



NEMZETI KUTATÁSI, FEJLESZTÉSI
ÉS INNOVÁCIÓS HIVATAL

Horizont 2020 Információs és Kommunikációs Technológiák 2016-17. évi pályázati felhívások

2016.okt.25



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MOMENTUM OF INNOVATION

Tartalom

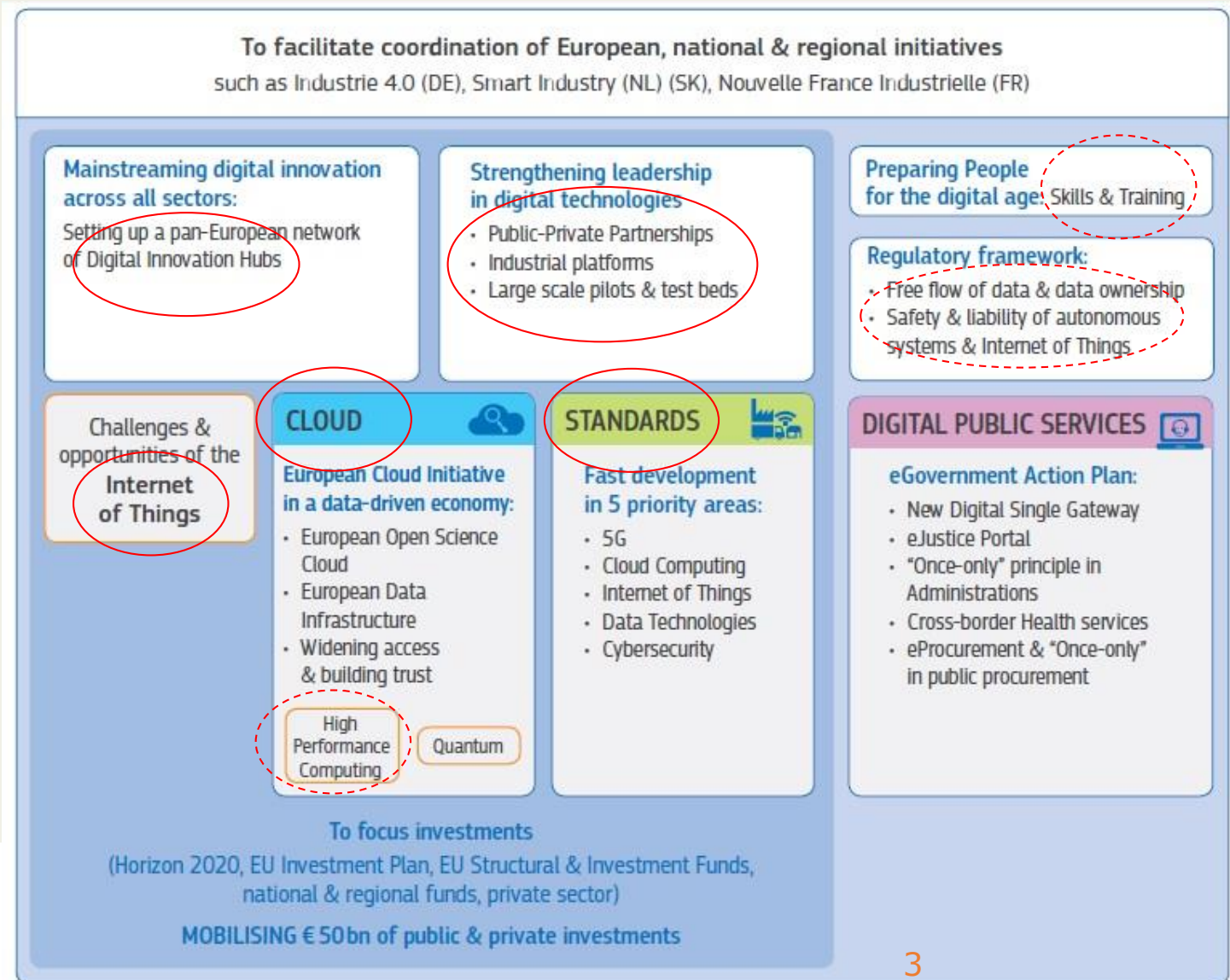
- H2020 ICT kontextus - 2018-20. évi munkaprogram előkészítése
- ICT a H2020-ban
- 2016-17. évi felhívások
- Konzorcium építő pályázat
- Nemzeti Kapcsolattartók és Partnerkeresés
- Rendezvények / ICT pályázók napja anyagai



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Contributing to the DEI strategy



