

The Virtualization of Health in Europe



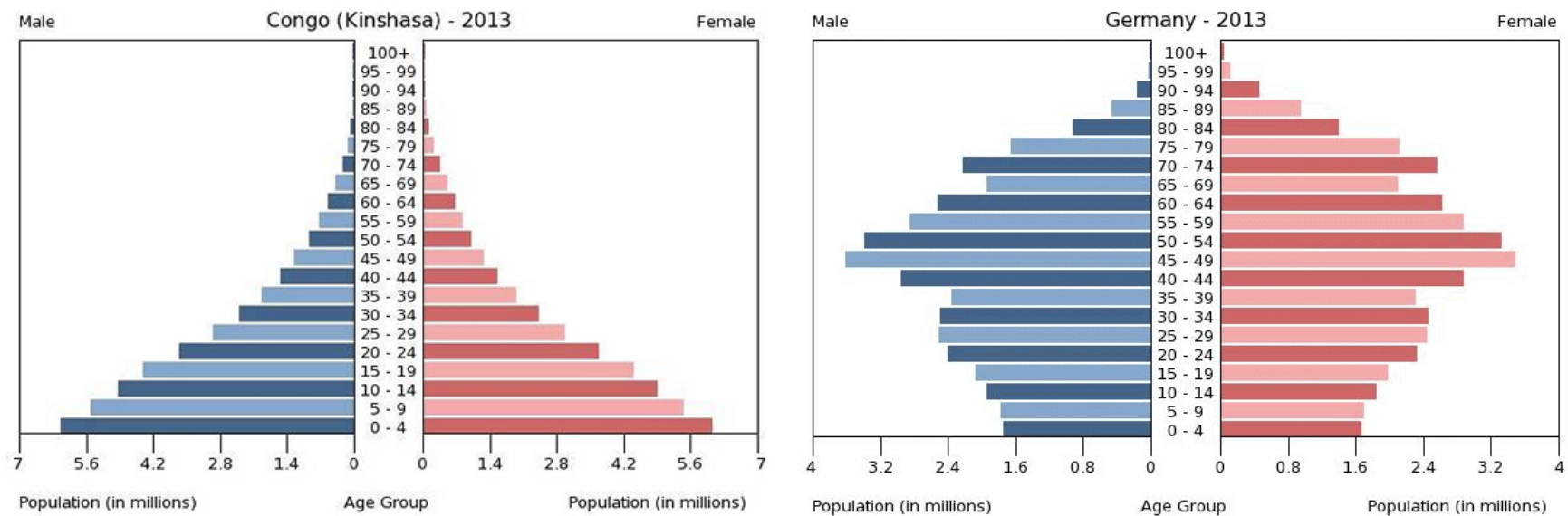
Prof. Dr. Med. Christoph Thümmeler

25th European Regional Conference of the
International Telecommunications Society
Brussels, 23.06.2014

