Horizon 2020

Information and Communication Technologies in Work Programme 2016-17

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DG CONNECT
European Commission

Reminder: ICT in H2020 > LEIT-ICT

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
- Nanotech., Materials, Manuf. & Processing ICT
- Biotechnology
- Space

Access to risk finance

Innovation in SMEs ICT

Societal Challenges

Health, demographic change and wellbeing ICT

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

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

ICT in Societal challenges

Societal Challenges

1. Health, demographic change and wellbeing
2. Food security, sustainable agriculture, and forestry, marine, maritime and inland water research, and the bio-economy
3. Secure, clean and efficient energy
4. Smart, green and integrated transport
5. Climate action, environment, resource efficiency and raw materials
6. Europe in a changing world – inclusive, innovative and reflective societies
7. Secure societies – protecting freedom and security of Europe and its citizens

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**

Budget

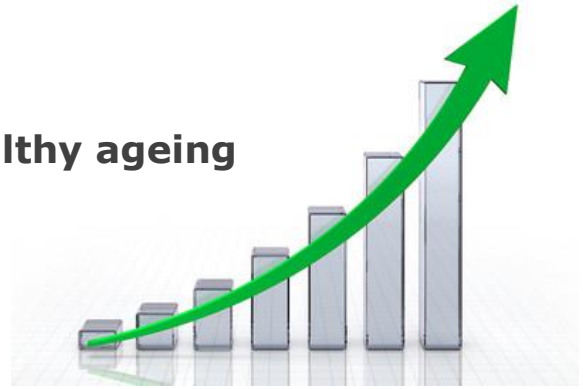
SC	2014-15	2016-17	2014-2020 (w/o EFTA)	Total SC (w/o EFTA)	% earmarked for ICT
Health	268	232	1 018	~ 6 900	15%
Food	-	-	-	~ 3 700	
Energy	72	*TBD*	*TBD*	~ 5 400	
Transport	85	*TBD*	*TBD*	~ 5 850	
Environment	25	*TBD*	*TBD*	~ 2 750	
Societies	78	85	319	~ 1 200	26%
Security	99	98	384	~ 1 550	25%
Total	**627**	**415**	**1 903+**	**~ 27 350**	**7%**

Note: All budget figures in M€

➔ **Different approaches between SCs!**

Preparation for market deployment
A few examples from WP2016-17

- **Big Data**
  - **SC1: Big Data supporting Public Health policies**
  - **SC4: Innovative ICT solutions for future logistics operations**
  - **SC6: Policy-making in the age of Big Data**
  - **SC6: European cultural heritage, access and analysis for a richer interpretation of the past**
- **Robotics**
  - **SC1: Robotics-based solutions for active and healthy ageing**
  - **SC2: Robot-based precision farming**
- **Internet of Things**
  - **Smart living environments for ageing well**
  - **Smart farming and food security**
  - **Autonomous vehicles in a connected environment**



Links to policy initiatives

- **eHealth**
  - **eHealth action plan 2012-2020**
- **Silver Economy**
- **Digital Single Market**
  - **Privacy & Cybersecurity**
  - **New eGovernment action plan**
- **Smart Cities and Communities EIP**
- **Strategic Energy Technology (SET) Plan**
- **ICT contribution to EU2020 20/20/20 objectives**

Approach to WP2016-17

- **Stronger integration** of ICT with other disciplines **within SC calls**
  - **Joint calls**
  - **Multidisciplinarity**
- Increased support to **activities cutting across SCs and LEIT-ICT**
  - **Focus areas**
    - Internet of Things
    - Digital Security
  - **Other cross-cutting topics**
    - Big Data supporting Public Health policies (SC1)
    - Policy-making in the age of Big Data (SC6)
- Consolidation and strengthening of the **SME instrument**

Health, demographic change and wellbeing
2016-2017

- **Continuity with WP2014-15, FP7 and CIP**
  - **Active and healthy ageing**
  - **Personalization of healthcare and patient empowerment**

