European Commission

ICT in the LEIT Priority
of HORIZON 2020

The New EU Framework Programme for Research and Innovation

Workprogramme 2014-2015

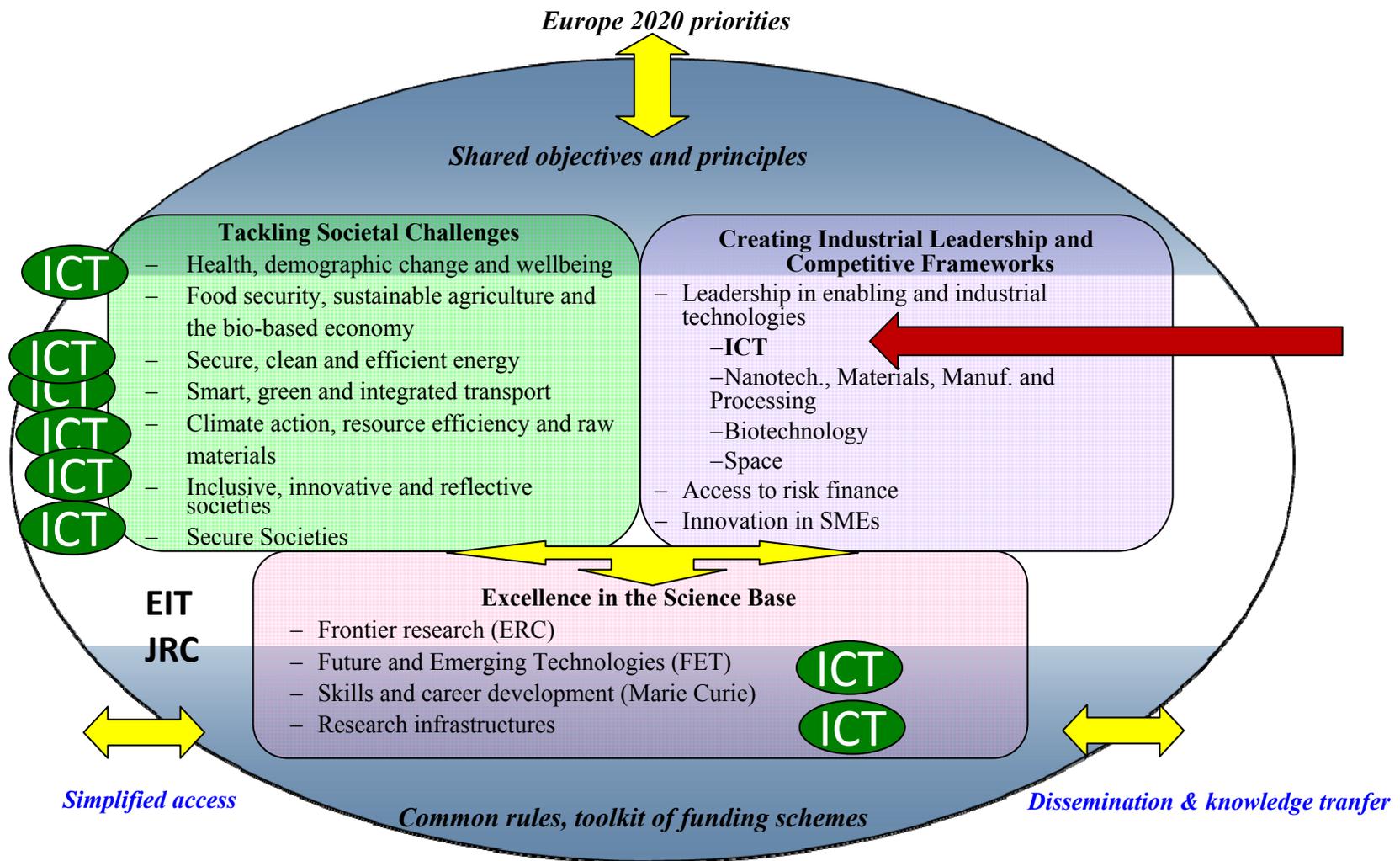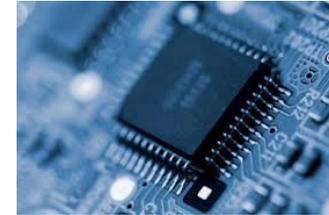**Athens, 19 November 2013**

