Horizon 2020
La proposta della Commissione e aree di attività

PARTE I
Verso un unico programma R&D&I

2007 - 2013

R&D 7FP

Innovazione CIP

2014 - 2020

R&D&I

HORIZON 2020

EIT - European Institute For Innovation and Technology

Innovation Union
Un progetto in Horizon 2020...

...a stronger, clear focus
Struttura del programma

**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 Skłodowska Curie actions
  - Opportunities for training and career development
- Research infrastructures (including e-infrastructure)
  - Ensuring access to world-class facilities

**Industrial Technologies**
- Leadership in enabling and industrial technologies
  - ICT, nanotechnologies, 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 and maritime research & the bioeconomy
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, resource efficiency and raw materials
- Inclusive, innovative and reflective societies
- Security society

Europe 2020 Priorities
- Research infrastructures (including e-infrastructure)

European Research Area

**Simplified Access**

**International Cooperation**

**Shared Objectives and Principles**

**Coherent with other EU and MS Actions**

**European Institute of Innovation and Technology (EIT)**

**Spreading Excellence and Widening Participation**

**Science with and for society**

**Joint Research Center (JRC)**

**Common Rules, Toolkit of Funding Schemes**
Caratteristiche

- Un **singolo programma** che riunisce tre iniziative fino ad ora separate
- **Value chain** che va dalla ricerca di frontiera, allo sviluppo tecnologico, dimostrazione, valorizzazione dei risultati e innovazione
- **Innovazione**, in tutte le sue forme
- Focus su **societal challenges**
- **Accesso semplificato** per le imprese, le università, etc in tutti gli stati europei
- Sinergie con i **Fondi Strutturali**
### Cosa cambia?

#### 7PQ
- Linear thematic calls
- Research plan
- Focus on R&D
- Quantity driven
- Resource intensive
- Linear approach (project design)
- Focus on output

#### Horizon 2020
- Challenge based calls (inter-pillars)
- Business plan
- Focus on added value of Innovation
- Demand/value driven
- Brain intensive (engineering)
- Synergistic approach (*programme engineering* -SF)
- Focus on outcome

---

**THEMATIC BASED**

**NEW CONCEPT**

**CHALLENGE BASED - SYSTEMIC**
### Budget proposto

<table>
<thead>
<tr>
<th>Istituzione</th>
<th>Importo Proposto (miliardi €)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commissione Europea</td>
<td>80</td>
</tr>
<tr>
<td>Parlamento Europeo</td>
<td>100</td>
</tr>
<tr>
<td>Consiglio Europeo</td>
<td>70</td>
</tr>
</tbody>
</table>
Accordo sul Budget
*28 Giugno 2013

70,2 Miliardi di €
(incluso EURATOM)

Quadro finanziario pluriennale
2014/2020 - MFF
Il processo di adozione

The “Ordinary legislative procedure” (ex “co-decision”)

1. European Parliament
2. Council
3. Commission
4. Conciliation: joint text
5. Adoption

- Commission opinion on EP amendments
- Direct approval if agreement with EP
- Green Paper consultation (online comments, opinions, position papers etc.)
- ERAC

- Council position
- Amendments (absolute majority of members)
- Approval within 6 weeks
- Approval within 3 months

- FP evaluations, FPR interim review etc.
- European Research Advisory Board
- Direct approval if agreement with Council

- Proposal
- EP Position
- European Parliament
- Com. communication on Common position
- Adoption
## CALENDARIO

