ICT in HORIZON 2020

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

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European Commission

HORIZON 2020

- H2020: the new approach
  - R&D&I and the policy agenda

- H2020 structure and coverage

- ICT in H2020 in 2015

- 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

- Over € 70 billion programme supporting R&I (2014-2020)

- A single programme for R&D&I
    - bringing together three separate programmes: FP7, CIP, EIT
    - <u>Simplified access</u> for all companies, universities, institutes

- Coupling research to innovation: The whole innovation chain

- Emphasis on partnerships and on openness
    - Public private partnerships defining and implementing strategic roadmaps

- Coverage of value chains
    - User supplier interaction, multidisciplinarity, cross cutting actions, SMEs

- Connection to national and regional initiatives
   - Combination of funds ESIF, H2020, etc..

Coupling research to innovation

- Support to Research and Innovation from lab to market
    - All forms of innovation, Access to finance, Pilots, Pilot Lines..
    - Set of instruments: RIAs and IAs

- Closer relationship between R&I and entrepreneurship

- More support to SMEs

- More evaluators from businesses 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 of WP
  - Dual commitments to invest: 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
  - 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**

PPPs across the Digital Value Chain
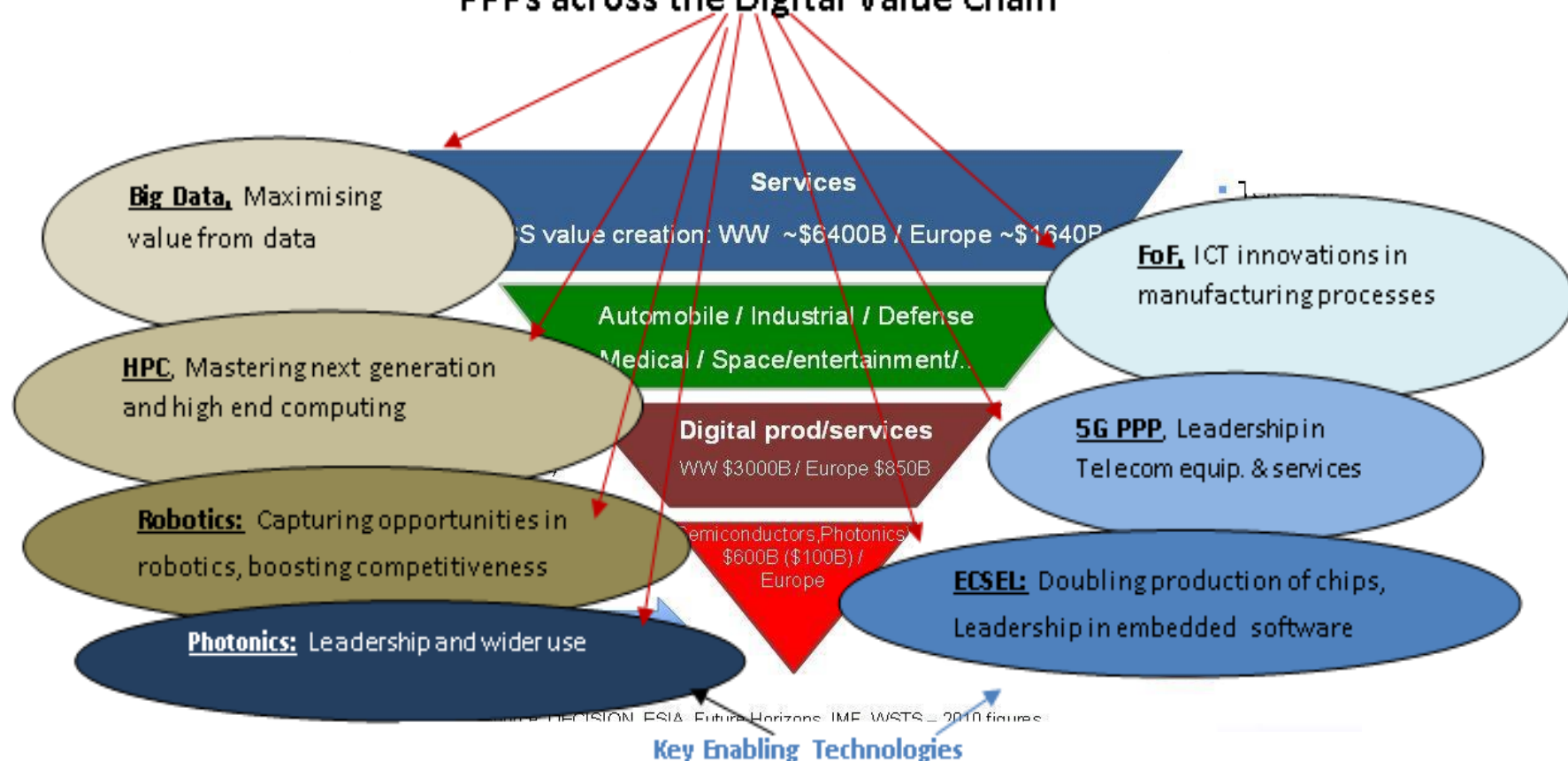
Joint Technology Initiatives