Strategic Programming 2018-20

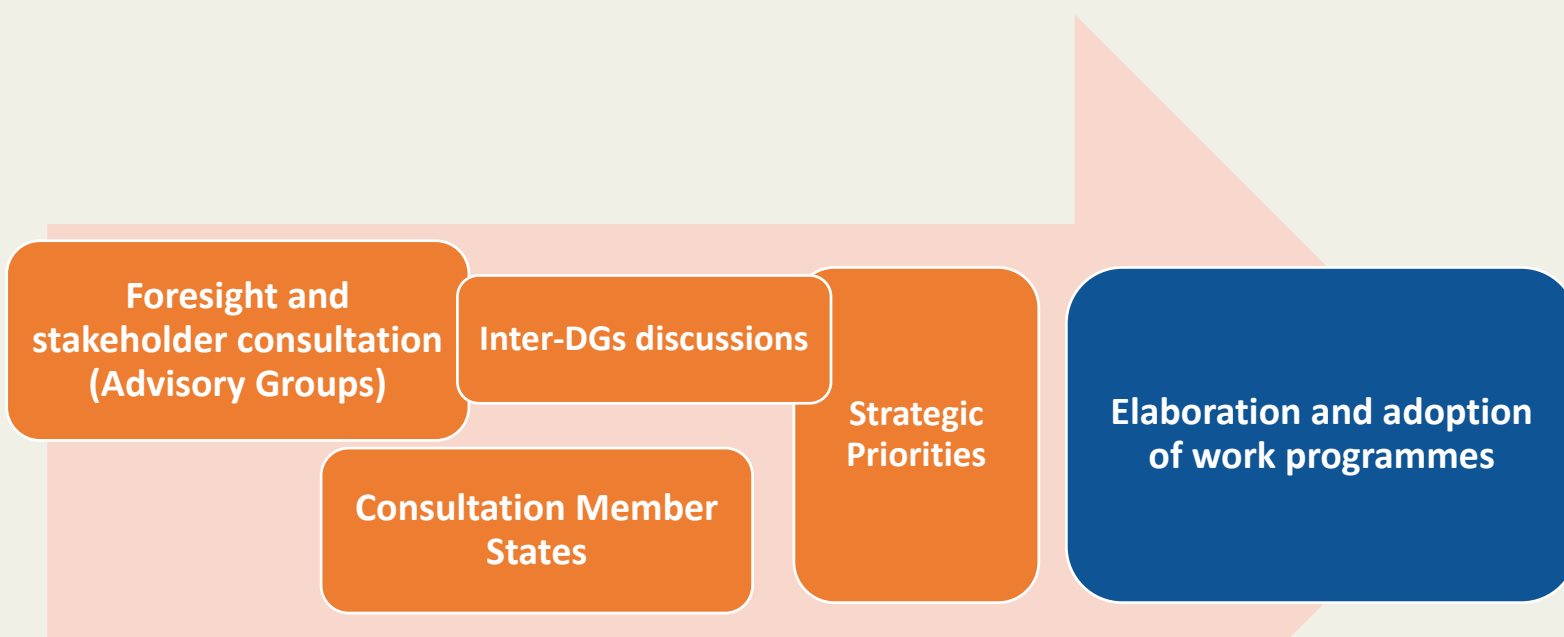
- Process

01-06/2016

04-09/2016

10/2016

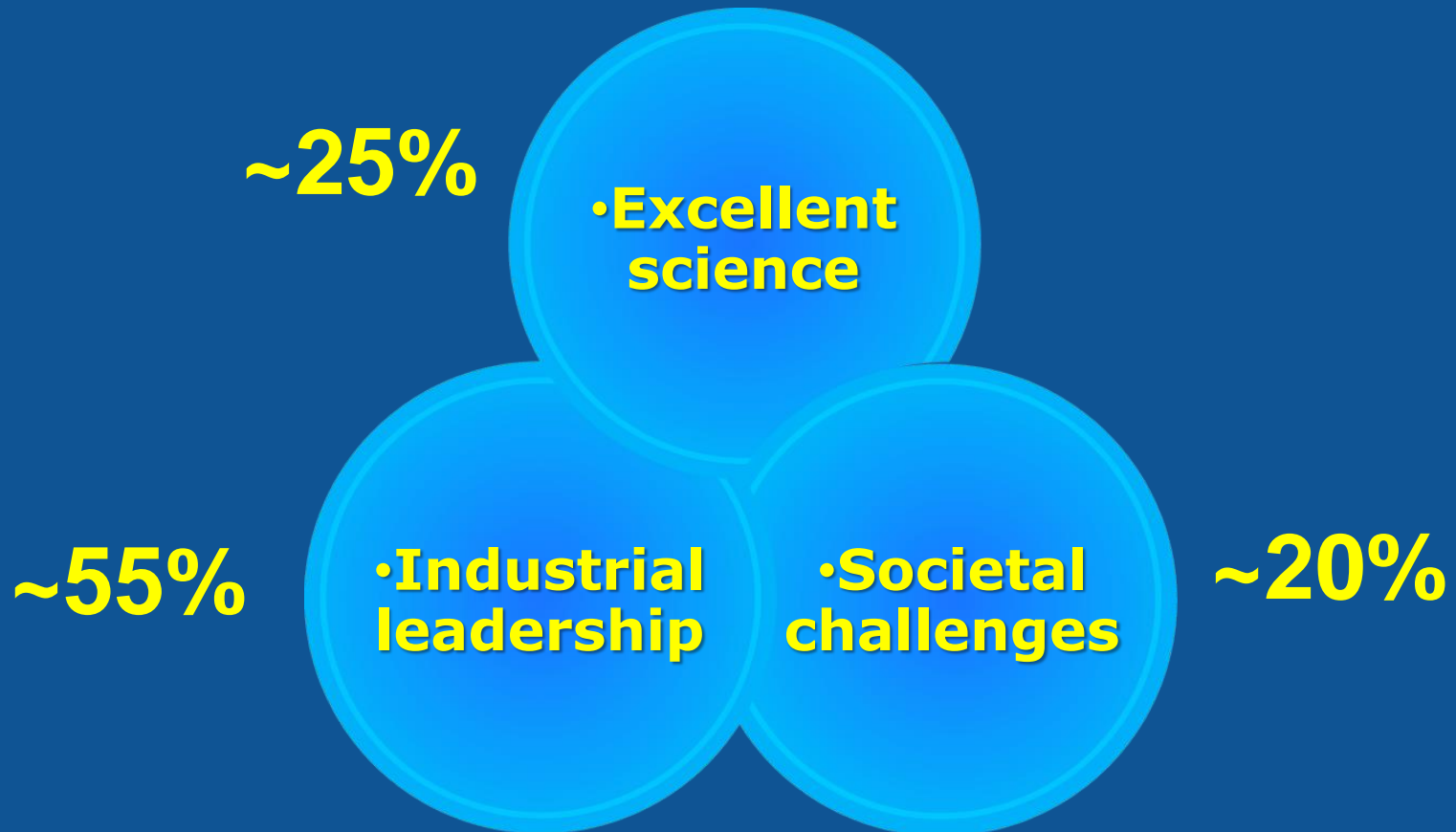
11/2016.....



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ICT in the 3 Pillars



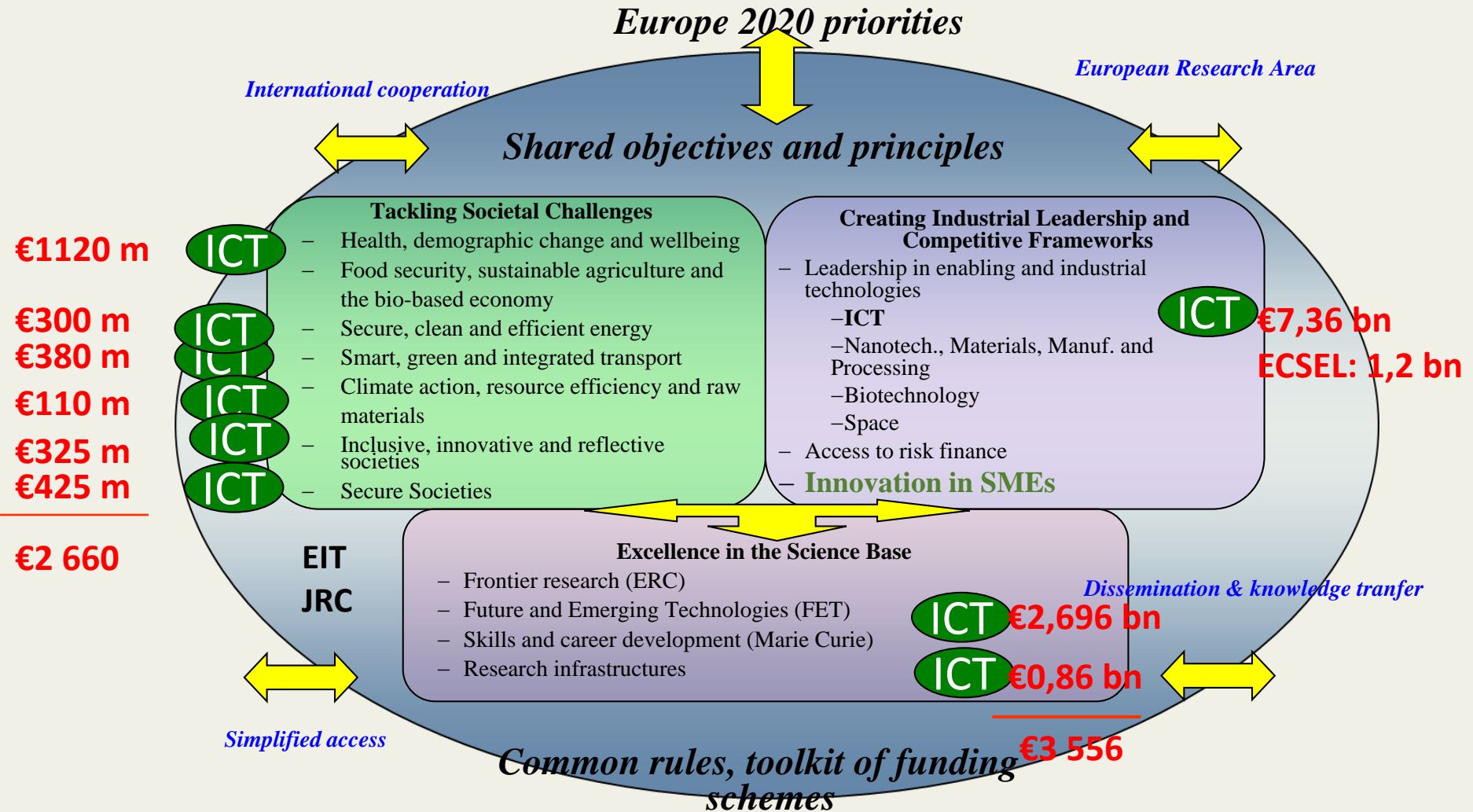
Simplification?



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ICT in H2020 (€ 13 576)



Where to find ICT R&D&I in H2020?

Everywhere!

change of mindset



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Channels for H2020 ICT Funding

- H2020 projects in LEIT (eg. Research and Innovation Actions, Innovation Actions, SME Instrument, FTI projects, Prizes)
- H2020 projects in Societal Challenges (same)
- Other H2020 areas, eg. Ind Marie Curie Projects)
- Calls for Third Parties through large initiatives (eg. PPP projects, Large Scale Pilots, Smart Anything Everywhere, I4MS, IoT EU platforms, etc.)