<table>
<thead>
<tr>
<th>Event</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposta Commissione sul Quadro Finanziario Pluriennale 2014-2020</td>
<td>6 Luglio 2011</td>
</tr>
<tr>
<td>Proposta Commissione su Horizon 2020</td>
<td></td>
</tr>
<tr>
<td>- Regolamento che istituisce il Programma Quadro di R&amp;I - Horizon 2020</td>
<td>30 Novembre 2011</td>
</tr>
<tr>
<td>- Regole di partecipazione e di diffusione</td>
<td></td>
</tr>
<tr>
<td>- Programma specifico recante attuazione di Horizon 2020</td>
<td></td>
</tr>
<tr>
<td>Partial General Approach del Consiglio sul Programma Quadro</td>
<td>Maggio 2012</td>
</tr>
<tr>
<td>Voto al Parlamento Europeo del Comitato ITRE (documento del Trilogo)</td>
<td>Novembre 2012</td>
</tr>
<tr>
<td>Partial General Approach del Consiglio sul Programma Specifico</td>
<td>Dicembre 2012</td>
</tr>
<tr>
<td>Consiglio Europeo sul Quadro Finanziario Pluriennale</td>
<td>7-8 febbraio 2013</td>
</tr>
<tr>
<td>Voto in plenaria del PE sul Quadro Finanziario Pluriennale</td>
<td>13-14 marzo 2013</td>
</tr>
<tr>
<td>Voto in plenaria del PE su H2020 * interrogazioni</td>
<td>10 – 13 giugno 2013</td>
</tr>
<tr>
<td>Adozione della posizione comune del Consiglio sul Quadro Finanziario</td>
<td>27-28 giugno 2013</td>
</tr>
<tr>
<td>Conciliazione tra PE e Consiglio sul regolamento di H2020</td>
<td>9 Luglio 2013</td>
</tr>
<tr>
<td>=&gt; Parlamento Europeo: adozione del regolamento di H2020</td>
<td>20 -21 Novembre 2013</td>
</tr>
<tr>
<td>=&gt; Consiglio Europeo formale: adozione del regolamento di H2020</td>
<td>10 Dicembre 2013</td>
</tr>
<tr>
<td>=&gt; Lancio di H2020 e dei primi bandi</td>
<td>11 Dicembre 2013</td>
</tr>
</tbody>
</table>
Accordo sul Budget
*28 Giugno 2013

70,2 Miliardi di €
(incluso EURATOM)

Quadro finanziario pluriennale
2014/2020 - MFF
Budget da FP1 a Horizon 2020

€ Billion (including EURATOM budget)

Framework Programmes

- Programmi Quadro quadriennali e quinquennali
- Programmi Quadro settenniali.

1984-1987: 3,27
1987-1990: 5,36
1990-1994: 6,6
1994-1998: 13,12
1998-2002: 14,96
2002-2006: 17,8
2007-2013: 53,2
2014-2020: 70,2
Budget: past & present

- H2020: 70.2 Billion €
- EIT: 0.31 Billion €
- CIP: 3.62 Billion €
- FP7: 53.2 Billion €
Struttura del programma

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**Societal Challenges**
- Health, demographic change and wellbeing
- Food security, sustainable agriculture, marine and maritime research & the bioeconomy
- Secure, clean and efficient energy
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- Climate action, resource efficiency and raw materials
- Inclusive, innovative and reflective societies
- Security society

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

- Excellent Science: 32%
- Societal Challenges: 39%
- Industrial Leadership: 22%
- Widening: 1%
- JRC: 2%
- EIT: 3%

* proposta del Trilogo del 27-06-13
Il budget per le attività

### Excellent Science

- **European Research Council**: 54%
- **Future and Emerging Technologies**: 25%
- **Marie Skłodowska Curie Actions**: 11%
- **European Research Infrastructures (including eInfrastructures)**: 10%

### Societal challenges

- **Health, demographic change and wellbeing**: 25%
- **Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy**: 20%
- **Secure, clean and efficient energy**: 13%
- **Smart, green and integrated transport**: 6%
- **Climate action, environment, resource efficiency and raw materials**: 10%
- **inclusive, innovative and reflective Societies**: 5%
- **Secure Societies**: 1%
## Il budget per le attività /2

