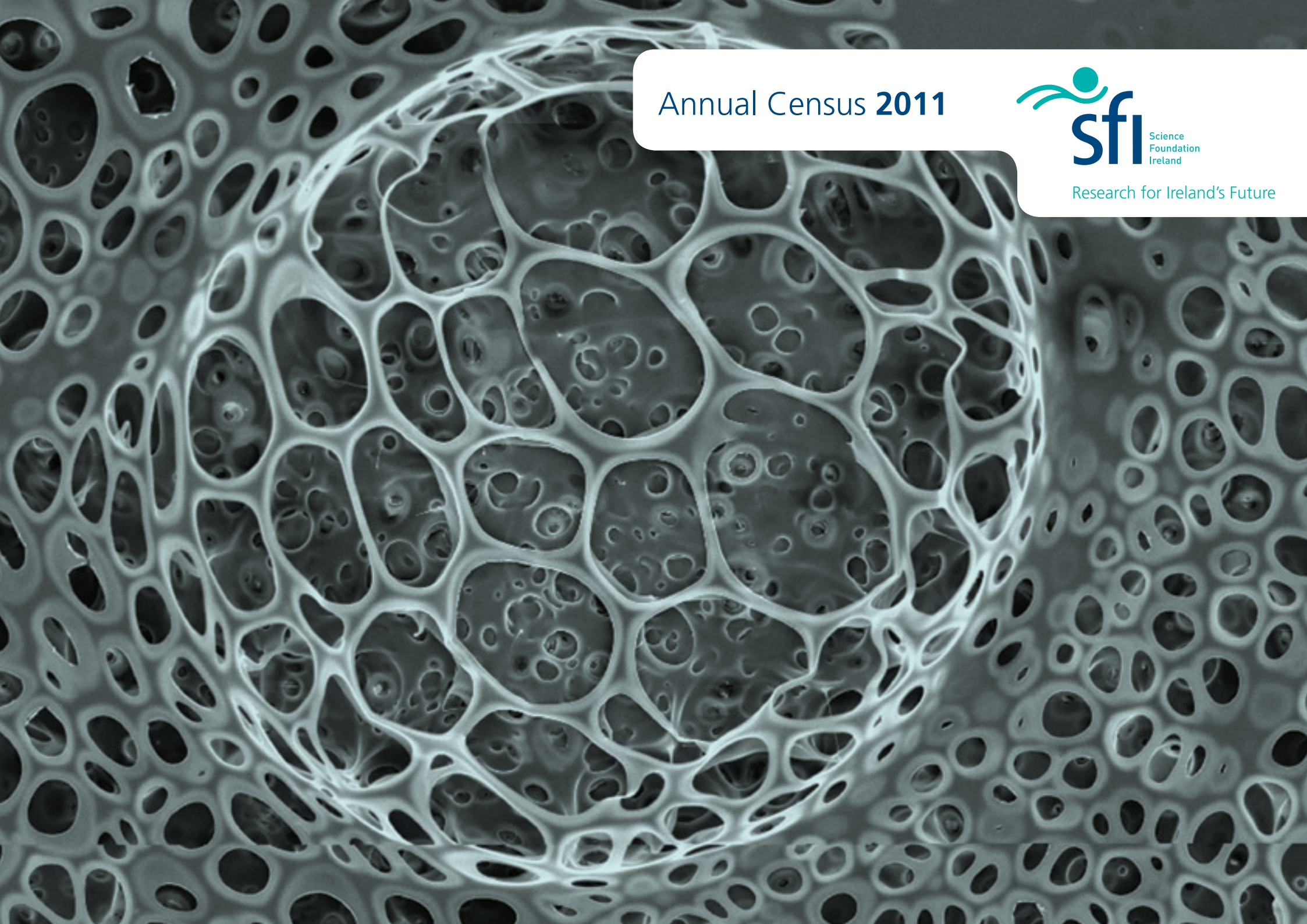




Annual Census 2011



Research for Ireland's Future

Science Foundation Ireland (SFI) Census 2011

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Executive Summary

The SFI Census of the holders of SFI's major grant categories¹ is conducted annually and provides information on research outputs, team compositions, collaborations and funding.

This is the fifth year that the census has been conducted and the key results are summarised below:

- Forms were returned for 511 active awards and these directly supported 2,995 individuals in 2011.
- A total of 5,740 publications were reported in 2011, a 15% increase on the 2010 level.
- Almost one-third of individuals who departed from their SFI funded team in 2011 took up employment in industry, up from one fifth in 2010. 66% of these were in companies based in Ireland.
- Individuals reported 10 early stage spin out companies in 2011, up from 4 in 2010.
- In addition to the spin out companies, a number of pre-commercial outputs were produced in 2011:
 - 170 Invention Disclosures
 - 79 Patents Filed
 - 27 Patents Awarded
 - 21 Standards Contributed To
 - 39 Licensed Technologies

- There was a 19% increase in the number of collaborations between SFI Researchers, companies, government departments and the Non-governmental organisation (NGO) sector this year. This equates to 583 companies partaking in 1,035 collaborations with SFI funded researchers. 56% of these collaborations are underpinned by legal agreements.
- Academic to academic collaborations also grew by 15% in one year. Almost three-quarters of these collaborations are with international research bodies.
- SFI funded researchers secured an additional €156m in non-SFI funding in 2011. Almost 60% of this funding is from non-Irish Exchequer sources.

The following section contains a short report on the key highlights of the 2011 census, which is followed by a section containing detailed tables on the findings.

1. SFI Principal Investigator (PI), SFI President of Ireland Young Researcher Award (PIYRA), SFI Principal Investigator Career Advancement Award (PICA), SFI Maths Initiative (MI), SFI Research Frontiers Programme (RFP), SFI Centres for Science, Engineering and Technology (CSET), SFI Strategic Research Clusters (SRC), Charles Parsons Award (CP), SFI Research Professor Recruitment Award (RP), US Ireland R&D Partnership Programme (US IRL) and the SFI Starting Investigator Research Grant (SIRG).

Census Report

SFI People and Awards²

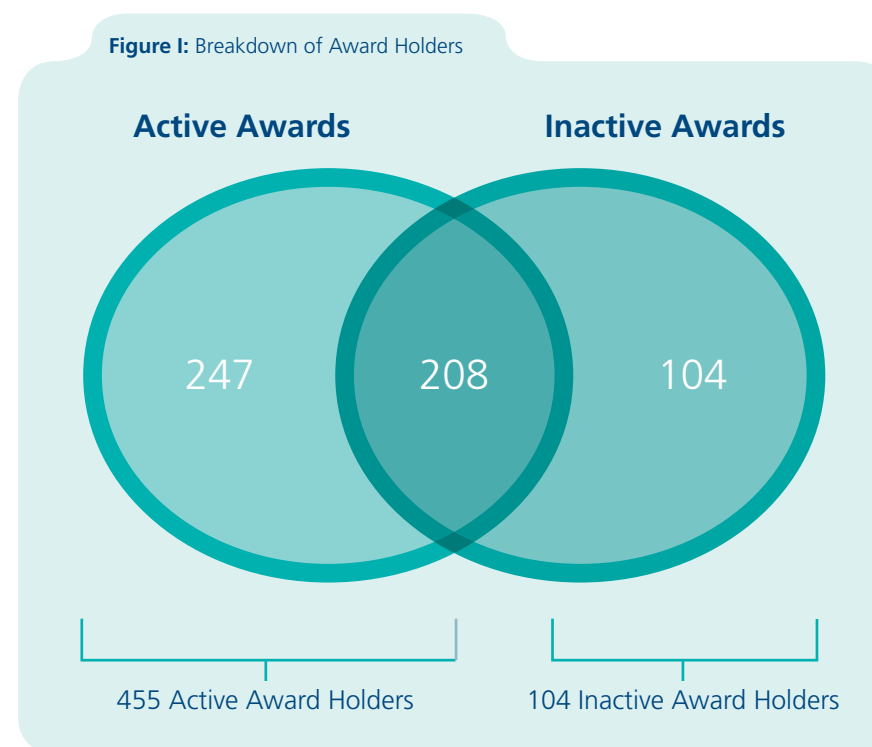
Census Response Rates

Table I: Response Rates

	Respondents			Awards		
	Total	Active	Inactive	Total	Active	Inactive
Form Sent	843	455	388	1361	511	850
Form Returned	570	455	114	985	511	474
Response Rate	68%	100%	29%	72%	100%	56%

- The Census form was sent to 843 researchers representing 1,361 active and inactive awards. The overall response rate was 68% for individuals and 72% for awards.
- For active awards, the response rate was 100% for both individuals and awards.
- The results of the census are therefore based on 570 respondents representing 985 awards, broken out as 455 active award holders³ and 114 inactive award holders⁴.
- The 985 awards are made up of 511 active awards and 474 inactive awards.

Figure I: Breakdown of Award Holders



- 247 individuals hold active awards only.
- 208 individuals hold active and inactive awards.
- 104 hold inactive awards only.

2. Active Awards refer to awards that received funding from SFI in 2011 and will continue to receive funding from SFI in 2012. Inactive awards are considered "expired" by SFI, i.e. on the 31/12/2011 they were no longer receiving funding from SFI.

3. Note active award holders may also hold inactive awards in their portfolio.

4. These award holders only hold inactive awards and are no longer on SFI's "books".

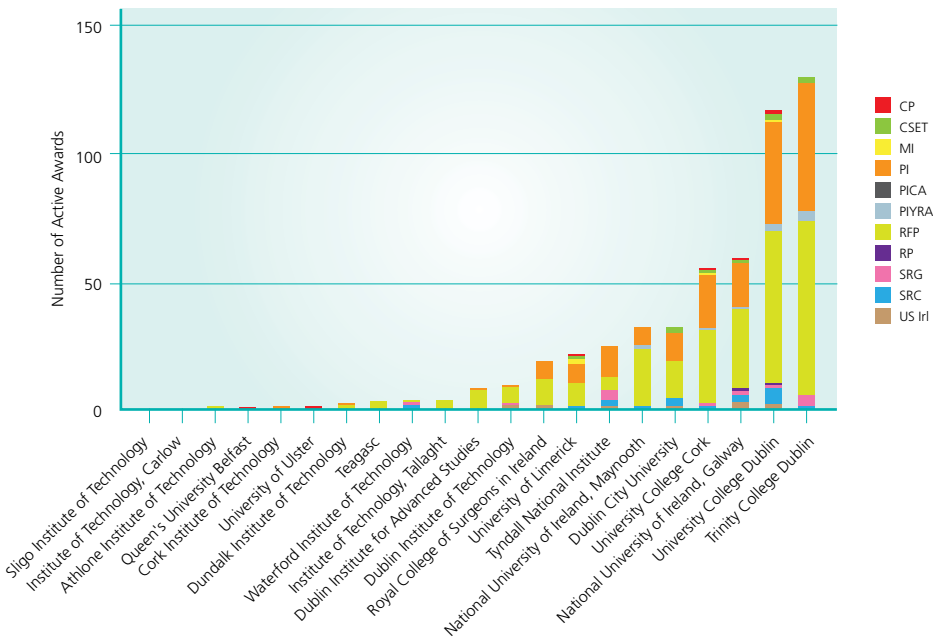
Respondents and Awards

This year there was a total of 511 active awards held by individuals.
This indicates a net loss of 46 individuals and 84 awards from 2010.

