### **Cloud Computing**

Cloud and Adjacent Technology Trends



World Standard Day 2015

Prof. Dr. Pascal Bouvry

## **Cloud Computing**

- Large corporates open their data centers to end-users
- Data collected by NSA > 5 Zettabytes (1 Million Petabytes)



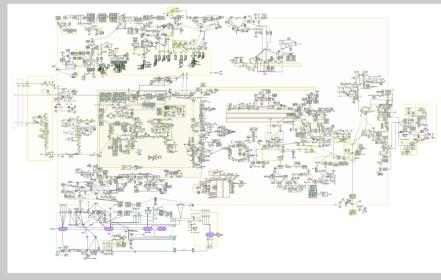


## **Domain driven applications**

- Systems Biomedicine/Bio-informatics:
  - ✓ Personalised medicine: genomic analysis added to 1000s of parameters will help fine-tuning medication and minimising side-effects.
  - ✓ Mining all existing cases in order to find analogies.
  - ✓ Going from a model-driven approach to machine learning approach. And finally binding the 2.



IBM Watson



Parkinson's Disease Map

## **Cloud Computing**

ICT

# Europe 2020 priorities

#### **Societal Challenges**

Health, demographic change and wellbeing Food security, sustainable agriculture and the bio-based economy Secure, clean and efficient energy Smart, green and integrated transport Climate action, resource efficiency and raw materials Inclusive, innovative and reflective societies Secure Societies

#### Industrial Leadership

Leadership in enabling and industrial technologies

Nanotech., Materials, Manuf. and Processing Biotechnology

ICT

Space

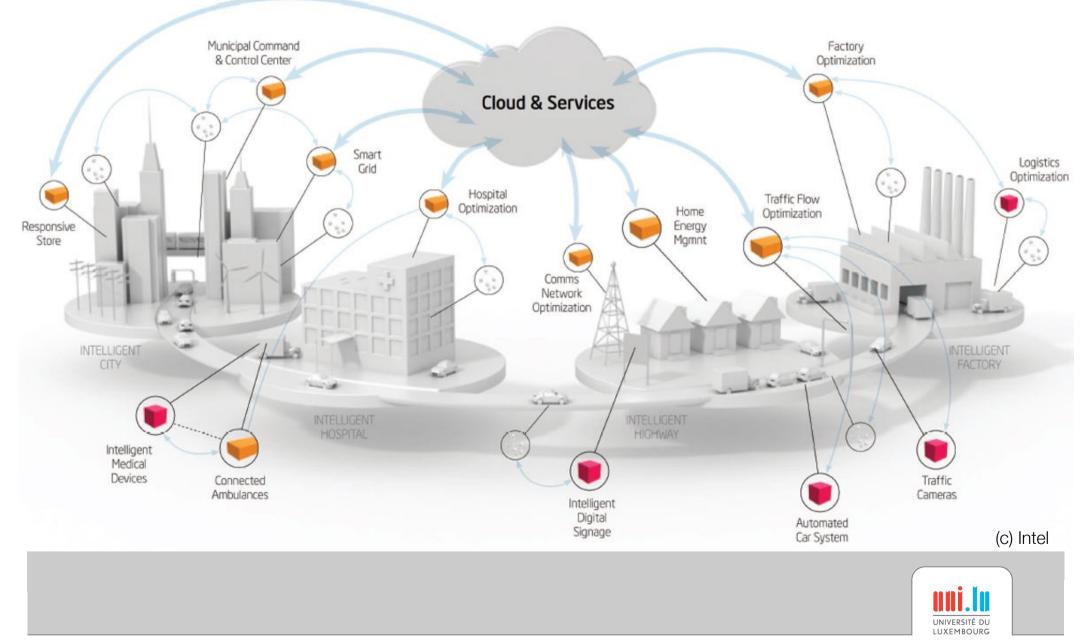
ICT

Access to risk finance Innovation in SMEs

#### Excellence in the Science Base

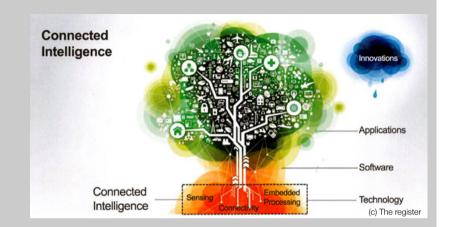
Frontier research (ERC) Future and Emerging Technologies (FET) Skills and career development (Marie Curie) Research infrastructures

### IoT/Cyber-physical systems



### **Next Steps**

- E-infrastructures
- Workflows and Distributed computing on the edge
- New generation of services and applications
- Standardisation for inter-operability is required



#### Luxembourg?

- $\checkmark$  Great infrastructure in terms of data centres and fiber
- ✓ Ideal testbed
- $\checkmark$  Ideal legal and fiscal environment
- ✓ Need of higher level services and High Performance Computing





### **Smart ICT for Business Innovation**



### Thank you for listening !

SUPPORTING ORGANISATIONS:		
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