“Science is the soul of prosperity of nations and the living source of all progress”

Funding opportunities for post doc researchers in Spain

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1. The Spanish Strategy: a general framework for ST&I policies

- The **SPANISH STRATEGY FOR ST&I 2013-2020** sets out Government’s long term policy for ST&I and approaches to maximize their economic and social benefits. It outlines «service to society» as the driving force behind scientific and technological advancement and therefore the need to accelerate the flow of research and knowledge into the economy.

- The **SPANISH STRATEGY** exemplifies an effort to align national policies with the objectives sought by the European Union as regards ST&I as well as to define our own priorities as result of a solid analysis of our strengths, opportunities, weaknesses and threats.
2. The context

- Spain faces one of the greatest economic challenges of recent decades, forcing to adopt major structural reforms in ST&I and to increase the economic impact of R&D investments.
- Consequently, the National Reform Programs (2012, 2013 and 2014) refer to the ST&I as the building block for “boosting economic growth and competitiveness” by encouraging the creation of capabilities and focusing on human resources.
- The SPANISH STRATEGY states policy actions and goals across boundaries to avoid the separation between research and innovation.
1. The Spanish Strategy: a general framework for ST&I policies

- Estrategia Estatal de Innovación (e2i) 2010-2015
- Innovación
- Investigación
- Estrategia Nacional de Ciencia y Tecnología (ENCYT) 2007-2015

IDEA
MERCADO
4. Main features of the Spanish ST&I System: **Strengths**

1. **R&D performing institutions**
2. **Researchers and R&D personnel highly qualified**
3. **International** recognition [impact] of **scientific production**
4. Access to **advanced** scientific and technological **infrastructures** –national and international-
5. **Scientific, technological and business leadership** in areas of **strategic interest worldwide** such as biotechnology, renewal energy, ICT, etc.
6. **Network infrastructures**.
7. **Human capital**
4. Main features of the Spanish ST&I System: **Weaknesses**

1. Low levels of **R&D SPENDING**
2. **BUSINESS R&D** significantly below EU-27.
3. **GOVERNANCE OF PUBLIC INSTITUTIONS**
4. **SMALL SIZE RESEARCH GROUPS** and barriers to achieve critical mass.
5. **LACK OF** flexible **FUNDING SCHEMES FOR TECHNOLOGY-BASED AND INNOVATIVE COMPANIES**.
6. **ST&I REGIONAL DISPARITIES**
7. **KNOWLEDGE MANAGEMENT AND** Lack of SMEs’ absorptive capabilities.
8. **SMALL NUMBER OF INNOVATIVE BUSINESS FIRMS**
9. **BARRIERS TO MOBILITY** of R&D personnel

Talent, Training, Skills and Job Opportunities

Towards knowledge excellence

Business Leadership in ST&I

Societal Challenges

From the lab to the market place
Funding (2013) across the main drivers of the Strategy: TALENT; EXCELLENCE; BUSINESS AND SOCIAL CHALLENGES. It only refers to competitive funding thru contracts, grants and competitive schemes (including top up).
## 6. Drivers and funding

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
<th>Subsidies</th>
<th>Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>TALENT AND EMPLOYABILITY</td>
<td>350,696,891</td>
<td>250,696,891</td>
<td>100,000,000</td>
</tr>
<tr>
<td>EXCELLENCE</td>
<td>498,250,000</td>
<td>147,750,000</td>
<td>350,000,000</td>
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<tr>
<td>BUSINESS LEADERSHIP</td>
<td>831,900,000</td>
<td>140,900,000</td>
<td>691,000,000</td>
</tr>
<tr>
<td>SOCIETAL CHALLENGES</td>
<td>2,183,344,080</td>
<td>499,944,080</td>
<td>1,683,400</td>
</tr>
</tbody>
</table>

- **Strategic Action in Health**: 87,433,080
- **Strategic Action in Digital Society and Economy**: 555,600,000
6. Drivers and funding

Distribution of subsidies/grants

- Societal Challenges: 48%
- Talent: 24%
- Excellence: 14%
- Business: 14%

Distribution of loans

- Societal Challenges: 60%
- Talent: 4%
- Excellence: 12%
- Business: 24%
6. Drivers and funding