Table II: Comparison of Active Awards 2011 and 2010

	Total Number of Active Awards 2011	Total Number of Active Awards 2010	Difference	Difference %
CP	7	7	0	0
CSET	9	9	0	0
MI	4	6	-2	-33%
PI	173	186	-13	-7%
PICA	0	3	-3	-100%
PIYRA	10	13	-3	-23%
RFP	265	326	-61	-19%
RP	2	3	-1	-33%
SIRG	14	14	0	0
SRC	19	20	-1	-5%
US Irl	8	8	0	0
Total	511	595	-84	-14%

Figure II: Number of Active Awards of each type held by Higher Education Institute (HEI)



47% of active awards are held in Trinity College Dublin (TCD) and University College Dublin (UCD).

Research Team Compositions

Forms were returned for 511 active awards and these supported 2,995 team members in 2011. Support for a further 1,914 team members was secured from other sources of funding.

Table III: Research Team Composition
(SFI Funded Team Members) as at 31/12/2011

	Male		Female		Total
	Number	% of Total	Number	% of Total	
Award Holder	368	81%	87	19%	455
Co-Investigators	73	90%	8	10%	81
Postdoctoral Researchers	485	67%	243	33%	728
PhD Students	816	64%	468	36%	1284
Masters Students	37	62%	23	38%	60
Technicians	47	75%	16	25%	63
Research Assistants	49	53%	43	47%	92
Administrators	12	17%	60	83%	72
Management Staff	20	56%	16	44%	36
Education & Outreach Staff	5	31%	11	69%	16
Other Team Members	76	70%	32	30%	108
Total	1988	66%	1007	34%	2995

Table IV: Research Team Composition by Nationality
(SFI Funded Team Members) as at 31/12/2011

	Irish		EU (Non-Irish)		Non-EU		Total
	Number	% of Total	Number	% of Total	Number	% of Total	
Award Holder	333	73%	84	18%	38	8%	455
Co-Investigators	52	64%	22	27%	7	9%	81
Postdoctoral Researchers	296	41%	236	32%	196	27%	728
PhD Students	680	53%	305	24%	299	23%	1284
Masters Students	41	68%	11	18%	8	13%	60
Technicians	48	76%	9	14%	6	10%	63
Research Assistants	55	60%	23	25%	14	15%	92
Administrators	62	86%	8	11%	2	3%	72
Management Staff	29	81%	4	11%	3	8%	36
Education & Outreach Staff	14	88%	1	6%	1	6%	16
Other Team Members	72	67%	23	21%	13	12%	108
Total	1682	56%	726	24%	587	20%	2995

Table V: Research Team Composition by Gender
(All funding sources) as at 31/12/2011

	Male		Female		Total
	Number	% of Total	Number	% of Total	
Award Holder	368	81%	87	19%	455
Co-Investigators	87	90%	10	10%	97
Postdoctoral Researchers	845	66%	429	34%	1274
PhD Students	1419	63%	846	37%	2265
Masters Students	107	62%	65	38%	172
Technicians	80	70%	34	30%	114
Research Assistants	98	57%	73	43%	171
Administrators	20	17%	96	83%	116
Management Staff	23	59%	16	41%	39
Education & Outreach Staff	5	28%	13	72%	18
Other Team Members	133	71%	55	29%	188
Total	3185	65%	1724	35%	4909

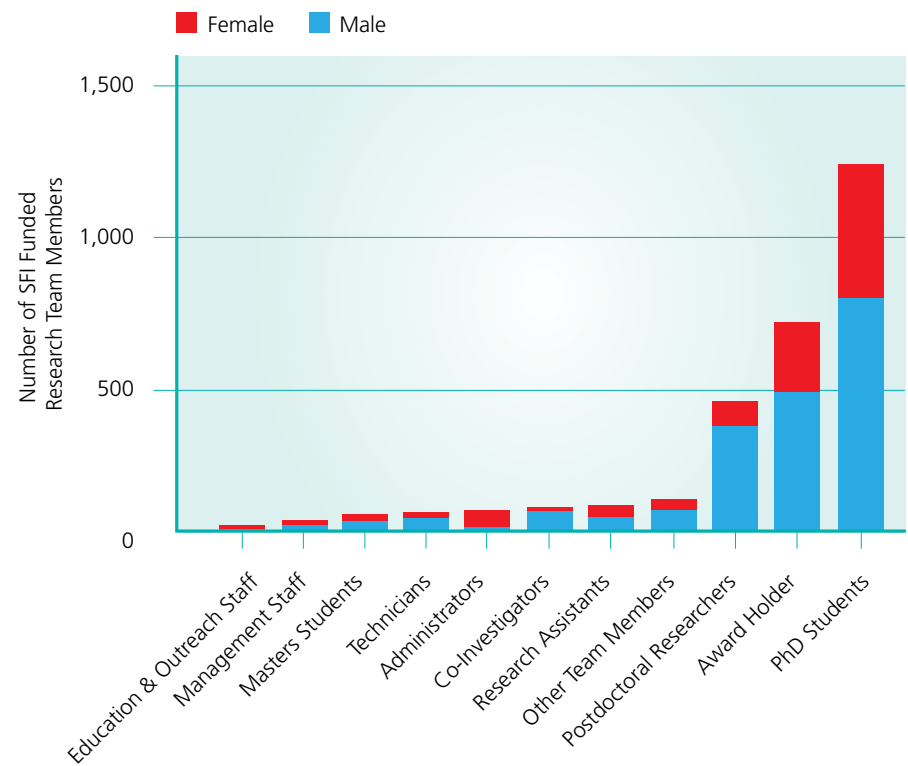
Table VI: Research Team Composition by Nationality
(All funding sources) as at 31/12/2011

	Irish		EU (Non-Irish)		Non-EU		Total
	Number	% of Total	Number	% of Total	Number	% of Total	
Award Holder	333	73%	84	18%	38	8%	455
Co-Investigators	56	58%	30	31%	11	11%	97
Postdoctoral Researchers	521	41%	433	34%	320	25%	1274
PhD Students	1234	54%	502	22%	529	23%	2265
Masters Students	109	63%	28	16%	35	20%	172
Technicians	90	79%	12	11%	12	11%	114
Research Assistants	103	60%	43	25%	25	15%	171
Administrators	99	85%	14	12%	3	3%	116
Management Staff	32	82%	4	10%	3	8%	39
Education & Outreach Staff	16	89%	1	6%	1	6%	18
Other Team Members	116	62%	42	22%	30	16%	188
Total	2709	55%	1193	24%	1007	21%	4909

Gender

- The ratio of male to female award holders is 80:20. This has remained unchanged for the past four Census reports.
- For the overall team, the ratio of male to female is two thirds to one third. As in previous years, this shows that there is a loss of female researchers in the progression from postdoctoral research level to award holder.

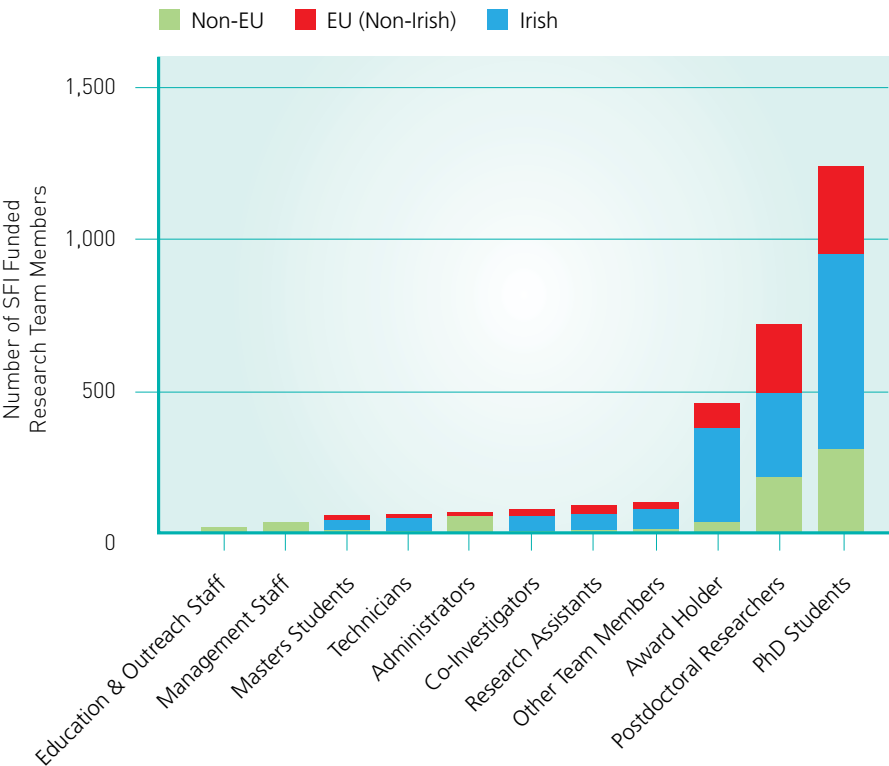
Figure III: Gender Breakdown of Research Team (SFI Funded Members) as at 31/12/2011



Nationality

- 23% of award holders are non-Irish, compared to 40% in 2010.
- 47% of SFI funded teams are non-Irish, excluding award holders.
- Within this group, almost 60% of SFI funded Postdoctoral Researchers and 47% PhD students are from abroad.

Figure IV: Nationality Breakdown of Research Team (SFI Funded Members) as at 31/12/2011



First Destination of Departing Team Members⁵

A total of 535 team members left SFI funded research groups in 2011. This represents an increase of 13% on 2010 figures. Of these, 54% remained in Ireland and 46% went abroad. These percentages are similar to the figures presented in 2010 (53% in Ireland, 47% abroad).

Table VII: All Departing Team Members in 2011

	Outside Ireland	% Outside Ireland	Within Ireland	% Within Ireland	Total	% Total Leavers
Industry	56	34.1%	108	65.9%	164	30.7%
Postdoctoral research in HEI	92	58.2%	66	41.8%	158	29.5%
Other	26	49.1%	27	50.9%	53	9.9%
Lecturers/Permanent researchers in HEI	32	76.2%	10	23.8%	42	7.9%
PhD research in HEI	9	30.0%	21	70.0%	30	5.6%
Career Break	17	73.9%	6	26.1%	23	4.3%
Technicians in HEI	6	31.6%	13	68.4%	19	3.6%
Unemployment	5	29.4%	12	70.6%	17	3.2%
Specialist Courses	3	23.1%	10	76.9%	13	2.4%
Maternity Leave	0	0.0%	10	100.0%	10	1.9%
Teachers (primary/secondary)	3	60.0%	2	40.0%	5	0.9%
Short term secondment to another institute	0	0.0%	1	100.0%	1	0.2%
Total	249	46.5%	286	53.5%	535	100.0%

All Departing Team Members

- Almost one third of individuals who left SFI funded teams in 2011 went into industry, compared to just 22% in 2010. Within this cohort, 66% of individuals took up employment in industry in Ireland.
- Another 30% proceeded to postdoctoral research, compared to 34% in 2010. Just over half of these took up research positions abroad.
- More than half of all team leavers in 2011 remained in Ireland. For those that stayed in Ireland, industry was the largest employer (38%).

Departing Postdoctoral Researchers

- 229 Postdoctoral Researchers departed SFI research groups in 2011. Over half of these Postdoctoral Researchers left Ireland, mostly to continue postdoctoral research in a Higher Education Institute (HEI) abroad. Of those remaining in Ireland, 41% went into industry and 33% continued postdoctoral research in a HEI. Industry as a first destination, both in and outside Ireland, attracted 32% of Postdoctoral Researchers. This is a significant increase on the 2010 figures, where 24% took first employment with industry. See table 3.1 for detailed information.

Departing PhDs

- 184 PhD students departed their SFI funded teams this year. Just over half of these left Ireland. This is an 8% decrease versus leavers in 2010. Almost 50% of those PhD students who left Ireland obtained postdoctoral research positions in HEIs abroad. The first destination for 25% of all PhD leavers, who left SFI funded teams in 2011, was in industry, primarily within Ireland (59%), compared to 21% in 2010.