<table>
<thead>
<tr>
<th>I. Excellent Science, of which:</th>
<th>Compromise % 27.06.13</th>
<th>Million € (27.06.13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ERC</td>
<td>31.73%</td>
<td>21.609</td>
</tr>
<tr>
<td>2. FET</td>
<td>17.00%</td>
<td>11.577</td>
</tr>
<tr>
<td>3. MS Curie Actions</td>
<td>3.50%</td>
<td>2.384</td>
</tr>
<tr>
<td>4. Research Infrastructures</td>
<td>8.00%</td>
<td>5.448</td>
</tr>
<tr>
<td>I. Industrial Leadership, of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leadership in Enabling and Industrial Technologies</td>
<td>22.09%</td>
<td>15.044</td>
</tr>
<tr>
<td>Access to Risk Finance</td>
<td>3.69%</td>
<td>2.513</td>
</tr>
<tr>
<td>Innovation in SME’s</td>
<td>0.80%</td>
<td>544,81</td>
</tr>
<tr>
<td>II. Societal Challenges, of which:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health, demographic change and well being</td>
<td>38.53%</td>
<td>26.240</td>
</tr>
<tr>
<td>Food security, sustainable agriculture, marine and maritime research &amp; the bio economy</td>
<td>9.70%</td>
<td>6.606</td>
</tr>
<tr>
<td>Secure, clean and efficient energy</td>
<td>7.70%</td>
<td>3.405</td>
</tr>
<tr>
<td>Smart, green and integrated transport</td>
<td>8.23%</td>
<td>5.244</td>
</tr>
<tr>
<td>Climate action, resource efficiency and raw materials</td>
<td>4.00%</td>
<td>5.605</td>
</tr>
<tr>
<td>Europe in a changing world – Inclusive, Innovative and reflective society</td>
<td>1.70%</td>
<td>1.158</td>
</tr>
<tr>
<td>Secure societies – Protecting freedom and security of Europe and its citizens</td>
<td>2.20%</td>
<td>1.498</td>
</tr>
<tr>
<td>Spreading Excellence and Widening Participation</td>
<td>1.06%</td>
<td>722</td>
</tr>
<tr>
<td>Science with and for society</td>
<td>0.60%</td>
<td>409</td>
</tr>
<tr>
<td>European Institute of Innovation and Technology - EIT</td>
<td>3.52%</td>
<td>2.397</td>
</tr>
<tr>
<td>JRC Non-nuclear</td>
<td>2.47%</td>
<td>1.682</td>
</tr>
<tr>
<td>EURATOM</td>
<td></td>
<td>2.098</td>
</tr>
<tr>
<td>Total</td>
<td>100.00%</td>
<td>70.200</td>
</tr>
</tbody>
</table>

Il calcolo del budget per programma è stato elaborato da APRE sulla base delle percentuali stabilite durante il Consiglio.
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1° PILLAR

EXCELLENT SCIENCE
### Excellent Science
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### Societal Challenges
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- **Security society**
*Le FET, che nell’ FP7 riguardavano solo ICT, in H2020 saranno trasversali ad altre tematiche.
Rationale:

- La Scienza di Eccellenza è alla base delle tecnologie di domani, del lavoro e del benessere
- L’Europa ha bisogno di formare, attrarre e trattenere i ricercatori talentuosi
- I ricercatori necessitano l’accesso alle migliori infrastrutture
Per sostenere le migliori idee e sviluppare competenze, per fare dell’Europa un polo di attrazione per i migliori ricercatori mondiali

**European Research Council:** progetti di ricerca di frontiera

**Future and Emerging Technologies:** ricerca nelle aree più promettenti nel campo delle tecnologie di domani; *(Science)*

Azioni **Marie Skłodowska-Curie** per attrarre e sostenere ricercatori e la loro mobilità;

**Infrastrutture di Ricerca** adeguate, meno care e diffuse in Europa.
**Excellent Science** /1

Budget proposto (milioni di €)

<table>
<thead>
<tr>
<th></th>
<th><strong>EC</strong></th>
<th><strong>EP</strong></th>
<th><strong>Compromise</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>European Research Council</strong></td>
<td>15.008</td>
<td>13.268</td>
<td><strong>11.934</strong></td>
</tr>
<tr>
<td><strong>Future and Emerging Technologies</strong></td>
<td>3.505</td>
<td>3.100</td>
<td><strong>2.457</strong></td>
</tr>
<tr>
<td><strong>Marie Skłodowska-Curie Actions</strong></td>
<td>6.503</td>
<td>5.572</td>
<td><strong>5.616</strong></td>
</tr>
<tr>
<td><strong>Research Infrastructures</strong></td>
<td>2.802</td>
<td>2.478</td>
<td><strong>2.267</strong></td>
</tr>
</tbody>
</table>

22.274 M €
Consiglio Europeo della Ricerca

- Nella proposta non sono evidenziati gli schemi di finanziamento
- ERC organo indipendente
- Schemi

<table>
<thead>
<tr>
<th>FP7</th>
<th>Eleggibilità</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERC Starting</td>
<td>2-7 anni dal phd</td>
</tr>
<tr>
<td>ERC Consolidator</td>
<td>7-12 anni dal phd</td>
</tr>
<tr>
<td>ERC Advanced</td>
<td>Almeno 10 anni di esperienza on ricerca</td>
</tr>
</tbody>
</table>
| ERC Sinergy       | • Da due a quattro PI  
                    • transdisciplinarietà                       |
| ERC Proof of Concept | Per grantees finanziati                         |
### ERC: Calls 2014*