Thomas Skordas

Head of the Photonics Unit

DG CONNECT, European Commission

HORIZON 2020

Europe 2020 priorities

Shared objectives and principles

Tackling 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

Creating Industrial Leadership and Competitive Frameworks
- Leadership in enabling and industrial technologies
  - **ICT**
  - Nanotech., Materials, Manuf. and Processing
  - Biotechnology
  - Space
- Access to risk finance
- Innovation in SMEs

ICT
ICT
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ICT

EIT

JRC

Excellence in the Science Base
- Frontier research (ERC)
- Future and Emerging Technologies (FET)
- Skills and career development (Marie Curie)
- Research infrastructures

ICT
ICT

Simplified access

Common rules, toolkit of funding schemes

Dissemination & knowledge tranfer

HORIZON 2020

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Industrial Leadership - ICT

1. A new generation of <u>components and systems</u>: engineering of advanced embedded and resource efficient components and systems **JTI ECSEL**

2. Next generation <u>computing</u>: advanced and secure computing systems and technologies, including cloud computing ⟶ <u>links to</u> **PPP HPC**

3. <u>Future Internet</u>: software, hardware, infrastructures, technologies and services **PPP 5G**

4. <u>Content technologies</u> and <u>information management</u>: ICT for digital content, cultural and creative industries **Future PPP on Big Data?**

5. Advanced interfaces and robots: <u>robotics</u> and <u>smart spaces</u> **PPP Robotics**

6. <u>Micro- and nanoelectronics</u> and <u>photonics</u>: key enabling technologies **JTI ECSEL** **PPP Photonics**

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1. Components and systems / 2014-2015

Draft – Pending Commission Decision

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

- **Complementary to the JTI Electronic Components and Systems (ECSEL)**

- **Organised in three related topics:**

  - **ICT 1 – 2014: Smart cyber-physical systems → 56 M€**
    - Next generation embedded and connected systems
  - **ICT 2 – 2014: Smart system integration → 48 M€**
    - Integration of heterogeneous micro- and nanotechnologies into smart systems
  - **ICT 3 – 2014: Advanced Thin, Organic and Large Area Electronics → 38 M€**

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

European Commission

1. Components and systems / 2014-2015
ICT 1 – 2014: Smart cyber-physical systems (CPS)

Draft – Pending Commission Decision

ICT 1: 56 M€

37 M€ - 100% funding
Small & large projects

a. Research and Innovation actions

New paradigms, concepts, and platforms / toolboxes laying the foundation for future generations of CPS. Focus is on:

- **Modelling and integration frameworks**

- **Smart cooperative and open CPS**: Engineering CPS that respond in real-time to dynamic and complex situations while preserving control, safety, privacy, reliability, etc.

b. Innovation actions

17 M€
70% funding

- **Towards platforms and ecosystems** : reference architectures and platforms for open, smart and co-operative CPS

  Small projects

- Towards a "**smart everywhere**" society: For networks of embedded systems design centres to help businesses innovate
  → **large scale experiments** driven by user requirements

  Large projects

Support Actions

2 M€, 100% funding

- Structuring of constituencies, roadmappping, promotion and dissemination, definition of strategic collaboration agenda with the USA …

DG CNECT Contact Point: Unit A3
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1. Components and systems / 2014-2015
ICT 2 – 2014: Smart System Integration

Draft – Pending Commission Decision

ICT 2: 48 M€

35 M€ - 100% funding
Small & large projects

a. Research and Innovation actions

- Advancing the SoA of **heterogeneous integration** of micro and nanotechnologies into **smart systems.** Focus on:
  - Higher density 3D heterogeneous integration
  - Autonomous smart systems with efficient energy management and harvesting
  - Smart systems with multi-functional properties

- R&D of **application-specific** smart systems

9 M€ - 70% funding
Small & large projects

b. Innovation actions

- **Access services** to design and manufacturing capabilities for prototyping, early validation and first production
- **Equipment / process assessment** for technology suppliers in smart systems

3 M€ - PCP Cofund
70% funding

c. Precommercial Procurement Action

Public authorities (acting as first users) procuring lab on chip based technologies for in-vitro diagnosis

1 M€, 100% funding

Coordination and Support Actions

Networking and collaboration among and with clusters, training, conferences, etc.