Edinburgh Napier
UNIVERSITY

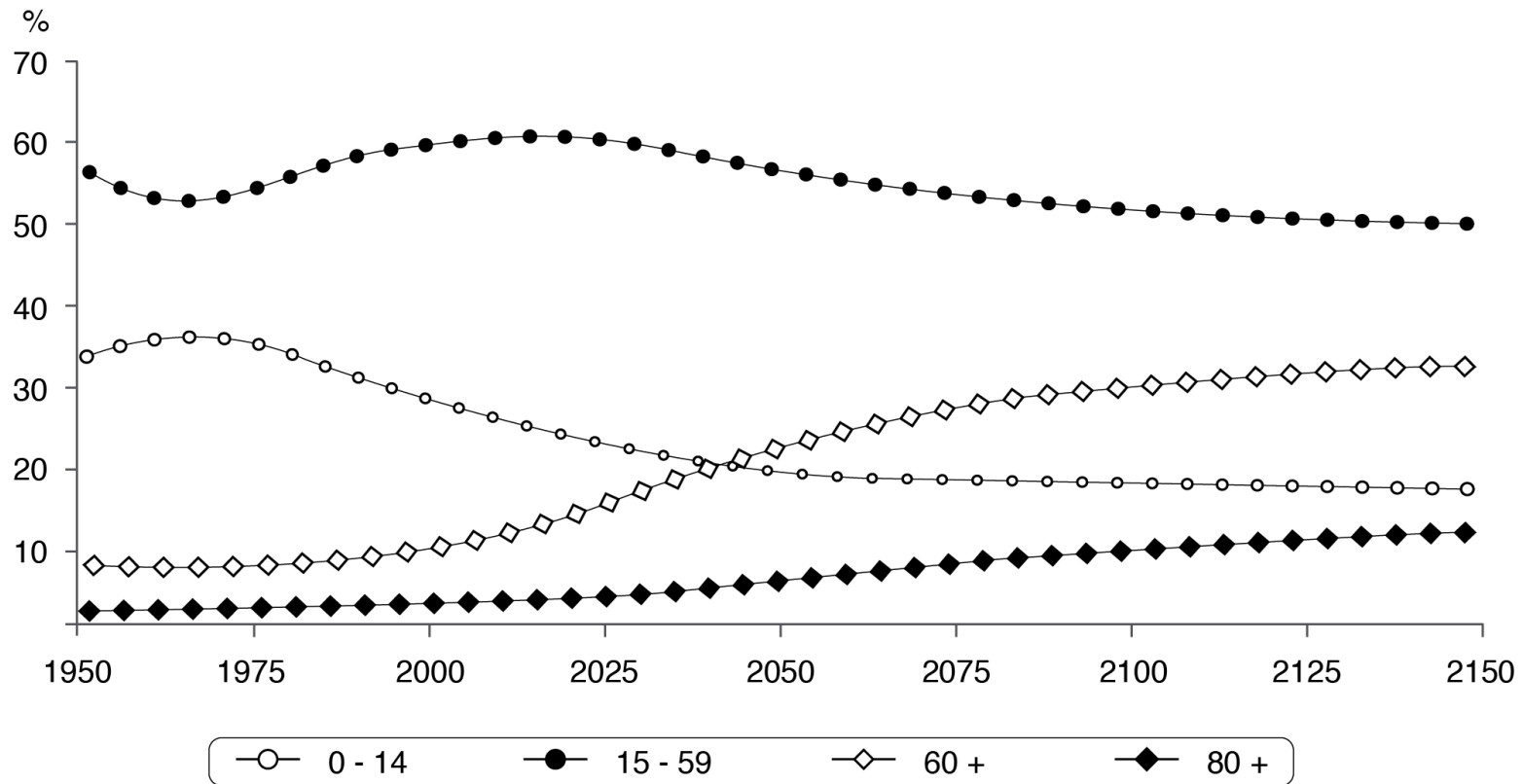
TUM
TECHNISCHE
UNIVERSITÄT
MÜNCHEN

Demographics

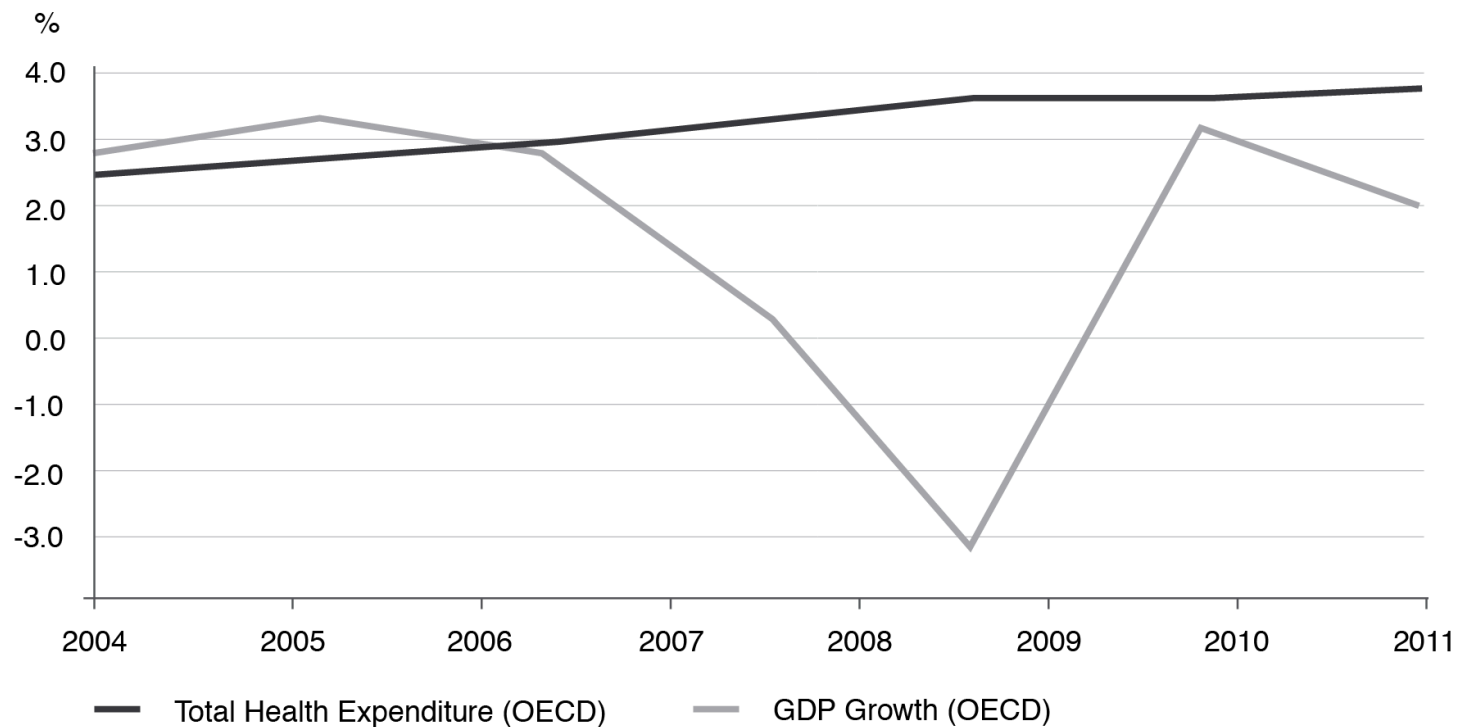