<table>
<thead>
<tr>
<th>1° trimestre</th>
<th>2° trimestre</th>
<th>3° trimestre</th>
<th>4° trimestre</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Starting grant</strong> (fine marzo)</td>
<td><strong>Consolidator grant</strong> (inizio giugno)</td>
<td></td>
<td><strong>Advanced grant</strong> (fine ottobre)</td>
</tr>
</tbody>
</table>

- Synergy grant: no call nel 2013 e 2014
- Proof of Concept: 1 call con doppia scadenza nel 2014 (inizi di aprile e di ottobre)

*proposta ERC, da approvare
FET – Future and Emerging Technologies

- Expanded from ICT to be used as cross-cutting instrument
- Supports frontier research: alternative ideas, concepts or paradigms of risky or non-conventional nature

**FET Open**
- fostering novel ideas. Collaborative research for embryonic, high risk visionary science and technology

**FET Proactive**
- Nurturing emerging themes and communities

**FET Flagship**
- Tackling grand interdisciplinary science and technology challenges
# Marie Skłodowska-Curie Actions - MSCA

<table>
<thead>
<tr>
<th>ITN</th>
<th>Innovative Training Networks (ITN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(including EID and IDP)</td>
<td>Doctoral and initial training of researchers proposed by international networks of organisations from public and private sectors</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IEF</th>
<th>Individual Fellowships (IF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOF</td>
<td>Individual fellowships for most promising experienced researchers to develop their skills through international or inter-sector mobility</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IIF</th>
<th>R&amp;I Staff Exchange (RISE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIG</td>
<td>International and inter-sector cooperation through the exchange of research and innovation staff</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IAPP</th>
<th>IRSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>COFUND</td>
<td>COFUND</td>
</tr>
</tbody>
</table>

| COFUND | Co-funding of regional, national and international programmes |
Research Infrastructures

1. Developing the European RIs for 2020 and beyond
   - Developing **new world-class RIs**
   - Integrating and opening national and regional RIs of pan-European interest
   - Development, deployment and operation of ICT based e-Infrastructures

2. Fostering the **innovation** potential of RIs and their **human resources**

3. Reinforcing European RI **policy** and **international cooperation**
2° PILLAR

INDUSTRIAL LEADERSHIP
Struttura del programma

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H2020

INDUSTRIAL LEADERSHIP

- ICT
- NANOTECHNOLOGIES
- ADVANCED MATERIALS
- MANUFACTURING
- BIOTECHNOLOGY
- SPACE

FP7

- COOPERATION - ICT
- COOPERATION - NMP
- COOPERATION - HEALTH
- COOPERATION - KBBE
- COOPERATION - SPACE
## Industrial Leadership/1

**Budget proposto (milioni di €)**

<table>
<thead>
<tr>
<th><strong>Leadership in enabling and industrial technologies</strong> (ICT, nanotechnologies, materials, biotechnology, manufacturing, space)</th>
<th><strong>EC</strong></th>
<th><strong>EP</strong></th>
<th><strong>Compromise 27.06.13</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15.580</td>
<td>13.781</td>
<td>12,355</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Access to risk finance</strong></th>
<th><strong>EC</strong></th>
<th><strong>EP</strong></th>
<th><strong>Compromise 27.06.13</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Leveraging private finance and venture capital for research and innovation</td>
<td>4.000</td>
<td>3.538</td>
<td>2.590</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Innovation in SMEs</strong></th>
<th><strong>EC</strong></th>
<th><strong>EP</strong></th>
<th><strong>Compromise 27.06.13</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fostering all forms of innovation in all types of SMEs</td>
<td>700</td>
<td>619</td>
<td>561</td>
</tr>
</tbody>
</table>
Industrial Leadership/2

Per incoraggiare investimenti in R&I in Europa, promovendo alcune priorità per ogni forma di business

- **Leadership in enabling and industrial technologies** - soprattutto **Key enabling technologies** (Information and Communication Technologies (ICT), Nanotechnologies, Advanced materials, Biotechnology, Advanced Manufacturing and Processing) & Space;

- **Access to finance** per aziende innovative, strumenti finanziari in partenariato con l’European Investment Bank; Debt instrument & Equity instrument

- **Innovation in SME**
  Support to innovative SMEs
Industrial Leadership/2

Rationale:

- Gli investimenti strategici nelle tecnologie-chiave (es. tecnologie industriali avanzate, microelettronica) rafforzano l’innovazione nei settori già maturi e in quelli emergenti.