DG CNECT Contact Point: Unit A4
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1. Components and systems / 2014-2015
ICT 3 – 2014: Advanced TOLAE technologies

Draft – Pending Commission Decision

ICT 3: 38 M€

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b. Innovation actions

15.5 M€ - 70% funding Large projects

Demonstrate innovative products enabled by TOLAE: Prototype development and demonstration in smart packaging, advertisement or sensing

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17 M€ - 100% funding Small projects

a. Research and Innovation actions

TOLAE technologies and manufacturing processes. Focus is on conformable / flexible / stretchable substrates, advanced materials and technologies and scalable manufacturing processes

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3 M€, 100% funding

c. Technology Take-up and Innovation support Actions

- Competence centres providing EU-wide access services to industry

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2.5 M€ - PCP Cofund 70% funding

d. Precommercial Procurement Action

- For public authorities (acting as first users) for procuring electronic and photonic textile

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DG CNECT Contact Point: Unit A1
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2. Advanced Computing / 2014-2015

- 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:**
    - **ICT 4 – 2015: Customised and low power computing → 57 M€**
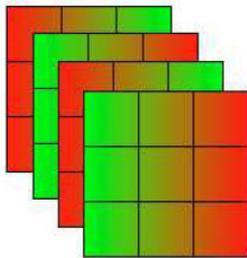
Multi core and
parallel architectures

Energy efficiency

Mixed criticality systems
and applications

3. Future Internet / 2014-2015

- 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:**

  - **ICT 5 – 2014: Smart networks and novel Internet architectures → 24 M€**
  - **ICT 6 – 2014 Smart optical and wireless network technologies → 30 M€**
  - **ICT 7 – 2014: Advanced cloud infrastructures and services → 73 M€**
  - **ICT 8 – 2015: Boosting public sector productivity and innovation through cloud computing services → 22 M€**
  - **ICT 9 – 2015: Tools and methods for Software Development → 25 M€**
  - **ICT 10 – 2015: Collective Awareness Platforms for sustainability and social innovation → 37 M€**
  - **ICT 11 – 2014: FIRE+ (Future Internet Research & Experimentation) → 31.5 M€**
  - **ICT 12 – 2015: Integrating Experiments and facilities in FIRE+ → 18 M€**
  - **ICT 13 – 2014: Web Entrepreneurship → 10 M€**
  - **ICT 14 – 2014: Advanced 5G Network Infrastructure for the Future Internet → 125 M€** **PPP 5G**

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3. Future Internet / 2014-2015
ICT 5 – 2014: Smart networks and novel Internet architectures

Draft – Pending Commission Decision

ICT 5: 24 M€

a. Research and Innovation actions

Novel Internet architectural and networking approaches to info delivery and access

→ with built-in security and privacy, mobility and scalability and targeting low-cost migration strategy from existing IP networks

→ Pilot experiments using virtualised platforms

**100% funding
Small projects**

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3. Future Internet / 2014-2015
ICT 6 – 2014 Smart optical and wireless network technologies

Draft – Pending Commission Decision

ICT 6: 30 M€

a. Research and Innovation actions

> 29 M€ - 100% funding
> Small projects

- **Focus on optical networks**
  - Dynamic management of resources
  - Transmission speeds at 10 Gbps/user (in 10 years)
  - Efficient data centre architectures
  - Scalability, cost and energy efficiency

- **Focus on wireless networks**
  - New paradigms for wireless connectivity
  - Flexible use of spectrum & usage diversity
  - Coverage of hybrid (terrestrial/satellite) infrastructure

Coordination and Support Actions

> 1 M€, 100% funding

- Dissemination, standardisation, international cooperation, roadmapping, etc.