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2016-17. évi munkaprogram



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Structure, budget

2016 – 17:	1526,2
Y1:	736,2
Y2:	790,0

CH1: Components and Systems

**CH2: Advanced computing and
Cloud Computing**

CH3: Future Internet

CH4: Content technologies

CH5: Robotics

CH6: Micro-Nano and Photonics

ICT Cross-Cutting Activities

Manufacturing

Internet of Things

Cyber-Security

Open Disruptive Innovation

Fast track to Innovation

RRI/SSH and creative dialogue

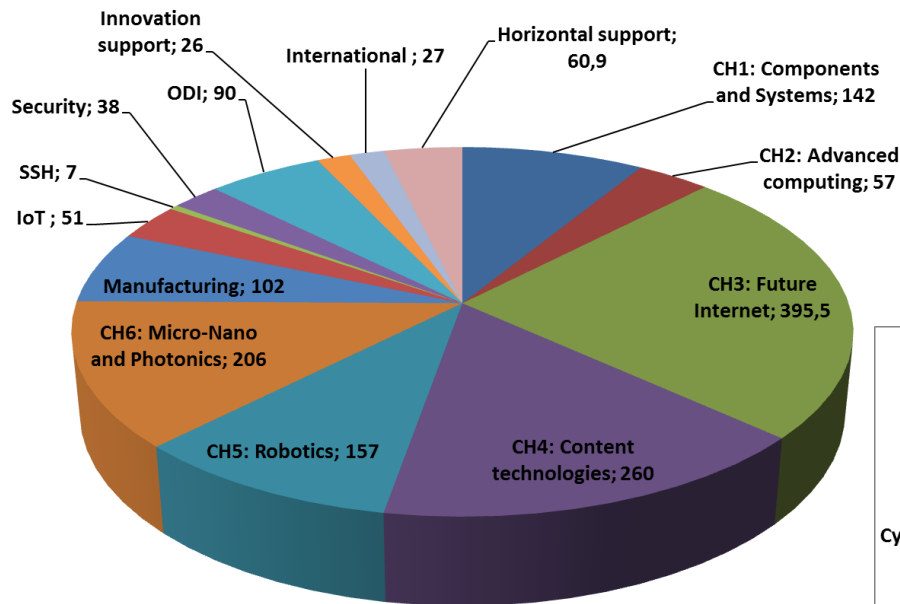
Horizontal Innovation

International Activities



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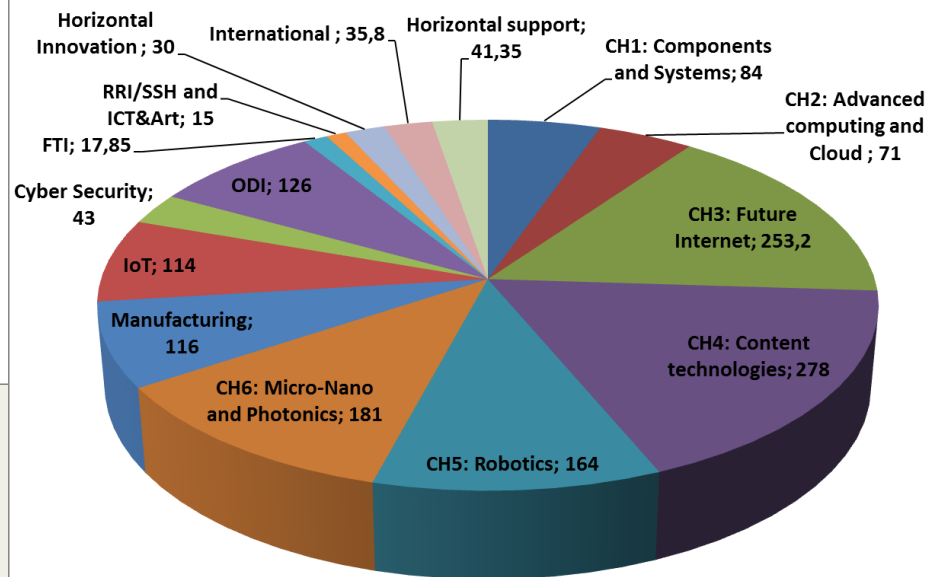
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WP14-15 LEIT Budget distribution (MEUR)

- Balanced portfolio
- Increase of bottom up activities in 16-17 (ODI and FTI)
- Increase of cross-cutting areas in 16-17 (IoT)

Budget allocation in first 4 years



WP16-17 LEIT Budget distribution (MEUR)



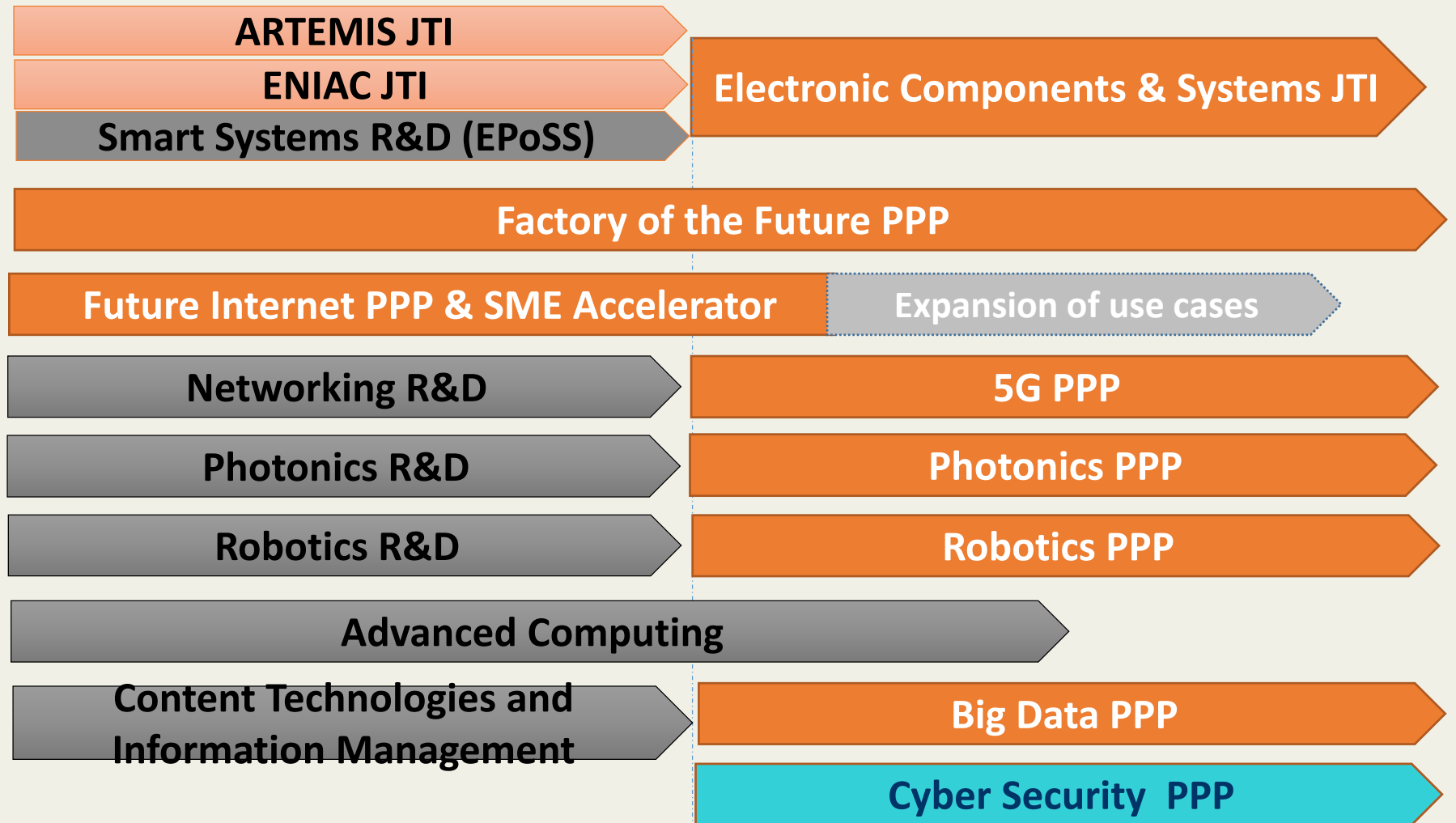
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ICT Roadmap-based research: Continuity and consolidation

FP7

H2020



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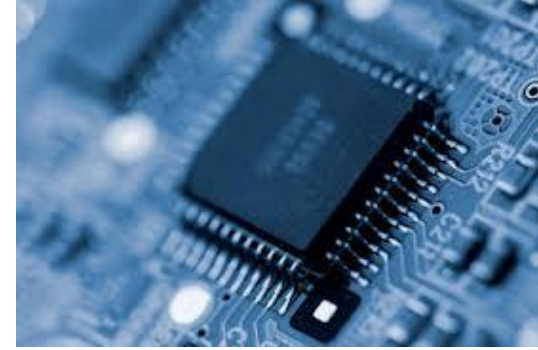
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10 Public-Private Partnerships

- [Factories of the Future \(FoF\)](#), to support the manufacturing industry through the development of sustainable production technologies and systems (1150 M€)
- [Energy-efficient Buildings \(EeB\)](#), to increase the competitiveness and energy efficiency of the construction industry (600 M€)
- [European Green Vehicles Initiative \(EGVI\)](#), to develop a competitive and resource efficient transport system with significantly less CO2 emissions (750 M€)
- [Sustainable Process Industry \(SPIRE\)](#), to make the process industry more resource- and energy-efficient (900 M€)
- [Photonics](#), one of the key enabling technologies for our future prosperity and an essential element of many sectors, from energy and health, to everyday products like DVD players and mobile phones (700 M€)
- [Robotics](#), a key driver of industrial competitiveness and essential to address key societal challenges in areas such as demographic change, health and well-being, food production, transport and security (700 M€)
- [High Performance Computing \(HPC\)](#), which plays a pivotal role in stimulating Europe's economic growth and advancing European science (700 M€)
- [Advanced 5G networks for the Future Internet \(5G\)](#), stimulate development of network internet infrastructure to ensure advanced ICT services for all sectors and users (700 M€)
- [Big Data Value PPP](#), towards a data-driven economy in Europe (500 M€)
- [Cyber Security PPP](#) (450 M€)



Industrial Leadership - ICT

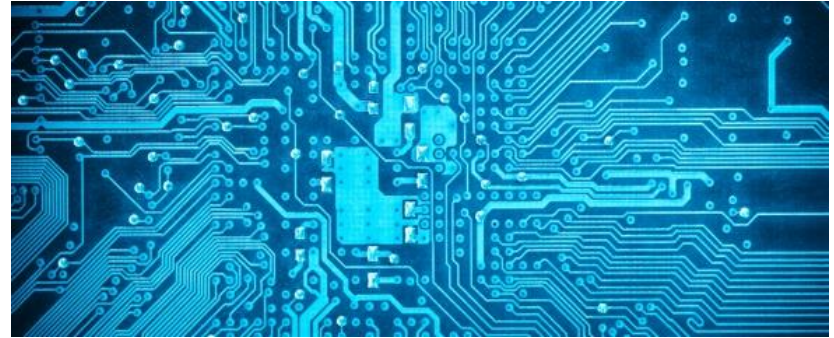


- **A new generation of components and systems:**
 - engineering of advanced embedded and resource efficient components and systems
- **Next generation computing:**
 - advanced and secure computing systems and technologies, including cloud computing
- **Future Internet:**
 - software, hardware, infrastructures,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