- **Contribution to other major WP initiatives in ICT**
  - **Digital Security**
  - **IoT**
  - **Big Data**

- **Introduction of specific SME-instrument topic**
- **Innovative public procurement actions**
- **International cooperation with US and Japan**
- **Contribution to the AAL programme**

Health, demographic change and wellbeing
2016-2017

- **Personalized Medicine** (114,5 M€)
  - **Active ageing and self-management of health** (58,5 M€)
    - **PCP - eHealth innovation in empowering the hospitalised patient** (18 M€)
    - **PPI for deployment and scaling up of ICT solutions for active and healthy ageing** (10,5 M€)
    - **EU-Japan cooperation on novel ICT Robotics based solutions for active and healthy ageing at home or in care facilities** (5 M€)
    - **Personalised coaching for well-being of older persons** (25 M€)
  - **Methods and data** (56 M€)
    - **In-silico trials for developing and assessing biomedical products** (19 M€)
    - **Personalised computer models and in-silico systems for well-being** (19 M€)
    - **Big Data supporting Public Health policies** (10 M€)
    - **PPI for uptake of standards for the exchange of digitalised healthcare records** (8 M€)
- **Coordination activities** (9,5 M€)

Food security and sustainable use of natural resources
2016-2017

- **Contribution from LEIT-ICT to the focus area 'Sustainable Food Security – Resilient and resource-efficient value chains'**
  - **Robot-based precision farming** (7 M€)

- **Contribution from SC2 to the IoT focus area**
  - **Large-scale pilot on 'Smart farming and food security'** (30 M€)

Energy
2016-2017

- **Three calls (all focus areas)**

  - **Energy-efficiency** (194 M€ overall)
    - **Behavioural change toward energy efficiency through ICT**
    - Bringing to market **more energy efficient and integrated data centres**

  - **Competitive low-carbon energy** (725 M€ overall)
    - **Smart grids, storage and energy system integration technologies (4 topics – 182 M€)**
    - **Tools and technologies for coordination and integration of the European energy system** (28 M€)

  - **Smart cities and communities** (231 M€ overall)

    ➔ part of **smart and sustainable cities** cross-cutting focus area

    - **Smart Cities and Communities lighthouse projects (131,5 M€)**

Transport
2016-2017

- **Three calls**

  - **Mobility for growth** (436 M€ overall)
    - **Innovative ICT solutions for future logistics operations**
    - **Intelligent Transport Systems *(3 topics)***
    - Increasing the take up and scale-up of innovative solutions to achieve sustainable mobility in urban areas

  - **Automated road transport** (114 M€ overall)
    - **ICT infrastructure to enable the transition towards road transport automation**

  - **European green vehicle initiative** (206 M€ overall)
    - Demonstration (pilots) for **integration of electrified L-category vehicles in the urban transport system**

Climate and environment
2016-2017

- **One generic SC5 call**

+ contributions to three focus areas

- **Industry 2020 in the circular economy**
- **Blue growth**
- **Smart and sustainable cities**

- **Opportunities for ICT contributions**
  - Water management
  - Climate and water resilience in cities
  - Business models for the circular economy
  - European data hub for the GEOSS information system

Inclusive, innovative and reflective societies
2016-2017

- **Revised WP structure with a better integration of ICT and SSH across three priorities:**
  - **Co-creation for growth and inclusion**
  - **Reversing inequalities and promoting fairness**
  - **Understanding Europe**
- **Joint SME topic**