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3. Future Internet / 2014-2015
ICT 7 – 2014: Advanced cloud infrastructures and services

Draft – pending Commission Decision

ICT 7: 73 M€

66 M€ - 100% funding
Small and large projects

5 M€ - 70% funding
Small projects

a. Research and Innovation actions

- **High performance heterogeneous cloud infrastructures** (IaaS, PaaS, SaaS)

- **Federated cloud networking:** deploying & managing cloud infrastructures , resources and services across computing & storage infrastructures

- **Dynamic configuration, automated provisioning and orchestration of cloud resources**

- **Automated discovery and composition of services**

- **Cloud security**

b. Innovation actions

Platforms for trusted cloud systems: open source SW for innovative and trusted cloud-based services

2 M€, 100% funding

Coordination and Support Actions

Defining common ref. models for SLAs in the cloud, addressing legal, economic, and societal factors, project collaboration actions, …

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3. Future Internet / 2014-2015
ICT 11 – 2014: FIRE+ (Future Internet Research & Experimentation)

Draft – Pending Commission Decision

ICT 11: 31.5 M€

a. Research and Innovation actions

25 M€, 100% funding Large projects

- **Creation, reconfiguration and/or extension of experimental infrastructures**
- **Leverage** GÉANT infrastructures by integrating devices across all comm. layers
- **Develop the concepts of Experimentation-as-a-Service (EaaS) and Virtual Experimentation**

b. Innovation actions

5 M€, 70% funding 1 large project

Selecting ideas for prototyping , experimentation, and validation and enabling experimentation planning and execution on top of FIRE+

Coordination and Support Actions

1.5 M€, 100% funding

Identification of new experimental facilities and testbeds for integration into FIRE+; roadmapping of future needs; International coop. with the USA, …

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3. Future Internet / 2014-2015
ICT 13 – 2014: Web Entrepreneurship

Draft – Pending Commission Decision

ICT 13: 10 M€

6 M€, 70% funding
Small Projects

a. Innovation actions

- Develop and test online platforms connecting existing local web entrepreneurship ecosystems and hubs and provide new services for web entrepreneurs
- Include conditions for collaborative innovation
- Help promising web start-ups

4 M€, 100% funding

b. Coordination Activities

Strengthen the environment for web entrepreneurship - exploit synergies across communities; Increase the impact and reach of online support platforms and services they offer + include training, legal and financial aspects, etc.

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3. Future Internet / 2014-2015
ICT 14 – 2014: Advanced 5G Network Infrastructure for the Future Internet

Draft – Pending Commission Decision

Call Opens 15 July 14
Closes 25 Nov 14

ICT 14: 125 M€

PPP 5G

98 M€, 100% funding
Large projects

a. Research and Innovation actions

- **Radio network architectures and technologies**
  - Network architecture, protocols and radio technologies
  - Low cost ubiquitous radio access infrastructure supporting low rate IoT and very high rate (>> 1Gbit/s) access
  - Radio, optical or copper based backhaul/fronthaul integration
  - Architectures for 5G transceivers and micro-servers
- **Convergence beyond last mile**
- **Network Management**
  Radically decrease network management opex through automation whilst increasing user perceived QoS, experience and security

25 M€, 70% funding
Large project

b. Innovation actions

Network virtualisation and SW networks: large scale validation, testing and standardisation in virtualisation; Orchestration logic; Tighter integration between the application/ service layers and the networking layers

2 M€, 100% funding

Coordination and Support Actions

Monitoring the PPP; international co-operation opportunities; support to standardisation and to spectrum policy; technology roadmaps, …

DG CNECT Contact Point: Unit E1
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4. Content technologies and information management / 2014-2015

Draft – Pending Commission Decision

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

- **Organised in eight topics:**

  - **ICT 15 – 2014: Big data and open data innovation and take-up → 50 M€**
  - **ICT 16 – 2015: Big data research → 39 M€**
  - **ICT 17 – 2014: Cracking the language barrier → 15 M€**
  - **ICT 18 – 2014: Support to the growth of ICT innovative creative industries SMEs → 15 M€**
  - **ICT 19 – 2015: Technologies for creative industries, social media and convergence → 41 M€**
  - **ICT 20 – 2015: Technologies for better human learning and teaching → 52 M€**
  - **ICT 21 – 2014: Advanced digital gaming/gamification technologies → 17 M€**
  - **ICT 22 – 2014: Multimodal and natural computer interaction → 31 M€**

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4. Content technologies and information management / 2014-2015
ICT 15 – 2014: Big data and open data innovation and take-up

Draft Pending Commission Decision

ICT 15: 50 M€

39 M€, 70% funding
Small & Large projects

b. Innovation actions

- **An incubator for open data supply chains** (open calls and support for SMEs to build services on top of open data)