- L’Europa ha bisogno di attrarre ulteriori investimenti privati in ricerca e innovazione.

- L’Europa necessita di un numero maggiore di PMI innovative capaci di stimolare la crescita e creare posti di lavoro.
Nanotechnologies
Next generation nanomaterials, -devices, -nanosystems
Ensuring safe development & application + societal dimension
Efficient synthesis and manufacturing of nanomaterials, - systems
Developing capacity-enhancing techniques, measuring methods

Advanced Materials
Materials development & transformation
Mgmt of materials components
Materials for sustainable and for creative industries
Metrology, characterisation, standardisation, quality control
Optimisation of the use / substitution of materials

Advanced Manufacturing & Processing
Factories of the future
Energy-efficient buildings
Sustainable technologies in energy-intensive process industries
New, sustainable business models

* Area attività: Proposta Commissione Europea
ICT
- New generation components & systems
- Next generation computing
- Future internet
- Content technologies & information mgmt
- Advanced interfaces and robots

Biotechnology
- Boosting cutting-edge biotech as future innovation drivers
- Biotechnology-based industrial processes
- Innovative and competitive platform technologies

Space
- Enabling European competitiveness & independence in space activities
- Enabling future space missions
- Enabling exploitation of space data
- Enable European participation in global space endeavours

* Area attività: Proposta Commissione Europea

€ 7.027 M

€ 470 M

€ 1.347 M
COSA SONO LE KET?
Key Enabling Technologies

Tecnologie "ad alta intensità di conoscenza e associate ad elevata intensità di R & S, a cicli d'innovazione rapidi, a consistenti spese di investimento e a posti di lavoro altamente qualificati. Rendono possibile l'innovazione nei processi, nei beni e nei servizi in tutti i settori economici e hanno quindi rilevanza sistemica. Sono multidisciplinari, interessano tecnologie di diversi settori e tendono a convergere e a integrarsi. Possono aiutare i leader nelle tecnologie di altri settori a trarre il massimo vantaggio dalle loro attività di ricerca”

* Current situation of key enabling technologies in Europe, SEC (2009)
**TRL 1** – basic principles observed

**TRL 2** – technology concept formulated

**TRL 3** – experimental proof of concept

**TRL 4** – technology validated in lab

**TRL 5** – technology validated in relevant environment (industrial environment in the case of key enabling technologies)

**TRL 6** – technology demonstrated in relevant environment (industrial environment in the case of key enabling technologies)

**TRL 7** – system prototype demonstration in operational environment

**TRL 8** – system complete and qualified

**TRL 9** – actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)
Access to Finance

- Per aziende innovative
- Strumenti finanziari in partenariato con l’European Investment Bank
- Debt instrument & Equity instrument

€ 2,590 M €

Innovation in SME

- Eurostars
- EEN
- Azioni di coordinamento e supporto

€ 561 M €
3° PILLAR

SOCIETAL CHALLENGES
### 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 Skłodowska Curie actions**
  - Opportunities for training and career development
- **Research infrastructures** (including e-infrastructure)
  - Ensuring access to world-class facilities

### Industrial Technologies
- **Leadership in enabling and industrial technologies**
  - ICT, nanotechnologies, 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 and maritime research & the bioeconomy**
- **Secure, clean and efficient energy**
- **Smart, green and integrated transport**
- **Climate action, resource efficiency and raw materials**
- **Inclusive, innovative and reflective societies**
- **Security society**
SOCIETAL CHALLENGES

- Health, Demographic Change and Wellbeing;
- Food Security, Sustainable Agriculture, Marine and 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.

COOPERATION

- HEALTH
- KBBE
- ENERGY
- TRANSPORT
- ENVIRONMENT
- SSH
- SECURITY

INTERNATIONAL COOPERATION
## Societal challenges/1

Budget proposto (milioni di €)

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<th>Category</th>
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</table>
Societal challenges/2

Rationale:

- Le preoccupazioni condivise dai cittadini e dalla società e gli obiettivi politici dell’agenda europea (clima, ambiente, energia, trasporti, ecc) non possono essere affrontati o raggiunti senza innovazione.

- Le soluzioni brillanti derivano da collaborazioni multidisciplinari, dove giocano un ruolo di primo piano anche le scienze sociali e umane.

