A stronger, clearer focus

Excellent Science

Industrial leadership

Societal challenges
H2020 structure

**Excellent Science**
- European Research Council
  - Frontier research by the best individual teams
- Future and Emerging technologies
  - Collaborative research to open new fields of innovation
- Marie Sklodowska Curie actions
  - Opportunities for training and career development
- Research Infrastructure (including e-infrastructure)
  - Ensuring access to world-class facilities

**Industrial Technologies**
- Leadership in enabling and industrial technologies
  - ICT, nanotechnology, materials, biotechnology, manufacturing, space
- Access to risk finance
  - Leveraging private finance and venture capital for research and innovation
- Innovation in SMEs
  - Fostering all forms of innovation in all types of SMEs

**Societal challenges**
- Health, demographic change and wellbeing
- Food security, sustainable agriculture, marine & maritime research & the bio-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

**European Institute of Innovation and Technology**
- Spreading Excellence and Widening Participation
- Science with and for society
- Joint Research Center (JRC)

75 miliardi euro TBC
## Main differences between FP7 and H2020

<table>
<thead>
<tr>
<th>Item</th>
<th>FP7</th>
<th>Horizon 2020</th>
<th>Comments to Horizon 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>Research</td>
<td>Research and Innovation</td>
<td>Financial instrument to implement Innovation Union. Check also the other Europe 2020 flagship initiatives</td>
</tr>
<tr>
<td>Budget</td>
<td>over 50 billion EUR</td>
<td>ca 70 billion EUR</td>
<td>Not such a significant increase - around 10-15%</td>
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<tr>
<td>Continuation of</td>
<td>FP6</td>
<td>FP7, CIP, EIT</td>
<td>More complex than FP7</td>
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<td>Blocks</td>
<td>Cooperation, Capacities, People, Ideas, Euratom, JRC</td>
<td>Excellent Science, Industrial Leadership, Societal challenges, JRC</td>
<td></td>
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<tr>
<td>Funding rate (up to) for research</td>
<td>75%</td>
<td>100%</td>
<td></td>
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<tr>
<td>Funding rate (up to) for Demonstration - Newly called Innovation projects</td>
<td>50%</td>
<td>70%</td>
<td></td>
</tr>
<tr>
<td>Overhead/indirect costs</td>
<td>Different models (20%, 60% or actual)</td>
<td>25%</td>
<td></td>
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<tr>
<td>Time-to-grant</td>
<td>12 months in average after submission of proposal</td>
<td>reduced to 8 months</td>
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</table>
Progetti collaborativi

R&I actions
- Basic research, applied research, technology development and integration, and testing and validation on a small scale prototype in a laboratory or simulated environment
- TRL, Technology Readiness Level: 1 – 5/6 + clinical trials in phases 1 to 3
- Funding rate: 100% costi diretti, 25% costi indiretti

I actions
- Prototyping, testing, demonstrating, piloting, large-scale product validation and market replication
- TRL, Technology Readiness Level: 6 to 7/8 or 9
- Funding Rate: 70% costi diretti (100% no profit); 25% costi indiretti
Lo strumento PMI: dall’idea al mercato

Approccio senza soluzioni di continuità – 3 fasi

IDEA BUSINESS COACHING MERCATO
durante il progetto
# Lo strumento PMI: le tre fasi

## Fase 1: concetto e valutazione della fattibilità

**Input:**
- Idea/Concept in "Business Plan I"
  - (~ 10 pages)

**Main Activities:**
- Feasibility of concept
- Risk assessment
- IP regime
- Partner search
- Design study
- Pilot application

**Output:**
- "Business plan II"
  - Lump sum: around 50,000 €
  - ~ 6 months

## Fase 2: R&D, dimostrazione, market replication

**Input:**
- "Business plan II" + "Description of activities under Phase2" (~ 30 pp.)

**Main Activities:**
- Development
- Prototyping
- Testing
- Piloting
- Miniaturisation
- Scaling-up
- Market replication

**Output:**
- investor-ready "Business plan III"
  - Output based payments: 1 to 2.5 M€ EU funding
  - ~ 12 to 24 months

## Fase 3: Commercializzazione

**Input:**
- "Business plan III"
- "Opportunities:"
  - 'Quality label' for successful Phase 1 & 2

**Easier access to private finance**
- Support via networking, training, coaching, information, addressing i.a. IP management, knowledge sharing, dissemination

**SME window in the EU financial facilities (debt facility and equity facility)**

**No direct funding**
Industrial Leadership - ICT

1. A new generation of **components and systems**: engineering of advanced embedded and resource efficient components and systems

2. Next generation **computing**: advanced and secure computing systems and technologies, including cloud computing

3. **Future Internet**: software, hardware, infrastructures, technologies and services

4. **Content technologies and information management**: ICT for digital content, cultural and creative industries

5. **Robotics**

6. **Micro- and nanoelectronics and photonics**: key enabling technologies
ICT Cross-Cutting Activities / 2014-2015

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

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

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

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

1. Health, demographic change and wellbeing
2. Food security, sustainable agriculture, and forestry, marine, maritime and inland water research, and the bioeconomy
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

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

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

- **Improving health information and data exploitation**
  - Digital representation of health data to improve diagnosis and treatment
  - eHealth interoperability
SC 3 - Secure, clean and efficient energy / 2014-2015

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

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

- **Smart cities and communities**
  - Integration of energy, transport and ICT through lighthouse projects (large scale demonstration)
SC 4 - Smart, green and integrated transport / 2014-2015

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

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

• Smart cities and communities
  • Integration of energy, transport and ICT through lighthouse projects (large scale demonstration)
SC 5 - Climate action, environment, resource efficiency and raw materials / 2014-2015

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

- **Water management**
  - Development and deployment of advanced ICT solutions for water resources management in agriculture and urban areas
SC 6 - Europe in a changing world – inclusive, innovative and reflective societies / 2014-2015

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

• **New forms of innovation**
  - **Innovation in the public sector** by using emerging ICT technologies
  - ICT-enabled **open government**
    - Personalised public services
    - M-government
    - Open participation
    - Transparency
  - **ICT for learning and inclusion**
• Digital security: cybersecurity, privacy and trust
  • Protecting our society by providing sustained trust in the usage of ICT and in securing the ICT underlying our digital society
  • Preventing cyber-attacks on any component of the digital society
  • Ensuring freedom and privacy in the digital society, protecting the fundamental values of our society and democratic rights of our citizens in cyberspace
  • Protect the weak in our society from abuses over the internet and giving the user control over his private data
  • Demonstrating the viability and maturity of state-of-the-art security solutions in large scale demonstrators, involving end users
Call planning overview

- **LEIT**
- **H2020-ICT-2014 (ICT Call 1)**

**Opening:**
11 December 2013 except topic ICT37 that opens on 01/03/2014\(^2\) for phase 1 and phase 2 and topic ICT14 that opens on 15 July 2014.

**Deadline(s):**
at 17.00.00 Brussels time on the following dates

| All Topics except ICT14.a, ICT14.b, ICT14.c, ICT35 | 23 April 2014\(^3\) |
| ICT37 [SME instrument] | Phase 1 | Phase 2 | Phase 1 | Phase 2 |

*Draft – Pending Committee Opinion and Commission Decision*