Components and systems 2016-2017

85 M€



■ open topic
■ closed topic

- Cover **systemic integration from smart integrated components to cyber-physical systems**
- **Complementary to the JTI Electronic Components and Systems (ECSEL)**
- Organised in four topics:
 - **Smart cyber-physical systems** (20 M€)
 - Next generation embedded and connected systems
 - **Thin, Organic and Large Area Electronics** (20 M€)
 - **Smart system integration** (18,5 M€)
 - Integration of heterogeneous micro- and nanotechnologies into smart systems
 - **Smart Anything Everywhere** initiative (26,5 M€)

Advanced Computing and Cloud Computing

2016-2017

77 M€



- Reinforce and expand Europe's industrial and technology strengths in **low-power ICT**
- Foster the evolution of **Cloud technology** to increase its uptake
- Complementary to the work in the Excellent Science pillar under Research Infrastructures and FET (on High Performance Computing)
- Organised in two topics:
 - **Customised and low energy computing** (32 M€)
 - **Cloud Computing** (45 M€)

■ open topic
■ closed topic

Future Internet 2016-2017

255 M€



- Integrated response to **technology** challenges and **innovation** needs of the future Internet
- Organised in seven topics:

- **5G PPP** Research and Validation of critical technologies and systems (104 M€)
- **5G PPP** Convergent Technologies (45 M€)
- **Networking research beyond 5G** (19 M€)
- **Software Technologies** (31 M€)
- **Future Internet Experimentation** - Building a European experimental Infrastructure (26 M€)
- **Collective Awareness Platforms for Sustainability and Social Innovation** (10 M€)
- **Net Innovation** Initiative (20 M€)

■ open topic
■ closed topic

Content technologies

2016-2017

280 M€



- Improve **access, creation, management** and **use of data** and **content** through advances along the **data, content and knowledge value chains**.
- Organised in eleven topics (+ one prize):
 - **Big data PPP** Cross-sectorial and cross-lingual data integration and experimentation (54 M€)
 - Large scale pilots in sectors best benefitting from data-driven innovation (50 M€)
 - Research addressing main technology challenges of the data economy (33 M€)
 - Support, industrial skills, benchmarking and evaluation (7 M€)
 - Privacy-preserving big data technologies (9 M€)
 - *Big Data inducement prize (2 M€)*
 - **Media and content convergence** (39 M€)
 - **Tools for smart digital content in the creative industries** (17 M€)
 - Support **technology transfer to the creative industries** (14 M€)
 - Technologies for **Learning and Skills** (31 M€)
 - **Interfaces for accessibility** (14 M€)
 - **Gaming and gamification** (12 M€)

■ open topic
■ closed topic

Robotics and autonomous systems

2016-2017

166 M€

- **Technology-driven** actions to keep EU at the cutting edge of research + **market-driven** actions to accelerate take-up and deployment of robots
- **Roadmap-based approach**
→ **Robotics PPP**
- Organised in four topics in LEIT-ICT + one topic in SC2:
 - **Advanced robot capabilities research and take-up** (64 M€)
 - **System abilities, development and pilot installations** (42 M€)
 - **System abilities, SME & benchmarking actions, safety certification** (48 M€)
 - **Robotics competition**, coordination and support (5 M€)
 - **Robotics Advances for Precision Farming** (7 M€) (SC2)



ICT key enabling technologies

2016-2017

181 M€

- Translate Europe's S&T excellence in **photonics** and **micro- and nano-electronics** into strengthened competitiveness and market leadership
- **Address the whole research and innovation value chain in photonics technology:** from materials to manufacturing, products and services, through equipment and devices – from advanced R&D to pilot lines
 - **Photonics PPP** (66 M€ in 2016, **89 M€ in 2017**)
 - Complemented by activities of LEIT-NMBP and **FoF PPP**
- Cover **generic technology developments on micro- and nano-electronics** focused on exploratory research and lower Technology Readiness Levels (TRLs) (23 M€)
 - Complementary to the JTI Electronic Components and Systems
- Organised in three topics in LEIT-ICT + one in LEIT-NMBP + one in FoF

ICT for the Factories of the Future 2016-2017

116 M€

- Part of the '**Industry 2020 in the Circular Economy**' cross-cutting focus area
- Focus on **ICT components of innovative production systems in all sectors** (for a more personalised, diversified and mass-produced product portfolio and for rapid and flexible reaction to market changes)
- Implementation of the **FoF PPP**
- Organised in three topics:
 - Digital automation (53 M€)
 - **ICT Innovation for Manufacturing SMEs (I4MS) (33 M€)**
 - Photonics laser-based production (30 M€)

■ open topic
■ closed topic

Internet of Things 2016-2017

139 M€

- **Cross-cutting focus area**
 - Contributions from **SC1** and **SC2**
- Increased support with the ambition to **foster the take-up of IoT in Europe** and to **enable the emergence of IoT ecosystems** supported by open technologies and platforms
- Organised in three topics:
 - **Large scale pilots** (100 M€)
 - Smart living environment for ageing well
 - Smart farming and food security
 - Wearables for smart ecosystems
 - Reference zones in EU cities
 - Autonomous vehicles in a connected environment
 - IoT Horizontal activities (4 M€)
 - **R&I on IoT integration and platforms** (35 M€)



- open topic
- closed topic

Digital Security

2016-2017

119 M€

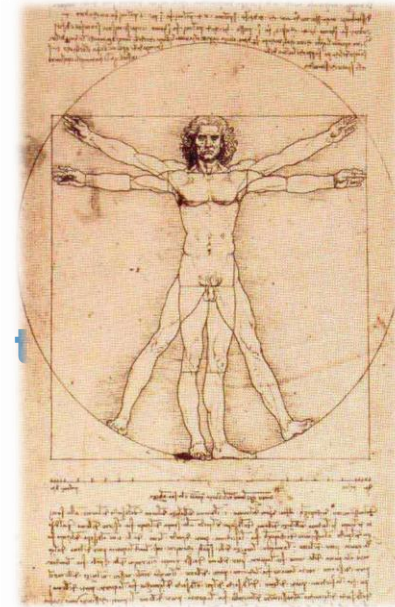


- **Focus area**
 - Combining contributions from **LEIT-ICT**, **SC1** and **SC7**
- **Grouping the main R&D&I activities in digital security**, from enabling technologies to specific use cases
- Organised in eight topics:
 - **Assurance and Certification** for Trustworthy and Secure ICT systems, services and components (23,5 M€)
 - **Cyber Security for SMEs, local public admin. and individuals** (22 M€)
 - Increasing **digital security of health related data** on a systemic level (11 M€)
 - **Economics of Cybersecurity** (4 M€)
 - **EU Cooperation and International Dialogues** in Cybersecurity and Privacy Research and Innovation (3 M€)
 - **Cryptography** (18,5 M€)
 - Addressing **Advanced Cyber Security Threats and Threat Actors** (20.5 M€)
 - **Privacy, Data Protection, Digital Identities** (18 M€)
 - **Privacy, Data Protection, Digital Identities** (17.6 M M€)

■ open topic
■ closed topic

Responsibility and creativity 2016-2017

15+ M€



- Cross-cutting activities supporting the **nexus between technical sciences, social sciences, humanities and arts.**
- Foster collaboration with SSH on **responsible research and innovation.**
- Engage with artists in innovation process to foster **creativity** and help enhance **user acceptance.**
- Two dedicated topics:
 - **Enabling responsible ICT-related research and innovation (7 M€)**
 - **Boost synergies between artists, creative people and technologists (8 M€)**
- ...Complemented by **other activities embedded in technical topics** and a **large hub supported through SC6.**

■ open topic
■ closed topic

International cooperation

40,8 M€



- **International partnership building in low and middle income countries** (13,8 M€) / Target: **sub-Saharan Africa and ASEAN**

• Coordinated calls

- **EU-Brazil** (7 M€)

- Cloud computing
- IoT pilots



■ open topic
■ closed topic

- **EU-Japan** (7 M€)

- 5G – Next Generation Communication Networks
- IoT/Cloud/Big Data platforms in social application contexts
- Experimental testbeds on Information-Centric Networking



- **EU-South Korea** (6 M€)

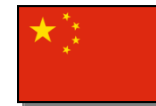
- 5G – Next Generation Communication Networks
- IoT joint research
- Federated Cloud resource brokerage for mobile cloud services



- **Cooperation with Taiwan in 5G PPP topic on Convergent Technologies** (5 M€)

• Other international cooperation activities

- **China:** Collaboration on Future Internet (1 M€)
- **Mexico:** Collaboration on ICT (with a focus on FIWARE) (1 M€)



Innovation and Entrepreneurship support 2016-2017

156+ M€

- Reinforce the **involvement of users** in R&D&I
- Support **digital entrepreneurship**
- Strengthen the **support to start-ups** and **SMEs**
- Facilitate the meeting between **investors** and start-ups
- Increase the **entrepreneurial skills**
- Organised in five topics + inducement prizes:
 - **Startup Europe for growth and Innovation Radar** (12 M€)
 - **Innovation procurement networks** (4 M€)
 - **Pre-commercial procurement open** (4 M€)
 - **Open Disruptive Innovation** scheme – SME instrument (**126 M€**)
 - **Fast Track to Innovation** (100 M€ - for all fields of LEIT and SCs)
 - **ICT Horizon prizes** (10 M€)