Departing Research Masters

- 83 Masters Students departed their SFI funded teams this year. 74% of these students found employment within Ireland and the majority of these found employment in industry (54%). Almost one third proceeded to PhD level.

5. When interpreting the percentages in this section, bear in mind that the numbers used as a basis for these percentages are very small.

Academic Outputs

A total of 5,740 publications were reported in 2011 by SFI funded researchers from active awards. This is a 15% increase on the number of publications reported in 2010. 3,351 publications were attributed to SFI funding and 2,389 were attributed to other funding sources. In addition, there were 713 publications reported from inactive awards.

Of the total number of SFI funded publications from active awards, 31% have a named co-author with an address other than Ireland and 40% are available in open-access repositories.

Figure V: Publication Output in 2011 by HEI

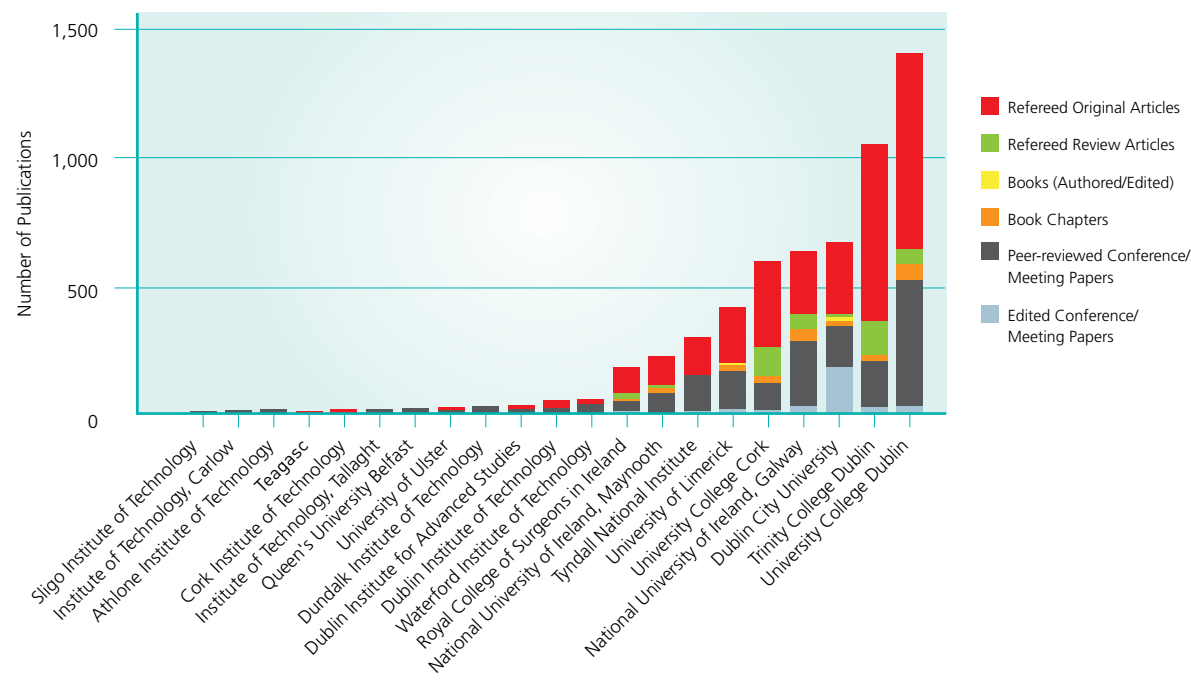


Table VIII: Publication Output in 2011 for Active Awards

	CP	CSET	MI	PI	PIYRA	RFP	RP	SIRG	SRC	US Irl	Total from SFI Funding	Other Funding Sources
Outputs with a non-Irish co-author	24	222	51	412	16	148	1	13	158	5	1050	858
Outputs available in Open Access Repositories	15	465	51	414	18	157	2	9	220	5	1356	652
SFI Accredited Outputs	66	627	139	861	28	296	2	32	526	6	2583	665
Total Research Outputs	111	823	145	1075	40	421	2	58	666	10	3351	2389

Pre-Commercial Outputs⁶

Table IX: Summary of Pre-Commercial Outputs in 2011 (Active Awards)

	Total
Invention Disclosures	160
Patents Filed	72
Patents Awarded	25
Standards Contributed To	21
Spin Outs Reported	9
Licensed Technologies	38

Table X: Summary of Pre-Commercial Outputs in 2011 (Inactive Awards)

	Total
Invention Disclosures	10
Patents Filed	7
Patents Awarded	2
Standards Contributed To	0
Spin Outs Reported	1
Licensed Technologies	1

Spin Outs

9 spin out companies were reported this year from active awards compared to 4 last year. This is a 150% increase on 2010.

Licensed Technologies

There were 38 licensed technologies in 2011 from active awards. This is a 73% increase on the 22 technologies reported in 2010.

Table XI: Summary of Pre-Commercial Outputs by HEI - Active Awards in 2011

	Invention Disclosures	Patents Filed	Patents Awarded	Standards Contributed to
Dublin City University	29	5	0	0
Dublin Institute of Technology	2	0	0	2
Dundalk Institute of Technology	0	0	0	3
National University of Ireland, Galway	23	5	0	5
National University of Ireland, Maynooth	2	2	1	0
Royal College of Surgeons in Ireland	5	8	2	0
Trinity College Dublin	23	11	3	1
Tyndall National Institute	12	6	2	0
University College Cork	20	7	1	2
University College Dublin	35	21	6	2
University of Limerick	4	2	9	6
University of Ulster	4	4	1	0
Waterford Institute of Technology	1	1	0	0
Total	160	72	25	21

Invention Disclosures

160 invention disclosures arose from active awards in 2011 compared to 150 in 2010.

Patents

There were 72 patents filed in 2011 compared to 59 patents filed from active awards in 2010. There was a significant increase in the number of patents awarded from active awards in 2011. There were 25 awarded in 2011 compared to 8 in 2010. This is a growth of 213%.

Standards

The number of standards contributed to in 2011 was 21. This is an increase from 18 in 2010.

6. Although Invention Disclosures, Patents, Spin Outs and Licenses are reported here as arising from SFI - funded research, it is important to stress that SFI does not produce these outputs directly. These are the product of the research and commercialisation ecosystem and are dependent upon Enterprise Ireland (EI), the HEI Technology Transfer Offices (TTOs) and other stakeholders.

Industry-Academic Collaborations

There was a 19% increase in the number of collaborations between SFI researchers, companies, government departments and the NGO sector in 2011, i.e. 1,035 collaborations in total versus 867 in 2010. This, in addition to the growth witnessed last year, means that there has been a 72% increase in non-academic collaborations in just two years.

There was a corresponding increase of 21% in the number of companies collaborating with SFI funded researchers, i.e. 583 companies in 2011 compared to 482 in 2010 or an additional 101 companies working with SFI researchers.

The number of collaborations or relationships with multinational corporations (MNCs) increased by 14% and involved 246 MNCs in 2011.

There was a 27% increase in the number of collaborations with small-medium enterprises (SMEs). There are now 337 SMEs working with SFI researchers. This is the largest growing category of companies working with SFI researchers and represents a 38% increase in the number of SMEs working with SFI Funded Researchers in 2010. It is worth noting that in 2008, there were 108 SMEs collaborating with SFI researchers, which increased to 165 in 2009, 245 in 2010 and now is at 337, which represents just over a 200% increase in 4 years.

There was a 17% increase in the number of collaborations reported with government departments/semi-state bodies and private foundations, charities and NGOs compared to 2010.

Over half (56%) of all these collaborations have legal agreements in place.

Table XII: 2011-2010 Comparison of Industry-Research Collaborations (Active Awards)

	Collaborations 2011	Collaborations 2010	% Change	Companies 2011	Companies 2010	% Change
Multinational Corporation (MNC)	515	450	+14%	246	237	+4%
SME	424	335	+27%	337	245	+38%
Government Departments or Semi-State Bodies	73	55	+33%	38	28	+36%
Private Foundations/ Charities/ Non Government Organisations (NGO)	23	27	-15%	21	24	-13%
Total by Award	1035	867	+19%	642	534	+20%

Academic-Academic Collaborations

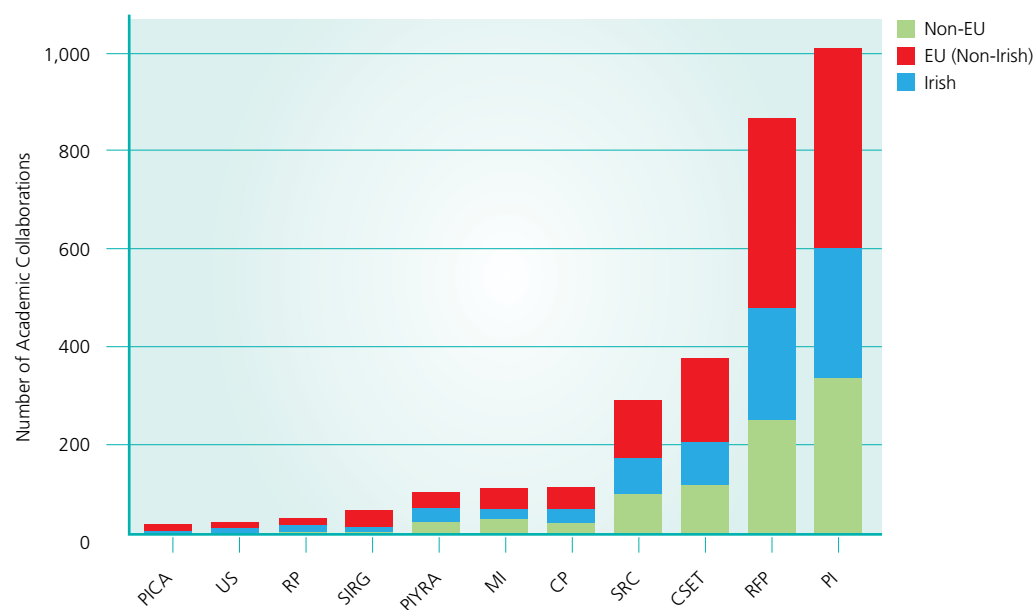
- There were 2,581 academic-academic collaborations in 2011, an increase of 15% on 2010.
- 74% of these collaborations are with international partners.
- The largest cohort of academic collaborations is with EU academic institutes (44%). Almost all of these academic collaborations are for the purpose of joint research and/or publication, while training and career & professional development and the sharing of material and resources still remain important factors in engaging with external institutes.

Table XIII: Academic Collaborations in 2011 by Objective
- Active Awards in 2011

	Collaborations	% of Collaborations with this Objective
Joint Research/Publication	2540	99.6%
Access to/provision of material, equipment, software, data	1463	57.4%
Training and Career & Professional Development (CPD)	654	25.7%
Licence development	173	6.8%
Start-up development	27	1.1%
Building networks & relationships	10	0.4%
Other	8	0.3%

31% of publications (1050) have a named co-author with an address other than Ireland. OECD figures for Ireland show a slightly larger percentage and place Ireland at average in terms of international co-authorship.⁷

Figure VII: Academic Collaborations in 2011 by Award Type and Region



7. <http://www.oecd.org/dataoecd/28/49/45188320.pdf>

International Events

There was a 13% increase in the number of international events attended since 2010. SFI researchers played an active role in international conferences, from organising to presenting at these events.

