The Irish policy mix for technology transfer and IPR for public-private research

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Global Ambition
If you’ve got the ambition we’ll help you take it global.

What we do

• Enterprise Ireland helps companies start, innovate and scale internationally

• Work with 5,000 Irish owned businesses across all sectors of manufacturing and internationally traded services, approximately 200 of which are large companies

• Annual budget of €343M

• Offer leadership, competitiveness, innovation, networking and financial supports made to match ambition at every stage of company development

• Mandate to drive collaboration and commercialisation of state-funded research and National H2020 participation mandate.

• Innovation activities across all Irish industry (Micro SME, SME, Large Indigenous, Foreign MNC)

• 32 international offices; 10 offices throughout Ireland

• Key focus is the development and growth of Irish companies in global markets

• Responsibility for FDI in food
Why Enterprise Ireland supports Innovation?

• Innovation is a strategic imperative for Enterprise Ireland
  • It is core to our toolkit of responses to global challenges and opportunities, such as those posed by Brexit
  • 68% of Brexit affected clients have indicated that they plan to invest in RDI as a direct response to the dangers posed by Brexit.

• EI’s Innovation supports are about **product, process and service development**: key activities for any development agency

• EI have the commercial, market & technical skills, strong leveraged relationships with the Higher Education Sector, fellow agencies (IDA, SFI etc.), VC community, EU Commission & international agencies and a strong track record of delivering economic impact.

• **Legislation**: Science & Technology Act 1987 (‘promote the application of science and technology to economic (...) development’)

• **Government Policy:**

![Image of Government Policy documents]
STIAC
The Science Technology and Innovation Advisory Council (1995)

First Report on the Strategy for Science Technology and Innovation

2007-Present Technology Transfer Strengthening Initiative

First Publication of the National IP Protocol
Last Mile (Technology Development & Diffusion)

€70M Budget
Impacts

More than 200 new start-up businesses establish with EI help each year

90 are HPSUs

30 Spinouts p/a via KTI (15+ are HPSUs)

1200+ companies supported to undertake market focused research collaborations each year

130 entrepreneurs hone their ideas on campus in EI’s ‘New Frontiers’ program

Rigorous Independent Evaluations have proven Large Returns on Investment in R&I

Innovation Partnerships: 6.6X Turnover
Innovation Vouchers: 7X Turnover
Technology Gateways: 5.5X Turnover
Technology Centres: 2X Turnover (to date)
Campus Incubation: 3.6X Turnover

Start-up Incubation facilities on every HEI Campus:

360 companies
1870 employees

1200 Market focussed researchers supported p/a (19% of researchers in State)

265 researchers and investors brought together to develop new start-ups in 2017

€12M for companies in 2016
3X Turnover multiplier

€475M from H2020 to date towards target of €1.25B, a third of which has been to companies.
1st in Europe for SME Instrument

30 Spinouts p/a via KTI
(15+ are HPSUs)

10X Licences
5X Spinouts
No 1 in Europe for KT

40,000 visits to KT industry portal p/a
Other Impacts

Regional Impacts

- 85% of the Entrepreneurs who receive pre-start-up entrepreneurial training via New Frontiers receive their training outside Dublin.

- Most of Enterprise Ireland’s campus Incubation facilities are based in the regions and as such 70% of the companies & 68% of the employees in these facilities are ‘incubated’ outside Dublin.
  - 94% of companies remain in the same region after they leave the incubation space.

- With regard to collaborative industry-academic Innovation projects:
  - 76% of Innovation Partnership projects are delivered outside Dublin.
  - 83% of Technology Gateway Projects are delivered outside Dublin.
  - 73% of Innovation Vouchers are delivered outside Dublin.
  - 44% of companies in Technology Centres are located outside Dublin.

- 61% of Commercialisation projects (funding to commercialise research in colleges aimed at developing new technologies for industry or at forming the basis of new spinout companies) were undertaken outside Dublin.