■ open topic
■ closed topic

SME Instrument – ICT + Other

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€)
 - Dedicated support to biotechnology SMEs closing the gap from lab to market
 - Engaging SMEs in space research and development
 - Supporting innovative SMEs in the healthcare biotechnology
 - 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€)
 - Stimulating the innovation potential of SMEs for sustainable and competitive agriculture, forestry, agri-food and bio-based sectors
 - Small business innovation research for Transport and Smart Cities Mobility (119 M€)
 - Supporting SMEs efforts for the development - deployment and market replication of innovative solutions for blue growth
 - Boosting the potential of small businesses in the areas of climate action, environment, resource efficiency and raw materials
 - New business models for inclusive, innovative and reflective societies (22 M€)
 - Engaging SMEs in security research and development (30 M€)

Prize: Big data Technologies

Objectives: Improve the performance of software for the forecasting of geospatio-temporal data. Focus on scalability, accuracy, speed and use of computational resources

Results: Demonstration of the ability to analyse extremely large scale collections of structures or multimedia geospatial temporal data in a way that is sensitive to the trade-off between the consumption of computational resources and the practical value of the predictions obtained

Opening: Second Quarter 2017

Deadline: Fourth Quarter 2017

Budget: 2M€
HORIZON 2020

Prize: Zero Power Water Infrastructure Monitoring

Objectives: To empower the EU water distribution market with solutions based on wireless sensor networks with energy harvesting technologies, designed for real-time monitoring of water management

Results: ICT prototype for monitoring of water based on wireless sensor networks. The prototype should stimulate the creation of an effective and scalable autonomous, zero power wireless sensor network platform to monitor water resources

Opening: First Quarter 2017

Deadline: Third Quarter 2018

Budget: 2M€

Prize: Tactile Displays for the Visually Impaired

Objectives: to address this significant gap in the ICT market with a tactile graphical display that makes visually impaired people benefit from digital technologies and improves the quality of their lives especially in the area of education and navigation; and, to stimulate broader European efforts in developing solutions for this societal need.

Results: An affordable, full-page tactile display, able to convey digital information in both braille and tactile graphics form to improve access to digital information for people with visual impairments. The solution should benefit visually impaired people (30 million in Europe) but also a wider range of people in need of multitasking solutions where, vision being engaged, the touch function of hands needs to be applied.

Opening: First Quarter 2017

Deadline: Fourth Quarter 2018

Budget: 3 M€



Prize: Online security - Seamless personal authentication

Objectives: significantly improve citizen's overall experience related to online authentication and consequently foster the widespread adoption of services and products provided within the Digital Single Market of the European Union

Results: An information and communication technologies (ICT) solution that enables citizens to seamlessly authenticate themselves across a wide range of applications and devices. The solution should be easy to use, reliable, robust against cyber-attacks, privacy-friendly and compatible as well as affordable and open. It should be ready to benefit a wide range of the EU population, from healthy to impaired citizens of all ages.

Opening: First Quarter 2017

Deadline: Third Quarter 2018

Budget: 4M€

New in 2017

Support Actions

- Reinforcing European presence in international ICT **standardisation** (2 M€)
- **Next Generation Internet** (2 M€)

■ open topic
■ closed topic

Internationalisation of European standardisation

Objective: Reinforce the EU presence in the international ICT standardisation scene

Scope:

- 1) Monitor and gather information regarding on-going work from the relevant international and global standards development-organisation (SDOs), fora and consortia.
- 2) Set-up and manage a facility to support participation of key European specialists in key international and global SDOs

Action: Coordination and support action

Budget: 2 M€

Internationalisation of European standardisation

Objective: developing a next generation of the Internet enabled by key technologies and services allowing it to become an open ecosystem avoiding the dominance of a few giant economic players. This coordination and support action will prepare the conditions, mobilise the constituencies and prototype the operations of a large future Next Generation Internet initiative going beyond Horizon 2020.

Scope:

- a) **Identification of research topics**
- b) **Dynamic and continuous consultation**
- c) **Ecosystem building**

Action: Coordination and support action

Budget: 2 M€

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**

Preparation for market deployment

A few examples from WP2016-17

- **Big Data**

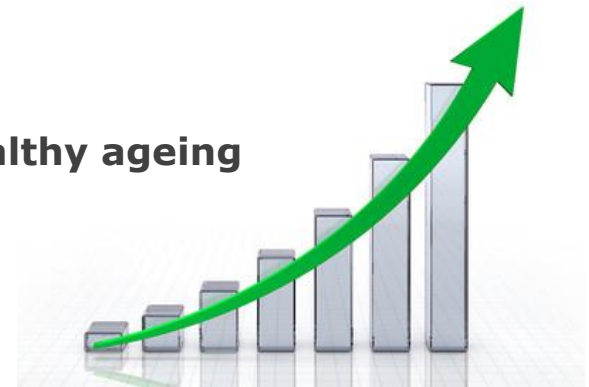
- SC1: Big Data supporting Public Health policies
- SC4: Innovative ICT solutions for future logistics operations
- SC6: Policy-making in the age of Big Data
- SC6: European cultural heritage, access and analysis for a richer interpretation of the past

- **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

What's
new?

- **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



- **Personalized Medicine** (116 M€)
 - **Active ageing and self-management of health** (60 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** (26.5 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** (14,5 M€) (see WP)

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)
 - **Engaging private consumers** towards sustainable energy
 - **Behavioural change** toward energy efficiency through ICT
 - Integration of **Demand Response** in Energy Management Systems (EeB PPP)
 - 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€)

■ open topic
■ closed topic

Transport

2016-2017



- **Three calls**
 - **Mobility for growth** (436 M€ overall)
 - Increasing the take up and scale-up of innovative solutions to achieve **sustainable mobility** in urban areas
 - Innovative ICT solutions for **future logistics** operations
 - Intelligent Transport Systems (*3 topics*)
 - **Big data in Transport:** Research opportunities, challenges and limitations
 - **Automated road transport** (114 M€ overall)
 - ICT infrastructure to enable the transition towards **road transport automation**
 - Coordination of activities in support of road automation
 - **European green vehicle initiative** (206 M€ overall)
 - Demonstration (pilots) for **integration of electrified L-category vehicles in the urban transport system**

■ open topic
■ closed topic

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

■ open topic
■ closed topic

Inclusive, innovative and reflective societies 2016-2017



- **Four calls**

- **Co-creation for growth and inclusion** (ICT: 31 M€)
 - Applied co-creation to deliver public services (10 M€)
 - Co-creation between public administrations: Once-only principle (9 M€)
 - Policy-development in the age of Big Data (12 M€)
- **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€)

■ open topic
■ closed topic

Security

2016-2017



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

■ open topic
■ closed topic

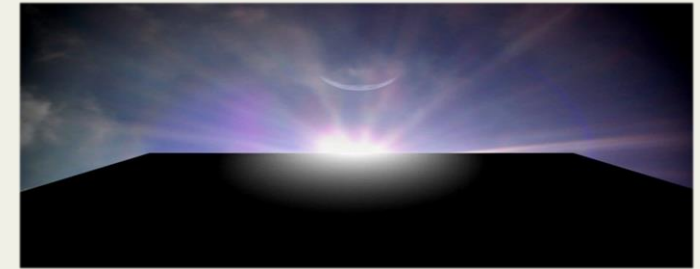
ICT in Excellent Science



Future and Emerging Technologies (FET) / 2016-2017

FET Open (202 m€)

- All technologies, no topical scope
- RIA, CSA, Innovation Launchpad
- 6 gatekeepers:
 - Long term vision
 - Breakthrough S&T
 - Novelty
 - Foundational
 - High risk
 - Interdisciplinary



- Light, fast scheme
- Several cut-off dates per year
- one-step submission
- ~15 page proposals
- One stage evaluation
- RIA projects: up to 4 M EUR
- CSA projects: up to 0.5 M EUR
- Launchpad: up to 0.1 M EUR



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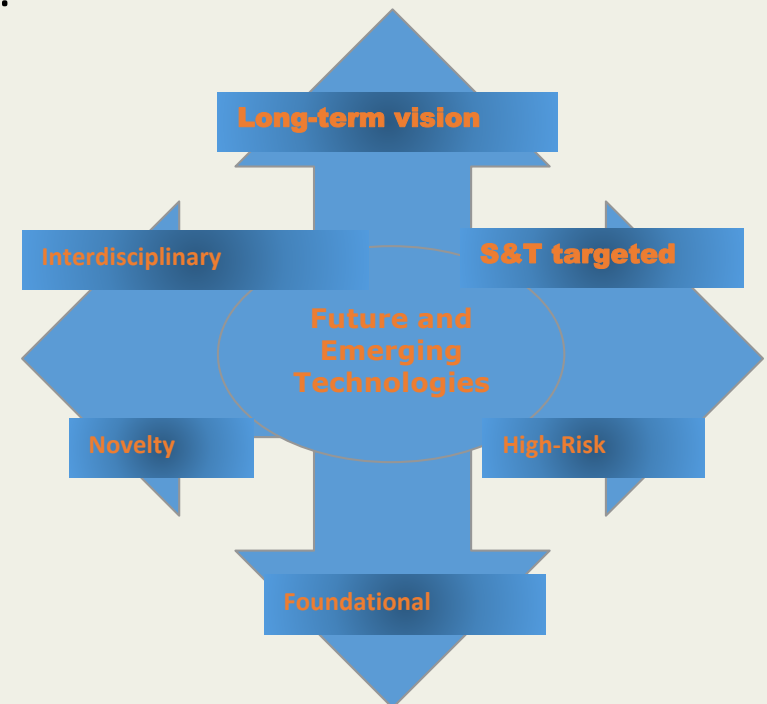
MOMENTUM OF INNOVATION

FET-Open Research and Innovation Actions

- Scope:

- [...] Proposals are sought for **collaborative research with ALL of the following characteristics** ('FET gatekeepers'):

- Long-term vision
- Breakthrough scientific and technological target
- Novelty
- Foundational
- High-risk
- Interdisciplinary



FETOPEN-01-2016-2017: FET-Open research and innovation actions

- **Long-term vision:** the research proposed must address a new and radical long-term vision of a science- and technology-enabled future that is far beyond the state of the art and not currently foreseen by technology roadmaps.
- **Breakthrough scientific and technological target:** research must target a scientifically ambitious and technologically concrete breakthrough, argued to be a crucial step towards achieving the long-term vision. The plausibility of the proposed breakthrough(s) to be attained within the life-time of the project must be argued in the proposal.
- **Novelty:** the research proposed for achieving the breakthrough must be based on cutting-edge knowledge, new ideas and concepts, rather than in the mere application or incremental refinement of existing ones.