- **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)
- *NEW!!!* **Big Data** → 500m€ (not in WP2014-15)
- **Green Vehicles** (ICT part) → **80m€** (20m€ in WP2014-15)

- 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
  - R&D&I and the policy agenda

- H2020 structure and coverage
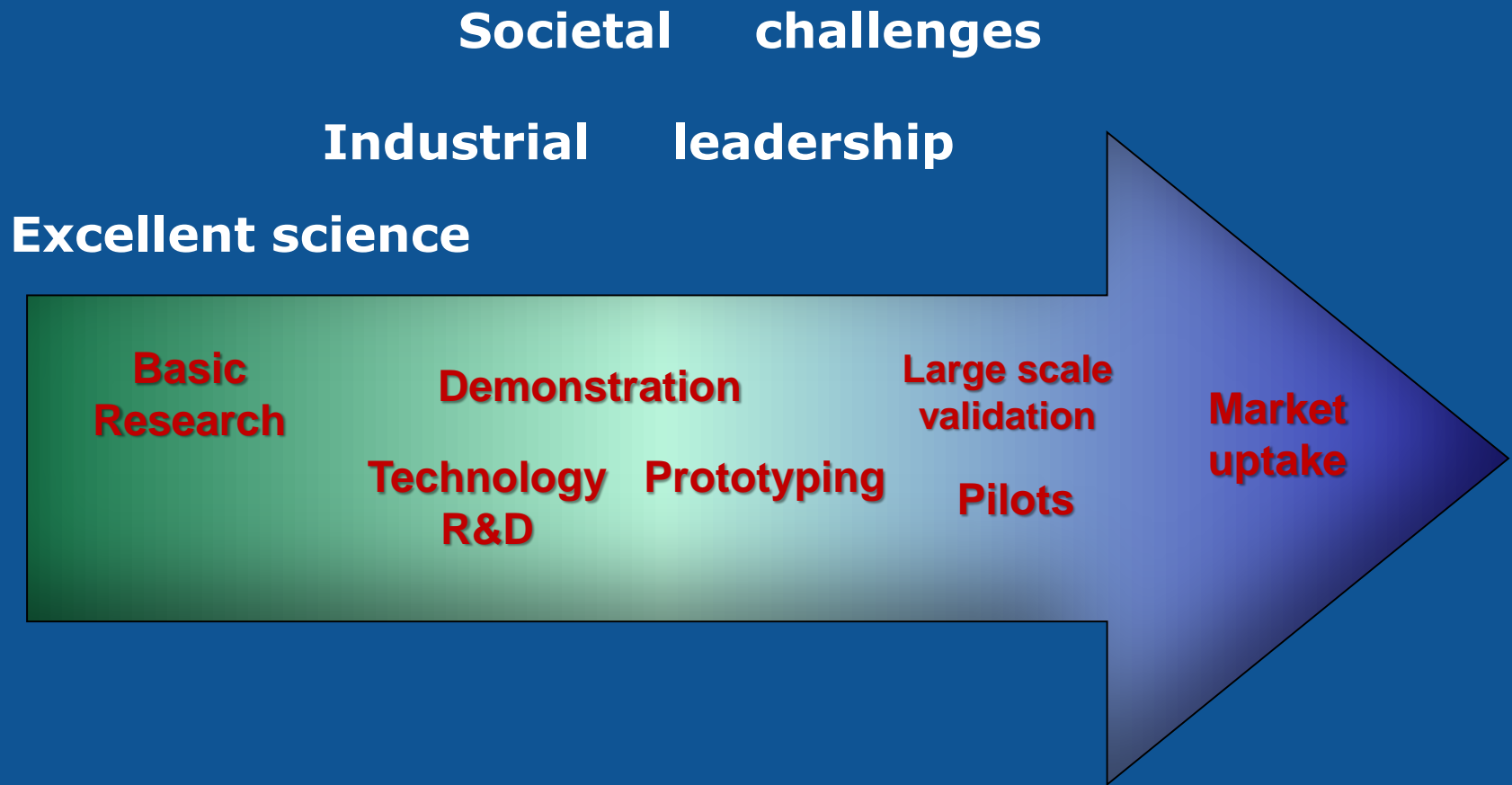
- ICT in H2020 in 2015

