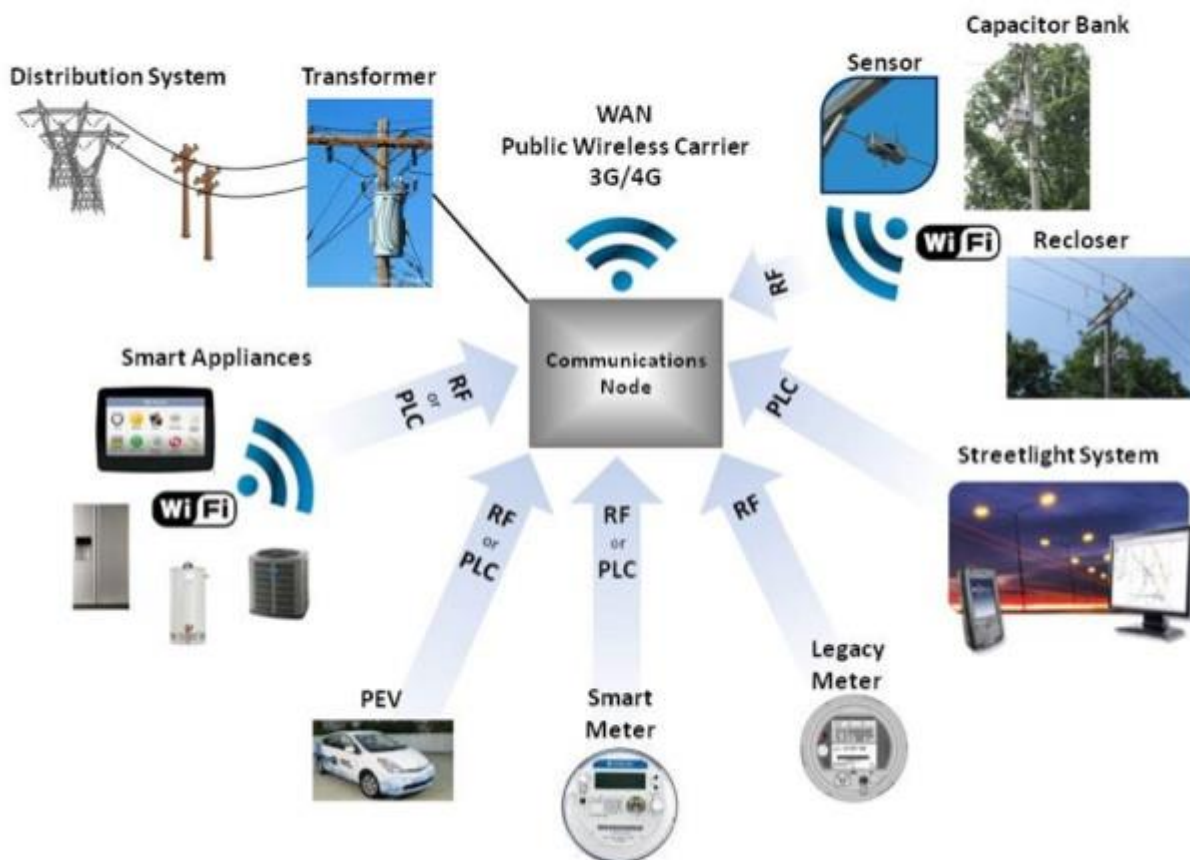


Information Technology towards Global Multimedia Network

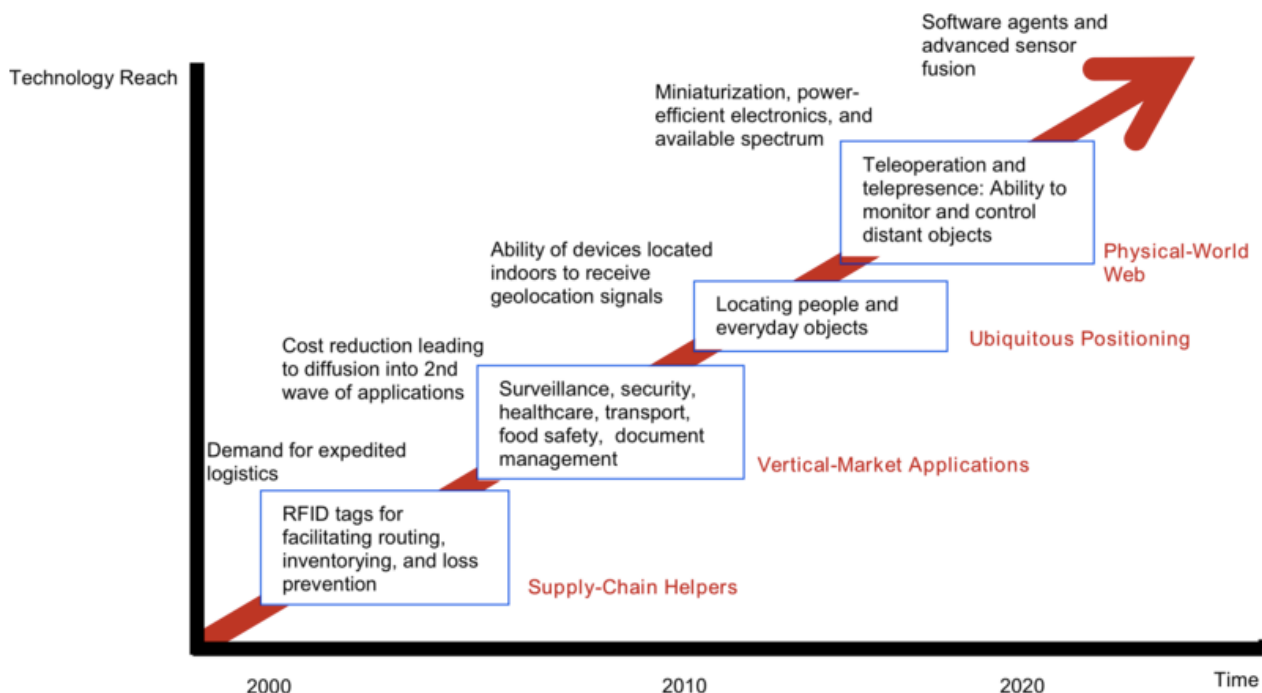




## Digital Grid Communications Overview

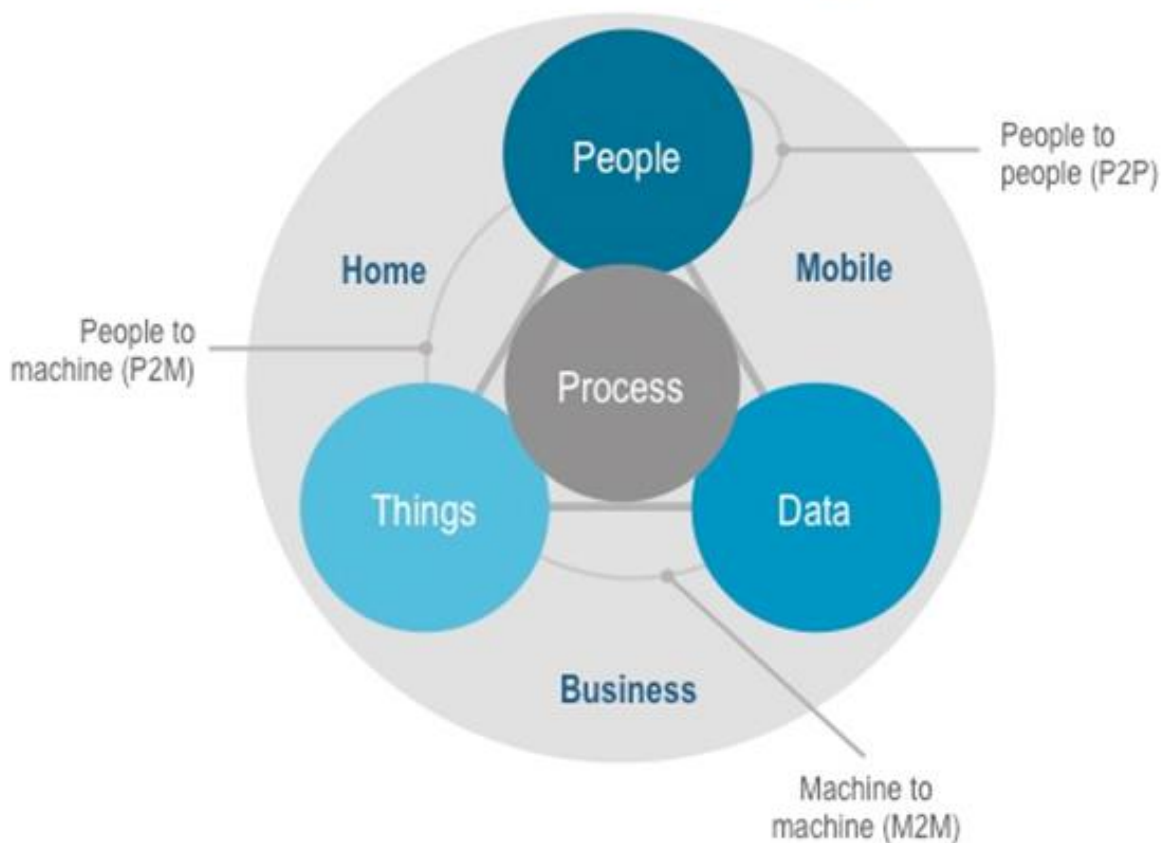