  1 project

- **Innovation and technology transfer in multilingual data harvesting and analytics solutions and services**

  A few projects

Coordination and Support Actions

11 M€, 100% funding
1 CSA per area

- Exchange and reuse of data assets;

- Coordination of skills centres for big data analytics technologies and business development;

- Creation of a Big Data integrator platform for all H2020

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4. Content technologies and information management / 2014-2015
ICT 17 – 2014: Cracking the language barrier

Draft – Pending Commission Decision

ICT 17: 15 M€

a. Research and Innovation actions

A radically improved quality and coverage of machine translation

4 M€, 100% funding)

b. Innovation actions

Pilots for optimizing translation quality and language/topical coverage in realistic use situations.

10 M€, 70% funding
Small projects

Coordination and Support Actions

Benchmarking and competitive evaluation of machine translation, and the optimal use of language resources from various sources

1 M€, 100% funding

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4. Content technologies and information management / 2014-2015
ICT 18 – 2014: Support to the growth of ICT innovative creative industries SMEs

Draft – Pending Commission Decision

ICT 18: 15 M€

b. Innovation actions

Support creative SMEs in leveraging emerging ICT technologies (e.g. 3D, augmented reality, advanced user interfaces, visual computing) for the development of innovative products, tools, applications and services

> 14 M€, 70% funding
> Small projects (0.5 M€ to 1 M€) for 6-18 months

Coordination and Support Actions

Stimulate the growth of creative industries: include investor readiness support; connect creative SMEs with appropriate sources of funding; …

> 1 M€, 100% funding

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4. Content technologies and information management / 2014-2015
ICT 21 – 2014: Advanced digital gaming/gamification technologies

Draft – Pending Commission Decision

ICT 21: 17 M€

**9 M€, 100% funding
Large projects**

a. Research and Innovation actions

Advanced digital gaming technologies and components for the digital game industry

**8 M€, 70% funding
Small projects**

b. Innovation actions

Stimulate technology transfer and new non-leisure applications by SMEs through coordinating and incubating small scale experiments – underpin new market developments on digital games for learning and skills acquisition, and for empowerment and social inclusion

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4. Content technologies and information management / 2014-2015
ICT 22 – 2014: Multimodal and natural computer interaction

Draft – pending Commission Decision

ICT 22: 31 M€

a. Research and Innovation actions

- **Interactive information retrieval systems** with more efficient and natural ways of delivering answers to users' queries.

  7.5 M€, 100% funding Small projects

- Novel **multi-modal, adaptive interfaces**, including Brain Computer Interfaces

  16 M€, 100% funding Small projects

b. Innovation actions

Innovative multimodal interfaces to provide more efficient and natural ways of interacting with computers and improve users' experience

7.5 M€, 70% funding Small projects

DG CNECT Contact Point: Unit G2
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5. Robotics / 2014-2015

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

- 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 collaboration
    - 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 (topics ICT 23 – 2014 and ICT 24 – 2015)**
    - **ICT 23 – 2014: Robotics → 74 M€**
    - **ICT 24 – 2015: Robotics → 83 M€**

European Commission

5. Robotics / 2014-2015
ICT 23 – 2014: Robotics

Draft – Pending Commission Decision

PPP Robotics

ICT 23: 74 M€

57 M€, 100% funding Small & Large projects

a. Research and Innovation actions

- **Advance abilities & key technologies for industrial and service robotics**

  – Advance cognition, human-robot interaction, mechatronics, navigation, and perception technologies and prove the exploitation potential in the *market domains of manufacturing, commercial, civil, agriculture*

- **Horizontal issues:** systems development processes , common HW and SW platforms and benchmarking for technology assessment, performance evaluation and certification

12 M€, 70% funding Small & Large projects

b. Innovation actions

Technology transfer and robotics use cases: introduce, test and validate robotics in real-world conditions

5 M€ - PCP Cofund 70% funding

c. Precommercial Procurement Action

- Public authorities (acting as first users) for procuring robotics for public safety and monitoring of environment and infrastructures

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6. Micro- and nano-electronics and photonics
Key Enabling Technologies / 2014-2015

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

- 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.)