H2020:Three priorities

~30 %

Excellent science

Support to policy goals

- Growth and jobs
- Key societal challenges

Industrial leadership

Societal challenges

~21 %

~38 %

European Commission

Set of instruments covering the full innovation chain

Societal   challenges

Industrial   leadership

Excellent science

Basic Research

Demonstration

Technology R&D

Prototyping

Large scale validation

Pilots

Market uptake

European Commission

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`
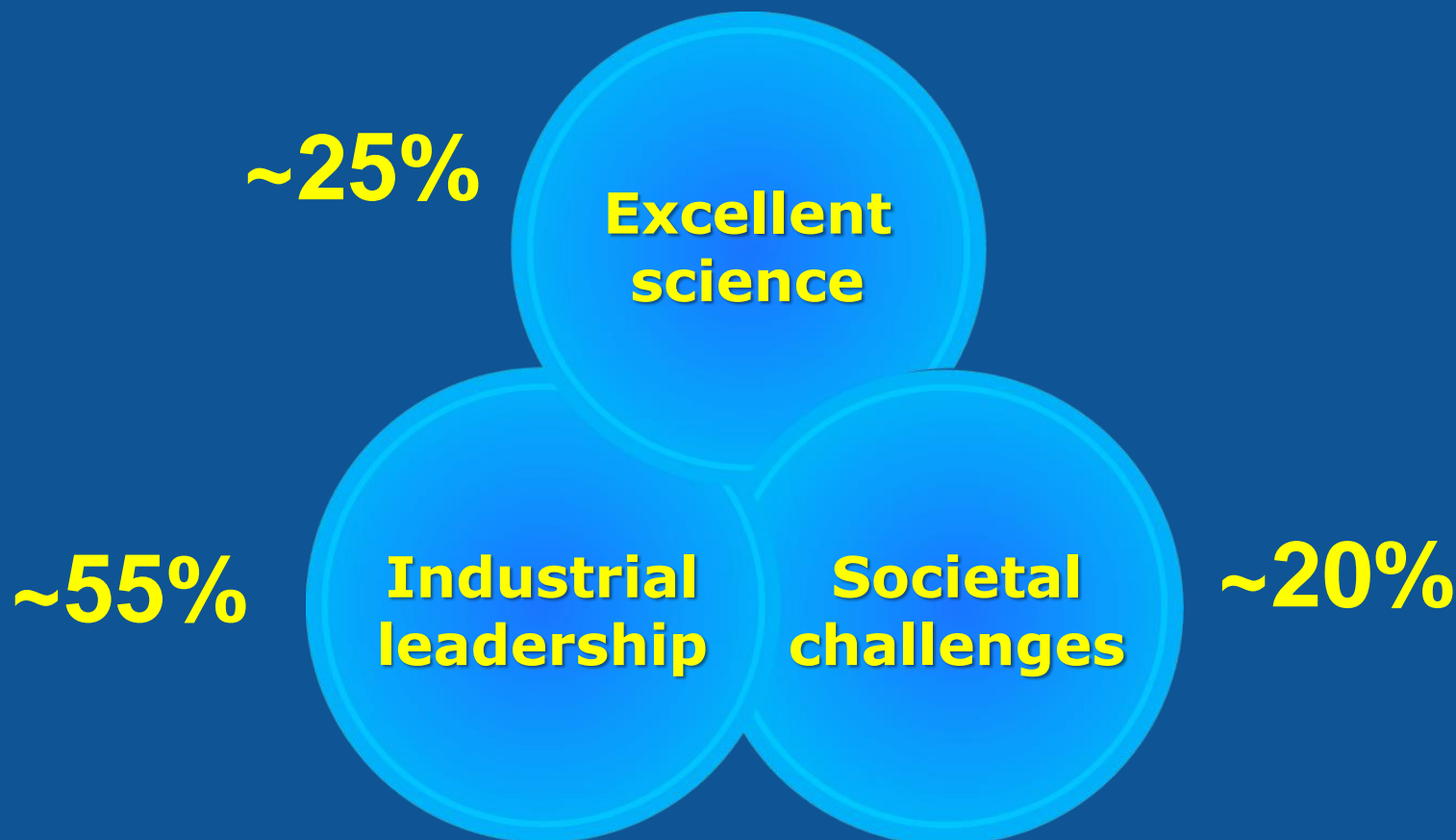
Smart, green and integrated transport `ICT`

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

~25%

Excellent science

~55%

Industrial leadership

Societal challenges

~20%

European Commission

- H2020: the new approach
  - R&D&I and the policy agenda

- H2020 structure and coverage

- ICT in H2020 in 2015

ICT in Industrial leadership

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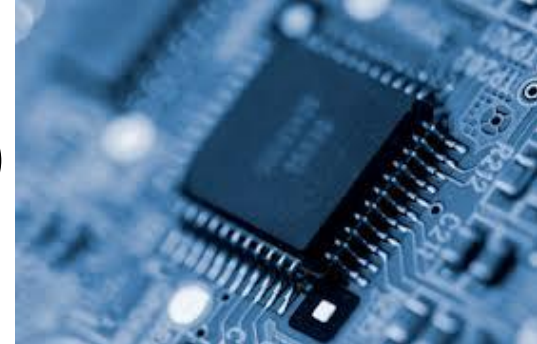
Industrial Leadership - ICT 7,7 b€