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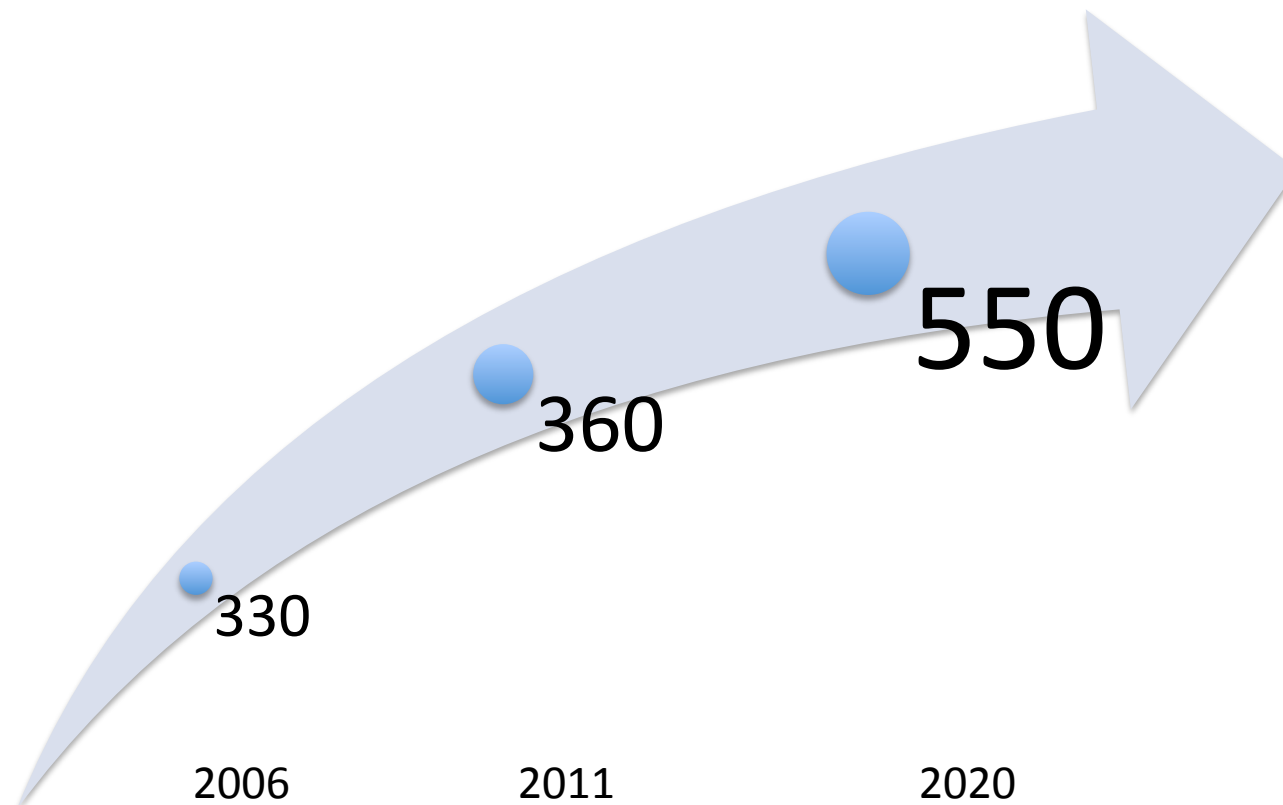
World Population by Age-groups in Percent 1950 – 2150 (Moderate Scenario)



