

Technology in motion!



## **Everything Everywhere:**

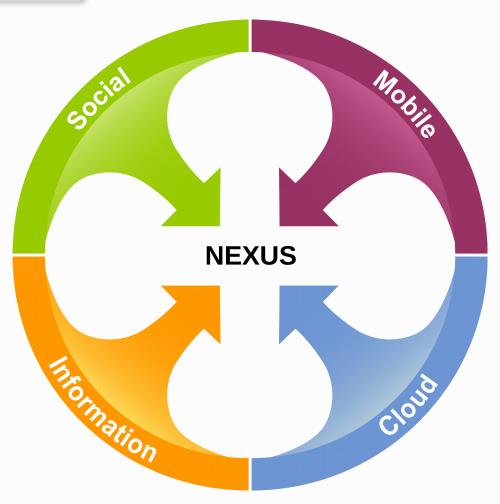
# The future of Internet is Mobile,

Ubiquitous,

Disruptive!



#### Gartner's Nexus of Forces: Social, Mobile, Cloud and Information



See "High-Tech Tuesday Webinar: Impact of Cloud, Data, Mobile and Social Forces on the Enterprise Software Markets" (G00248165)



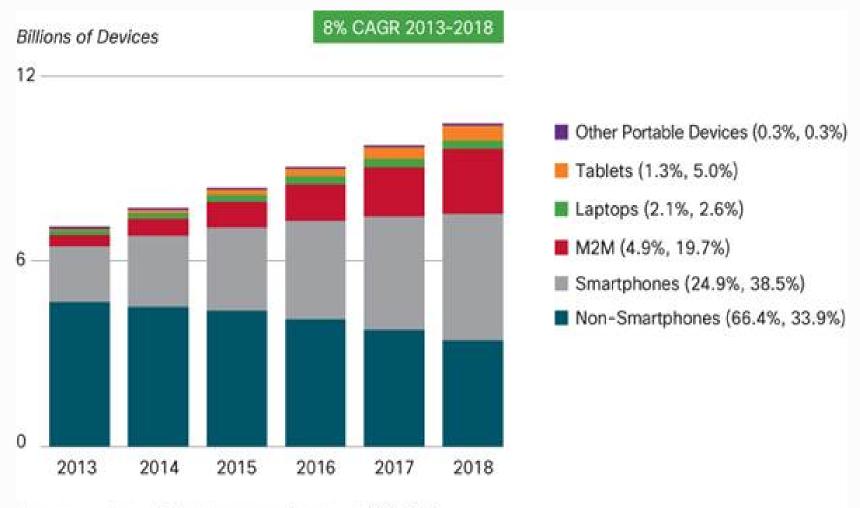
### Revolution!

2016:

The number of mobile devices is bigger
Than the world population!







Figures in parentheses refer to device or connections share in 2013, 2018.