- **A new generation of <u>components and systems</u>:**
  - engineering of advanced embedded and resource efficient components and systems

- **Next generation <u>computing</u>:**
  - advanced and secure computing systems and technologies, including cloud computing

- **<u>Future Internet</u>:**
  - software, hardware, infrastructures, technologies and services

- **<u>Content technologies</u> and <u>information management</u>:**
  - ICT for digital content, cultural and creative industries

  - **<u>Robotics</u>:**
    - robotics and smart spaces

  - **<u>ICT KETs: Micro- and nanoelectronics</u> and <u>photonics</u>:**
    - key enabling technologies

European Commission

Components and systems
2014-2015

142 M€ in 2014

- Covers **systemic integration from smart components to cyber-physical systems**

- **Includes support to the JTI (ECSEL)**

  - up to 85 M€ on CPS in ECSEL

- **WP 2014-15: Organised in three related topics:**

  - Smart cyber-physical systems (56 M€)
    - Next generation embedded and connected systems
  - Smart system integration (48 M€)
    - Integration of heterogeneous micro- and nanotechnologies into smart systems
  - Advanced Thin, Organic and Large Area Electronics (38 M€)

- R&I in this area will also contribute to the implementation of the **SRA on Energy Efficient Buildings**

European Commission
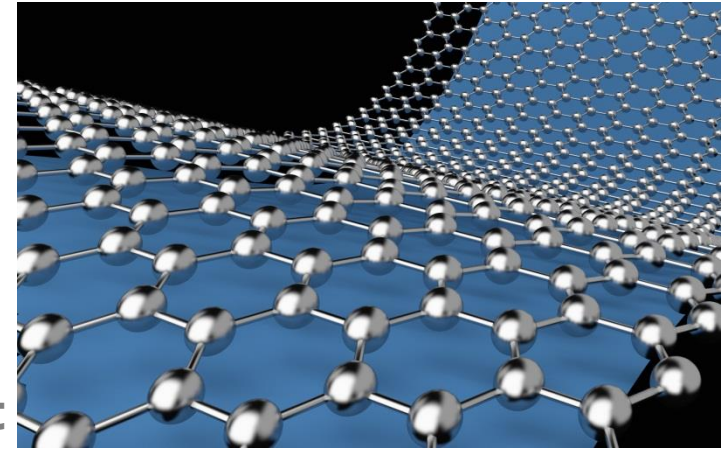
Advanced Computing
2014-2015

55 M€ in 2015

- Reinforce and expand Europe's industrial and technology strengths in **low-power ICT**

- Focus is on **integration of advanced components on all levels in computing systems**

- Complementary to and coordinated with work in the Future Internet area (on Cloud Computing) and in Excellence Science pillar under Research Infrastructures and FET (on High Performance Computing)

- **Organised in one topic:**
  - **Customised and low power computing**

European Commission

Future Internet / 2014-2015

244 M€ in 2014
74 M€ in 2015

- Focused on **network and computing infrastructures** to accelerate innovation and address the most critical technical and use aspects of the Internet

- **Organised in ten topics:**
  - Smart networks and novel Internet architectures
  - Smart optical and wireless network technologies
  - Advanced 5G Network Infrastructure for the Future Internet (122 M€)
    → 5G PPP, DL on 25/11/2014
  - Advanced cloud infrastructures and services
  - **Boosting public sector productivity and innovation through cloud computing services (21 M€)**
  - Tools and methods for Software Development
  - FIRE+ (Future Internet Research & Experimentation)
  - **More Experimentation for the Future Internet (17 M€)**
  - **Collective Awareness Platforms for sustainability and social innovation (36 M€)**
  - Web Entrepreneurship

Content technologies and information management / 2014-2015
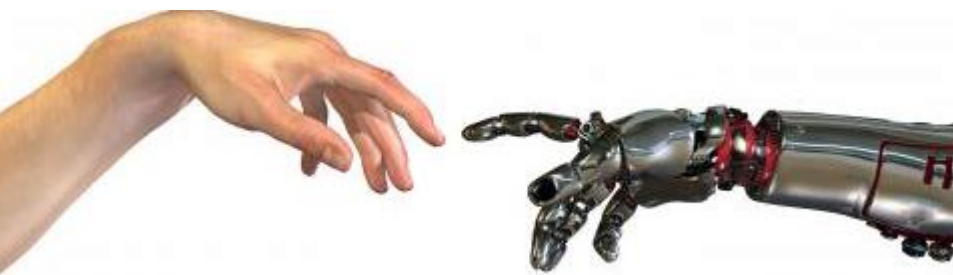
104 M€ in 2014
127 M€ in 2015