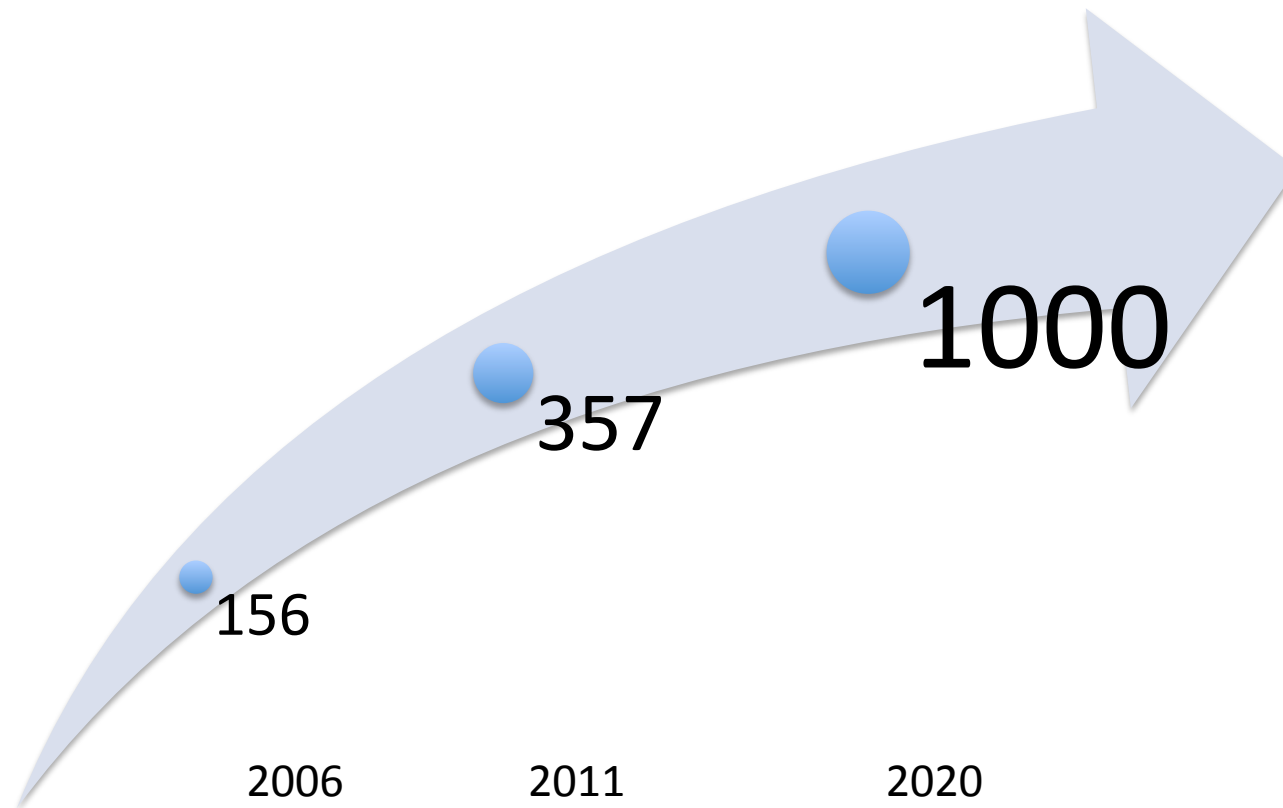
GDP Growth and Rise in Health Costs in OECD Countries