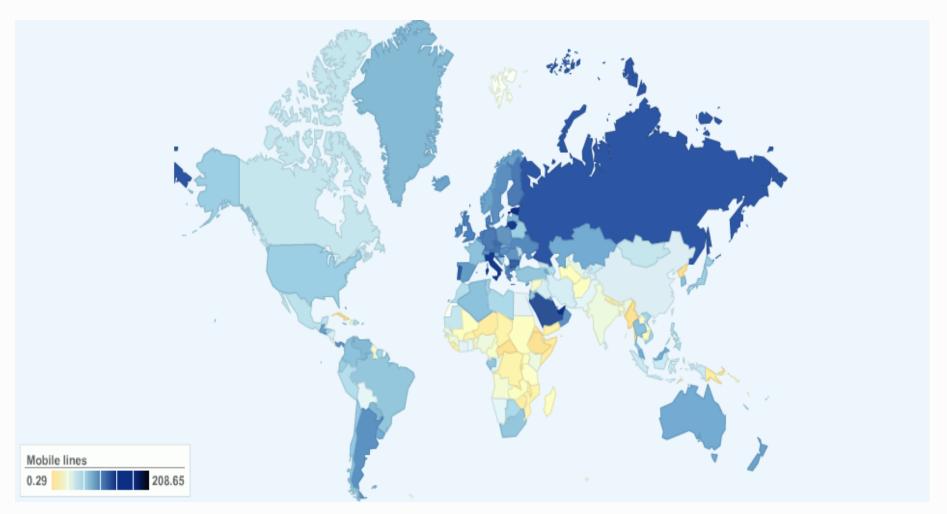
Source: Cisco VNI Mobile, 2014

**3HT NIOL** REVILLITII! 





## A global market



Source: Andrew Trench



## With huge sizes

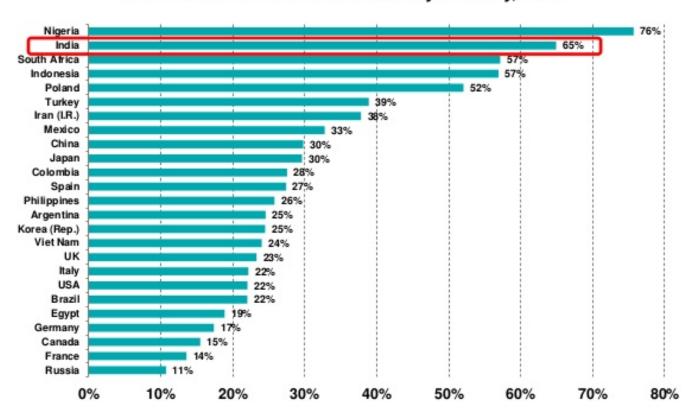
1 billion people will use smart--phones in 2016, 350
 million among them, will use them professionally

- The market of "mobiles" will exceed 1,3 trillion \$
  until 2016 and will constitute 35% of the technology
  investment
- The impact of mobile Internet to the industry might exceed 10 trillion \$ annually in 2025.



#### Mobile = 65% of India Internet Traffic... More Mobilized vs. Most Other Countries

#### Mobile % of Total Internet Traffic by Country, 5/15





#### **GLOBAL DIGITAL SNAPSHOT**

A SNAPSHOT OF THE WORLD'S KEY DIGITAL STATISTICAL INDICATORS

TOTAL POPULATION

ACTIVE INTERNET USERS ACTIVE SOCIAL MEDIA ACCOUNTS

UNIQUE MOBILE USERS ACTIVE MOBILE SOCIAL ACCOUNTS











**7.210** BILLION

3.010 BILLION

**2.078** BILLION

3.649 BILLION **1.685** BILLION

**URBANISATION: 53%** 

PENETRATION: 42%

PENETRATION: 29%

PENETRATION: 51%

PENETRATION: 23%

FIGURE REPRESENTS TOTAL GLOBAL POPULATION, INCLUDING CHILDREN FIGURE INCLUDES ACCESS VIA FIXED AND MOBILE CONNECTIONS FIGURE REPRESENTS ACTIVE USER ACCOUNTS, NOT UNIQUE USERS FIGURE REPRESENTS
UNIOUE MOBILE PHONE USERS

FIGURE REPRESENTS ACTIVE USER ACCOUNTS, NOT UNIOUE USERS



#### 1st revolution

Water/Steam



#### 2nd revolution

Electricity



#### 3rd revolution

Automation



#### 4th revolution

Cyberphysical systems



#### Replacement of equipment

Percent of installed base



 $\sim 10 - 20$ 

Little replacement, as tooling equipment could be kept, only conveyor belt needed



~ 40 - 50

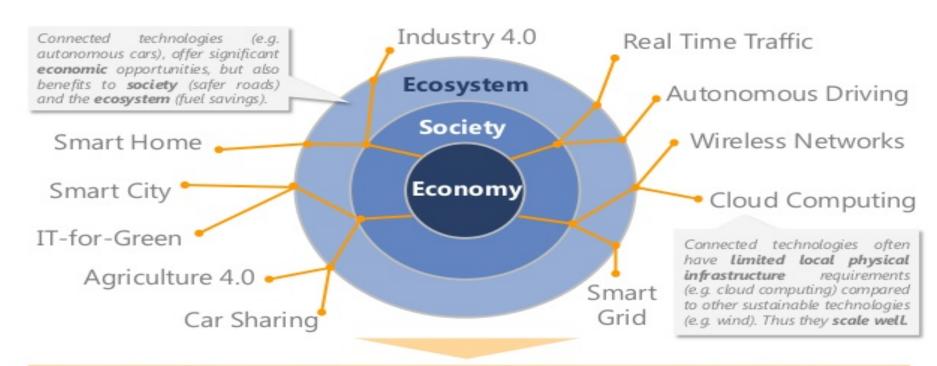
Existing machines are connected, only partial replacement of equipment



## New ecosystems emerge

### A Connected technologies as a catalyst for sustainability

High scalability due to limited infrastructure requirements



From **optimised processes** to **improved decision making** – connected technologies are a **driver for sustainability.** They also offer high potential **scalability** of sustainability effects.