- **Addresses:**
  - **Big Data** with focus on both innovative data products and services and solving research problems
  - Machine translation in order to overcome barriers to multilingual online communication
  - **Tools for creative, media and learning industries** in order to mobilise the innovation potential of SMEs active in the area
  - Multimodal and natural computer interaction

- **Organised in eight topics:**

  - Big data and Open Data innovation and take-up
  - **Big data research (37 M€)**
  - Cracking the language barrier
  - Support to the growth of ICT innovative creative industries SMEs
  - **Technologies for creative industries, social media and convergence (40 M€)**
  - **Technologies for better human learning and teaching (50 M€)**
  - Advanced digital gaming/gamification technologies
 - Multimodal and natural computer interaction

European Commission

Robotics / 2014-2015

74 M€ in 2014
80 M€ in 2015

- **Roadmap-based research driven by application needs**
  → Robotics PPP

- Effort to close the innovation gap to **allow large scale deployment of robots and foster market take-up**: use-cases, pre-commercial procurement, industry-academia cross-fertilisation
  - Includes two pre-commercial procurement actions (health-care sector, public safety and environmental monitoring)

- Additional activities: shared resources, performance evaluation & benchmarking, community building and robotic competitions

- **Organised in two annual calls**
  (80 M€ in 2015)

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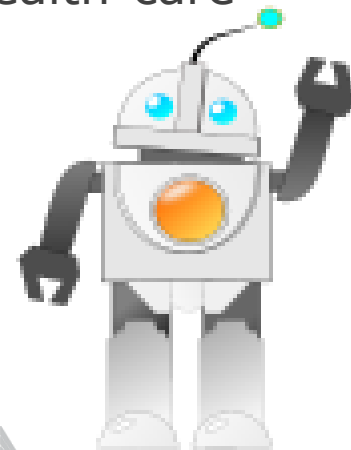
Micro- and nano-electronics and photonics Key Enabling Technologies
2014-2015

57 M€ in 2014
143 M€ in 2015

- Covers **generic technology developments on micro- and nano-electronics** focused on **advanced research** and lower Technology Readiness Levels (TRLs) (48 M€)
  - Complementary to the JTI Electronic Components and Systems

- Addresses the **full innovation and value chain** in markets sectors where the European **photonics** industry is particularly strong (optical communications, lighting, medical photonics, laser technologies, etc.) (95 M€)
  → **Photonics PPP**
  - Includes calls for ERANETs as well as public procurement actions (roll-out and deployment of optical networking technologies)

Factory of the Future / 2014-2015

34 M€ in 2014
68 M€ in 2015

- Focuses on **ICT components of innovative production systems in all sectors** (for more personalised, diversified and mass-produced product portfolio and for rapid adaptations to market changes)

- Organised in **three topics:**

  - Process optimisation of manufacturing assets (34 M€)
  - ICT-enabled modelling, simulation, analytics and forecasting technologies (32 M€)

  - ICT Innovation for Manufacturing SMEs (36 M€)
  - Part of **FoF PPP**

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ICT Cross-Cutting Activities / 2014-2015

- **Internet of Things and platforms for Connected Smart Objects (49 M€)**
    - Cutting across several LEIT-ICT areas (smart systems integration, smart networks, big data)
    - Bringing together different generic ICT technologies and their stakeholder constituencies

    - **Human-centric Digital Age**
        - Understanding technologies, networks and new digital and social media and how these are changing the way people behave, think, interact and socialise as persons, citizens, workers and consumers

- **Cyber-security, Trustworthy ICT**
    - Focuses on security-by-design for end to end security and a specific activity on cryptography
    - Complementary to Cyber-security in Societal Challenge 7

- **Trans-national co-operation among National Contact Points**
    - Mechanisms for effective cross border partnership searches, identifying, understanding and sharing good practices among ICT NCPs

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ICT horizontal innovation actions / 2014-2015

- **Support for access to finance (15 M€)**
  - Pilot action for business angels to co-invest in ICT innovative companies
  - Implemented by EIF and closely coordinated with "Access to risk finance" part of H2020

- **Innovation and Entrepreneurship Support**
  - ICT business idea contests in universities and high schools
  - ICT entrepreneurship summer academy
  - ICT entrepreneurship labs
  - Campaign on entrepreneurship culture in innovative ICT sectors
  - Support for definition and implementation of inducement prizes
  - European networks of procurers

- **Pre-commercial procurement (4 M€)**

  - **Open Disruptive Innovation Scheme (88 M€)**
    - Support to a large set of **early stage high risk innovative SMEs in ICT**
    - Implementation through the **SME instrument**
      -> Continuously open calls with several (3) cut-off dates/year
      -> 5% of LEIT budget