Table XIV: Breakdown of Location and Member Roles at International Events in 2011

	Ireland	EU (excl Ireland)	Outside EU	Total
Host	146	54	38	238
Programme Committee Member	121	181	122	424
Invited Speaker	409	755	507	1671
Oral Presentation of a Paper	373	727	421	1521
Poster Presented	575	594	332	1501
Meeting Participant	234	240	106	580
Total	1858	2551	1526	5935

Note: These figures are not mutually exclusive. For example, an individual could have both hosted and presented a paper at an event.

External Funding

- The amount of additional funding obtained by SFI researchers increased by 18% to €156m.
- Funding leveraged from the Irish Exchequer remained relatively constant at €63m.
- Funding secured from the EU has decreased by 10% to €56m.
- Funding secured from Enterprise Ireland and the HEA has increased by 46% and 44% respectively.
- Also, there has been a 43% increase from funding secured from Charity/Non-Profit Organisation (Irish).

Table XV: Amount of non-SFI Funding secured by SFI Funded Researchers in 2011 (By Source for Active Awards, amounts in €s)⁸

	External Funding Leveraged	% change from 2010
EU	56,203,077	-10%
Enterprise Ireland	20,166,029	+46%
HEA	18,995,365	+44%
Private Enterprise	16,572,804	+11%
IRCSET	8,537,973	-31%
Charity/Non-Profit Organisation (Irish)	8,511,685	+43%
HRB	7,839,278	-17%
Other Irish Government Source	3,153,911	-54%
Other International Government Source	3,132,193	-24%
Wellcome Trust	2,821,960	+64%
Department of Agriculture Fisheries and Food	1,805,780	+0.4%
Charity/Non-Profit Organisation (International)	1,420,932	-20%
EPA	1,380,350	-45%
Other International Interest Organisation	1,358,380	+12%
NIH	1,274,198	+20%
Other Source	853,709	+137%
Teagasc	714,100	-32%
NSF	617,500	+68%
DCENR	614,010	+514%
Marine Institute	40,000	-91%
Total	156,013,234	+18%

8. Acronyms are explained in Appendix B.

Table XVI: Amount of External Funding secured by SFI Funded Researchers in 2011 by Irish Exchequer vs Non-Irish Exchequer and National vs International Funding Sources (Active Awards, amounts in €s)

	Irish Exchequer	Non-Irish Exchequer	National	International
EU		56,203,077		56,203,077
Enterprise Ireland	20,166,029		20,166,029	
HEA	18,995,365		18,995,365	
Private Enterprise		16,572,804		
IRCSET	8,537,973		8,537,973	
Charity/Non-Profit Organisation (Irish)		8,511,685	8,511,685	
HRB	7,839,278		7,839,278	
Other Source		853,709		
Other International Government Source		3,132,193		3,132,193
Wellcome Trust		2,821,960		2,821,960
Other Irish Government Source	3,153,911		3,153,911	
Department of Agriculture Fisheries and Food	1,805,780		1,805,780	
EPA	1,380,350		1,380,350	
Charity/Non-Profit Organisation (International)		1,420,932		1,420,932
NIH		1,274,198		1,274,198
Other International Interest Organisation		1,358,380		1,358,380
Teagasc	714,100		714,100	
NSF		617,500		617,500
DCENR	614,010		614,010	
Marine Institute	40,000		40,000	
Total by Source	63,246,796	92,766,438	71,758,481	66,828,240
Total Amount	156,013,234⁹		138,586,721¹⁰	

9. The figure reported is multi-annual funding secured in 2011. Multi-annual SFI funding invested in 2011, for comparison, was €104,787,000.

10. This figure is lower than the total as not all funding can be described as national or international for example, private funding or funding from "other sources".

Annual Census 2011

Tables and Graphs

SFI People and Awards

Table 1.1: Response Rates

	People			Awards		
	Total	Active	Inactive	Total	Active	Inactive
Form Sent	843	455	388	1361	511	850
Form Returned	570	455	114	985	511	474
Response Rate	68%	100%	29%	72%	100%	56%

Table 1.2: Total Number of each Award Type by Award Holder in 2011

	Total Number of Awards	Number of Active Awards 2011
CP	7	7
CSET	9	9
MI	5	4
PI	283	173
PICA	7	0
PIYRA	16	10
RFP	604	265
RP	11	2
SIRG	14	14
SRC	21	19
US Irl	8	8
Total	985	511

Table 1.3: SFI Award Holders 2011

	Award Holders		Number of Active Awards		Number of Awards [Active + Inactive]	
Female	87	19.1%	98	19.2%	182	18.5%
Male	368	80.9%	413	80.8%	803	81.5%
Total	455	100.0%	511	100.0%	985	100.0%

Figure 1.1: Award Holders 2011

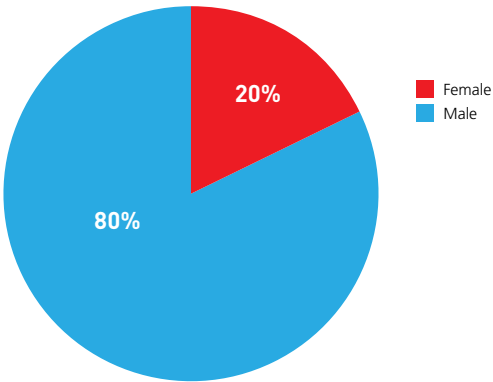


Table 1.4: SFI Active Award Holders 2011

	Active Award Holders		Number of Active Awards	
Female	87	19.1%	98	19.2%
Male	368	80.9%	413	80.8%
Total	455	100.0%	511	100.0%

Table 1.5: SFI Award Holders (Active) by HEI in 2011

	Number of Active Award Holders	% of Active Award Holders by HEI
Trinity College Dublin	108	23.7%
University College Dublin	106	23.3%
National University of Ireland, Galway	52	11.4%
University College Cork	49	10.8%
National University of Ireland, Maynooth	27	5.9%
Dublin City University	26	5.7%
Tyndall National Institute	21	4.6%
University of Limerick	20	4.4%
Royal College of Surgeons in Ireland	16	3.5%
Dublin Institute of Technology	9	2.0%
Dublin Institute for Advanced Studies	6	1.3%
Waterford Institute of Technology	3	0.7%
Teagasc	3	0.7%
Institute of Technology, Tallaght	3	0.7%
Dundalk Institute of Technology	2	0.4%
University of Ulster	1	0.2%
Queen's University Belfast	1	0.2%
Cork Institute of Technology	1	0.2%
Athlone Institute of Technology	1	0.2%
Total	455	100.0%

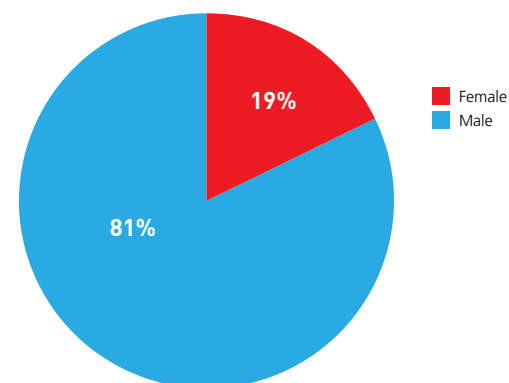
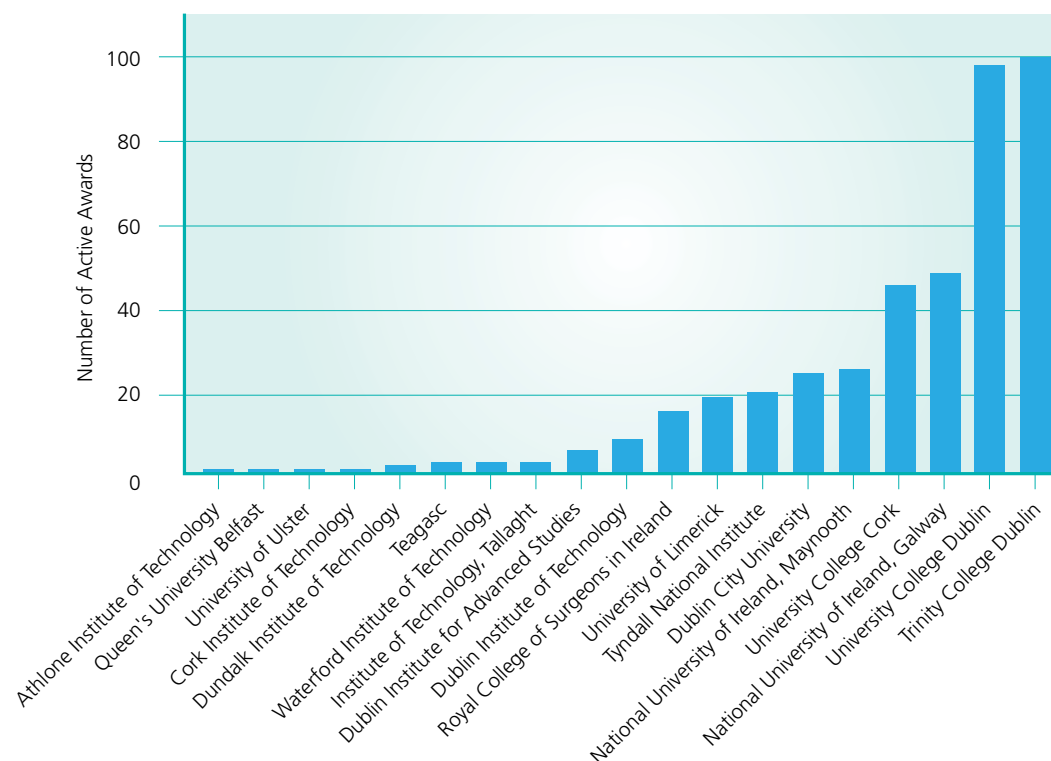
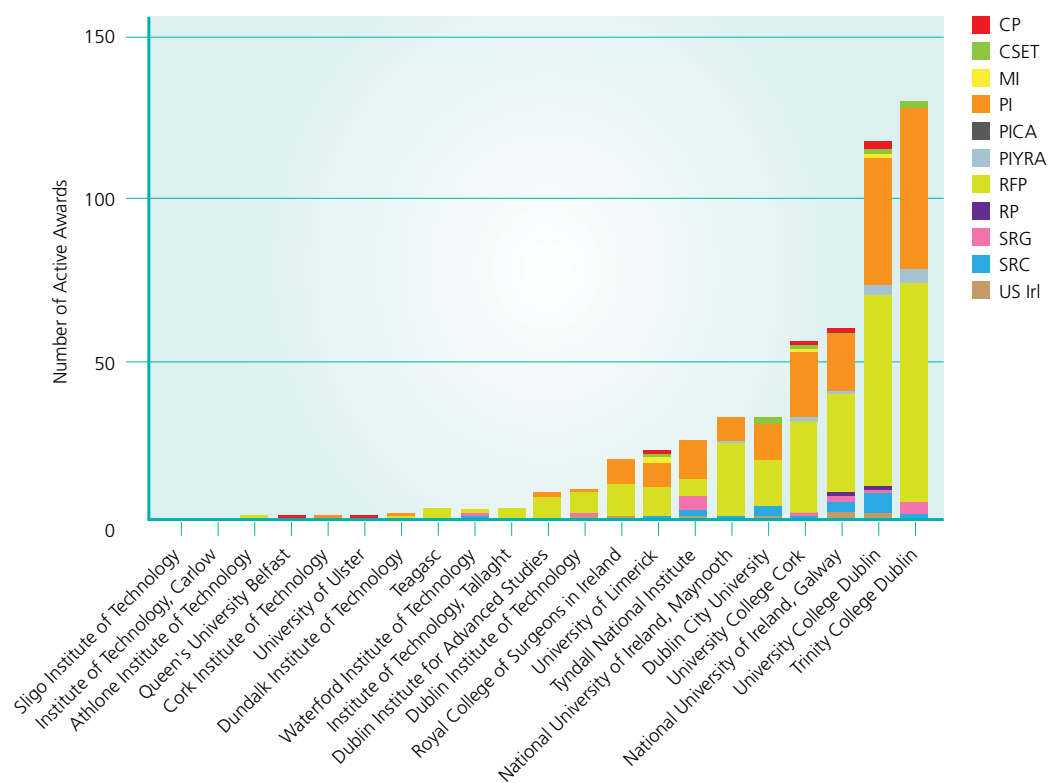
Figure 1.2: Active Award Holders 2011**Figure 1.3:** SFI Active Award Holders by HEI in 2011