## DISTRIBUTION OF FUNDS

- **Capítulo VII (Subvenciones)**
- **Capítulo VIII (créditos financieros)**

<table>
<thead>
<tr>
<th>Programa</th>
<th>Capítulo VII</th>
<th>Capítulo VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PROGRAMA ESTATAL DE PROMOCIÓN DEL TALENTO Y SU EMPLEABILIDAD</td>
<td>100,000,000</td>
<td>250,696,891</td>
</tr>
<tr>
<td>2. PROGRAMA ESTATAL DE FOMENTO DE LA INVESTIGACIÓN CIENTÍFICA Y TÉCNICA DE EXCELENCIA</td>
<td>350,000,000</td>
<td>148,250,000</td>
</tr>
<tr>
<td>3. PROGRAMA ESTATAL DE LIDERAZGO EMPRESARIAL EN I+D+I</td>
<td>541,000,000</td>
<td>140,900,000</td>
</tr>
<tr>
<td>4. PROGRAMA ESTATAL DE I+D+I ORIENTADA A LOS RETOS DE LA SOCIEDAD</td>
<td>1,330,400,000</td>
<td>499,944,080</td>
</tr>
</tbody>
</table>
7. NATIONAL PROGRAM OF TALENT AND EMPLOYABILITY

1. Strong and highly competitive pre doctoral and post doctoral TRAINING

2. Provide PROFESSIONAL SKILLS for the ST&I System:
   - ST&I Technicians
   - ST&I Management

3. Developing new BUSINESS/INDUSTRIAL PhD Programs

4. Scientific/academic careers and opportunities

5. Among public research organizations and across public and private ST&I performers

6. Foster international mobility:
   1. Inflows –international attraction of talent-
   2. Outflows –as part of the research career-

7. PhD job opportunities:
   - Public Research Organizations
   - Business Firms

8. ST&I employment opportunities within public and private organizations:
   - ST&I technicians
   - ST&I managers

9. Distinguished Professors

7. NATIONAL PROGRAM OF TALENT AND EMPLOYABILITY
7. NATIONAL PROGRAM OF TALENT AND EMPLOYABILITY

- Administrative simplification.
- Portability
- New schemes:
  - PhD contracts (1,020)
  - PhD contracts in Severo Ochoa Centers of Excellence (80)
  - Marie Curie Cofund
  - Schemes based on StG
  - Post doctoral contracts: 2 years
  - Post doctoral incorporation –young researchers: 2 years
  - Ramon y Cajal (5 years) and additional benefits (40,000 E +110,000 E)
- And new initiatives to foster employability and attract talent:
  - 1,000 new employments in R&D
  - New opportunities for young post doc within research projects
## 7. NATIONAL PROGRAM OF TALENT AND EMPLOYABILITY

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
<th>GRANTS</th>
<th>LOANS</th>
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</thead>
<tbody>
<tr>
<td>PhD Contracts</td>
<td>79.074.000</td>
<td>79.074.000</td>
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</tr>
<tr>
<td>Post doc contracts</td>
<td>11.250.000</td>
<td>11.250.000</td>
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</tr>
<tr>
<td><strong>TRAINING</strong></td>
<td><strong>90.324.000</strong></td>
<td><strong>90.324.000</strong></td>
<td></td>
</tr>
<tr>
<td>Ramón y Cajal</td>
<td>54.005.000</td>
<td>54.005.000</td>
<td></td>
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<tr>
<td>Torres Quevedo</td>
<td>15.000.000</td>
<td>15.000.000</td>
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<tr>
<td><strong>EMPLEA</strong></td>
<td><strong>101.500.000</strong></td>
<td><strong>1.500.000</strong></td>
<td><strong>100.000.000</strong></td>
</tr>
<tr>
<td>Technicians</td>
<td>6.720.000</td>
<td>6.720.000</td>
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</tr>
<tr>
<td>I3</td>
<td>3.250.000</td>
<td>3.250.000</td>
<td></td>
</tr>
<tr>
<td>COFUND CURIE</td>
<td>2.000.000</td>
<td>2.000.000</td>
<td></td>
</tr>
<tr>
<td><strong>INCORPORATION</strong></td>
<td><strong>182.475.000</strong></td>
<td><strong>82.475.000</strong></td>
<td><strong>100.000.000</strong></td>
</tr>
</tbody>
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7. NATIONAL PROGRAM OF TALENT AND EMPLOYABILITY

- PhD contracts: (1) better social benefits; (2) 1,020 contracts - 20,600 €/año+academic taxes+mobility aid- and (3) linked to R&D projects and Severo Ochoa Centers of Excellence. Severo Ochoa Centers also have a programme supported by La Caixa.