International cooperation actions / 2014-2015

21 M€

- **Coordinated calls**
  - **EU-Brazil (7 M€)**
    - Cloud computing, including security aspects
    - High performance computing
    - Experimental platforms
  - **EU-Japan (6 M€)**
    - Technologies combining big data, internet of things in the cloud
    - Optical communications
    - Acces networks for densely located users
    - Experimentation and development on federated Japan-EU testbeds

- **International partnership building and support to dialogues with high income countries (USA, Canada, East Asia and Oceania) (3 M€)**

- **International partnership building in low and middle income countries (11 M€)**

European Commission

ICT in Societal challenges

Excellent science

Industrial leadership

Societal challenges

European Commission

Societal Challenges - ICT

338 M€ in 2014
298 M€ in 2015

- **Health, demographic change and wellbeing**

- **Food security, sustainable agriculture, and forestry, marine, maritime and inland water research, and the bioeconomy**

- **Secure, clean and efficient energy**

- **Smart, green and integrated transport**

- **Climate action, environment, resource efficiency and raw materials**

- **Europe in a changing world – inclusive, innovative and reflective societies**

- **Secure societies – protecting freedom and security of Europe and its citizens**

European Commission

Key principles for ICT R&I in the Societal Challenges

- **Interoperability**

- **Re-use and economies of scale**

- **Breakthroughs leveraging the transformative power of ICT**

- **Preparation for market deployment**

    +

- **Information for future digital policy**

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Societal Challenges - ICT
Funding for ICT (€ million, **2014-2015**)

Challenge	Total	ICT	%
Health, demographic change and wellbeing	**1 804**	**265**	**15%**
Food security, sustainable agriculture, marine and maritime research & the Bioeconomy	687		
Secure, clean and efficient energy	**1 447**	**72**	**5%**
Smart, green and integrated transport	**1 542**	**92**	**6%**
Climate action, environment, resource efficiency and raw materials	**745**	**26**	**3,5%**
Innovative, inclusive and reflective societies	**310**	**77**	**25%**
Secure societies	**393**	**100**	**25%**

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Health, demographic change and wellbeing / 2014-2015

104 M€ in 2015

- **Advancing active and healthy ageing with ICT**
  - **Service robotics** within assisted living environments
  - ICT solutions for **independent living with cognitive impairments**
  - ICT solutions enabling **early risk detection and intervention**

- **Integrated, sustainable, citizen-centred care**
  - ICT-based approaches for **integrated care** (beyond current state-of-art in tele-health and tele-care)
  - **Self-management of health and disease**
  - Public-procurement of innovative eHealth services

- **Improving health information and data exploitation**
  - Digital representation of **health data** to improve diagnosis and treatment
  - **eHealth interoperability**

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Secure, clean and efficient energy / 2014-2015

24 M€

- **Energy efficiency / buildings and consumers**
  - Public procurement of **green data centres**
  - New ICT-based solutions for **energy efficiency through citizens' behavioural change**

- **Competitive low-carbon energy / modernising the single European electricity grid**
  - Distribution grid and retail market
    - Next generation ICT infrastructure for **smart metering and smart grids**

- **Smart cities and communities**
  - Integration of **energy, transport and ICT** through **lighthouse projects** (large scale demonstration)

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Smart, green and integrated transport / 2014-2015

52 M€

- **Road**
    - **Cooperative Intelligent Transport Systems**
        - Connecting people, vehicles, infrastructures and businesses
    - Safe and connected **automation in road transport**

- **Green vehicles**
    - **Electric vehicles'** enhanced performance and **integration into the transport system and the electricity grid**

- **Smart cities and communities**
    - Integration of **energy, transport and ICT** through **lighthouse projects** (large scale demonstration)

European Commission

Climate action, environment, resource efficiency and raw materials / 2014-2015

13 M€

- **Waste management**
    - ICT solutions for waste traceability, waste material flow management

- **Water management**
    - Development and deployment of advanced ICT solutions for water resources management in agriculture and urban areas

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Europe in a changing world – inclusive, innovative and reflective societies / 2014-2015

55 M€

- **Reflective societies – Cultural Heritage**
  - **Innovative ecosystems of digital cultural assets**
  - **Advanced 3D modelling for accessing and understanding European cultural assets**

- **New forms of innovation**
  - **Innovation in the public sector** by using emerging ICT technologies
  - ICT-enabled **open government**
  - Personalised public services
  - M-government
  - Open participation
  - Transparency
  - ICT for **learning and inclusion**

Secure societies – protecting freedom and security of Europe and its citizens / 2014-2015

50 M€

- **Digital security: cybersecurity, privacy and trust**
  - Protecting our society by providing sustained **trust in the usage of ICT** and in securing the ICT underlying our digital society
  - **Preventing cyber-attacks** on any component of the digital society
  - **Ensuring freedom and privacy in the digital society**, protecting the fundamental values of our society and democratic rights of our citizens in cyberspace
  - Protect the weak in our society from abuses over the internet and **giving the user control over his private data**
  - Demonstrating the viability and maturity of state-of-the-art security solutions in **large scale demonstrators**, involving end users