Table 1.6: Total Number of Active Awards of Each Award Type held by Respondents and by HEI in 2011

	CP	CSET	PI	MI	PICA	PIYRA	RFP	RP	SIRG	SRC	US IrI	Number of Active Awards
Trinity College Dublin	0	2	49	0	0	4	67	0	4	1	0	127
University College Dublin	2	2	39	1	0	3	58	1	1	6	2	115
National University of Ireland, Galway	1	1	17	0	0	1	30	1	2	3	2	58
University College Cork	1	1	20	1	0	1	28	0	1	1	0	54
National University of Ireland, Maynooth	0	0	7	0	0	1	22	0	0	1	0	31
Dublin City University	0	2	11	0	0	0	14	0	0	3	1	31
Tyndall National Institute	0	0	12	0	0	0	5	0	4	2	1	24
University of Limerick	1	1	7	2	0	0	9	0	0	1	0	21
Royal College of Surgeons in Ireland	0	0	7	0	0	0	10	0	0	0	1	18
Dublin Institute of Technology	0	0	1	0	0	0	6	0	1	0	1	9
Dublin Institute for Advanced Studies	0	0	1	0	0	0	7	0	0	0	0	8
Waterford Institute of Technology	0	0	0	0	0	0	1	0	1	1	0	3
Teagasc	0	0	0	0	0	0	3	0	0	0	0	3
Institute of Technology, Tallaght	0	0	0	0	0	0	3	0	0	0	0	3
Dundalk Institute of Technology	0	0	1	0	0	0	1	0	0	0	0	2
University of Ulster	1	0	0	0	0	0	0	0	0	0	0	1
Queen's University Belfast	1	0	0	0	0	0	0	0	0	0	0	1
Cork Institute of Technology	0	0	1	0	0	0	0	0	0	0	0	1
Athlone Institute of Technology	0	0	0	0	0	0	1	0	0	0	0	1
Total	7	9	173	4	0	10	265	2	14	19	8	511

For example, there were two Active CSET awards where the host HEI was University College Dublin.

Figure 1.4: Number of Active Awards of each type held by Higher Education Institute (HEI)**Table 1.7:** SFI Active Awards by Nationality of Award Holder in 2011

	Number of Active Award Holders	% of Active Award Holders of this Nationality
Ireland	333	73.2%
United Kingdom	36	7.9%
Germany	17	3.7%
United States of America	11	2.4%
Canada	6	1.3%
Italy	5	1.1%
India	5	1.1%
Sweden	3	0.7%
Spain	3	0.7%
Russian Federation	3	0.7%
Netherlands	3	0.7%
France	3	0.7%
Denmark	3	0.7%
Australia	3	0.7%
Switzerland	2	0.4%
Belgium	2	0.4%
Austria	2	0.4%
Trinidad & Tobago	1	0.2%
Taiwan	1	0.2%
South Africa	1	0.2%
Slovenia	1	0.2%
Portugal	1	0.2%
Poland	1	0.2%
New Zealand	1	0.2%
Malaysia	1	0.2%
Israel	1	0.2%
Iceland	1	0.2%
Hungary	1	0.2%
Greece	1	0.2%
Czech Republic	1	0.2%
China	1	0.2%
Bulgaria	1	0.2%
Total	455	100.00%

Table 1.8: Total Number of Active Award Holders by Region of Nationality in 2011

	Active Award Holders		Number of Active Awards	
Ireland	333	73.2%	374	73.2%
EU (non-Irish)	84	18.5%	95	18.6%
Non-EU	38	8.4%	42	8.2%
Total	455	100.0%	511	100.0%

Figure 1.5: Nationality of Award Holders in 2011

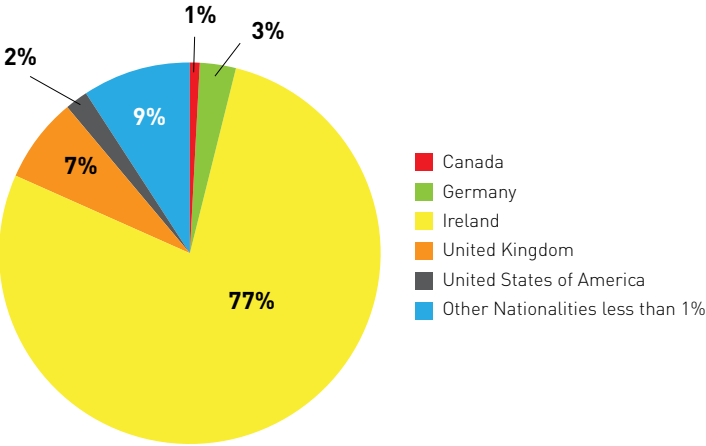
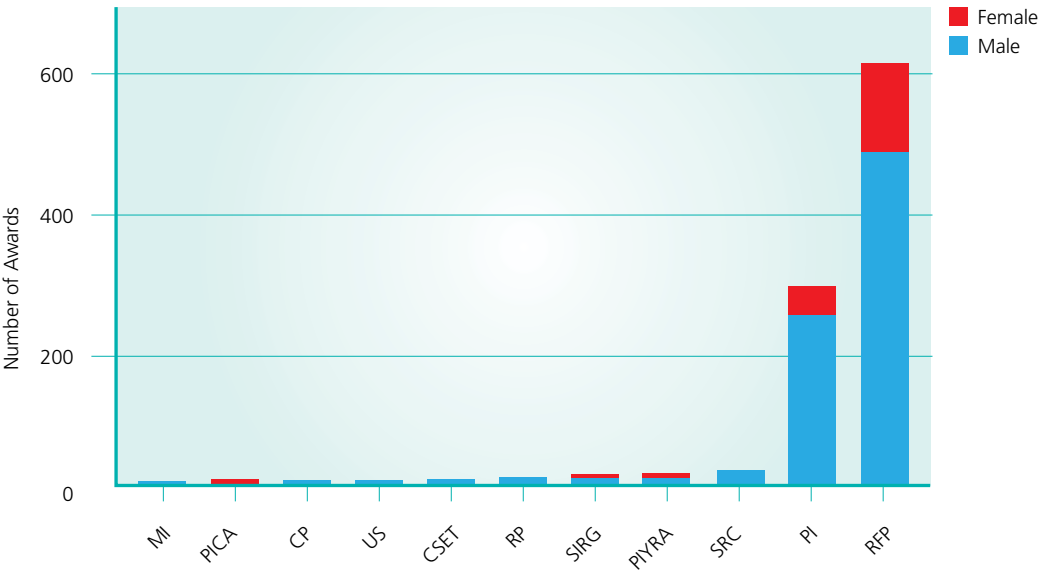


Table 1.9: Total Number of Active Awards by Award Holder and Gender in 2011

	Active Total	Female	Male
CP	7	0	7
CSET	9	1	8
MI	4	0	4
PI	173	22	151
PICA	0	0	0
PIYRA	10	4	6
RFP	265	67	198
RP	2	0	2
SIRG	14	3	11
SRC	19	0	19
US Irl	8	1	7
Number of Active Awards	511	98	413

Figure 1.6: SFI Awards held by Gender in 2011



Research Team Compositions

Table 2.1: Research Team Composition
(SFI Funded Team Members) as at 31/12/2011

	Number	Category as % of Total
Award Holder	455	15.2%
Co-Investigators	81	2.7%
Postdoctoral Researchers	728	24.3%
PhD Students	1284	42.9%
Masters Students	60	2.0%
Technicians	63	2.1%
Research Assistants	92	3.1%
Administrators	72	2.4%
Management Staff	36	1.2%
Education & Outreach Staff	16	.5%
Other Team Members	108	3.6%
Total	2995	100.0%

Table 2.2: Research Team Composition by Gender
(SFI Funded Team Members) as at 31/12/2011

	Male	Female	Total	Category as % of Total
Award Holder	368	87	455	15.2%
Co-Investigators	73	8	81	2.7%
Postdoctoral Researchers	485	243	728	24.3%
PhD Students	816	468	1284	42.9%
Masters Students	37	23	60	2.0%
Technicians	47	16	63	2.1%
Research Assistants	49	43	92	3.1%
Administrators	12	60	72	2.4%
Management Staff	20	16	36	1.2%
Education & Outreach Staff	5	11	16	.5%
Other Team Members	76	32	108	3.6%
Total	1988	1007	2995	100.0%

Table 2.3: Research Team Composition by Nationality
(SFI Funded Team Members) as at 31/12/2011

	Irish	EU (Non-Irish)	Non-EU	Total	Category as % of Total
Award Holder	333	84	38	455	15.2%
Co-Investigators	52	22	7	81	2.7%
Postdoctoral Researchers	296	236	196	728	24.3%
PhD Students	680	305	299	1284	42.9%
Masters Students	41	11	8	60	2.0%
Technicians	48	9	6	63	2.1%
Research Assistants	55	23	14	92	3.1%
Administrators	62	8	2	72	2.4%
Management Staff	29	4	3	36	1.2%
Education & Outreach Staff	14	1	1	16	0.5%
Other Team Members	72	23	13	108	3.6%
Total	1682	726	587	2995	100.0%

Table 2.4: Research Team Composition
(All funding sources)

	Total	Category as % of Total
Award Holder	455	9.3%
Co-Investigators	97	2.0%
Postdoctoral Researchers	1274	25.9%
PhD Students	2265	46.3%
Masters Students	172	3.5%
Technicians	114	2.2%
Research Assistants	171	3.5%
Administrators	116	2.3%
Management Staff	39	0.8%
Education & Outreach Staff	18	0.4%
Other Team Members	188	3.8%
Total	4909	100.0%

Table 2.5: Research Team Composition by Gender (All funding sources)

	Male	Female	Total	Category as % of Total
Award Holder	368	87	455	9.3%
Co-Principal Investigators	87	10	97	2.0%
Postdoctoral Researchers	845	429	1274	25.9%
PhD Students	1419	846	2265	46.3%
Masters Students	107	65	172	3.5%
Technicians	80	34	114	2.2%
Research Assistants	98	73	171	3.5%
Administrators	20	96	116	2.3%
Management Staff	23	16	39	0.8%
Education & Outreach Staff	5	13	18	0.4%
Other Team Members	133	55	188	3.8%
Total	3185	1724	4909	100.0%

Table 2.6: Research Team Composition by Nationality (All funding sources)

	Irish	EU (Non-Irish)	Non-EU	Total	Category as % of Total
Award Holder	333	84	38	455	9.3%
Co-Principal Investigators	56	30	11	97	2.0%
Postdoctoral Researchers	521	433	320	1274	25.9%
PhD Students	1234	502	529	2265	46.3%
Masters Students	109	28	35	172	3.5%
Technicians	90	12	12	114	2.2%
Research Assistants	103	43	25	171	3.5%
Administrators	99	14	3	116	2.3%
Management Staff	32	4	3	39	0.8%
Education & Outreach Staff	16	1	1	18	0.4%
Other Team Members	116	42	30	188	3.8%
Total	2709	1193	1007	4909	100.0%

First Destination of Departing Team Members

The tables and graphs below indicate the destinations of team members who left SFI-funded research teams in 2011.