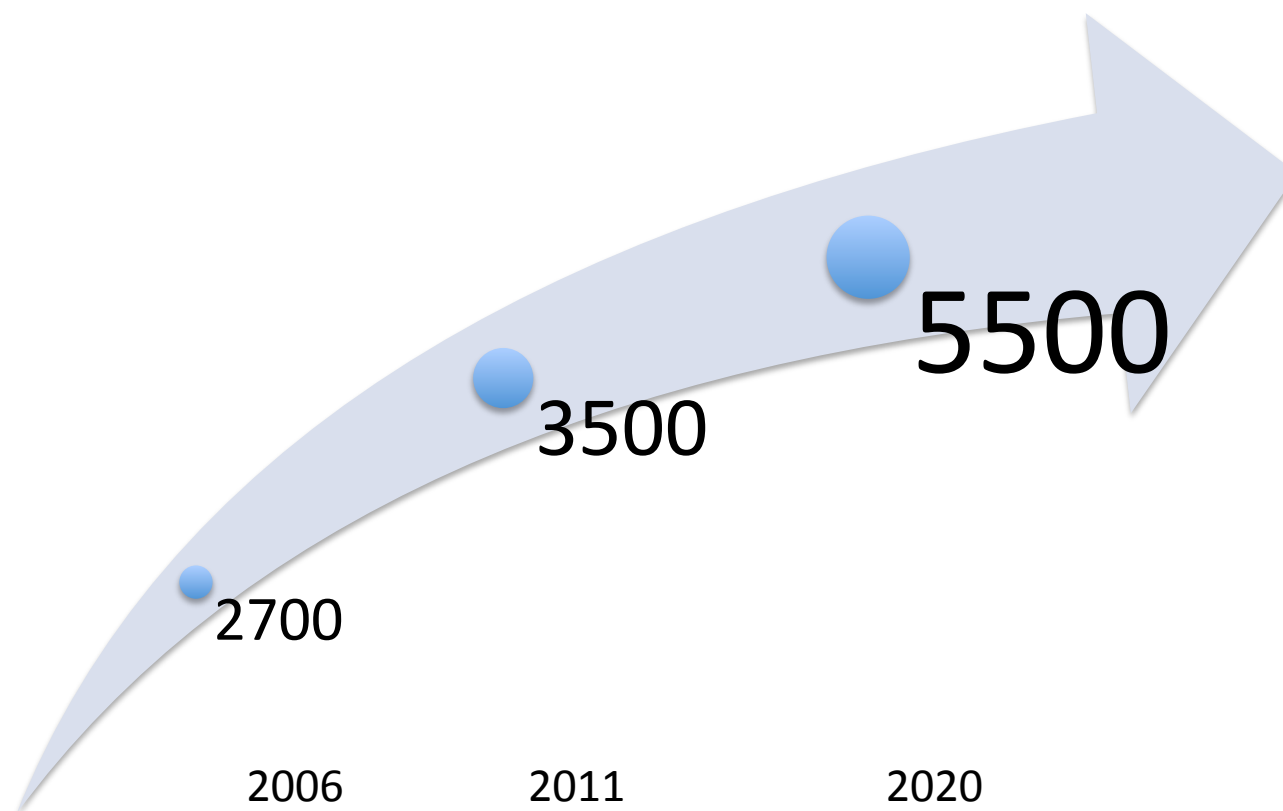
Germany, Health Spending in Billion USD



China, Health Spending in Billion USD



USA, Health Spending in Billion USD



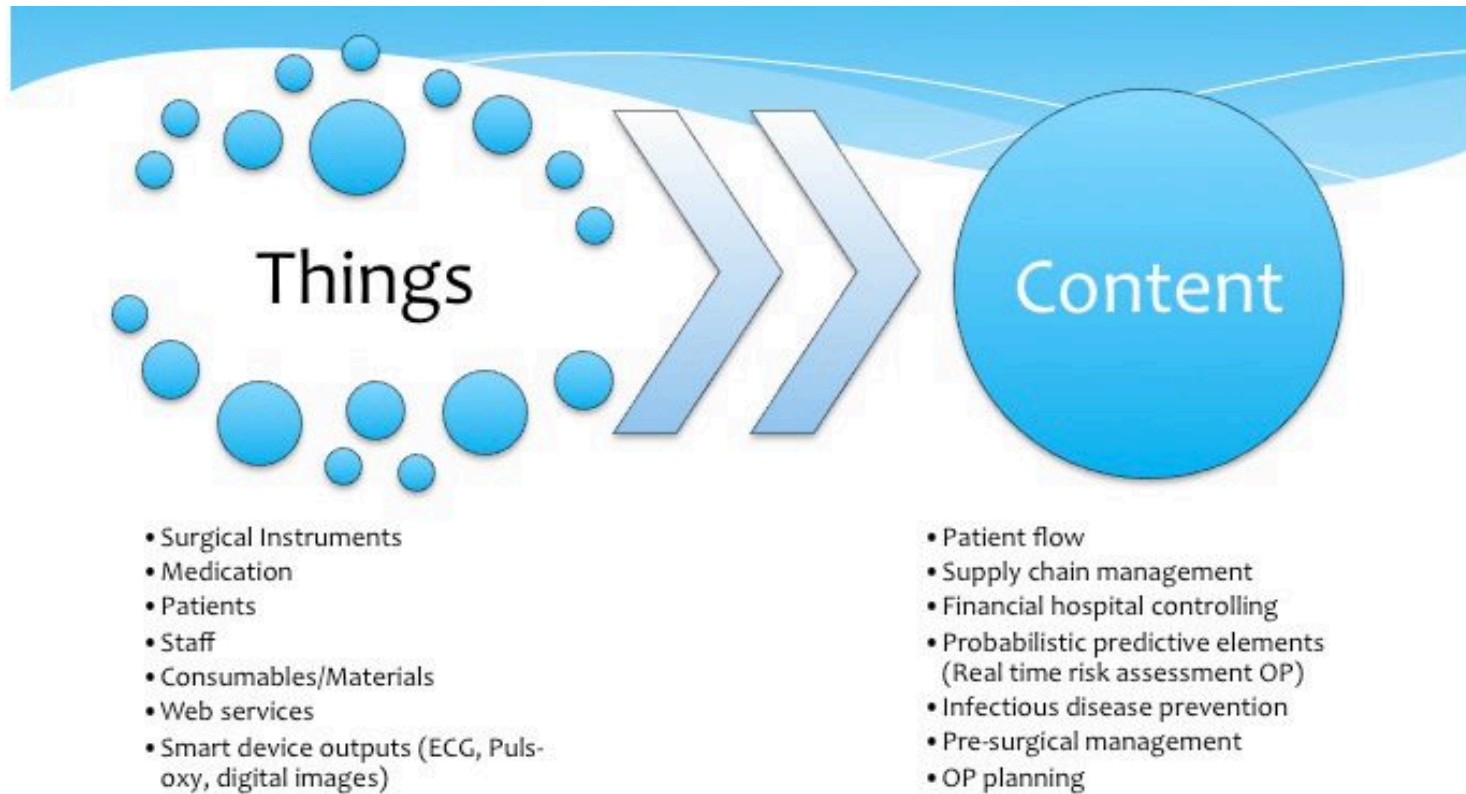
Average annual percent in health care spending, 2006 to 2010 USA

Category	2006 to 2007	2007 to 2008	2008 to 2009	2009 to 2010
Hospital care	6.2%	5.3%	6.4%	4.9%
Professional services	5.9%	5.6%	3.6%	3.0%
Long-term care	8.1%	5.2%	5.2%	4.4%
Retail products & services	6.3%	4.5%	2.6%	4.6%
Prescription drugs	5.3%	3.1%	5.1%	1.2%
Supervisory care (imputed)	4.2%	4.2%	3.3%	2.5%

Source: Deloitte analysis utilizing NHEA and additional health care data sources.

