



ICT in HORIZON 2020

**Information and
Communication Technologies
in the EU Framework
Programme for Research and
Innovation**



Khalil Rouhana
Director, DG CONNECT
European Commission

-  H2020: the new approach
 - R&D&I and the policy agenda
- H2020 structure and coverage
- ICT in H2020

- Overall policy objectives:
 - Growth and jobs, societal challenges, knowledge base,
- Quantified targets per area:
 - Announced upfront (see metrics on our Web site)
 - Knowledge base targets: Publications patents
 - Industrial targets: Value creation in Europe
 - Societal challenges as relevant
- E.g. for Robotics:
 - Industrial robotics: >30 % of production in Europe
 - Professional service robots: > 50% production in Europe
 - Service robotics: >20 %
- Need to embed EU R&D&I in a wider set of actions to achieve goals

H2020: What's new with respect to FP7

- A single programme for R&D&I
 - bringing together three separate programmes: FP7, CIP, EIT
 - Simplified access for all companies, universities, institutes
- Coupling research to innovation: The whole innovation chain
- Work in partnerships
 - Public private partnerships
 - Address other policy issues to ensure impact
- Coverage of value chains
 - User supplier interaction, multidisciplinary, cross cutting actions
- Connection to national and regional initiatives
 - Combination of funds ESIF, H2020, etc..

- Support to Research and Innovation from lab to market
 - All forms of innovation, Access to finance, Pilots, Pilot Lines..
 - RIAs and Ias
- Promotion of a closer relationship between research and entrepreneurship
- More support to SMEs
- More evaluators from the business world involved in the selection process
- **About half of the budget of ICT-related activities** allocated to instruments aiming at supporting innovation

- **Contractual PPPs**
 - Involvement of industry in the preparation
 - Indicative pre-defined budget
 - More emphasis on relevance of industry and impact
 - Open to all according to normal FP rules
- **Joint Technology Initiatives**
 - Industry driven research agenda
 - Fixed budget for 7 years to leverage more industry investment
 - Sector structuring to achieve impact
 - Coverage of longer value chains and interrelated sectors
 - Higher level of SME participation
 - Specific solutions outside FP rules
- **Complemented in ICT by an Open (disruptive) scheme**

- Pooling resources into common initiatives when needed
 - The JTI ECSEL
 - ERANETs
 - Art 185: AAL
- "Competence centres" based initiatives
 - ECHORD++, I4MS, "Smart anything everywhere",...
- Guidelines for combining funds from ESIF and H2020

- H2020: the new approach
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 • H2020 structure and coverage

- ICT in H2020

Three priorities





Horizon 2020 structure

Excellent Science

Frontier Research (ERC)

Future and Emerging Technologies (FET) **ICT**

Skills and career development (Marie Skłodowska-Curie)

Research Infrastructures **ICT**

Industrial Leadership

Leadership in enabling
and industrial technologies

ICT **ICT**

ICT

Nanotech., Materials, Manuf. & Processing

Biotechnology

Space

Access to risk finance

Innovation in SMEs

Societal Challenges

ICT

Health, demographic change and wellbeing

Food security, sustainable agriculture,
and the bio-based economy

Secure, clean and efficient energy **ICT**

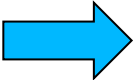
Smart, green and integrated transport **ICT**