ICT in Excellent science

Excellent science

Industrial leadership

Societal challenges

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Excellent Science - ICT

2,5 b€*

* Including budget for other areas than ICT covered in FET

- **Future and Emerging Technologies (FET)**
  - **FET Open**: fostering novel ideas
  - **FET Proactive**: nurturing emerging themes and communities
  - **FET Flagships**: pursuing grand interdisciplinary science and technology challenges
    - **Graphene**
    - **Human Brain Project**

- **Research infrastructures**
  - Developing the European research infrastructure for 2020 and beyond

862 m€

  - **Development, deployment and operation of ICT-based e-infrastructures**
    - **ICT infrastructure resources and services for Research**
    - **Access to and management of scientific data**
    - **High Performance Computing**

European Commission

Future and Emerging Technologies

80 M€ in 2015

2014-2015

- **FET Open** (80M€)
  - **All technologies, no topical scope**
  - **Light and fast scheme**
    - Several cut-off dates per year, one-step submission of ~15 pages
    - One stage evaluation

- **FET Proactive** (97,4 m€)
  - **Global Systems Science (GSS)**
    - Improve the way in which scientific knowledge can stimulate, guide, and help evaluate policy and societal responses to global challenges
  - **Knowing, doing, being: cognition beyond problem solving**
    - New approaches to cognitive systems
  - **Quantum simulation**
    - Quantum technologies to ultimately address real world problems
  - **Towards exascale high performance computing** (97,4 M€)
    - → **HPC PPP**: To be coordinated with complementary work in LEIT and RI

- **FET Flagships**
  - **Graphene**
  - **Human Brain Project**

European Commission

eInfrastructures / 2014-2015   80,5 M€

- **ICT infrastructure resources and services for Research (40,5 M€)**
  - Provision of core services across e-infrastructures
  - Research and Education Networking – GEANT
  - **eInfrastructures for virtual research environments**

- **Access to and management of scientific data**
  - Managing, preserving and computing with big research data
  - Towards global data e-infrastructures – Research Data Alliance
  - eInfrastructure for Open Access

- **High Performance Computing (40 M€)**
  - Pan-European High Performance Computing infrastructure and services
  - **Centres of Excellence for computing applications**
  - Network of HPC competence centres for SMEs

European Commission

WP2014-15 revision

- Published on 22 July 2014

- Revision of several call deadlines

- Description of main eligibility and award criteria of prizes

  - Collaborative Sharing of Spectrum (LEIT-ICT)

  - Breaking the optical transmission barriers (LEIT-ICT)

  - eHealth Inducement Prize: Food scanner (SC1)

- One additional topic in Digital Security call (SC7)

  - DS-7-2015: Value-sensitive technological innovation in Cybersecurity

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Call planning (1/2)

FET
- **FET Open**: 30 Sept 2014, 31 March 2015, 29 Sept 2015
- **FET Proactive (HPC)**: 25 Nov 2014

Research Infrastructures : 14 Jan 2015

LEIT
- **5G PPP**: 25 Nov 2014
- **FoF**: ~~9 Dec 2014~~ **4 Feb 2015**
- **Main ICT call:** 14 April 2015
- **EU-Brazil**: 21 April 2015

SC1 (Health) 21 April 2015

SC3 (Energy)
- **Energy-efficiency**: ~~10 June 2015~~ **4 June 2015**
- **Smart Cities**: ~~3 March 2015~~ **5 June 2015**

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Call planning (2/2)

SC4 (Transport)
- **Mobility for growth**: ~~31 March 2015 + 27 August 2015~~ **23 April + 15 Oct 2015**
- **Green vehicle**: ~~27 August 2015~~ **15 Oct 2015**

SC5 (Climate, Environment)
- **Water**: ~~16 Oct 2014 + 10 March 2015~~ **21 April + 8 Sept 2015**

SC6 (Inclusive, Innovative and Reflective societies)
- Advanced 3D modelling (topic REFLECTIVE 7): 30 Sep 2014
- **EURO 6, REFLECTIVE 6, INSO 1**: ~~21 April 2015~~ **28 May 2015**

SC7 (Security)
- **Digital Security**: ~~21 April 2015~~ **27 August 2015**

SME instrument
- ***Phase 1:*** *18 June, 24 Sept, 17 Dec 2014, 18 March, 17 June, 17 Sept, 16 Dec 2015*
- ***Phase 2****: 9 Oct, 17 Dec 2014, 18 March, 17 June, 17 Sept, 16 Dec 2015*