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FETOPEN-01-2016-2017: FET-Open research and innovation actions

- **Foundational:** the breakthroughs that are envisaged must be foundational. If achieved, they would establish an essential basis for a new kind of technology and its future uses, not currently anticipated.
- **High-risk:** the inherently high risk of the research proposed will be reflected in a flexible but effective methodology for exploring alternative directions and options, supported by open and agile research and innovation practices.
- **Interdisciplinary:** collaborations are expected to go beyond 'waterfall' configurations in multi-disciplinary science- and technology research. Instead they should seek new solutions through genuine exchanges, mutual learning, cross-fertilisation and synergistic advances among distant disciplines in order to open unexplored areas of investigation and new directions for joint research.



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Proposal composition (RIA)

Part A: Administrative part of the proposal

Part B: Narrative part of the proposal (core proposal)

- Cover page (1 page A4)
- Section 1: **S&T Excellence**
- Section 2: **Impact**
- Section 3: **Implementation**
- Section 4: **Members of the consortium** (Additional information)
- Section 5: **Ethics and Security** (Additional information)

Pages limit: Sections 1, 2 and 3 together are strictly limited to 15 pages

A4 and Sections 4-5 are not covered by the limit of pages



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VERY COMPETITIVE

- Is FET-Open really the right scheme for you?
- Check out LEIT and Societal Challenges work programmes
- FET is not ERC: collaboration, science and technology are all essential ingredients.
- It is not because something has not been done before that it is sufficiently novel for FET
- FET is not the long-term end of an established industry's road-map
- A long-term vision is essential, but also a plausible idea on how to get there.
- Writing a good proposal is probably as hard as writing a good scientific publication.



FETOPEN-02-2016

FETOPEN-03-2017

FET-Open Coordination and Support Actions

- Scope
 - FET Futures – looking for new topics and strategies [2017]
 - FET Communication – visibility and outreach [2016]
 - FET Exchange – networking in future and emerging R&I areas [2016 and 2017]
 - FET Conference – 2018 [2016]
 - FET Innovation Greenhouse – services for facilitating earliest stages of innovation from FET research [2016]



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- New topic in WP2016-17

This topic aims at funding further innovation related work (i.e. activities which were not scheduled to be funded by the original project) to verify and substantiate the innovation potential of ideas arising from FET funded projects and to support the next steps in turning them into a genuine social or economic innovation.

- Coordination and Support Action
- single step submission, '1+7' pages
- Inspired by the successful ERC Proof-of-Concept (PoC) scheme



- Scope
 - Short and focused actions (18 months indicative)
 - Early innovation from an ongoing or recently finished FET project
 - Ongoing or maximum 1 year from end-date of originating project to call deadline
 - FP7 and H2020, any FET-funded project
 - The link with the originating project is to be substantiated in the proposal
 - No additional S&T research
 - No actions that are/were foreseen in originating project
 - No direct link needed with originating consortium
 - Single participant possibility
 - Assurance on necessary rights and agreement to be stated
 - No prescribed actions but 'fitness for purpose'
 - Complementary to ODI and SME schemes



- 100K funding, 18 months indicative duration
- single step submission, '1+7' pages

Opening: 01 Mar 2016			
FETOPEN-04-2016-2017 (CSA)	1.20M Euro	1.80M Euro	29 Sep 2016
			27 Sep 2017

- 'eligible' originating projects for innovation launchpad:
 - for the 2016 call: ~90 FP7+ ~60 H2020
 - for the 2017 call: ~50 FP7 & ~100 H2020
 - ~100 overlap between both calls
 - figures do not include HPC projects and the 2 flagships



Deadlines

- **FETOPEN-01-2016-2017 (RIA)**
11 May 2016 / 17 Jan 2017 / 27 Sep 2017
- **FETOPEN-02-2016 (CSA)**
11 May 2016
- **FETOPEN-03-2017 (CSA)**
17 Jan 2017
- **FETOPEN-04-2016-2017 (CSA)**
29 Sep 2016 / 27 Sep 2017



FET PRO-ACTIVE



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Future and Emerging Technologies (FET) / 2016-2017

FET Proactive High Performance Computing (85 m€)

- Co-design of HPC systems and applications
(41 M EUR - Projects 10-20 M EUR)
- **Transition to Exascale Computing**
(40 M EUR - Projects: 2-4 M EUR)
- **Exascale HPC ecosystem development**
(4 M EUR - Projects: 1-2 M EUR)



■ open topic
■ closed topic

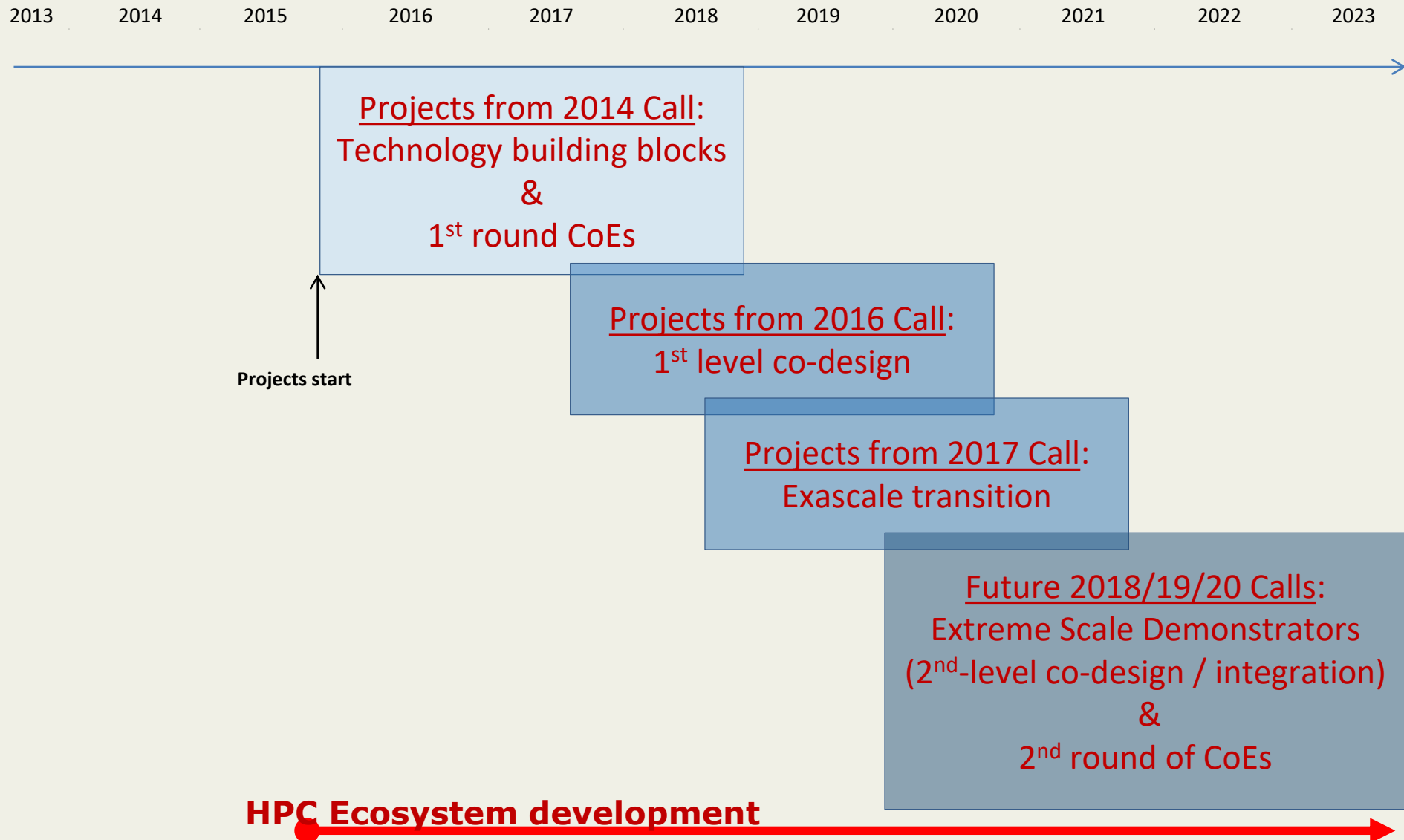
Call - FET-Proactive - High-Performance Computing

- Implements Strategic Research Agenda (SRA) of ETP4HPC in Public-Private Partnership
- See <http://www.etp4hpc.eu/strategy/strategic-research-agenda>
- Complements other building blocks of HPC strategy under LEIT and e-Infrastructures



HPC PPP timeline in H2020 (indicative)

Exascale Technologies & Applications



FET FLAGSHIPS



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FET Flagships

FET Flagships address ambitious S&T challenges that require:

- *Setting up large-scale partnerships that bring together the leading researchers from a large number of research organisations (academia and industry);*
- *Commitment to a strong science investment over a long time period that cannot be carried out alone by the Commission or any single Member State*



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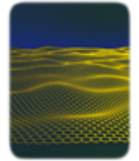
Graphene FET Flagship

Graphene, is a 2D material, a single layer of carbon atoms, stronger than diamond, yet lightweight and flexible and an exceptional electricity conductor.