- Le soluzioni promettenti devono essere testate, dimostrate e progressivamente sviluppate.
1. Health, Demographic Change And Wellbeing

1.1. Understanding health, wellbeing and disease
1.2. Preventing disease
1.3. Treating and managing disease
1.4. Active ageing and self-management of health
1.5. Methods and data
1.6. Health care provision and integrated care
SC1 Health, Demographic Change And Wellbeing

CALLS - FOCUS AREA WP 2014 - 15

PERSONALISING HEALTH AND CARE

**Understandin g health, ageing and disease**

**Innovative treatments and technologies**

**Advancing active and healthy ageing care**

**Integrated, sustainable, citizen-centred**

**Effective health promotion, disease prevention, preparedness and screening**

**Improving diagnosis**

**Improving health information, data exploitation and providing an evidence base for health policies and regulation**

@APRE 2013
2. Food Security, Sustainable Agriculture, Marine And Maritime Research And The Bio-economy

2.1. Sustainable agriculture & forestry

2.2. Sustainable and competitive agri-food sector for a safe and healthy diet

2.3 Unlocking the potential of aquatic living resources

2.4 Sustainable and competitive bio-based industries and supporting the development of a European bio-economy
SC2 - European Bioeconomy Challenges:
Food Security, Sustainable Agriculture and Forestry, Marine and Maritime and Inland Water Research

FOCUS AREA
2014 - 2015:

Sustainable Food Security
Blue Growth
General call
Agriculture and forestry, Agri-food sector for a safe and healthy diet, aquatic living, bio-based industries
3. Secure, Clean And Efficient Energy

3.1. Reducing energy consumption and carbon footprint by smart and sustainable use

3.2. Low cost, low carbon electricity supply

3.3. Alternative fuels and mobile energy sources

3.4. A single, smart European electricity grid

3.5. New knowledge and technologies

3.6. Robust decision making and public engagement

3.7 Market uptake of energy innovation
- Renewable electricity and heating/cooling
- Modernising the single European electricity grid
- Providing the energy system with flexibility through enhanced energy storage technologies
- Sustainable biofuels and alternative fuels for the European transport fuel mix
- Enabling the sustainable use of fossil fuels in the transition to a low-carbon economy
4. Smart, Green and Integrated Transport

4.1 Resource efficient transport that respects the environment

4.2 Better mobility, less congestion, more safety and security

4.3 Global leadership for the European transport industry

4.4 Socio-economic and behavioural research and forward looking activities for policy making
SC4 Smart, Green and Integrated Transport

CALLS - FOCUS AREA
WP 2014 - 15
5. Climate Action, Resource Efficiency and Raw Materials

5.1. Fighting and adapting to climate change

5.2. Protecting the environment, sustainably managing natural resources, water, biodiversity and ecosystems

5.3. Ensuring sustainable supply of non-energy & non-agricultural raw materials

5.4. Enabling the transition towards a green economy and society through eco-innovation

5.5. Developing comprehensive and sustained global environmental observation and information systems

* Area attività: Proposta Commissione Europea
SC5. Climate Action, Resource Efficiency and Raw Materials

CALLS - FOCUS AREA WP 2014 - 15

- Fighting and adapting to climate change
- Protecting the environment, sustainably managing natural resources, water, biodiversity and ecosystem
- Ensuring the sustainable supply of non-energy and non-agricultural raw materials
- Enabling the transition towards a green economy through eco-innovation
- Developing comprehensive and sustained global environmental observation and information systems
- Cultural Heritage
6. Europe in a changing world – Inclusive, Innovative and Reflective societies

6.1. Inclusive societies
6.2. Innovative societies
6.3 Make use of the innovative, creative and productive potential of all generations
6.4 Ensure societal engagement in research and innovation
6.5 Promote coherent and effective cooperation with third countries
6.6 Reflective Societies – cultural heritage and European identity

* Area attività: Proposta Commissione Europea
SC6 Europe in a changing world – Inclusive, Innovative and Reflective societies

CALLS - FOCUS AREA
WP 2014 - 15

OVERCOMING THE CRISIS: NEW IDEAS, STRATEGIES AND GOVERNANCE STRUCTURES FOR EU

EUROPE AS GLOBAL ACTOR

YOUNG GENERATION IN AN INNOVATIVE INCLUSIVE AND SUSTAINABLE EUROPE

NEW FORMS OF INNOVATION

REFLECTIVE SOCIETIES: CULTURAL HERITAGE AND EUROPEAN IDENTITIES
7. Secure Societies – Protecting Freedom And Security of Europe and its Citizens