#### DIGITAL STRATEGY

#### DIGITAL GOVERNANCE PROCESS GOVERNANCE - DATA GOVERNANCE - TECHNOLOGY GOVERNANCE

#### SKILL AND CAPABILITY LEADERSHIP – SKILL DEVELOPMENT – ORGANIZATION ALIGNMENT

#### PRODUCT AND PROCESS

SMART PRODUCTS

SMART INNOVATION SMART PRODUCT LIFECYCLE MANAGEMENT

> SMART FACTORY/ SMART PRODUCTION

SMART SUPPLY CHAIN DIGITAL, INTEGRATED AND INTERCONNECTED

SMART SERVICES
DIGITAL AFTERSALES
SERVICES

SMART SALES DIGITAL MARKETING AND SALES

#### INFRASTRUCTURE AND TECHNOLOGY



BIG DATA AND ANALYTICS PLATFORM



CLOUD SERVICES INFRASTRUCTURE



CONNECTIVITY AND SECURITY



ARCHITECTURE AND APPLICATION INTEGRATION

#### PLAYERS AND ECOSYSTEM



COMPANY







PARTNERS



#### **ENABLERS**







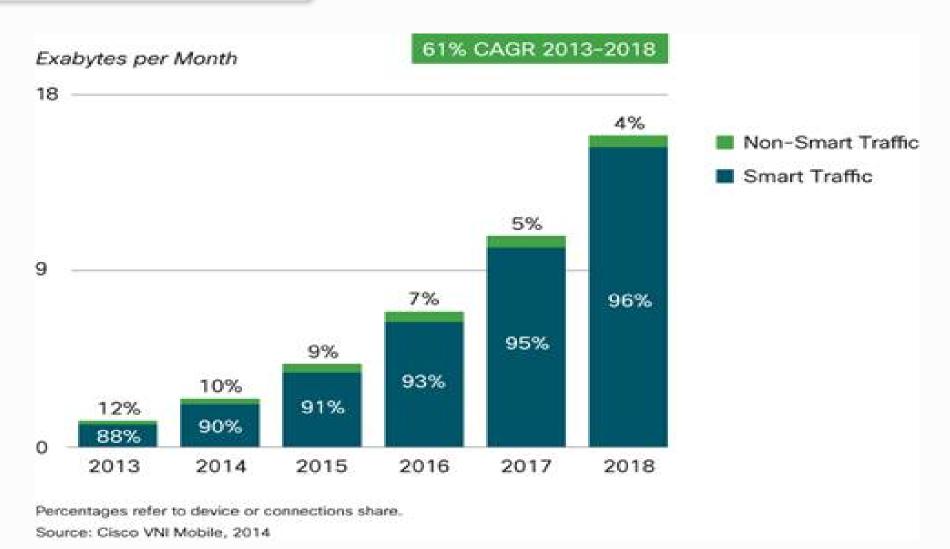




DIGITAL ENABLED BUSINESS MODEL



### Traffic explodes too!





## The daily routine...





### The MEGATREND

Ubiquitous = SaaS+ Mobile Internet

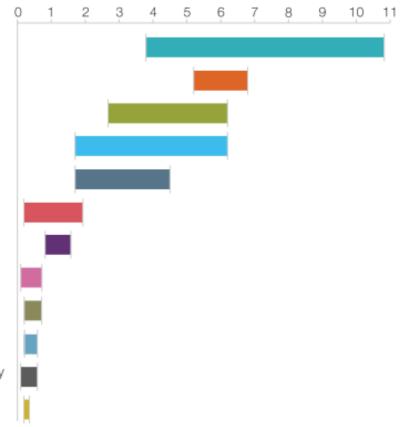
**EXPERIENCE = APPLICATIONS + NETWORKS** 

#### A gallery of disruptive technologies

Estimated potential economic impact of technologies across sized applications in 2025, \$ trillion, annual



- 2. Automation of knowledge work
- 3. Internet of Things
- 4. Cloud
- 5. Advanced robotics
- 6. Autonomous and near-autonomous vehicles
- 7. Next-generation genomics
- 8. Energy storage
- 9. 3-D printing
- 10. Advanced materials
- 11. Advanced oil and gas exploration and recovery
- 12. Renewable energy



SOURCE: McKinsey Global Institute



#### **#1 Mobile Internet**

Increasingly inexpensive and capable mobile computing devices and Internet connectivity

Potential economic impact in 2025 across sized applications of \$3.7 trillion-\$10.8 trillion

10–20% potential cost reduction in treatment of chronic diseases through remote health monitoring

#### Component technologies

- · Wireless technologies
- Small, low-cost computing and storage devices
- Advanced display technology, natural user interfaces
- · Advanced, low-cost batteries

- · Service delivery
- Worker productivity
- Additional consumer surplus from use of mobile-Internet services



#### #2 Automation of knowledge work

Intelligent software systems that can perform knowledge-work tasks

Potential economic impact in 2025 across sized applications of \$5.2 trillion-\$6.7 trillion