Table 3.1: Departing Postdoctoral Researchers in 2011

Destination	Outside Ireland	% Outside Ireland	Within Ireland	% Within Ireland	Total	% of Total Leavers
Post Doctoral research in HEI	47	56.6%	36	43.4%	83	36.2%
Industry	28	38.4%	45	61.6%	73	31.9%
Lecturers/Permanent researchers in HEI	32	76.2%	10	23.8%	42	18.3%
Maternity Leave	0	0.0%	8	100.0%	8	3.5%
Other	4	57.1%	3	42.9%	7	3.1%
Unemployment	3	42.9%	4	57.1%	7	3.1%
Career Break	4	66.7%	2	33.3%	6	2.6%
Technicians in HEI	1	50.0%	1	50.0%	2	0.9%
Specialist Courses	0	.0%	1	100.0%	1	0.4%
Total	119	52.0%	110	48.0%	229	100.0%

Table 3.2: Departing PhD Researchers in 2011

Destination	Outside Ireland	% Outside Ireland	Within Ireland	% Within Ireland	Total	% of Total Leavers
Post Doctoral research in HEI	45	60.0%	30	40.0%	75	40.8%
Industry	19	41.3%	27	58.7%	46	25.0%
Other	13	50.0%	13	50.0%	26	14.1%
Unemployment	2	22.2%	7	77.8%	9	4.9%
Specialist Courses	3	33.3%	6	66.7%	9	4.9%
Career Break	7	87.5%	1	12.5%	8	4.3%
Technicians in HEI	2	40.0%	3	60.0%	5	2.7%
Teachers (primary/secondary)	2	66.7%	1	33.3%	3	1.6%
Maternity Leave	0	0.0%	2	100.0%	2	1.1%
Short term secondment to another institute	0	0.0%	1	100.0%	1	0.5%
Total	93	50.5%	91	49.5%	184	100.0%

Table 3.3: Departing Masters Students in 2011

Destination	Outside Ireland	% Outside Ireland	Within Ireland	% Within Ireland	Total	% of Total Leavers
Industry	5	13.2%	33	86.8%	38	45.8%
PhD research in HEI	8	34.8%	15	65.2%	23	27.7%
Other	4	44.4%	5	55.6%	9	10.8%
Career Break	5	71.4%	2	28.6%	7	8.4%
Technicians in HEI	0	0.0%	3	100.0%	3	3.6%
Specialist Courses	0	0.0%	3	100.0%	3	3.6%
Total	22	26.5%	61	73.5%	83	100.0%

Table 3.4: Departing Research Assistants in 2011

Destination	Outside Ireland	% Outside Ireland	Within Ireland	% Within Ireland	Total	% of Total Leavers
Other	5	45.5%	6	54.5%	11	35.5%
PhD research in HEI	1	14.3%	6	85.7%	7	22.6%
Industry	4	66.7%	2	33.3%	6	19.4%
Technicians in HEI	1	50.0%	1	50.0%	2	6.5%
Teachers (primary/secondary)	1	50.0%	1	50.0%	2	6.5%
Career Break	1	50.0%	1	50.0%	2	6.5%
Unemployment	0	0.0%	1	100.0%	1	3.2%
Total	13	41.9%	18	58.1%	31	100.0%

Table 3.5: Departing Technicians in 2011

Destination	Outside Ireland	% Outside Ireland	Within Ireland	% Within Ireland	Total	% of Total Leavers
Technicians in HEI	2	28.6%	5	71.4%	7	87.5%
Industry	0	0.0%	1	100.0%	1	12.5%
Total	2	25.0%	6	75.0%	8	100.0%

Table 3.6: All Departing Team Members in 2011

	Outside Ireland	% Outside Ireland	Within Ireland	% Within Ireland	Total	% of Total Leavers
Industry	56	34.1%	108	65.9%	164	30.7%
Post Doctoral research in HEI	92	58.2%	66	41.8%	158	29.5%
Other	26	49.1%	27	50.9%	53	9.9%
Lecturers/Permanent researchers in HEI	32	76.2%	10	23.8%	42	7.9%
PhD research in HEI	9	30.0%	21	70.0%	30	5.6%
Career Break	17	73.9%	6	26.1%	23	4.3%
Technicians in HEI	6	31.6%	13	68.4%	19	3.6%
Unemployment	5	29.4%	12	70.6%	17	3.2%
Specialist Courses	3	23.1%	10	76.9%	13	2.4%
Maternity Leave	0	0.0%	10	100.0%	10	1.9%
Teachers (primary/secondary)	3	60.0%	2	40.0%	5	0.9%
Short term secondment to another institute	0	0.0%	1	100.0%	1	0.2%
Total	249	46.5%	286	53.5%	535	100.0%

Table 3.7: Departing Members by Nationality by Destination in 2011

	Irish			EU (Non Irish)			Non-EU		
	Within Ireland	Outside Ireland	Total	Within Ireland	Outside Ireland	Total	Within Ireland	Outside Ireland	Total
Postdoctoral Researchers	63 70.0%	27 30.0%	90 100.0%	30 40.5%	44 59.5%	74 100.0%	17 26.2%	48 73.8%	65 100.0%
PhD Students	63 68.5%	29 31.5%	92 100.0%	15 36.6%	26 63.4%	41 100.0%	13 25.5%	38 74.5%	51 100.0%
Masters Students	54 85.7%	9 14.3%	63 100.0%	2 18.2%	9 81.8%	11 100.0%	5 55.6%	4 44.4%	9 100.0%
Research Assistants	18 81.8%	4 18.2%	22 100.0%	0 0.0%	7 100.0%	7 100.0%	0 0.0%	2 100.0%	2 100.0%
Technicians	4 100.0%	0 0.0%	4 100.0%	1 50.0%	1 50.0%	2 100.0%	1 50.0%	1 50.0%	2 100.0%
Total	202 74.5%	69 25.5%	271 100.0%	48 35.6%	87 64.4%	135 100.0%	36 27.9%	93 72.1%	129 100.0%

Table 3.8: Team Members Qualifications Awarded in 2011

	Irish	EU (Non-Irish)	Non-EU	Total
Masters Students	132	14	12	158
PhD Students	210	84	94	388
Total	342	98	106	546

Academic Outputs

Table 4.1a: Publication Output by Publication Type - Active Awards in 2011

	Publications attributed to SFI by Award											
	CP	CSET	MI	PI	PIYRA	RFP	RP	SIRG	SRC	US Irl	Total from SFI Funding	Publications funded from Other Funding Sources
Refereed/Original Articles	54	241	91	598	31	196	2	35	278	7	1533	1448
Refereed Reviews	4	52	1	101	2	14	0	1	45	1	221	197
Books	1	4	1	8	0	1	0	3	9	0	27	19
Book Chapters	9	55	4	30	1	17	0	1	29	1	147	106
Peer-Reviewed Conference/ Meeting Proceedings/ Papers	37	341	34	265	5	137	0	16	270	1	1106	583
Edited Conference/ Meeting Proceedings	6	130	14	73	1	56	0	2	35	0	317	36
Total Research Outputs	111	823	145	1075	40	421	2	58	666	10	3351	2389

Table 4.1b: Publication Output - Active Awards in 2011

	Publications attributed to SFI by Award											
	CP	CSET	MI	PI	PIYRA	RFP	RP	SIRG	SRC	US Irl	Total from SFI Funding	Other Funding Sources
Outputs with a non-Irish Co-Author	24	222	51	412	16	148	1	13	158	5	1050	858
Outputs available in Open Access Repositories	15	465	51	414	18	157	2	9	220	5	1356	652
SFI Accredited Outputs	66	627	139	861	28	296	2	32	526	6	2583	665
Total Research Outputs	111	823	145	1075	40	421	2	58	666	10	3351	2389

Table 4.2a: Publication Output by Publication Type - Inactive Awards in 2011

	MI	PI	PICA	PIYRA	RFP	RP	SRC	Total from SFI Funding
Refereed Original Articles	3	131	12	15	287	4	28	480
Refereed Review Articles	0	7	3	1	17	0	2	30
Books (Authored/Edited)	0	2	0	0	1	0	0	3
Book Chapters	0	5	2	0	9	0	0	16
Refereed Conference/Meeting Papers	0	34	6	12	101	2	13	168
Edited Conference/Meeting Papers	0	8	0	0	8	0	0	16
Total Research Outputs	3	187	23	28	423	6	43	713

Table 4.2b: Publication Output - Inactive Awards in 2011

	MI	PI	PICA	PIYRA	RFP	RP	SRC	Total from SFI Funding
Outputs with a non-Irish Co-Author	3	59	7	6	190	4	8	277
Outputs available in Open Access Repositories	3	90	5	13	157	4	9	281
SFI Accredited Outputs	2	154	21	26	328	6	34	571
Total Research Outputs	3	187	23	28	423	6	43	713

Table 4.3: Publication Output by HEI - Active Awards in 2011

	Refereed Original Articles	Refereed Review Articles	Books (Authored/ Edited)	Book Chapters	Refereed Conference/ Meeting Papers	Edited Conference/ Meeting Papers	Total by HEI
Athlone Institute of Technology	4	0	0	2	4	0	10
Cork Institute of Technology	11	0	0	1	0	0	12
Dublin City University	274	19	9	23	157	189	671
Dublin Institute for Advanced Studies	17	0	0	3	12	2	34
Dublin Institute of Technology	30	0	0	1	17	1	49
Dundalk Institute of Technology	6	2	1	2	16	0	27
Institute of Technology, Carlow	1	1	0	1	1	0	4
Institute of Technology, Tallaght	6	1	0	0	5	0	12
National University of Ireland, Galway	245	56	5	43	255	33	637
National University of Ireland, Maynooth	111	9	1	15	84	3	223
Queen's University Belfast	7	0	0	1	11	0	19
Royal College of Surgeons in Ireland	103	19	1	9	44	6	182
Sligo Institute of Technology	1	0	0	0	0	1	2
Teagasc	8	1	0	1	0	0	10
Trinity College Dublin	667	129	5	30	171	32	1034
Tyndall National Institute	146	4	1	4	138	6	299
University College Cork	334	116	5	24	101	18	598
University College Dublin	768	57	7	63	485	36	1416
University of Limerick	213	3	8	28	142	24	418
University of Ulster	13	1	1	1	11	0	27
Waterford Institute of Technology	16	0	2	1	35	2	56
Total Publication Output	2981	418	46	253	1689	353	5740

Pre-Commercial Outputs¹¹

Table 5.1: Summary of Pre-Commercial Outputs in 2011 (Active Awards)

	Total
Invention Disclosures	160
Patents Filed	72
Patents Awarded	25
Standards Contributed to	21
Spin Outs Reported	9
Licensed Technologies	38

Table 5.1a: Summary of Pre-Commercial Outputs in 2011
(All Awards, Active and Inactive)

	Total
Invention Disclosures	170
Patents Filed	79
Patents Awarded	27
Standards Contributed to	21
Spin Outs Reported	10
Licensed Technologies	39

Table 5.2: Summary of Pre-Commercial Outputs by HEI - Active Awards in 2011

	Invention Disclosures	Patents Filed	Patents Awarded	Standards Contributed to
Dublin City University	29	5	0	0
Dublin Institute of Technology	2	0	0	2
Dundalk Institute of Technology	0	0	0	3
National University of Ireland, Galway	23	5	0	5
National University of Ireland, Maynooth	2	2	1	0
Royal College of Surgeons in Ireland	5	8	2	0
Trinity College Dublin	23	11	3	1
Tyndall National Institute	12	6	2	0
University College Cork	20	7	1	2
University College Dublin	35	21	6	2
University of Limerick	4	2	9	6
University of Ulster	4	4	1	0
Waterford Institute of Technology	1	1	0	0
Total	160	72	25	21

Table 5.3: Non-Award Specific Pre-Commercial Outputs by HEI - Active Awards in 2011

	Total Licensed Technologies	Total Spin Outs Reported
Cork Institute of Technology	1	0
Dublin City University	7	2
Dublin Institute of Technology	2	0
National University of Ireland, Galway	6	2
Royal College of Surgeons in Ireland	3	0
Trinity College Dublin	5	2
Tyndall National Institute	4	1
University College Cork	3	0
University College Dublin	6	2
University of Limerick	1	0
Total	38	9

11. Although Invention Disclosures, Patents, Spin Outs and Licenses are reported here as arising from SFI - funded research, it is important to stress that SFI does not produce these outputs directly. These are the product of the research and commercialisation ecosystem and are dependent upon Enterprise Ireland (EI), the HEI Technology Transfer Offices (TTOs) and other stakeholders.