The Graphene Flagship will bring graphene, and related 2D materials, from academic labs to industry, manufacturing and society.

Examples Applications:

- ✓ electronic paper; bendable smartphones; enhanced solar cells and batteries; lighter and more energy efficient airplanes ...
- ✓ On the longer term, graphene is expected to give rise to new computers and revolutionary medical applications such as artificial retinas.



Artistic impression of a computed graphene sheet
Credit: Jannis Hoyer



Nokia Morph concept - Credit: Nokia Research Center

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The Human Brain Project



HBP will create the world's largest **experimental facility for developing the most detailed models of the brain** (from genes to mind), for studying how the human brain works and ultimately for simulating and developing personalised treatment of brain diseases.

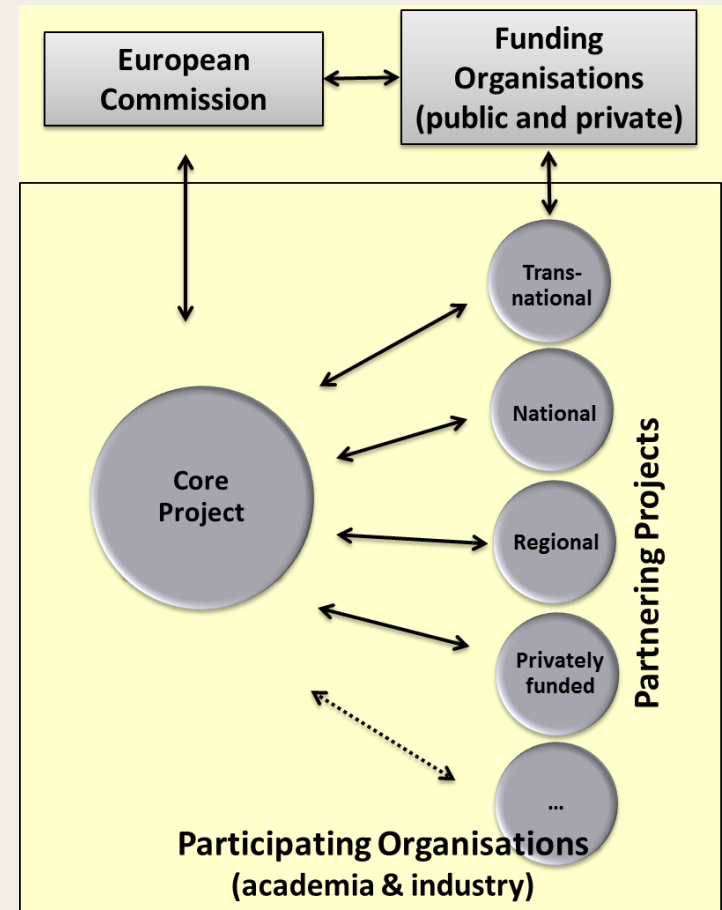
This research lays the scientific and **technical foundation for medical progress**: identifying new drug targets and treatment, in response to the urgent need to combat brain diseases and their associated costs to society.

HBP will also produce brain-inspired '**neuromorphic**' computing systems that could drastically reduce power-consumption for super-computers and enhance robots.



FET Flagship Partnering Projects

- The implementation model of the Flagships aims to link together and ensure coordination and synergy of all those research activities relevant for the Flagship that are funded by the Commission and the Member States.*
- Partnering Projects are projects supported by national/regional funding agencies and/or by private funding. They are addressing areas relevant for the Flagships and contribute to their objectives.**





Theme 1 - Integration and consolidation of e-infrastructure platforms supporting European policies and research and education communities

- EINFRA-1.1-2016 - Support to the next implementation phase of Pan-European High Performance Computing infrastructure and services (PRACE)
- **EINFRA-1.2-2017 - Data and Distributed Computing e-infrastructures for Open Science**

Theme 2 - Prototyping innovative e-infrastructure platforms and services for research and education communities, industry and the citizens at large

- **EINFRA-2.1-2017 – Platform-driven e-infrastructure innovation**
- EINFRA-2.2-2016 – User-driven e-infrastructure innovation

Theme 3 - Support to policies and international cooperation

- **INFRA supp-02-2017 Policy & Cooperation measures for Research Infrastructures**
- INFRA supp-03-2016 Support to policies and international cooperation

■ open topic
■ closed topic



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Funding opportunities / experimentation through existing projects

- [Future Internet PPP](#) – Accelerators (FP7, closed)
- [ECHORD ++](#) - Robotics (FP7, closed)
- [I4MS](#) – ICT Innovation for Manufacturing SMEs
- [SAE](#) - Smart Anything Everywhere
- [FIRE](#) – Future Internet Research & Experimentation
- [FET Flagships](#) – [Human Brain](#), [Graphene](#)
- [Internet of Things - European Platforms Initiative](#)
- Pre-commercial procurement (PCP) tenders
- Further competitive calls on [Participant Portal](#)



H2020 projektek konzorciumai által meghirdetett versenypályázati kiírások

- [FIESTA-IoT: Open Calls for experiments and extensions](#)
(Beadási határidő: 2016.10.26, 17:00)
- [WISHFUL: Open Call for Experiments and Extensions](#)
(Beadási határidő: 2016.10.28, 17:00)
- [TRIANGLE: Open Calls for 5G/IoT experiments and testbed extensions](#)
(Beadási határidő: 2016.10.31, 17:00)
- [OrganiCity: Smart City experiments](#)
(Beadási határidő: 2016.11.01, 17:00)
- [MONROE: Open Call for Mobile BroadBand \(MBB\) Experiments and Extensions](#)
(Beadási határidő: 2016.12.02, 17:00)
- [FORTISSIMO 2: Call for Proposals for HPC-Cloud Application experiments](#)
(Beadási határidő: 2016.12.07, 17:00)
- [ROBOTT-NET: Robot Technology Transfer Network Vouchers](#)
(Beadási határidő: 2016.12.14, 17:00)
- [INTER-IoT: Interoperability for Heterogeneous IoT Platforms Interoperability](#)
(Beadási határidő: 2017.01.13, 17:00)
- [F-INTEROP: Platform for Online Interoperability and Performance Test](#)
(Beadási határidő: 2017.01.25, 17:00)



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H2020 projektek konzorciumai által meghirdetett versenypályázati kiírások

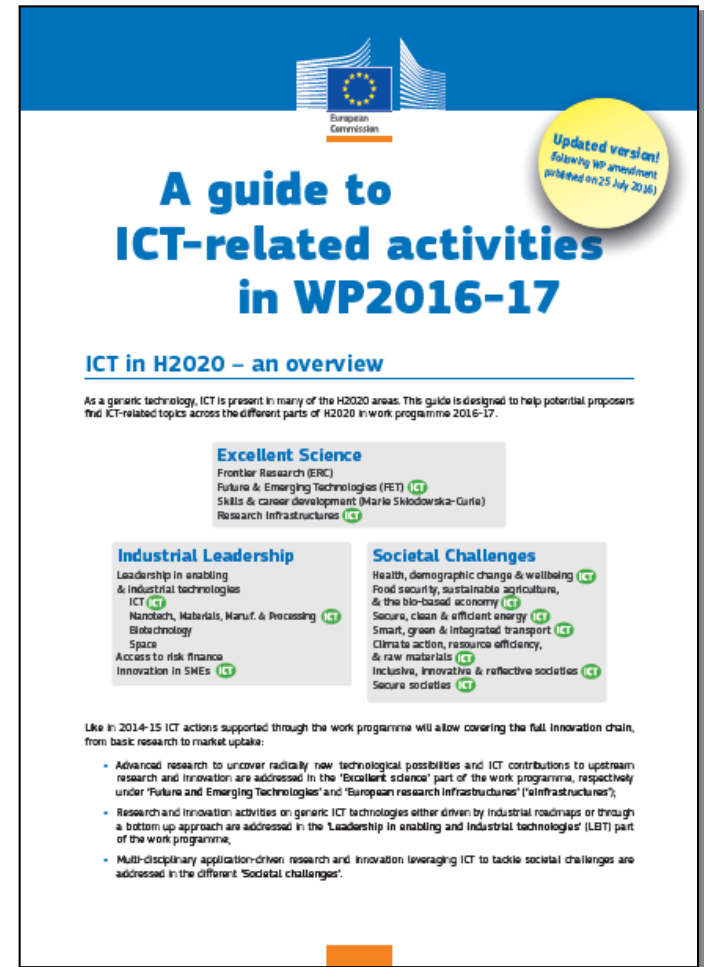
[Internet of Things - European Platforms Initiative](#)