- Ramón y Cajal (175) include new incentives: wage+ 40,000 Euros for individual research + 110,000 Euros for further incorporation..

- COFUND CURIE: co-funding contracts under Cofund Marie Curie schemes

- EMPLEA -specialists in technology and knowledge management within business firms-
## 7. NATIONAL PROGRAM OF TALENT AND EMPLOYABILITY

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<th>Capítulo VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD training in foreign institutions</td>
<td>7.000.000</td>
<td>7.000.000</td>
<td></td>
</tr>
<tr>
<td>PhD mobility (universities)</td>
<td>2.571.700</td>
<td>2.571.700</td>
<td></td>
</tr>
<tr>
<td>Junior and senior faculty mobility (EDU)</td>
<td>7.526.300</td>
<td>7.526.300</td>
<td></td>
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<tr>
<td>Mobility (bilateral cooperation)</td>
<td>722.346</td>
<td>722.346</td>
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<tr>
<td>INCOPORATION</td>
<td>17.820.346</td>
<td>17.820.346</td>
<td></td>
</tr>
</tbody>
</table>
8. Other areas of interest

- **Training and skills** for R&D
- **Mobility** across institutions and public-private sectors
- Creating **new job opportunities** in R&D
- **Outstanding research** at the «knowledge frontier» and international scientific leadership
  - Prompt «emerging technologies» – exploratory avenues
  - Support **leading scientific institutions**
  - Large **scientific infrastructures**: Spanish roadmap revisited
- **Development of business ST&I capabilities**; the role of SMEs
  - Leadership and adoption of **key enabling technologies**
  - **Market driven research thru PPPs and clusters**

**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
- Social changes and innovative societies
- Inclusive and secure societies
- **The Society and Economy of the Digital Age**
8. Other areas of interest

1. Knowledge creation – basic and blue sky research based on scientific excellence and long term results
2. Convergence ERC initiatives
3. Bottom-up process
4. New funding opportunities for scientific breakthroughs
5. From blue skies projects towards proof of concepts and exploratory exercises to advance knowledge production and its potential for further development
6. Governance and restructuring of Public Research Organizations
7. Scientific specialization, increasing competition and international collaborations
8. ST&I equipment and small infrastructures to support research activities
9. Large Research Infrastructures: National and International Roadmaps coordination

- Knowledge frontiers
- Emerging Technologies
- Leading Institutions
- ST&I Infrastructures and Equipment
8. Other areas of interest

- **ST&I business capabilities**
- **Key Enabling Technologies**
- **Market driven research: PPPs and clusters**

1. Business firms capabilities to perform ST&I projects
2. Significant increase in SMEs engagement in ST&I activities
3. Innovative firms internationalization
4. Foster competitiveness in strategic industrial and economic sectors thru ST&I
5. Adoption and diffusion of horizontal technologies and potential cross industry applications
6. Strategic focus on KETs - nanotechnology, fotonics, microelectronic, advanced production systems, new materials, chemistry, ITCs- and business applications
7. Market oriented research
8. PPPs to foster:
   - ST&I applications
   - Entrepreneurial capabilities
   - Business engagement

8. Other areas of interest
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1. Health, demographic change and wellbeing
2. Food security, sustainable agriculture, marine and maritime research & the bio economy
3. Secure, clean and efficient energy
4. Smart, green and integrated transport
5. Climate action, resource efficiency and raw materials
6. Social changes and innovative societies
7. Inclusive and secure societies
8. Society and Economy of the Digital Age

The promotion of R&D&I directed at the challenges of society arises from the need to respond to the problems we face, and the objective of the SPANISH STRATEGY is to promote the scientific, technological and business leadership of Spain in all those segments with a high potential for growth at global level. CHALLENGES cover large fundamental areas which determine unique spaces for the multidisciplinary and inter sectoral collaboration.

The search for solutions to respond to the global CHALLENGES mobilizes major effort in terms of basic scientific research, development and innovation developed by research groups in the public sector and in business and in collaboration.