Table 5.4: Invention Disclosures arising from SFI Funding - by HEI and Award Type - Active Awards in 2011

	CP	CSET	MI	PI	PIYRA	RFP	SIRG	SRC	US Irl	Total by HEI
University College Dublin	0	12	1	9	0	4	3	6	0	35
University College Cork	1	4	0	7	0	5	2	1	0	20
Trinity College Dublin	0	7	0	13	1	1	0	1	0	23
Tyndall National Institute	0	0	0	7	0	1	0	4	0	12
National University of Ireland, Galway	0	12	0	2	0	1	0	8	0	23
Dublin City University	0	24	0	1	0	0	0	4	0	29
University of Limerick	1	0	0	1	0	2	0	0	0	4
Royal College of Surgeons in Ireland	0	0	0	4	0	1	0	0	0	5
National University of Ireland, Maynooth	0	0	0	2	0	0	0	0	0	2
Waterford Institute of Technology	0	0	0	0	0	0	0	1	0	1
University of Ulster	4	0	0	0	0	0	0	0	0	4
Dublin Institute of Technology	0	0	0	0	0	0	0	0	2	2
Total by Award	6	59	1	46	1	15	5	25	2	160

Table 5.5: Number of Patents Filed arising from SFI Funding in 2011 - by HEI and Award Type - Active Awards in 2011

	CP	CSET	MI	PI	RFP	RP	SIRG	SRC	Total by HEI
Dublin City University	0	3	0	0	0	0	0	2	5
National University of Ireland, Galway	0	0	0	2	0	0	0	3	5
National University of Ireland, Maynooth	0	0	0	1	0	0	0	1	2
Royal College of Surgeons in Ireland	0	0	0	5	3	0	0	0	8
Trinity College Dublin	0	2	0	6	2	0	0	1	11
Tyndall National Institute	0	0	0	3	0	0	0	3	6
University College Cork	0	1	0	6	0	0	0	0	7
University College Dublin	0	5	1	7	2	1	3	2	21
University of Limerick	0	0	0	1	1	0	0	0	2
University of Ulster	4	0	0	0	0	0	0	0	4
Waterford Institute of Technology	0	0	0	0	0	0	0	1	1
Total by Award	4	11	1	31	8	1	3	13	72

Table 5.6: Number of Awarded Patents arising from SFI Funding in 2011 - by HEI and Award Type - Active Awards in 2011

	CP	CSET	MI	PI	RFP	SRC	Total by HEI
National University of Ireland, Maynooth	0	0	0	1	0	0	1
Royal College of Surgeons in Ireland	0	0	0	0	2	0	2
Trinity College Dublin	0	0	0	3	0	0	3
Tyndall National Institute	0	0	0	1	0	1	2
University College Cork	0	0	0	1	0	0	1
University College Dublin	0	1	1	4	0	0	6
University of Limerick	1	8	0	0	0	0	9
University of Ulster	1	0	0	0	0	0	1
Total by Award	2	9	1	10	2	1	25

Industry-Research Collaborations

Table 6.1: Industry-Research Collaborations by Company Type - Active Awards in 2011

	Total Collaborations	Companies
Multinational Corporation (MNC)	515	246
SME	424	337
Government Departments or Semi-State Bodies	73	38
Private Foundations/Charities/ Non Government Organisations (NGO)	23	21
Total by Award	1035	642

Table 6.2: Industry-Research Collaborations by Award Type - Active Awards in 2011

	Multinational Corporation (MNC)	SME	Government Departments or Semi-State Bodies	Private Foundations/ Charities/ Non Government Organisations (NGO)	Total by Award Type
CSET	137	149	14	9	309
PI	161	106	17	2	286
SRC	112	84	13	4	213
RFP	44	32	6	5	87
CP	30	25	16	3	74
MI	12	10	4	0	26
SIRG	7	7	1	0	15
PIYRA	8	2	0	0	10
RP	4	3	1	0	8
US Irl	0	4	1	0	5
PICA	0	2	0	0	2
Total	515	424	73	23	1035

Table 6.3: Industry-Research Collaborations in 2011 with Legal Agreements

	Legal Agreement in place	
	Total Collaborations	Companies
Multinational Corporation (MNC)	294	135
SME	252	192
Government Departments or Semi-State Bodies	28	16
Private Foundations/Charities/ Non Government Organisations (NGO)	8	6
Total	582	349

Table 6.4: Breakdown of Primary Objectives of Industry-Research Collaborations - Active Awards in 2011

	Primary Objective		Secondary Objective		Additional Objective	
	Total	% of Total	Total	% of Total	Total	% of Total
Collaborative research ¹²	563	51.4%	112	10.2%	44	4.0%
Sharing of knowledge, material, equipment, software or data	159	14.5%	391	35.7%	142	13.0%
Contract/Sponsored Research ¹³	131	11.9%	41	3.7%	26	2.4%
Other	95	8.7%	127	11.6%	127	11.6%
Building networks and relationships	75	6.8%	195	17.8%	384	35.0%
Company sponsored postgraduate studentships	55	5.0%	46	4.2%	19	1.7%
Exchanges of personnel	14	1.3%	64	5.8%	50	4.6%
None specified	4	0.4%	120	10.9%	304	27.7%
Total	1096	100.0%	1096	100.0%	1096	100.0%

Table 6.5: 2011-2010 Comparison of Industry-Research Collaborations (Active Awards)

	Collaborations 2011	Collaborations 2010	% Change	Companies 2011	Companies 2010	% Change
Multinational Corporation (MNC)	515	450	+14%	246	237	+4%
SME	424	335	+27%	337	245	+38%
Government Departments or Semi-State Bodies	73	55	+33%	38	28	+36%
Private Foundations/Charities/ Non Government Organisations (NGO)	23	27	-15%	21	24	-13%
Total by Award	1035	867	+19%	642	534	+20%

12. Where the goals are jointly defined and all partners equally contribute.

13. Where the relationship is essentially that of customer and contractor.

Academic - Academic Collaborations

Table 7.1: Academic Collaborations in 2011 by Region (Active Awards)

Ireland	672	26.0%
EU (non-Irish)	1128	43.7%
Non-EU	781	30.3%
Total	2581	100.0%

Table 7.2: Academic Collaborations in 2011 by Award Type (Active Awards)

PI	918	35.6%
RFP	666	25.8%
CSET	365	14.1%
SRC	233	9.0%
CP	98	3.8%
MI	93	3.6%
PIYRA	89	3.4%
SIRG	49	1.9%
RP	34	1.3%
US Irl	24	0.9%
PICA	12	0.5%
Total	2581	100.0%

Table 7.3: Academic Collaborations in 2011 by Award Type and Region (Active Awards)

	Irish		EU Non-Irish		Non-EU		Total
PI	233	25.4%	383	41.7%	302	32.9%	918
RFP	175	26.3%	306	45.9%	185	27.8%	666
CSET	87	23.8%	173	47.4%	105	28.8%	365
SRC	73	31.3%	86	36.9%	74	31.8%	233
CP	29	29.6%	44	44.9%	25	25.5%	98
MI	23	24.7%	40	43.0%	30	32.3%	93
PIYRA	27	30.3%	32	36.0%	30	33.7%	89
SIRG	12	24.5%	32	65.3%	5	10.2%	49
RP	11	32.4%	15	44.1%	8	23.5%	34
US Irl	1	4.2%	11	45.8%	12	50.0%	24
PICA	1	8.3%	6	50.0%	5	41.7%	12
Total	672	26.0%	1128	43.7%	781	30.3%	2581

Table 7.4: Academic Collaborations in 2011 by Objective (Active Awards)

	Collaborations	% of Collaborations with this Objective
Joint Research/Publication	2540	99.6%
Access to/provision of material, equipment, software, data	1463	57.4%
Training and Career & Professional Development (CPD)	654	25.7%
Licence development	173	6.8%
Start-up development	27	1.1%
Building networks & relationships	10	0.4%
Other	8	0.3%

External Funding

Table 8.1: Amount of non-SFI Funding secured by SFI Funded Researchers in 2011 (By Source, amounts in €s)¹⁴

	External Funding Leverage €
EU	56,203,077
Enterprise Ireland	20,166,029
HEA	18,995,365
Private Enterprise	16,572,804
IRCSET	8,537,973
Charity/Non-Profit Organisation (Irish)	8,511,685
HRB	7,839,278
Other Irish Government Source	3,153,911
Other International Government Source	3,132,193
Wellcome Trust	2,821,960
Department of Agriculture Fisheries and Food	1,805,780
Charity/Non-Profit Organisation (International)	1,420,932
EPA	1,380,350
Other International Interest Organisation	1,358,380
NIH	1,274,198
Other Source	853,709
Teagasc	714,100
NSF	617,500
DCENR	614,010
Marine Institute	40,000
Total	156,013,234

Active Awards in 2011

Table 8.2: Amount of External Funding secured by SFI Funded Researchers in 2011 by Irish Exchequer vs. Non-Irish Exchequer and National vs. International Funding Sources (amounts in €s)¹⁵

	Irish Exchequer	Non-Irish Exchequer	National	International
EU	-	56,203,077	-	56,203,077
Enterprise Ireland	20,166,029	-	20,166,029	-
HEA	18,995,365	-	18,995,365	-
Private Enterprise	-	16,572,804	-	-
IRCSET	8,537,973	-	8,537,973	-
Charity/Non-Profit Organisation (Irish)	-	8,511,685	8,511,685	-
HRB	7,839,278	-	7,839,278	-
Other Irish Government Source	3,153,911	-	3,153,911	-
Other International Government Source	-	3,132,193	-	3,132,193
Wellcome Trust	-	2,821,960	-	2,821,960
Department of Agriculture Fisheries and Food	1,805,780	-	1,805,780	-
Charity/Non-Profit Organisation (International)	-	1,420,932	-	1,420,932
EPA	1,380,350	-	1,380,350	-
Other International Interest Organisation	-	1,358,380	-	1,358,380
NIH	-	1,274,198	-	1,274,198
Other Source	-	853,709	-	-
Teagasc	714,100	-	714,100	-
NSF	-	617,500	-	617,500
DCENR	614,010	-	614,010	-
Marine Institute	40,000	-	40,000	-
Total by Source	63,246,796	92,766,438	71,758,481	66,828,240
% of Total Amount	41%	59%	52%	48%
Total Amount	156,013,234		138,586,721	

Active Awards in 2011

14. Acronyms for these sources of funding are explained in Appendix B.

15. This figure is lower than the total as not all funding can be described as national or international for example, private funding or funding from "other sources".