- 2016.10.14 - 2017.01.13: [INTER-IoT](#) felhívás
- 2016.11.30 - 2017.02.28: [symbloTe](#) felhívás
- 2017.02.01 - 2017.03.31: [TagItSmart!](#) felhívás
- 2017.04.01 - 2017.június: [BIGIoT](#) felhívás
- 2017.06.01 - 2017.08.01: [bloTope](#) felhívás
- 2017.09.01 - 2018. április: [Agile](#) felhívás
- 2017.09.01 (tervezett): [TagItSmart!](#) felhívás
- 2017.10.31 - 2018. február: [symbloTe](#) felhívás
- 2018.01.01 - 2018.03.31: [Vicinity](#) felhívás
- 2018.02.01 - 2018.szeptember: [Agile](#) felhívás



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



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



NKFIH Konzorciumépítő pályázat – EU_KP_16

- „A” alprogram: Horizont 2020, ECSEL, AAL és EUROSTARS programok pályázataira való felkészülés támogatása
- Legközelebb 2016. december 10-ig nyújtható be
- Támogatható célkitűzések, tevékenységek
 - a nemzetközi program hivatalos külföldi konzorciumi partnerkereső rendezvényén való részvétel
 - pályázat és/vagy konzorciumi szerződés előkészítésére irányuló külföldi projekt előkészítő ülésen történő részvétel, hazai projekt előkészítő ülés szervezése
 - koordinátor esetében a pályázat és/vagy konzorciumi szerződés előkészítése, jogi, szabadalmi ügyvivői tanácsadás
- Koordinátor: 3 M Ft Partner: 1.5 M Ft
- Több magyar partner: külön-külön jogosult



National Contact Point

Partner Search & Proposal Development



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[> View Partner Searches](#)[> Launch a New Partner Search](#)[> Toolbox](#)[> Find your Representative](#)

Ideal-ist addresses ICT companies and research organizations worldwide wishing to find project partners for a participation in the Horizon 2020 program of the European Commission.

Ideal-ist offers a unique and quality-labelled Partner Search and other services helping to ease participation in Horizon 2020. Learn more [About ideal-ist](#)



Open calls

[View All](#)

- [> 2016 Mobility for Growth](#)
- [> 2016-2017 Green Vehicles](#)

Recent Partner Searches

- [> PS-IL-102368:
Range Anxiety's reduction for the L-
Category Vehicles users](#)



ICT Events

[View All](#)

- [> Information and Networking Days
on Horizon 2020 Big Data PPP
topic 2017](#)

THE network of National Contact Points for ICT in Horizon 2020



- ➔ Supports project proposers
- ➔ From project idea to successful proposal submission

Ideal-ist Network



Ideal-ist Representatives



is worldwide

Albania | Algeria | Argentina | Armenia | Australia | Austria | Azerbaijan | Belarus | Belgium | Bosnia and Herzegovina | Brazil | Bulgaria | Canada | Chile | China | Croatia | Cyprus | Czech Republic | Denmark | Egypt | Estonia | Faroe Islands | Finland | France | Georgia | Germany | Greece | Hungary | Iceland | India | Ireland | Israel | Italy | Jordan | Latvia | Lebanon | Lithuania | Luxembourg | Malta | Mexico | Moldova | Montenegro | Morocco | Netherlands | New Zealand | Norway | Philippines | Poland | Portugal | Romania | Russia | Serbia | Singapore | Slovakia | Slovenia | South Africa | Spain | Sweden | Switzerland | Taiwan | Tunisia | Turkey | Uganda | Ukraine | United Kingdom | Uruguay | Uzbekistan | Quality Manager

Key events

ICT Proposers Day 2016
26-27 Sep 2016

Bratislava, Slovakia



Információ – kapcsolatépítés – konzorciumalakítás - kiállítás

<https://ec.europa.eu/digital-single-market/en/ict-proposers-day-2016>



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Key events - 2016

2016. oct. 26 Berlin, Germany	Fifth annual conference on innovative public procurement
2016. oct. 26-28 Bratislava, Slovakia	Re-Industrialisation of the European Union Event 2016
2016. nov. 7 Brussels, Belgium	Post-Consultation on Cloud Computing Research Innovation Challenges for WP 2018-2020
2016. nov. 8 Brussels, Belgium	FIWARE Open Day
2016. nov. 9-10 Rome, Italy	Second Global 5G Event
2016. nov. 14-16 Bratislava, Slovakia	HORIZON 2020 - Societal Challenge 6 - 2017 Call for Proposals - Brokerage Event and SSH 2016 Conference
2016. nov. 18 Luxembourg	ICT Research and Innovation for Creative Industries and Cultural Heritage: Horizon 2020 Information and Networking Day
2016. nov. 22-24 Rome, Italy	European Nanoelectronics Forum and AENEAS Consortium Building Days
2016. nov. 22-23 Bordeaux, France	Factories of the Future for Aerospace Workshop
2016. nov. 23 Brussels, Belgium	EIP-SCC Conference: Inclusive Smart Cities - A European Manifesto on Citizen Engagement
2016. nov. 21-25 Rennes, France	European Cyber Week
2016. nov. 23-24 Rennes, France	EIT Digital: International symposium on innovations related to the security of digital systems and protocols
2016. nov. 23-25 Porto, Portugal	NEM (New European Media) Summit 2016
2016. nov. 28 - dec. 4 Oberurgl, Austria	3rd Human Brain Project (HBP) Education School – Future Neuroscience - The Multiscale Brain: From Genes to behaviour
2016. nov. 29 - dec. 2 Valencia, Spain	BDVA (Big Data Value Association) Summit 2016
2016. nov. 30 Istanbul, Turkey	ICTurkey Brokerage Event 2016 - A szervezők utazási támogatást kínálnak
2016. nov. 30 - dec. 1 Düsseldorf, Germany	Graphene Connect Workshop on Energy, Production and Composites
2016. dec. 2 Brussels, Belgium	H2020 Info Day on FOF 12, ICT 5 and ICT 31: ICT Innovation for Manufacturing SMES (I4MS), Customised and low energy computing and Micro- and nanoelectronics technologies
2016. dec. 5 Brussels, Belgium	SPARC (Robotics PPP) Brokerage Event
2016. dec. 5-8 Brussels, Belgium	European Summit on Innovation for Active and Healthy Ageing: Transforming the future of Health and Care in Europe

Key events - 2017

2017. jan. 17-18 Luxembourg	<u>Information and Networking Days on Horizon 2020 Big Data Public-Private Partnership topics 2017</u>
2017. jan. 23-25 Stockholm, Sweden	<u>HiPEAC Conference 2017</u>
2017. jan. 31 - feb. 1 Brussels, Belgium	<u>ARTEMIS Brokerage 2017</u>
2017. feb. 8-10 Vienna, Austria	<u>1st Human Brain Project (HBP) Student Conference</u>
2017. feb. 16-17 La Valette, Malta	<u>Presidency event on Quantum Technologies</u>
2017. mar. 8-9 Cork, Ireland	<u>SSI 2017: International Conference and Exhibition on Integration Issues of Miniaturized Systems</u>
2017. mar. 22-24 Edinburgh, UK	<u>European Robotics Forum 2017</u>
2017. mar. 28-29 Brussels, Belgium	<u>Photonics Public Private Partnership Annual Meeting</u>



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eDIGIREGION

Realising The Digital Agenda Through
Transnational Cooperation
Between Regions

<http://www.edigiregion.eu/>



Overall aims

Through a planned process of inter and intra regional mentoring, and knowledge transfer, eDIGIREGION will initiate a series of **cross-border transnational collaborations** and **internationalisation activities** in the technology domains of the **Digital Agenda** to support open innovation and boost regional competitiveness, unlock new business opportunities for SMEs and mobilise financial support.

Partners and partner regions:

South East Ireland

WIT = University/Research Centre

SERA = Regional government

IBEC = Industry representative organisation

Kernel Capital = Venture Capital company

Castilla-La Mancha Spain

UCLM = University

JCLM = Regional Government

Desertic = ICT Industry Cluster

Central Hungary

KMIRU Khe = Regional Government Innovation Agency

MMO = ICT Industry Cluster

BME = University

Regens = SME

Bucharest-Ifov

UEFISCDI = Government Research & Innovation Agency

UPB-CETTI = University

ARIES = ICT Industry Cluster

ARDBI = Regional government





International Conference 2016

The eDIGIREGION project (www.edigiregion.eu) is organising its

3rd international conference:

Inter-regional trans-national cooperation: Scaling up local RDI ecosystems

Where: Albacete, Spain

When: 16-17 November 2016

#ScaleRDlup

<http://edigiregion.eu/interregional-transnational-coop>

Köszönöm a figyelmet!

Németh Edina

ICT & FET

Programbizottsági Tag és
Nemzeti Kapcsolattartó

NKFIH

Edina.Nemeth@ist.hu

+36-70-221-0387



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