# TECHNOLOGY ROADMAP: THE INTERNET OF THINGS

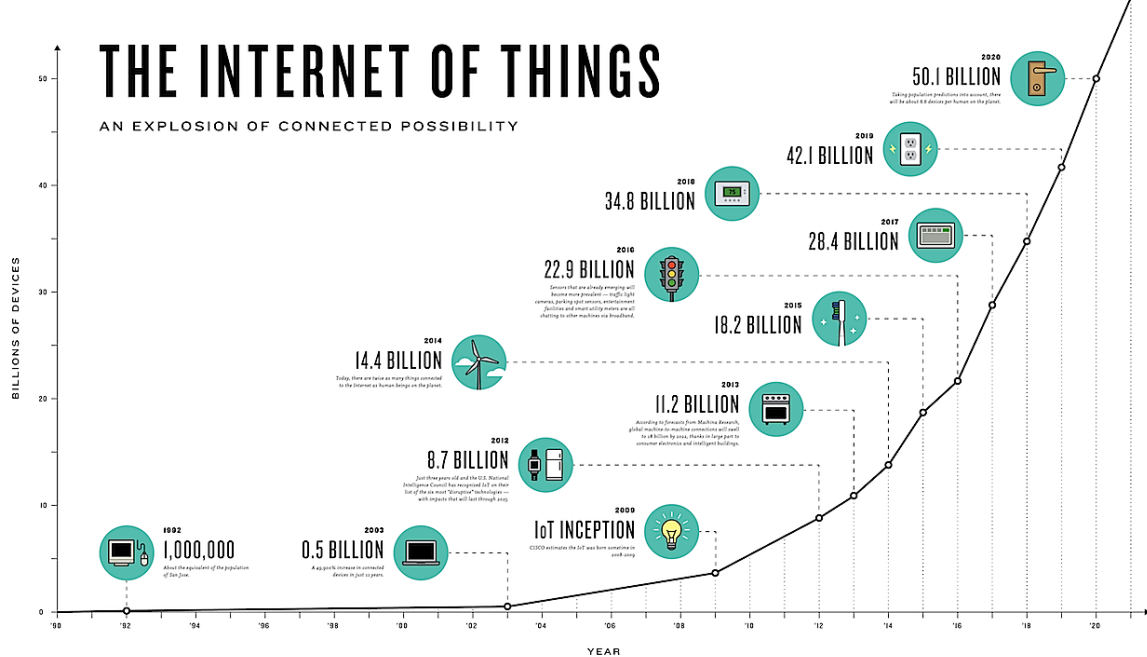


Source: SRI Consulting Business Intelligence

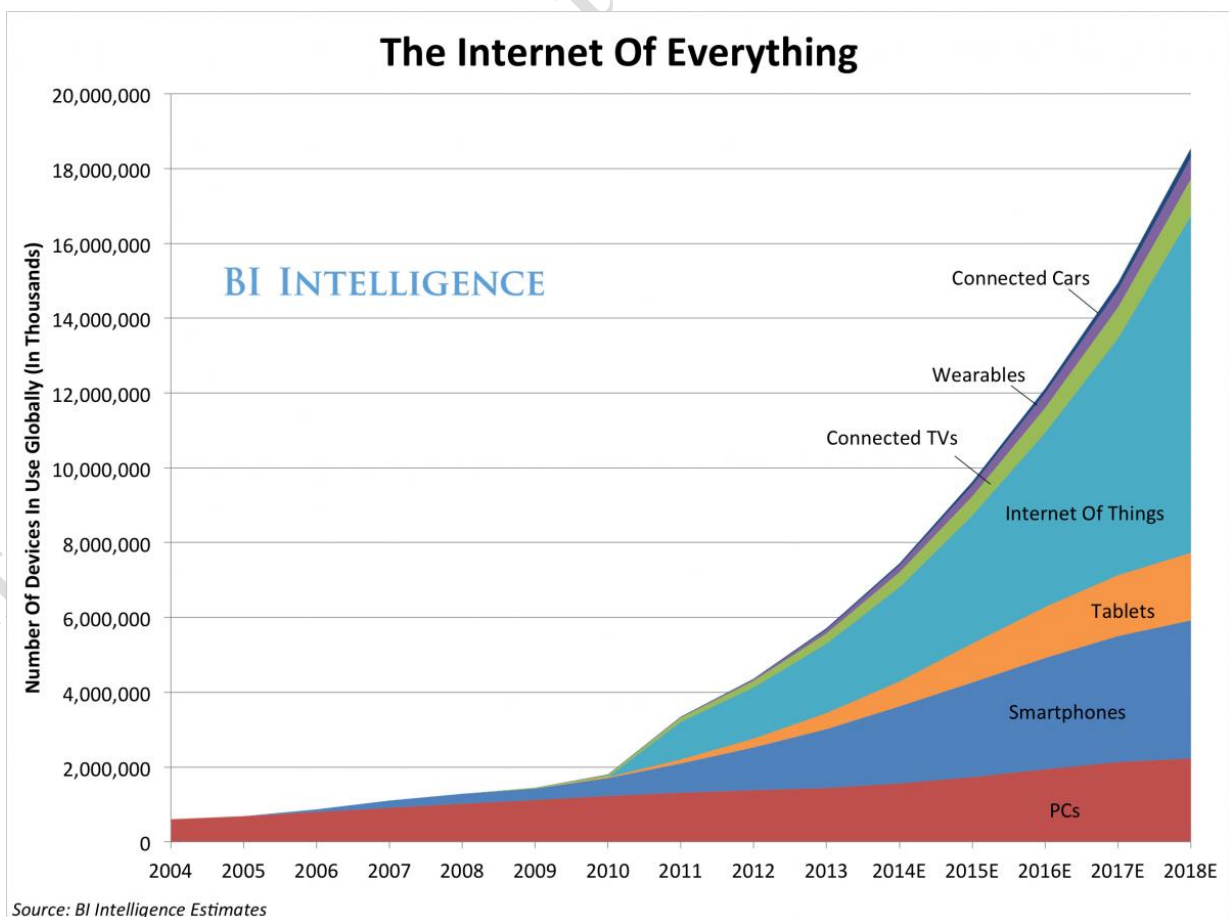