Next steps: Timetable for WP2016-17

30 September 2014	**Presentation of CAF advisory report to H2020 ICT Committee**
16 October 2014	**Discussion with PC strategic configuration** on overarching strategic document
Nov – Jan 2014	**Discussion with Programme Committees** on scoping paper;
December 2014	**Presentation of proposed strategic programming document to new Commissioner(s)**
Jan – July 2015	**Preparation of the detailed work programme 2016/17 content**, prepared on the basis of the endorsed strategic programming document, including input from Advisory Groups and discussion with PC configurations
Summer 2015	**Opinions of the Programme Committee configurations**
Third quarter 2015	**Adoption by the Commission** of the Work Programme; publication of the calls for 2016

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Find out more

- On the Horizon2020 web site
  - ✓ http://ec.europa.eu/programmes/horizon2020

- On the participants portal
  - ✓ http://ec.europa.eu/research/participants/portal/desktop/en/home.htmlHelpdesk

- H2020 Helpdesk, including FAQ
  - ✓ http://ec.europa.eu/research/index.cfm?pg=enquiries

- Contact your National Contact Points
  - ✓ http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html

European Commission

Thank you
for your attention!

Find out more:

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

Additional background on PPPs

- *Scope*
  - **R&I on Electronic Components and Systems with a strong emphasis on the 'close to market' innovation projects**

- *Partnerships in terms of membership*
  - **Electronics Components and Systems including semiconductor and design, smart and cyberphysical systems and embedded software industry – large and small, universities and research and technology organisations and users (automotive, health ...)**

- *Financing of the partnership*
  - **€1.185 billion from the EU**
  - **At least €1.170 billion from the Participating States**
  - **At least €2.340 billion from industry**

- *Investment potential in the sector*
  - **€100 billion in ambitious R&I by 2020**
  - **€10 billion in the next two year for first production/volume manufacturing**

- *Scope*
  - **Increase production volume and revenue growth to reach more than 18% of world market share by 2020**
  - **Large uptake of photonics by end users**
  - **Increase by 10% high-skill jobs in photonics industry**
- *Partnerships in terms of membership*
  - **> 1.500 members**
  - **Industry (OSRAM, Philips, Sagem, Jenoptik, Trumpf, IQE and Aixtron, ...) and 40% SMEs**
  - **Research organisations, national and regional innovation clusters**
- *Financing of the partnership*
  - **EU envelope of about € 700 million**
- *Additional Private Commitments in the sector*
  - **€ 2.8 Billion**

- *Scope*
  - **Industrial and service robotics; to reach 42% of the world market in robotics by 2020**
  - **Creation of 245.000 new jobs (suppliers and service industry)**
- *Partnerships in terms of membership*
  - **208 members, industry (large companies such as Siemens, Finmeccanica, KUKA), SMEs, universities research and technology organisations**
- *Financing of the partnership*
  - **EU envelope of about €700 million**
- *Additional Private Commitments in the sector*
  - **€ 2.1 billion**

European Commission

- *Scope*
  - **Advanced 5G network infrastructure for Future Internet to gain leadership in the next generation mobile**
  - **43% global network market share of European suppliers**
- *Partnerships in terms of membership*
  - **400 members, large telecon operators (France Telecon, Telefonica, ...), equipment suppliers (Alcatel-Lucent, ...), SMEs including software, standarisation, academia**
- *Financing of the partnership*
  - **EU envelope of about €700 million**
- *Additional Private Commitments in the sector*
  - **Minimum € 3.5 billion**

European Commission

- *Scope*
  - **Capture 30% of the big data market**
- *Partnerships in terms of membership*
  - **Software companies (ATOS, SAP, ...)**
  - **User companies in industry, retail, health ...**
  - **Academia and Research and Technology Organisations**
- *Financing of the partnership*
  - **EU envelope of about € 534 million**
- *Additional Private Commitment in the sector*
  - **€ 2.1 billion**

European Commission

- *Scope*
  - **Ensuring Europe's capacity to build and exploit high end computing**
- *Partnerships in terms of membership*
  - **High Performance Computing System vendors (Bull, EUROTECH, KALRAY, ...)**
  - **Microprocessor (ARM, ST, ...)**
  - **Research organisations, supercomputer centers, ...**
- *Financing of the partnership*
  - **EU envelope of about € 700 Million**
- *Additional Private Commitment in the sector*
  - **€ 2.8 billion**

European Commission

- *Scope*
  - **Reduce energy consumption, less waste management, increase investment by industry, better use of ICT**

- *Partnerships in terms of membership*
  - **Large manufacturers in automotive, aerospace, engineering, .**
  - **Suppliers and Service providers (e.g. software houses, ..)**
  - **Research and academia**
  - **Regional and national Innovation clusters**

- *Financing of the partnership*
  - **€450 million DG CONNECT**
  - **€700 million DG RTD**

- *Additional Private Commitments in the sector*
  - **€ 4.6 billion**

European Commission

55