  → **Photonics PPP**
  - Includes calls for ERANETs as well as public procurement actions (roll-out and deployment of optical networking technologies)

- **Organised in five topics:**
  - **ICT 25 – 2015: Generic micro- and nano-electronic technologies → 50 M€**
  - **ICT 26 – 2014: Photonics KET → 47 M€**
  - **ICT 27 – 2015: Photonics KET → 44 M€**   **PPP Photonics**
  - **ICT 28 – 2015: Cross-cutting ICT KETs → 56 M€**
  - **ICT 29 – 2014: Development of novel materials and systems for OLED lighting → 18 M€**

HORIZON 2020

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6. Micro- and nano-electronics and photonics / 2014-2015
ICT 26 – 2014: Photonics KET

Draft – Pending Commission Decision

PPP Photonics

ICT 26: 47 M€

28 M€, 100% funding Small projects

a. Research and Innovation actions

- **Application driven core photonic technology developments – focus on:**
  - *Biophotonics* for screening of diseases
  - *Sensing for safety and civil security:* optoelectronic devices for NIR & MIR sensing applications (0.7 to 50 µm) for high volume markets
- **Disruptive approaches in sensing**
  Photonic sensing devices offering breakthrough advances in sensitivity or specificity

8 M€, 70% funding 1 Large project

b. Innovation actions

Open system architectures for Solid State Lighting

5 M€ - PCP Cofund 70% funding

c. Coordination and Support Actions

Strategic coordination and networking; Wide uptake of SSL technologies; EU-wide outreach

6 M€ - ERANET Cofund

c. ERANETs

A joint call for proposals between national & regional grant programmes

DG CNECT Contact Point: Unit A1
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European Commission

6. Micro- and nano-electronics and photonics / 2014-2015
ICT 29 – 2014: Development of novel materials and systems for OLED lighting

Draft – Pending Commission Decision

PPP Photonics

ICT 29: **18 M€**
A Joint Call between ICT and NMP

18 M€, 100% funding Small projects

a. Research and Innovation actions

Focus is on: Materials, process & device technology for OLED lighting – focus is on:

– Materials: competitive lifetime for all colours and white light

– Devices: OLEDs over larger surfaces, with higher brightness, larger uniformity and longer lifetimes

– Energy efficacy above 100 lm/W, with improved out-coupling efficiency

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ICT Cross-Cutting Activities / 2014-2015

- **ICT 30 – 2015: Internet of Things and platforms for Connected Smart Objects → 51 M€**

  - Cutting across several LEIT-ICT areas (smart systems integration, smart networks, big data)

  - Bringing together different generic ICT technologies and their stakeholder constituencies

- **ICT 31 – 2014: Human-centric Digital Age → 7 M€ (for R&I actions and for CSAs)**

  - 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

- **ICT 32 – 2014: Cyber-security, Trustworthy ICT → 38 M€**

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

- **ICT 33 – 2014: Trans-national co-operation among National Contact Points → 4 M€**

  - Mechanisms for effective cross border partnership searches, identifying, understanding and sharing good practices among ICT NCPs

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ICT Cross-Cutting Activities / 2014-2015
ICT 32 – 2014: Cyber-security, Trustworthy ICT

Draft – Pending Commission Decision

ICT 32: 38 M€

**37 M€, 100% funding
Small and large projects (2-8 M€)**

a. Research and Innovation actions

- **Security-by-design for end-to-end security**

  Develop and test paradigms across all HW and SW layers of an ICT system and application and business services + include automated security policy governance for open and dynamically reconfigurable environments

- **Cryptography**

  HW based real-time cryptography, distributed cryptography, post-quantum cryptography for long term security, quantum key distribution (QKD) systems and networks, etc.

c. Coordination and Support Actions

Activities supporting the Cryptography Community: integration and structuring of the cryptography community, technology gaps, standards development, training needs and skill shortage, open competitions, dissemination and outreach

1 M€, 100% funding

**DG CNECT Contact Point: Unit H4
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ICT innovation actions / 2014-2015

- **ICT 34 – 2015: ICT contribution to pilot for co-investments by business angels in innovative ICT firms → 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

- **ICT 35 – 2014: Innovation and Entrepreneurship Support → 7 M€**

  • 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

- **ICT 36 – 2015: Pre-commercial procurement open to all areas of public interest requiring new ICT solutions → 4 M€**