## Internet of Everything

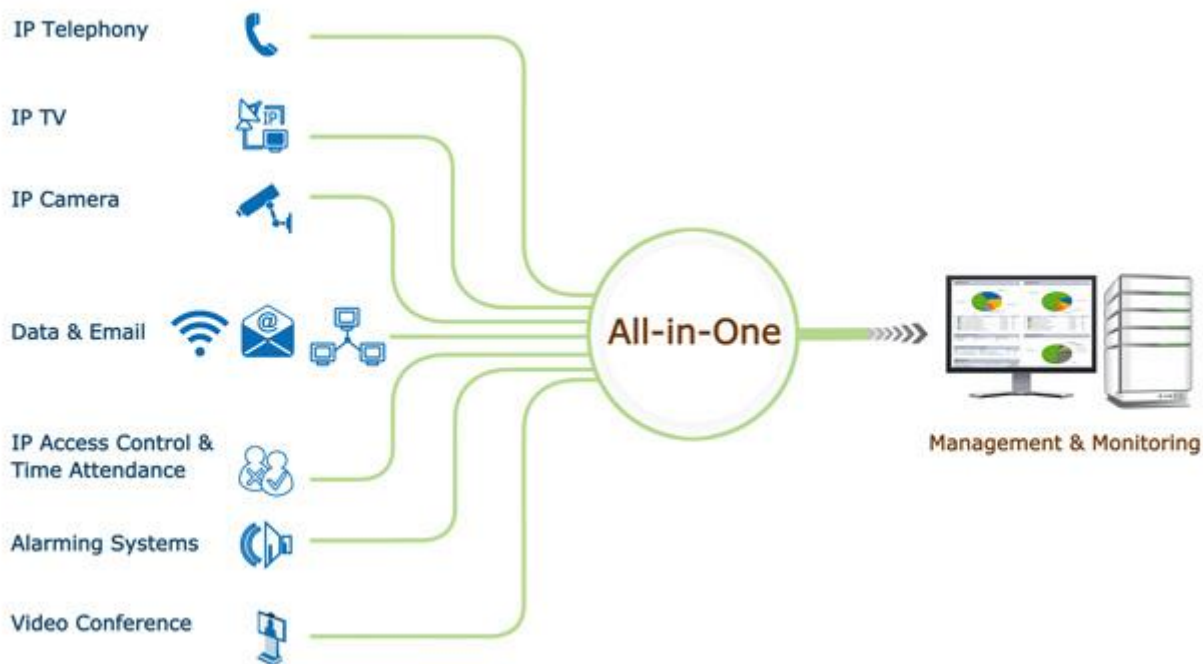






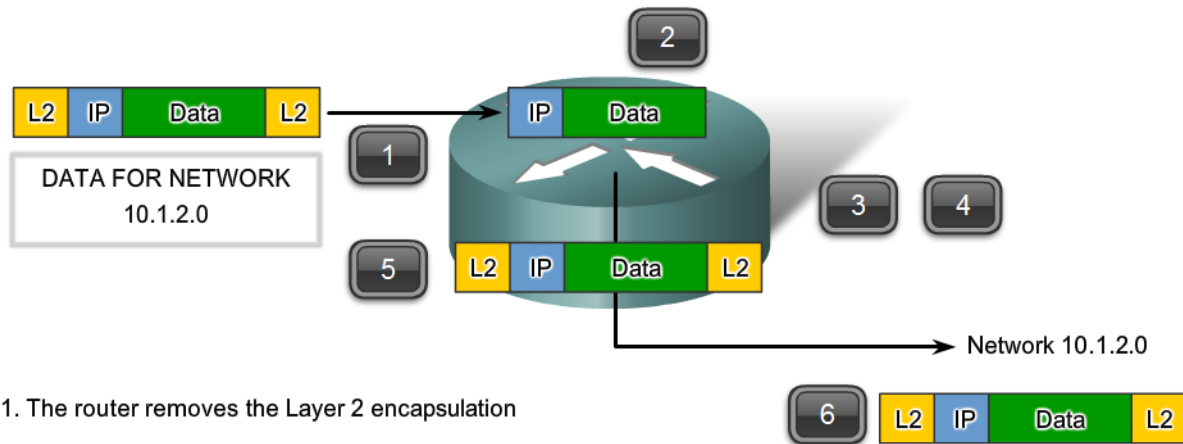
- Cisco thinks about **50 billion devices will be connected by 2020**, after coming out with an earlier analysis in January that claimed 8.7 billion connected devices in 2012.
  - A separate analysis from **Morgan Stanley** feels that number can actually be as high as **75 billion**, and also claims that there are 200 unique consumer devices or equipment that could be connected to the Internet that have not yet done so.
- <http://www.businessinsider.com/75-billion-devices-will-be-connected-to-the-internet-by-2020-2013-10>