Additional labor productivity could equal the output of 110 million–140 million full-time workers

#### Component technologies

- · Artificial intelligence, machine learning
- Natural user interfaces
- · Big-data technologies

- · Smart learning in education
- Diagnostics and drug discovery in health care
- Discovery, contracts/patents in legal sector
- Investments and accounting in finance sector



#### **#3 Internet of Things**

Networks of low-cost sensors and actuators for data collection, monitoring, decision making, and process optimization

Potential economic impact in 2025 across sized applications of \$2.7 trillion-\$6.2 trillion

Offers potential to drive **productivity across \$36 trillion** in operating costs of key affected industries: manufacturing, health care, and mining

#### Component technologies

- · Advanced, low-cost sensors
- Wireless and near-field communication devices eg, RFID (radio frequency identification tags)

- Process optimization, especially in manufacturing and logistics
- Efficient use of natural resources—eg, smart-meter and smart-grid control of water and electricity
- Remote health-care delivery, sensor-enhanced business models



#### #4 Cloud

Use of computer hardware and software resources to deliver services over the Internet or a network

Potential economic impact in 2025 across sized applications of \$1.7 trillion-\$6.2 trillion

15–20% potential productivity gains across IT infrastructure, application development, and packaged software

#### Component technologies

- Cloud-management software—eg, virtualization, metering
- · Data-center hardware
- · High-speed networks
- Software/platform as a service (SaaS/PaaS)

- Cloud-based delivery of Internet services and applications
- · Enterprise IT productivity



## about HAMAC

- ✓ Established in Athens in 2010, by **32** companies today **70+** which develop **innovative** applications and services to **mobile devices**
- ✓ Its members have a global presence in 40+
  countries
- ✓ They have gained international investors' trust and have raised funds from the international markets.



## The founding members of HAMAC



































































## The new members 2012



































































## The new members 2014

## accysonus Citrix Byte Mobile



























## HAMAC members

- 4.000 employees, among them 1.000 scientists
   and engineers of high academic and professional
   qualification
- have a total turnover of over 400 mil.€
- have obtained a series of distinctions and awards at national and international level



## HAMAC Objectives

Growing the ecosystem

Going global

Access to capital

Enhancing innovation and enterpreneurship policies



## Hellenic Mobile Cluster



a competitive, globally, cluster which will contribute to smart, sustainable, extroverted development of its members and all actors of the broader ecosystem



## Greece @MWC2013





## Greece @MWC2014





## Greece @MWC 2015





## The winners from Greece - 2014









## YOOR: The Greece challenge winners





Philippos Beveratos and Jean-Robert Malandra

Greece Challenge winners



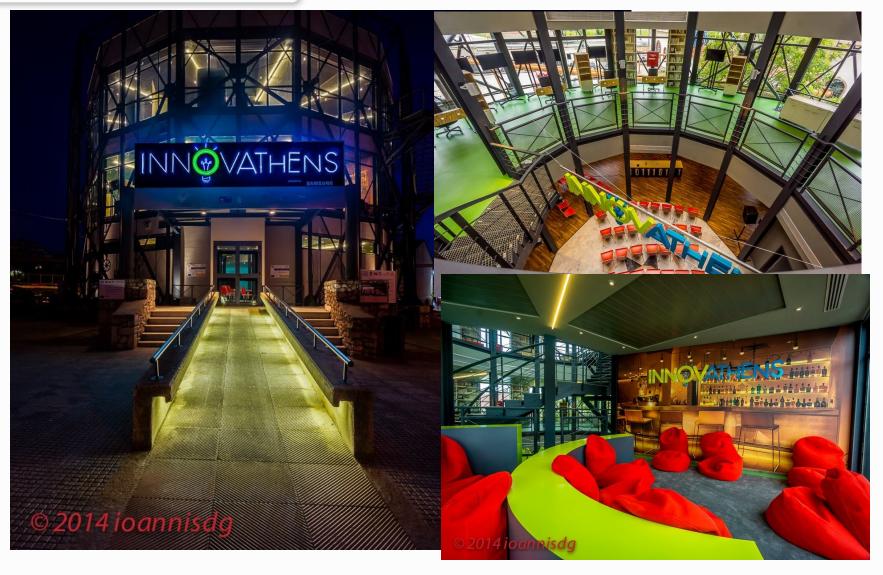
## **Mobile mini-MBA**



A HAMAC initiative, in cooperation with AUEB, Samsung and InnovAthens



## InnovAthens - Σynergies





## Σynergies





Σynergies









# Thank you!

Yiannis K. Giannarakis ygiannarakis@hamac.gr