Climate action, resource efficiency,
and raw materials **ICT**

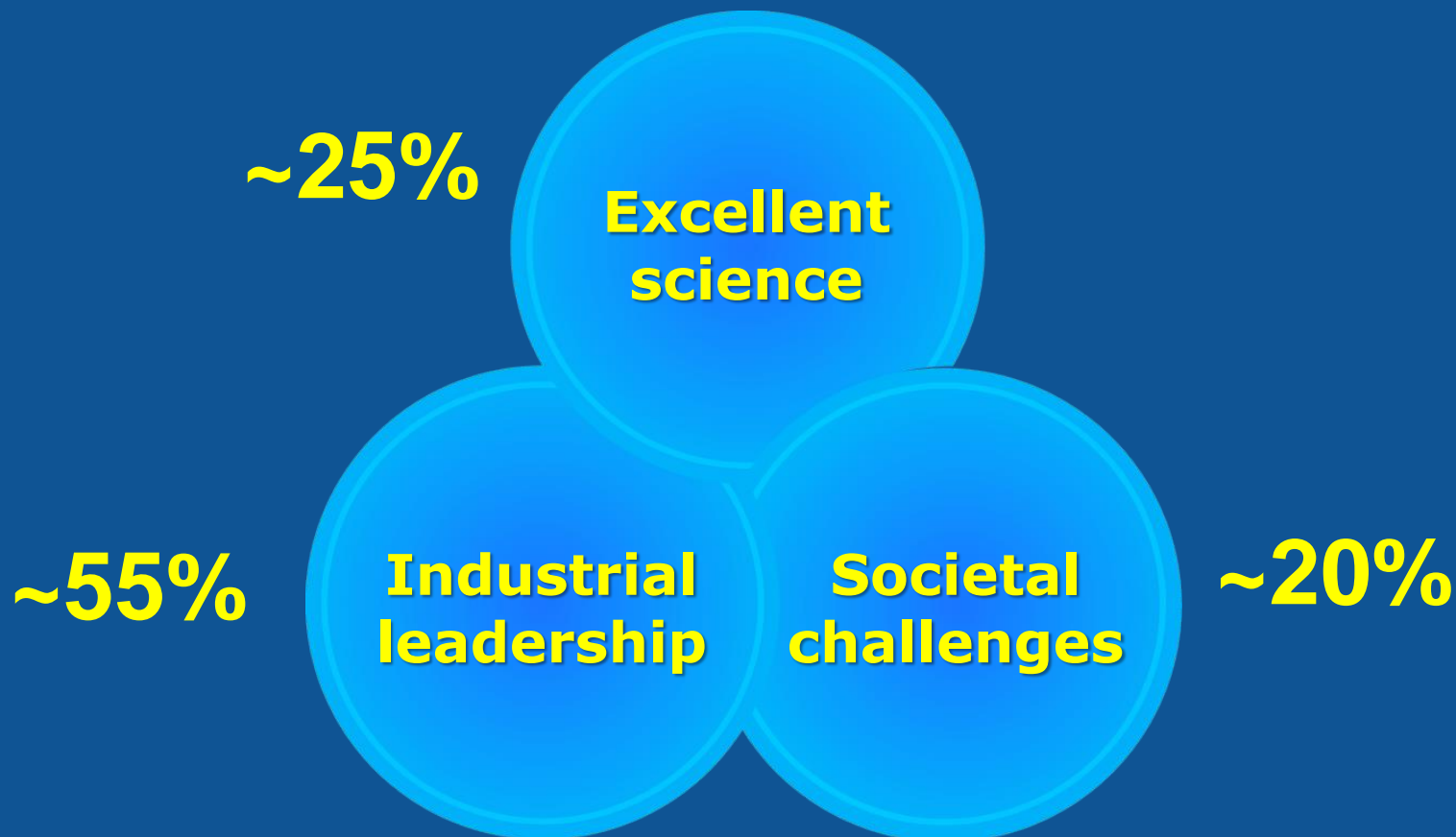
Inclusive, innovative and reflective societies

Secure societies **ICT**

ICT

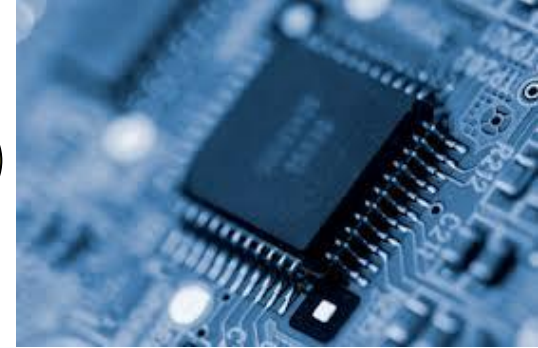
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Three priorities for ICT