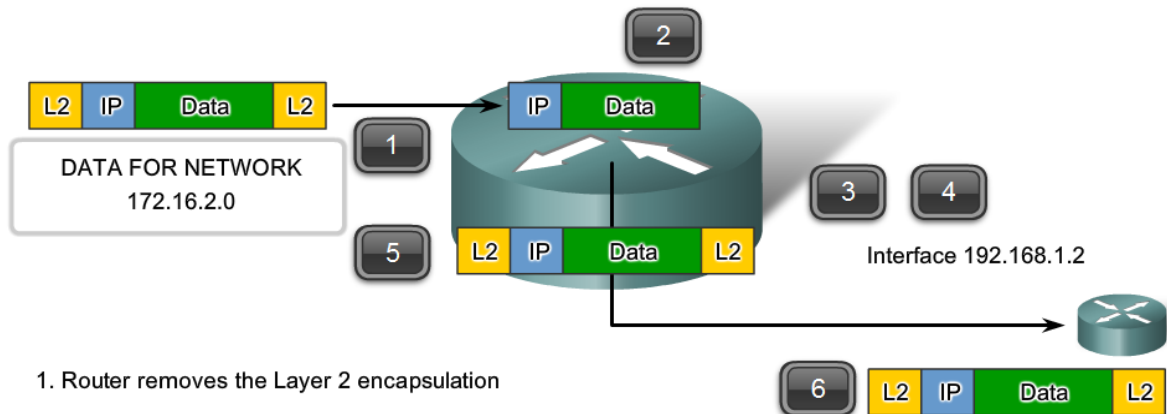
Legat de ruter (*router en.*), ca dispozitiv dedicat si/sau ca functie de rutare:

a. In tabela de rutare, exista o *ruta* (inregistrare) cu privire la reseaua destinatie



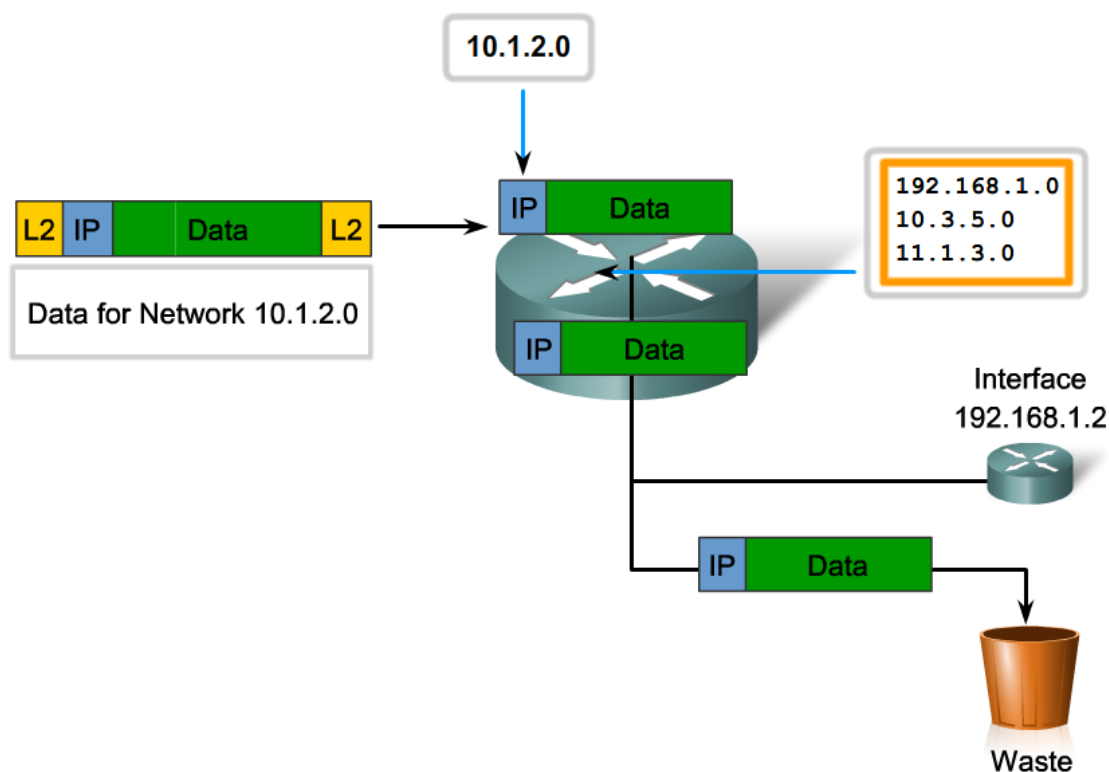
1. The router removes the Layer 2 encapsulation
2. Router extracts the destination IP address
3. Router checks the routing table for a match
4. Network 10.1.2.0 is found in the routing table
5. Router re-encapsulates the packet
6. Packet is sent to Network 10.1.2.0