- 41% (€65M) of Horizon 2020 funding was delivered outside Dublin in 2017.

Numbers of 1:1 company projects delivered per county p/a:
Other Impacts

• **Societal impacts**: EI supported Companies & Technologies that can improve or save lives
  - Anti-microbial coatings developed in DIT & TCD to fight MRSA in Hospitals etc.
  - Early identification of Pre-eclampsia solution developed by research spinout (‘Metabolomic Diagnostics’) – opportunity to address 70,000 maternal deaths and half a million infant deaths each year.
  - EI supports have helped ‘Radisens Diagnostics’ win European funding (SME instrument) to begin development of enhanced diagnostic testing for diabetes which will improve the accuracy and reduce the time taken with diagnosing this pernicious condition.
  - Tinnitus treatment developed by research spin-out (‘Mutebutton’) – opportunity for 40M Tinnitus sufferers worldwide
  - Research support to ‘Mincon’, a Clare based SME, to significantly enhance their drill bits. ‘Mincon’ made international headlines for their involvement in the 2010 Chilean miners rescue where a ‘Mincon’ drill bit was used to drill the rescue bore hole for the trapped miners
  - Revolutionary energy-neutral wastewater treatment developed via EI support by ‘Oxymem’

• **Spillovers** – 1200 industry/commercial focused researchers supported per annum (1/5 of all researchers in the system) with immeasurable benefits for the Irish economy.
  - E.g. One such researcher (Mark Hughes) subsequently became Director of Artificial Intelligence (AI) for the world’s largest healthcare company, United Health Group. Mark was then headhunted by Identv and was responsible for the decision to set up the company’s AI business unit in Dublin with an initial 20 very highly paid AI engineering jobs.
Number of companies involved in approved Innovation Partnerships 2005-2017

Average 2005-2012
43 companies

Average 2013-2017
70 companies

63% increase
Commercialisation Fund Payments

Commercialisation Fund Drawdown €M

Year:
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
- 2016
- 2017

Values:
- 2003: 9.8
- 2004: 11.2
- 2005: 15
- 2006: 20.1
- 2007: 22.1
- 2008: 19.8
- 2009: 29.3
- 2010: 18.9
- 2011: 17
- 2012: 16.4
- 2013: 18.2
- 2014: 16.1
- 2015: 14.7
- 2016: 14.3
- 2017: 14.3
# Research & Innovation Budget 2017

## Activities

### Types of Supports
- HPSU Equity
- Commercialisation Fund
- New Frontiers

### Types of Outputs p/a
- 90 HPSUs
- 30 Spinouts
- 110 Competitive Start Funds
- 100 New Frontiers Start-ups
- 1100 product, process, service development projects
- 700+ industry contacts made to the EEN p/a
- ~800 companies involved in Technology Centres
- 130+ companies supported under Horizon 2020

## Enabling the system to work with industry
- Technology Transfer Strengthening
- Campus Incubation
- Knowledge Transfer Ireland
- Developing key RDI people for industry

## Budget OUT

### C122M Actual R&I Budget

<table>
<thead>
<tr>
<th>Activities</th>
<th>Company Creation</th>
<th>1:1 RDI Solutions</th>
<th>1: Many RDI Solutions</th>
<th>Enabling the system to work with industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of budget</td>
<td>33%</td>
<td>41%</td>
<td>18%</td>
<td>8%</td>
</tr>
</tbody>
</table>

### International Sources of Funding
- H2020 SME Instrument: €15M
- ESA: €12M
- Horizon 2020: €145M

### Leveraged Private national funding from our activities
- HPSUs: €38M
- Industry Cash to: Innovation Partnerships: €2.1M
- In-company RDI: €30M
- Technology Gateway Projects: €3.9M
- Total: €36M

### Leveraged funding
- Technology Centre Industry Cash: €6M (+€6M in-kind)

## Leveraged funding

- €252M