Inclusive, innovative and reflective societies 2016-2017

- **Four calls**
  - **Co-creation for growth and inclusion** (ICT: 30,5 M€)
    - **Applied co-creation to deliver public services** (10 M€)
    - **Policy-development in the age of Big Data** (11,5 M€)
    - **Once-only principle** (9M€)
  - **Reversing inequalities and promoting fairness** (ICT: 4 M€)
    - **Multi-stakeholder platform for enhancing youth digital opportunities** (1 M€)
    - **Boosting inclusiveness of ICT-enabled research and innovation** (3 M€)
  - **Understanding Europe** (ICT: 35,5 M€)
    - **Virtual museums and social platform on European digital heritage, memory, identity and cultural interaction** (11 M€)
    - **European cultural heritage, access and analysis for a richer interpretation of the past** (9 M€)
    - **Understanding the transformation of European public administrations** (15,5 M€)
  - **Engaging together globally**

Security
2016-2017

- **Integration of physical and cyber-security activities in a joint call on critical infrastructure protection**

- **Focus area on Digital Security**
  - **with contributions from LEIT-ICT and SC1**

- **Joint SME topic**

Security
2016-2017

- **Five calls**
  - **Digital Security focus area**
  - **Critical infrastructure protection**
  - **Disaster resilience**
  - **Fight against crime and terrorism**
  - **Border security and external security**

Security
2016-2017

- **Digital Security focus area** (118 M€)
  - **Privacy and Data Protection** (18 M€)
  - **Addressing Advanced Cyber Security Threats and Threat Actors** (18 M€)
  - **Cyber Security for SMEs, local public administration and Individuals** (22 M€)
  - **Economics of Cybersecurity** (4 M€)
  - **EU Cooperation and International Dialogues in Cybersecurity and Privacy Research and Innovation** (3 M€)
  - **Increasing digital security of health related data on a systemic level (SC1)** (11 M€)
  - **Assurance and Certification for Trustworthy and Secure ICT systems, services and components (LEIT-ICT)** (23,5 M€)
  - **Cryptography (LEIT-ICT)** (18,5 M€)
- **Critical infrastructure protection** (40 M€)
  - **Prevention, detection, response and mitigation of the combination of physical and cyber threats to the critical infrastructure of Europe** (40 M€)

SME Instrument

SME Instrument – ICT
2016-2017

- **SME Instrument dedicated call** (739 M€ overall)
  - **Open Disruptive Innovation Scheme** (126 M€)
  - Accelerating the uptake of nanotechnologies advanced materials or advanced manufacturing and processing technologies by SMEs (67 M€)
  - **Accelerating market introduction of ICT solutions for Health, Well-Being and Ageing Well** (30,5 M€)
  - Stimulating the innovation potential of SMEs for a low carbon and efficient energy system (96 M€)
  - Small business innovation research for Transport and Smart Cities Mobility (119 M€)
  - **New business models for inclusive, innovative and reflective societies** (22 M€)
  - **Engaging SMEs in security research and development** (30 M€)

More information…

Call planning – 2016 (1/2)

FET

- **FET Open:** 11 May, 29 Sept
- **FET Proactive:** 12 April, 27 Sept

Research Infrastructures: 30 March, 22 June, 20 Sept

LEIT

- **EU-Japan, EU-South Korea: 19 Jan**
- **Main ICT call: 12 April, 8 Nov**

SC1 (Health):

- **EU-Japan coop on Robotics: 12 Apr**
- **Other topics from SC1 call: 16 Feb**

SC3 (Energy)

- **Energy-efficiency: 21 Jan**, 15 Sept
- **Competitive Low Carbon Energy:** 5 April

SC4 (Transport): 20 Jan, 26 Jan

Call planning – 2016 (2/2)

SC6 (Europe in a changing world)

- **Co-creation:** 24 May
- **Reversing inequalities: 4 Feb**
- **Understanding Europe: 4 Feb**

SC7 (Security)

- **Digital security of health data: 16 Feb**
- **Assurance and certification:** 12 April
- **Other topics (CIP+DS):** 25 August

Cross-cutting activities

- **ICT for FoF: 21 Jan**
- **IoT:** 12 April
- **Smart Cities:** 8 March, 5 April