7.1 Fight crime, illegal trafficking and terrorism, including understanding and tackling terrorist ideas and beliefs
7.2 Protect and improve the resilience of critical infrastructures, supply chains and transport modes
7.3 Strengthen security through border management
7.4 Improve cyber security
7.5 Increase Europe's resilience to crises and disasters
7.6 Ensure privacy and freedom, including in the Internet and enhance the societal dimension legal and ethical understanding of all areas of security, risk and management
7.7 Enhance standardisation and interoperability of systems, including for emergency purposes
7.8 support the Union's external security policies, including conflict prevention and peace-building

* Area attività: Proposta Commissione Europea
SC7 Secure Societies: Protecting Freedom And Security of Europe and its Citizens
CALLS - FOCUS AREA WP 2014 - 15

- Crisis Management and Civil protection with a view to strengthening prevention and preparedness against natural and man-made disasters by underpinning an all-hazard approach to risk assessment across the EU
- Developing solutions, for climate change adaptation in areas affected by natural disasters
- Critical Infrastructure Protection...
- Communication Interoperability facilitating disaster management...
- Ethical/Societal Dimension.
AZIONI ORIZZONTALI
### Excellent Science
- European Research Council
  - Frontier research by the best individual teams
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- Security society

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**European Institute of Innovation and Technology (EIT)**

**Spreading Excellence and Widening Participation**

**Science with and for society**

**Joint Research Center (JRC)**
## Azioni ulteriori

**Budget proposto (milioni di €)**

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2.397 M €

EIT

European Institute of Innovation & Technology
H2020 KICs – Knowledge & Innovation Communities

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<td>1st</td>
<td>2014</td>
<td>Innovation for healthy living and active ageing</td>
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<tr>
<td></td>
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<td>Raw materials – sustainable exploration, extraction, processing and recycling</td>
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<td>2nd</td>
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<td></td>
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<td>Added value manufacturing</td>
</tr>
<tr>
<td>3rd</td>
<td>2018</td>
<td>Urban mobility</td>
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+ Climate change KIC - ICT KIC - Sustainable Energy KIC
Horizon 2020 introduces specific measures for spreading excellence and widening participation through engaging those who commit less in the EU research and innovation effort. This will greatly enhance competitiveness.
SPREADING EXCELLENCE AND WIDENING PARTICIPATION

TEAMING AND TWINNING: create new Centres of Excellence and expertise and encourage pan-European networking among researchers with a strong focus on excellence and innovation. They will build on knowledge transfer and exchange of best practice between research institutions, building on the strengths of leading partners.
SPREADING EXCELLENCE AND WIDENING PARTICIPATION

**ERA CHAIRS:** bring outstanding researchers to universities and other research institutions that have high potential for research excellence. On their side, institutions should mobilise support from different funding sources, including from the European Structural and Investment Funds, to invest in facilities and infrastructures in the context of Smart Specialisation Strategic Policy Frameworks and commit to institutional change and a broader support to innovation.

A **POLICY SUPPORT FACILITY:** inform better the formulation and optimisation of research and innovation policies in low performing Member States and regions aiming to make them more competitive at European level by offering expert advice to public authorities. Efforts to improve the international experience and networking capacities of peripheral institutions will be made by stimulating their participation with cross-border science networks through dedicated **COST** activities, connecting unexploited pockets of excellence throughout Europe.
"Science with and for Society shall build effective cooperation between science and society, recruit new talent for science and pair scientific excellence with social awareness and responsibility"
SCIENCE WITH AND FOR SOCIETY

- Call for making Science Education and careers attractive for young people;
- Call for promoting Gender equality in Research and innovation;
- Call for integrating Society in Science and Innovation;
- Call for developing Governance for the advancement of Responsible Research and Innovation;
- Call for Strategic Activities: networking and sharing knowledge about Science with and for Society
1.682 M €

JRC - Joint Research Centre
1. The Institute for Reference Materials and Measurements (IRMM)
2. The Institute for Transuranium Elements (ITU)
3. The Institute for Energy and Transport (IET)
4. The Institute for the Protection and Security of the Citizen (IPSC)
5. The Institute for Environment and Sustainability (IES)
6. The Institute for Health and Consumer Protection (IHCP)
7. The Institute for Prospective Technological Studies (IPTS)