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VIRTUALIZATION



Prof. C.Thuemmler, IoT Week Venice, 2012

Generic Enablers

PROJECTS

<CONCORD /> ENVIROFI

FIcontent FI-WARE

Finest
FUTURE LOGISTICS



THE INFINITY
PROJECT



OUTSMART



fi★star FIspace
Business Collaboration



Stefano De Panfilis

Chief Innovation Officer,
Engineering Informatica



FI-WARE
Open APIs for Open Minds

FI-WARE catalogue

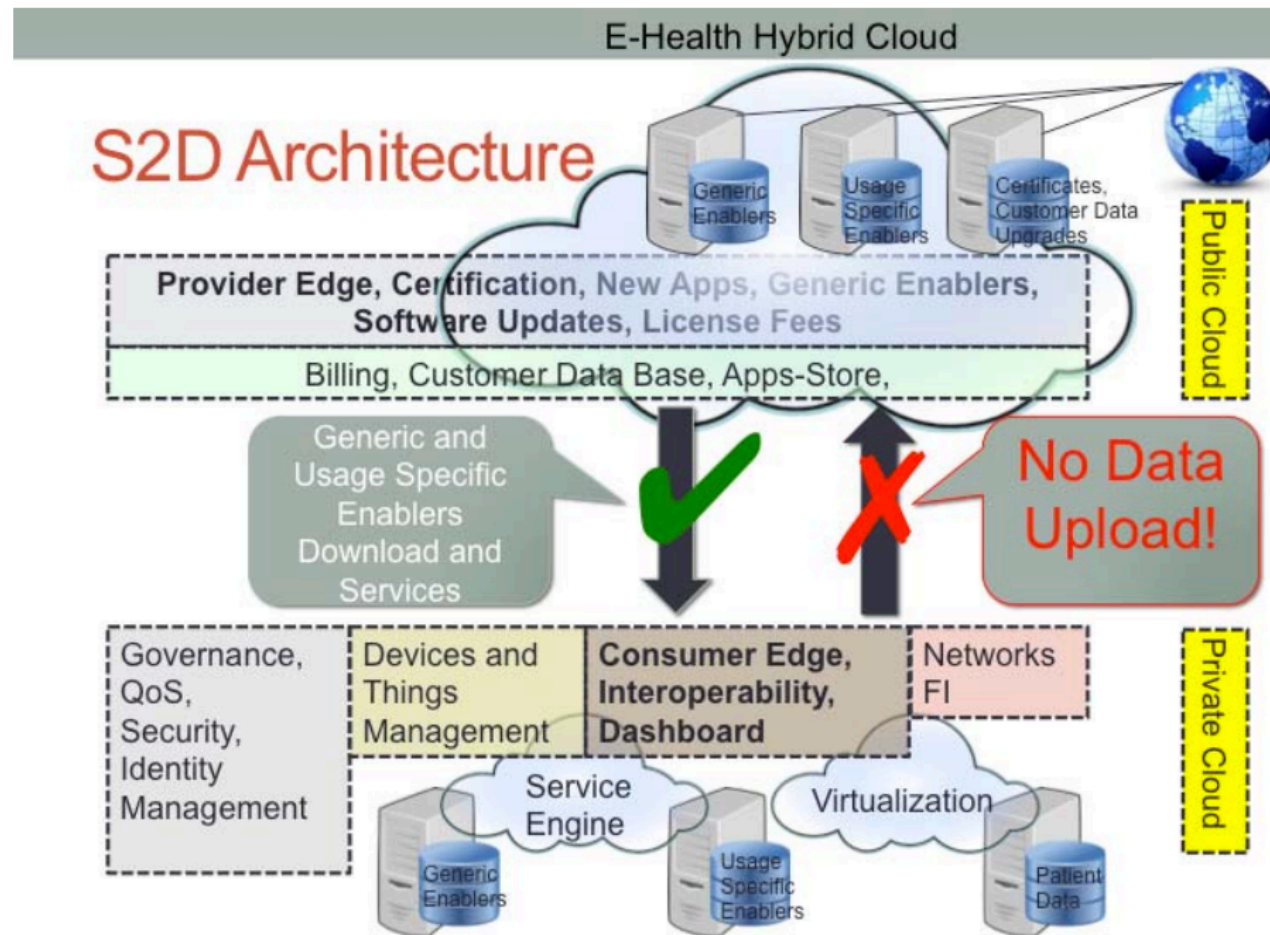
<http://catalogue.fi-ware.org>

Generic Enablers



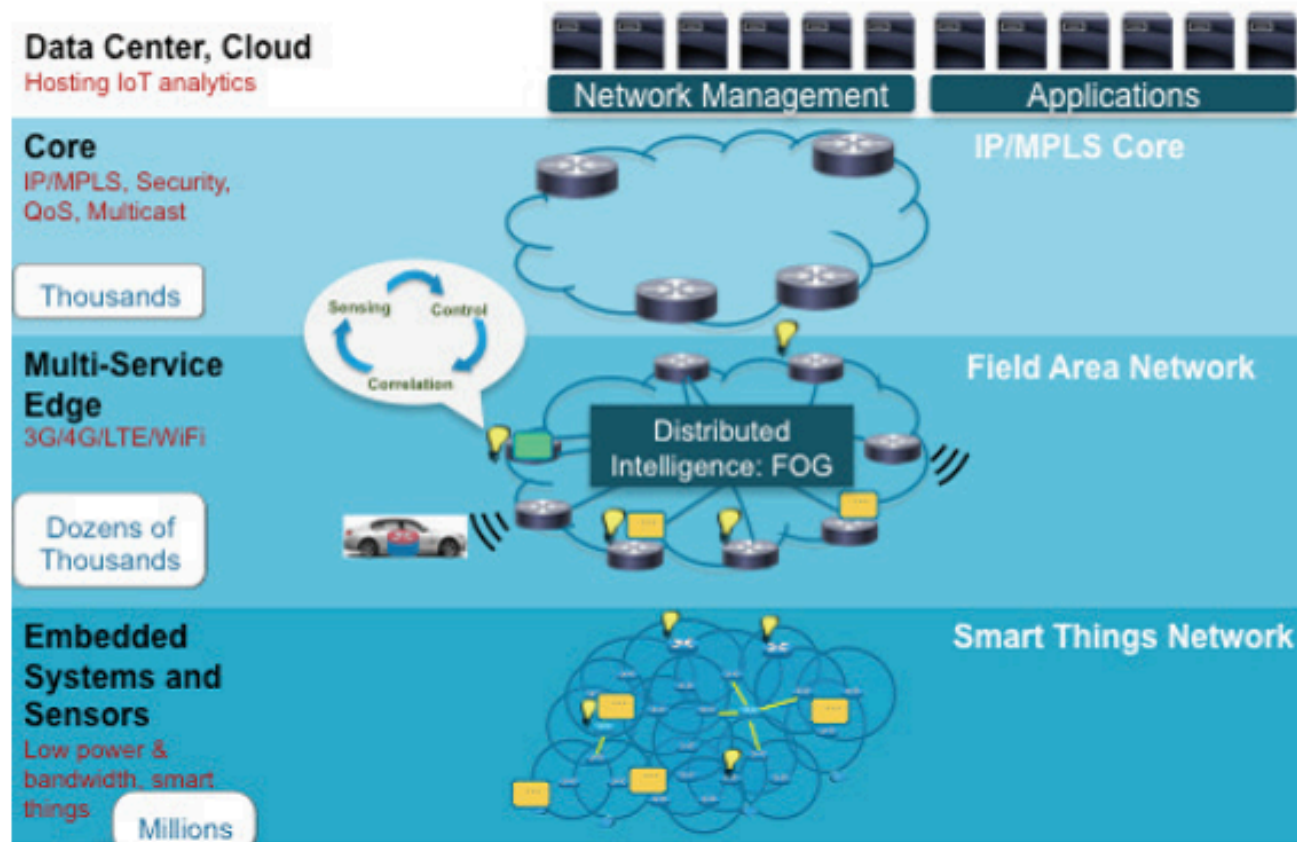
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Software to Data Paradigm



FOG

The Internet of Thing Architecture and Fog Computing



TRENDS. TECHNOLOGY. INNOVATION.

17-18 September 2014 | Munich, Germany

➤ REGISTER



2nd European Conference on the Future Internet

The 2nd European Conference on the Future Internet (ECFI) presents trends, technologies and innovations for the smart use of tomorrow's Internet in different application sectors. The event will bring together key stakeholders from large industry players as well as SMEs to discuss the development of Future Internet infrastructures and services in Europe. ECFI Munich will present cutting-edge research results on the European Internet infrastructures and services of the future, which have been developed in the Future Internet Public-Private Partnership (FI-PPP).

In addition, the event will mark the start for the SME-driven innovation phase of the programme, where the FI-PPP will invest 80 million euros for application and service projects driven by European SMEs. The FI-PPP is a European programme for Internet-enabled innovation aiming to accelerate the development and adoption of Future Internet technologies in Europe.