  • European networks of procurers
  • Pre-commercial procurement

- **ICT 37 – 2014-15: Open Disruptive Innovation Scheme → 45 M€ (2014) + 45 M€ (2015)**

  • 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

ICT innovation actions / 2014-2015
ICT 37 – Open Disruptive Innovation Scheme

Draft – Pending Commission Decision

Financing innovative SMEs through the dedicated SME instrument

- For early stage, high-risk innovative SMEs

- **Objective:** nurture promising innovative and disruptive ideas; support prototyping and demo in real world environments; help deployment

- ***Phase 1***: Concept and feasibility assessment
→ lump sum of 50 K€ per project for ~6 months project durations

- ***Phase 2***: R&D, demonstration, market replication (70% funding)
→ 0.5 to 2.5 M€ per project for 1 to 2 years; Must include a first commercialisation plan

- ***Phase 3****: via the Debt Facility (EIB/EIF)*

➤ **Apply for Phase 1 or directly for Phase 2**

- **Budget of the action: 90 M€ for 2014-15: (10% Phase 1, 88% Phase 2, 2% Phase 3)**

- *Continuously Open Calls – Opens 1st March (TBC)*

- ***3 Cut-off dates in 2014:*** *For phase 1: 18.06, 24.09,17.12; for Phase 2 TBD*

- ***Time to Grant****: 3 months for Phase 1 and 6 months for Phase 2*

DG CNECT Contact Point: Unit F2
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International cooperation actions / 2014-2015

- **Coordinated calls**

- **EU-Brazil**
  - Cloud computing, including security aspects
  - High performance computing
  - Experimental platforms

- **EU-Japan**
  - Technologies combining big data, internet of things in the cloud
  - Optical communications
  - Access networks for densely located users
  - Experimentation and development on federated Japan-EU testbeds

- **ICT 38 – 2015: International partnership building and support to dialogues with high income countries (USA, Canada, East Asia and Oceania) → 3 M€**

- **ICT 39 – 2015: International partnership building in low and middle income countries → 11 M€**

European Commission

Factory of the Future / 2014-2015

- 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:**

  - **FoF 1 – 2014: Process optimisation of manufacturing assets → 34 M€**

    includes R&I on CPS-based process optimisation (Cyber-Physical Systems) for adaptive and smart manufacturing systems; Collaborative and mobile manufacturing (cloud-enabled) process optimisation of manufacturing assets across the supply chain; and, towards zero-failure laser-based manufacturing;

  - **FoF 8 – 2015: ICT-enabled modelling, simulation, analytics and forecasting technologies → 32 M€**

  - **FoF 9 – 2015: ICT Innovation for Manufacturing SMEs (I4MS) → 36 M€**

- Part of the **PPP FoF**

Call DDL: 20 March 14

European Commission

Call planning overview

- **LEIT**

  - **H2020-ICT-2014 (ICT Call 1)**
    - Publication date: 11 December 2013
    - Deadline: **23 April 2014** (all topics except 5G Future Internet)
    - Deadline for 5G Future Internet: **25 November 2014**

  - **H2020-FoF-2014/2015 (Factory of the Future)**
    - Publication date: 11 December 2013
    - Deadlines: **20 March 2014** and **9 December 2014**

  - **H2020-EUJ-2014 (EU-Japan Call)**
    - Publication date: 7 January 2014
    - Deadline: **10 April 2014**

  - **H2020-ICT-2015 (ICT Call 2)**
    - Publication date: 15 October 2014
    - Deadline: **21 April 2015 (TBC)**

  - **H2020-EUB-2015 (EU-Brazil Call)**
    - Publication date: 15 October 2014
    - Deadline: **21 April 2015 (TBC)**

European Commission

Guide to the presence of ICT in H2020

■ **Comprehensive coverage of all three H2020 pillars**

■ **Detailed list of calls and topics**

Find out more:

▪http://ec.europa.eu/research/horizon2020/index_en.cfm

▪**A guide to ICT-related activities in WP2014-15:**
http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=3511

▪**The ICT LEIT WP 2014-15 can be found at:**
https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/H2020%20LEIT-ICT%20WP%202014-15%20-%2031%2010%202013.pdf

▪**The Participant Portal to be revamped soon**:
https://ec.europa.eu/research/participants/portal

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Thank you
for your attention!

Find out more:
www.ec.europa/research/horizon2020