SME instrument

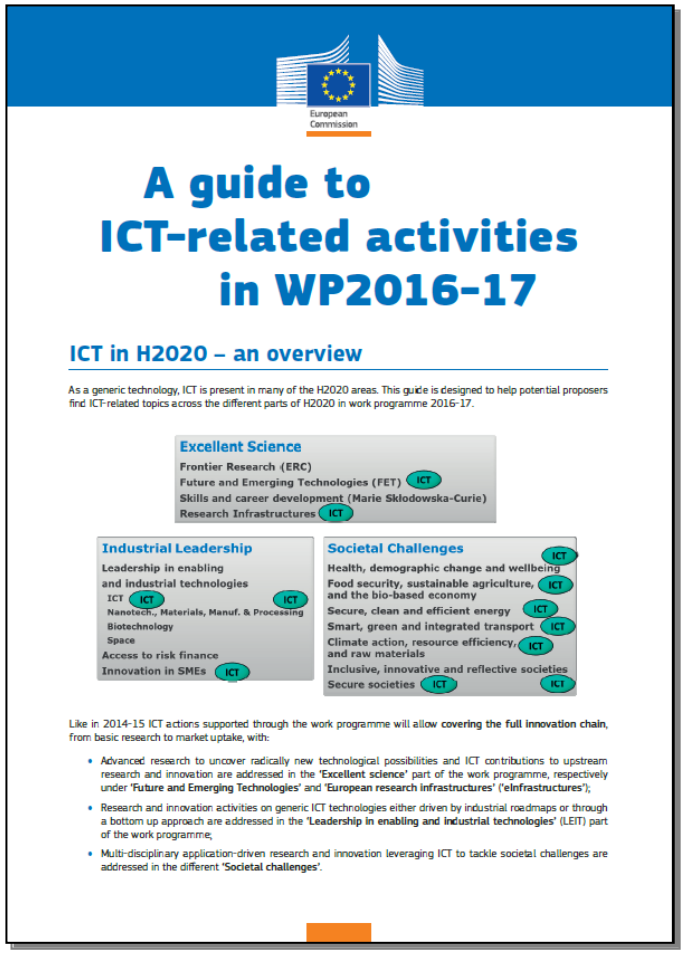
- **Phase 1: 24 Feb**, 3 May, 7 Sept, 9 Nov
- **Phase 2: 3 Feb**, 14 April, 15 June, 13 Oct

Fast Track to Innovation: 15 March, 1 June, 25 Oct

European Commission

Guide to ICT-related activities in WP2016-17

- **Comprehensive coverage of the three H2020 pillars**
- **Detailed list of calls and topics**
- **Available on H2020 website**



European Commission

A guide to ICT-related activities in WP2016-17

ICT in H2020 – an overview

As a generic technology, ICT is present in many of the H2020 areas. This guide is designed to help potential proposers find ICT-related topics across the different parts of H2020 in work programme 2016-17.

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Like in 2014-15 ICT actions supported through the work programme will allow **covering the full innovation chain**, from basic research to market uptake, with:

- Advanced research to uncover radically new technological possibilities and ICT contributions to upstream research and innovation are addressed in the **'Excellent science'** part of the work programme, respectively under **'Future and Emerging Technologies'** and **'European research infrastructures'** (**'eInfrastructures'**);
- Research and innovation activities on generic ICT technologies either driven by industrial roadmaps or through a bottom up approach are addressed in the **'Leadership in enabling and industrial technologies'** (LEIT) part of the work programme;
- Multi-disciplinary application-driven research and innovation leveraging ICT to tackle societal challenges are addressed in the different **'Societal challenges'**.

Find out more

- **Horizon2020 web site**
  - ✓ http://ec.europa.eu/programmes/horizon2020
- **Participants portal**
  - ✓ http://ec.europa.eu/research/participants/portal
- **H2020 Helpdesk**, including FAQ
  - ✓ http://ec.europa.eu/research/index.cfm?pg=enquiries
- **National Contact Points**
  - ✓ http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html

Thank you for your attention!