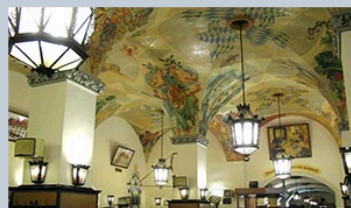
CONFERENCE | EXHIBITION

17 September 2014



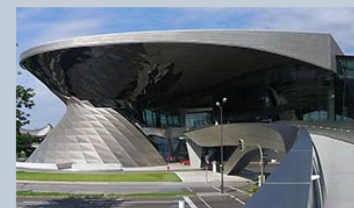
EVENING EVENT

17 September 2014

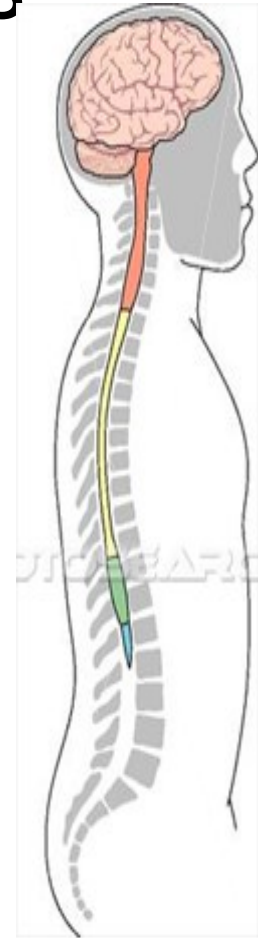
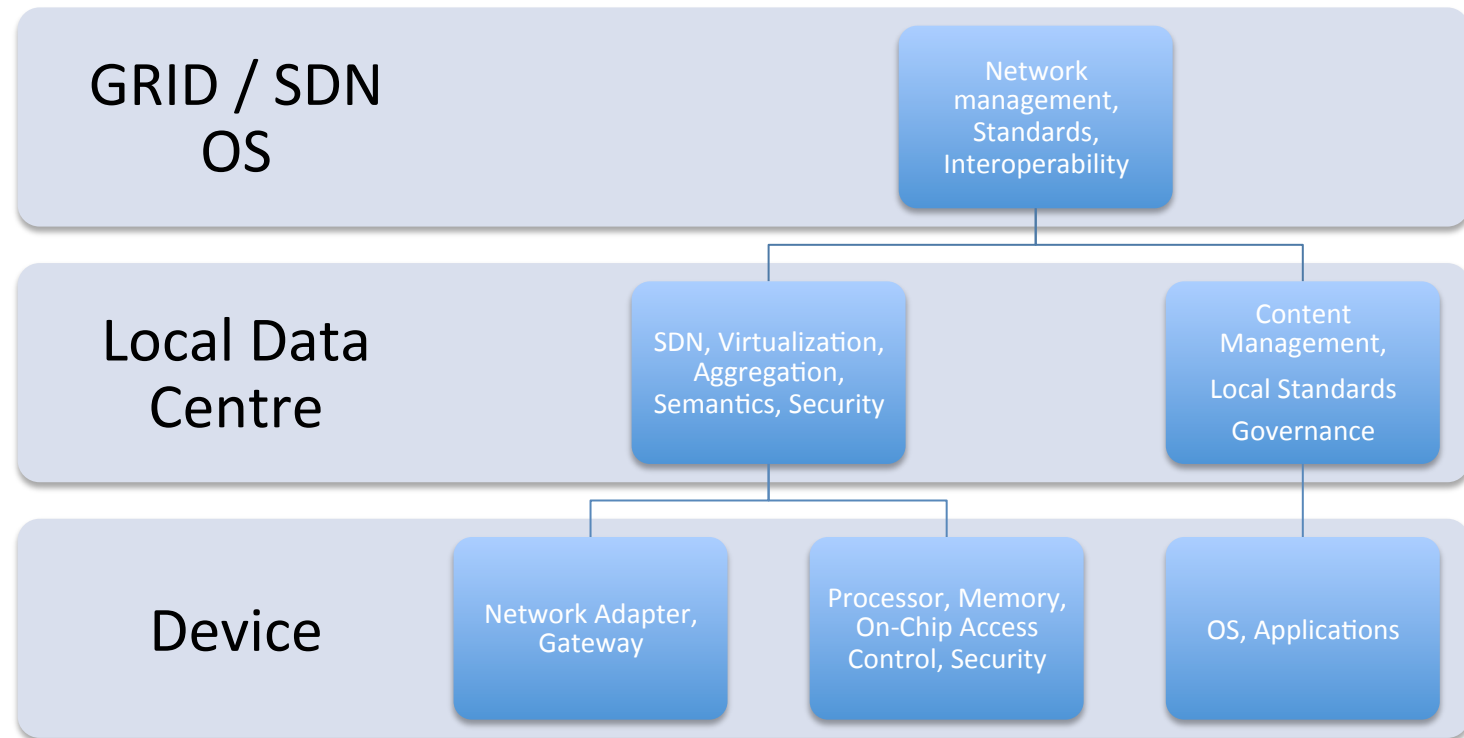


TECHNO BRUNCH

18 September 2014



Hierarchical subsidiary Architecture derived from Neurobiological Principles



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CHALLENGES

- Network coverage (4G – 5G)
- Framework
- Interoperability
- International Standards (Legal, ethical, technical)
- Certification
- Business models
- Social Technological Alignment