b. In tabela de rutare, exista o *ruta default*



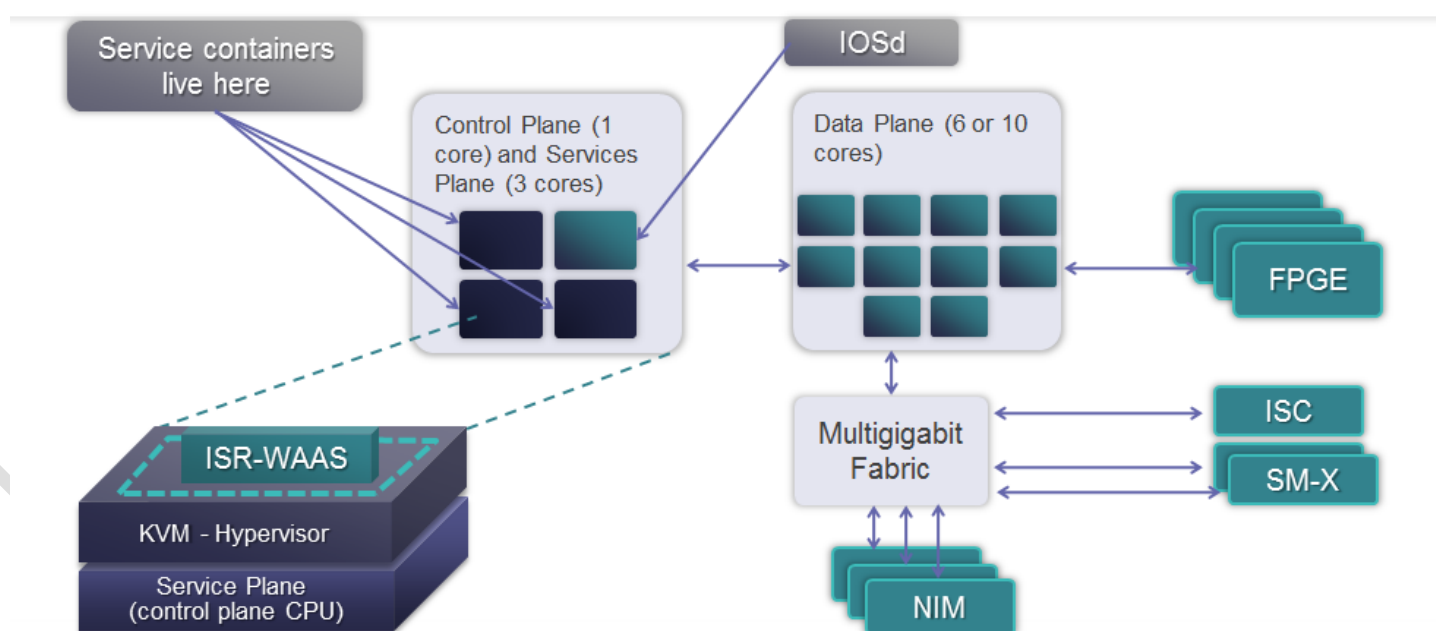
1. Router removes the Layer 2 encapsulation
2. Router extracts IP Address
3. Router checks the routing table for a match
4. Network 172.16.2.0 not in the routing table but default route to 192.168.1.2 exists
5. Router re-encapsulates the packet
6. Packet is sent to Interface 192.168.1.2

c. In tabela de rutare, NU exista o *ruta* (inregistrare) cu privire la reseaua destinatie si nici o *ruta default*



Integrated Service Router – Solutie actuala (exemplu, Cisco)

## ISR 4400 Series Architecture



- Front Panel Gigabit Ethernet (FPGE)



- IP Solution Center (ISC) provides intelligent network management
- SM-X Layer 2/3 EtherSwitch Service Module
- WAN Network Interface Modules (NIM)

## Re-designed Architecture For Branch Agility



**ISR 4000 Series**



### Service Aware Data Plane

for Efficient traffic handling



### Virtualized Services Framework

Flexible virtualized application services



### Converged Branch with UCS E-Series

Integrated network, compute, storage



### Pay-as-You-Grow

Performance and services on demand

Info3 Retele, <http://www.cdscd.ro>