FCT Fundação para a Ciência e a Tecnologia
MINISTÉRIO DA EDUCAÇÃO E CIÊNCIA

Horizon 2020

ICT in Societal Challenges and Industrial Leadership

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HORIZON 2020
THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

ICT in H2020

SOCIETAL CHALLENGES
ICT for Health, Demographic change and wellbeing
ICT for Secure, clean and efficient energy
ICT for Smart, green and integrated transport
ICT for Climate action, environment, resource efficiency and raw materials
ICT for Inclusive, innovative and reflective societies
ICT for Secure societies
Human-Centric Digital Age
Internet of Things and Platform of Connected Smart Objects
Cyber-security, Trustworthy ICT
ICT LEIT
Other KETs / Cross Cutting KETs
ICT KETs (micro- and nano-electronic technologies, photonics)
Content technologies and information management
Advanced computing
Future internet
A new generation of components and systems
Robotics
Factory of the Future PPP
Horizontal ICT innovation actions
Open Disruptive Innovation scheme / SME instrument
Excellent Science
FET Open
FET Pro Active
FET Flagships
e_Infrastructures

ICT in Industrial Leadership

1. Components and systems
2. Advanced Computing
3. Future Internet
4. Content technologies and information management
5. Robotics
6. Key Enabling Technologies:
   - Micro- nano-electronics
   - Photonics
7. International Cooperation actions (EU-Brazil, EU-Japan)

ICT cross cutting activities:

- Internet of Things
- Human-centric Digital Age
- Cybersecurity

Horizontal Innovation actions

- Access to finance
- Innovation and Entrepreneurship Support
- Open disruptive innovation scheme (SME instrument)

1. Components and systems (Budget: 142M)

- Covers systemic integration from smart integrated components to cyber-physical systems
- Work is complementary to the JTI Electronic Components and Systems (ECSEL)
- Organised in three related topics
- R&I in this area will also contribute to the implementation of the SRA on Energy Efficient Buildings
- 3 topics open in 2014

2. Advanced Computing (Budget: 57M)

- 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 and in Excellence Science pillar under Research Infrastructures and FET
- 1 topic open in 2015

3. Future Internet (Budget: 395.5M)

- Focus is on network and computing infrastructures to accelerate innovation and address the most critical technical and use aspects of the Internet
- Addresses:
  - limitations of the Internet not designed to support the very large set of requirements
  - more efficient computational and data management models
  - availability of testbeds for experiments and research validation
  - leveraging of Internet to foster innovative usages of social and economic value and to promote entrepreneurship
- Links to a cross-cutting action on IoT with Components and Systems
- 10 topics open both in 2014 & 2015

4. Content technologies and information management (Budget: 260M)

- Addresses:
  - Big Data with focus on
    - Innovative data products and services
    - Solving fundamental research problems
  - Machine translation
    - Overcoming barriers to multilingual online communication
  - Tools for creative, media and learning industries
    - Mobilising the innovation potential of SMEs active in the area
  - Multimodal and natural computer interaction
  - 8 topics open both 2014 & 2015

5. Robotics (Budget: 157M)

- Roadmap-based research driven by application needs (established by the planned Public-Private Partnership in Robotics)
- Effort to close the innovation gap: use-cases, pre-commercial procurement, industry-academia cross-fertilisation
- Additional activities: shared resources, performance evaluation & benchmarking, community building and competitions
- 2 topics open both in 2014 &2015

6. Key Enabling Technologies (Budget: 215M) – I

Micro- and- nano-electronics:

- Covers generic technology developments focused on Technology Readiness Levels (TRLs)
- Includes a coordination and support action with international cooperation with USA and Asia in the areas of standardisation including 450 mm wafers manufacturing
- Includes also an awareness actions targeted at young students
- 1 topic open in 2014

6. Key Enabling Technologies (Budget: 215M) – II

Photonics & OLED lighting

- 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.)
- 4 topics open in both 2014 & 2015

7. International Cooperation actions (Budget: 27M)

- EU – Japan:
  - Big data
  - Internet of Things
  - Cloud
  - Topic open in 2014
- EU – Brazil:
  - Cloud Computing,
  - High Performance Computing
  - Topic open in 2015
- International partnership with high income countries (USA, Canada and East Asia – 2015
- International partnership with low and middle income countries – 2015

ICT Cross-Cutting Activities (Budget: 49 M)

- Internet of Things:
  - Cutting across several LEIT-ICT areas (smart systems integration, smart networks, big data)
  - Brings 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

ICT Innovation actions (Budget: 71 M)

- Access to finance
  - Pilot action for business angels to co-invest in ICT innovative companies
- 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
- Open Disruptive Innovation Scheme
  - Agile space to combine new technologies, devices, applications, interfaces, business models for new product and services concepts
  - Open, fast and light
  - Small-scale bottom-up initiatives
  - Continuously open calls with cut-off dates/year

Overview of calls for ICT Industrial Leadership 2014-15

- H2020-ICT-2014:

  Publication date: 11 December 2013

  Deadline: 23 April 2014 (all topics except 5G Future Internet)

  Deadline for 5G Future Internet: 23 September 2014

- H2020-EUJ-2014 (EU-Japan Call):

  Publication date: 7 January 2014

  Deadline: 10 Abril 2014

2014

- H2020-ICT-2015:

  Publication date: 15 October 2014

  Deadline: 14 April 2015

- H2020-EUB-2015 (EU-Brazil Call):

  Publication date: 15 October 2014

  Deadline: 21 April 2015

2015

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