Industrial Leadership - ICT

7,7 b€

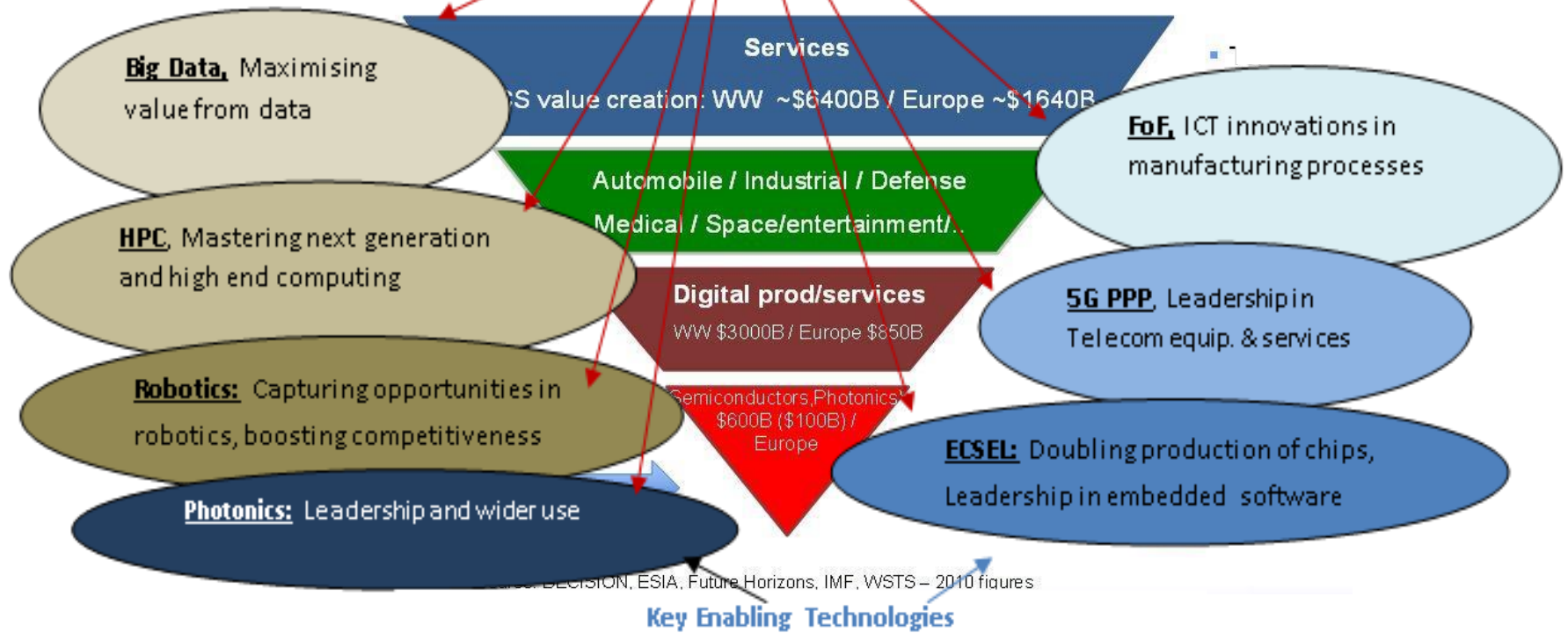


- **A new generation of components and systems:**
 - engineering of advanced embedded and resource efficient components and systems
- **Next generation computing:**
 - advanced and secure computing systems and technologies, including cloud computing
- **Future Internet:**
 - software, hardware, infrastructures, technologies and services
- **Content technologies and information management:**
 - ICT for digital content, cultural and creative industries
- **Robotics:**
 - robotics and smart spaces
- **ICT KETs: Micro- and nanoelectronics and photonics:**
 - key enabling technologies



Partnerships in ICT

PPPs across the Digital Value Chain



Joint Technology Initiatives

- **ECSEL** (Electronic Components and Systems for European Leadership)
 - 1,185 b€ from EU (250m€ in 2014-15)
 - 3,6 b€ (out of which 1,2 b€ from Member States) from industry partners and other sources

Contractual PPPs

- **5G** → 700m€ indicatively earmarked in H2020 (125m€ in WP2014-15)
- **Photonics** → 700m€ (156m€ in WP2014-15)
- **Robotics** → 700m€ (157m€ in WP2014-15)
- **High Performance Computing** → 700m€ (157m€ in WP2014-15)
- **Factories of the Future** (ICT part) → 450m€ (102m€ in WP2014-15)
- **Big Data** → 500m€ (not in WP2014-15)
- **Green Vehicles** (ICT part) → 80m€ (20m€ in WP2014-15)



HORIZON 2020

**Thank you
for your attention!**

Find out more:

<http://ec.europa.eu/programmes/horizon2020>