Other

Table 9.1: Involvement in Outreach Programmes in 2011 by HEI

	Engaged in Public Outreach Programmes for the Promotion of Science in 2011		
	Yes	No	Total
University College Dublin	68	42	110
Trinity College Dublin	71	39	110
National University of Ireland, Galway	43	9	52
University College Cork	31	18	49
Dublin City University	18	11	29
National University of Ireland, Maynooth	20	7	27
Tyndall National Institute	15	7	22
University of Limerick	11	9	20
Royal College of Surgeons in Ireland	14	2	16
Dublin Institute of Technology	6	3	9
Dublin Institute for Advanced Studies	4	2	6
Waterford Institute of Technology	0	3	3
Teagasc	2	1	3
Institute of Technology, Tallaght	2	1	3
Dundalk Institute of Technology	1	1	2
University of Ulster	1	0	1
Queen's University Belfast	1	0	1
Cork Institute of Technology	1	0	1
Athlone Institute of Technology	1	0	1
Total	310	155	465

Active Awards in 2011

Table 9.2: Attendance at International Events by HEI in 2011

	Yes	No	Total
Athlone Institute of Technology	0	1	1
Cork Institute of Technology	1	1	2
Dublin City University	26	10	36
Dublin Institute for Advanced Studies	6	1	7
Dublin Institute of Technology	6	3	9
Dundalk Institute of Technology	1	1	2
Institute of Technology, Carlow	0	0	0
Institute of Technology, Tallaght	1	2	3
National University of Ireland, Galway	47	19	66
National University of Ireland, Maynooth	21	10	31
Teagasc	2	1	3
Queen's University Belfast	1	0	1
Royal College of Surgeons in Ireland	19	4	23
Trinity College Dublin	107	35	142
Tyndall National Institute	21	5	26
University College Cork	43	16	59
University College Dublin	96	28	124
University of Limerick	17	7	24
University of Ulster	1	0	1
Waterford Institute of Technology	2	1	3
Total	418	145	563

Active Awards in 2011

Table 9.3: Breakdown of Location and Member Roles at International Events in 2011

	Ireland	EU (excl Ireland)	Outside EU	Total
Host	134	40	37	211
Programme Committee Member	118	177	120	415
Invited Speaker	395	706	487	1588
Oral Presentation of a Paper	360	690	410	1460
Poster Presented	545	571	320	1436
Meeting Participant	213	220	99	532
Total	1765	2404	1473	5642

Active Awards in 2011

Appendix A:

List of Companies¹⁶ Collaborating with SFI Researchers

Companies

ABB	Alcon Laboratories Ireland Ltd	AustriaMicrosystems	Brandon Products Ltd	CognoPlus Ltd
Abbott	Alere International	Autodesk Research	Briglec Ltd	Collplant Ltd
Abem Instrument AB	Alimentary Health Ltd	Axellis Ltd	Bristol Myers Squibb	Connexios
Abtran Ltd	Allergan Inc.	Axion Consulting	British Energy	Consorzio Treesse
Acciona Infraestructuras S.A.	Allied Irish Beef Processors	B9 Energy Group	British Telecom (BT)	Copeland Ltd
Achira	Almac Group Ltd	Bank of Ireland Group	Bruker Advanced Supercon GmbH	Covidien
ACRA Control	Alnac Diagnostics	Bausch & Lomb Inc.	Calicojack	CR Entertainment
Actelion Pharma	Alstom	Baxter Medical Corporation	Caliper LifeSciences Inc.	Cray Inc.
Action Point	Amdocs ChangingWorlds	Bayer Group	Carbery	CreditExpo
Adama Innovation	Amgen	BD Biosciences Europe	Carbon Decisions	Cree
Adaptive HVM Ltd	Anachem Ltd	Becton Dickinson Inc.	Carefusion Corporation	Creganna
Adidas	Analog Devices Inc.	Beemway	Carton Brothers	Crescent Diagnostics
Adnagen	Andor Technology Plc	Beiersdorf	Cayman Chemical Company	Critech Research
Advanced Accelerator Apps	Anti Cancer Inc.	BenchBio Ltd	Cellix Ltd	Critical Path
Aerogen Ltd	APEnvEcon	BHP-Billiton	Cellology	Cross VetPharm
AeroSurgical Ltd	Apple Computers	BiancaMed	Celtic Catalysts Ltd	CSEM S.A.
AFchempharm	Applied Materials	Big River Streaming	Celtrak Ltd	CSK
Agennix	Appsie	Bimeda Ltd	CERAM Research Ltd	CVD Technologies Ltd
Analytic Graphics Inc.	Aquafact International Services Ltd	Bio Business	Charles Rivers Laboratories	Cylon Controls
Agile Sciences	Aquamarine	BioCEP	Christian Hansen	Cynar Plc
Agilent Technologies	Arch Therapeutics	Biofocus DPI Ltd	Chromotek	Cyntelix Corporation Ltd
Airbus SAS	Argutus Medical Ltd	BiolineRX	CIP Technologies	Danone
Airtricity	Ark Therapeutics Group Plc	BioMerieux	Cisco Systems Inc.	Danubia Nanotech
Aixtron	Armac Systems	Biomining Inc	Citco Group Ltd	Datafusion
Ajinomoto Inc.	Arup	Biospark	Citigroup Inc.	DataHug
Akyuz Plastik A.S.	AstraZeneca	Biosurfir S.A.	Clarochem Ireland	DataKraft
Alcatel-Lucent	Asylum Research Ltd	Biotrin International Ltd	ClearSight Ltd	De Puy Inc.
Alcatel-Lucent Bell Labs	AT&T	Boehringer Ingelheim	Clerici-Sacco Group	DeBeers Group
Alchemy Software Development Ltd	ATOS	Bofinn Diagnostics	Coca Cola	Decawave
	Audit Diagnostics	Boliden Tara Mines Ltd	CODEX Discovery	Dell
	Aughinish Alumina	Boston Scientific Corporation	Cognex	Deloitte & Touche

16. These companies are reported to be collaborating with SFI researchers.

Denator AB	Evergreen Engineering	Hemcon Medical Technologies Inc	Jam Media Ltd	Movidiu
Depfa Bank Plc	EverSeen Ltd	Henkel Ireland Ltd.	Janssen Pharmaceutical Ltd.	Moving Media
Deutsche Telekom	EXFO	Hewlett-Packard (HP)	JBA Goup	MP Biomedicals LLC
Devro Ltd	Ezetop	Heystaks	Johnson and Johnson	Mylan Institutional Inc.
Diageo	Ezose	Histogen Inc.	K Systems	Mytec GmbH
Diagnostica Stago	FairView Analytics Ltd	HMH (Houghton Mifflin Harcourt)	Kanichi	Nanosight
Diamond Detectors Ltd	Falk	Holfeld Plastic Ltd	Kedco Ltd	National Digital Research Centre Ltd
Dionex UK Ltd	FEI Electron Microscopes	Honeywell Turbo Technologies	Kepak	Natural Motion
Disney	Ferfics Ltd	Hospira Inc.	Kildare Chilling	NaviExpert SP. Z.O.O.
DMC medical	Fiat Research ScPA	Hovione	Kugler Maag	Navteq Europe BA
DNP	FibroGen Inc.	HSG Zander GMBH	Lake Region Manufacturing Inc.	Neat Sciences
DreamTec	Fidelity Investments (FISC)	Huawei Technology Co. Ltd	Lam Research	NeoSurgical
Dresser Rand	Fineos	Human Genome Science Inc.	Landtech Soils Ltd	Nestle
DriveRite	Fintrax Group	Hummingbird Scientific	LefScienceHub	Netwatch
Dualsystems	Firecomms	Huntsman	Lexas Research Ltd	NeuroSky
EADS	Forschungszentrum Julich GmbH	IBM	Life Technologies	Nikon Europe
Eblana Photonics Ltd	France Telecom	IdentiGEN Ltd	Light Stream Animation	Nokia Siemens Networks
Eboroil Udmartia Inc.	FrieslandCampina	Idiro	Logscreen	Norkom Technologies
eDaq Pty Ltd	Fugro-BKS	Imagine Eyes	Luxcel Biosciences Ltd	Nortel Networks Corporation
Eircom	Fujitsu	iMobile	M/A COM	Noscira
Eire Composites	Full Flight Technology	Impedans Ltd	MagSense Life Sciences Inc.	Novartis
Elan Pharmaceuticals (Ireland)	G Telemetry	Inagh Valley Trust R&D Enterprise Ltd	Mainstream Renewable Power	Nowcasting International
Elastin Specialties Inc.	G.E.M Team Solutions Gdbr	Infineon	Mandat International	NTE SA
Eli Lilly S.A. (Ireland)	Gaelectric Developments Ltd	Innocoll	Marigot Ltd	Nujira
EMC (Ireland) Ltd	Gasera Ltd	Innolume Inc.	Marvell	NXP
Emerson Process Managment	GE Healthcare	Innova S.p.A	Mason Technologies	Occam Asset Management
EnBio Ltd	Gemalto (eGO)	Innovalia	Maxwell Technologies	Ocean Energy Ltd
Enfer Scientific Ltd	Genzyme Corporation	Integra Life Sciences	mBio Diagnostics	Oceanlinx
Enzolve Technologies Ltd	Gerbera Ltd	Intel Corporation	Medtronic	OFS Denmark
Epic Digital Media	GFM Systems	Intelligent Data Systems Inc.	Meiji	OncoMark Ltd
Epichem Pty Ltd	Giantreo	Intercept Pharma Inc.	Mendel Biotechnology Inc.	Openlink Software (USA) Ltd
EPPRA SAS	Glas-seal Ltd	Intermune	Merck Group	Opsona Therapeutics
Equateq	GlaxoSmithKline	Intune Networks	Metal Fabrication Ltd	Organis Spintronics
Equinome Ltd	Glebe Scientific Ltd	InvestorFirst	MetaOme	Ortho Clinical Diagnostics
Ericsson	Glen Dimplex Ltd	Ipsen	Microsoft Corporation	Ovagen
Erigal	G-Media	Irish Cattle Breeding Federation	Midatech Ltd	Oxford Metrics Group
Erin Energy Ltd	Grant Galvin (entrepreneur)	Irish Response	Millipore	PaddyPower
eSpatial	Groupe Archimen Active 3D	Itasca Consulting Group Inc.	MITRE	Paraytech
Eudaemon Consulting Ltd	Halcyon Solutions	iTraffic	Molecular Devices	Parexel International UK
Europlex	Heinz	J&J Vistakon	Mostostal Warszawa	PAS Technologies Ireland Ltd

Pavement Management Services Ltd	Rolls-Royce Group	Solexperts AG	Toray Industries Inc
PepsiCo Ireland	Rovsing Ireland Ltd	Solvay	Transver GmbH
Pfizer	Royal DSM NV	SONI Ltd	Traslan
Pharmatrin Ltd	S3 Group	SpeechStorm	Trinity Biotech
Pheonix Ltd	Saab Combitech Systems AB	Spokesoft Technologies Ltd	Trinity Horne
Philips Group	SAES Getters S.p.A.	SpongeIT	Triveritas Ltd
PicoMetrics Inc	Sanofi-Aventis	Sports Index	Tullow Oil Plc
Pilkington Glass (UK)	SAP AG	SQW Energy Scotland	United Technologies Corporation
Pioneer Investments	Saudi Aramco	SSE Renewables	Unternehmensberatung Biogas
Piper Systems Ltd	Scandinavian Homes Ltd	St Gobain Glass	Unum
Plasmedica Ltd	Schering-Plough	ST Microelectronics	Valio
Plentex Ltd (Blue Sundial Algae Project)	SDL Enterprise Technology (Ireland)	Stat Sports	Veolia
PocketKings	Seagate Technologies LLC	Statistical Solutions Cork	Veryan Ltd
Polecat Ltd	Selective Antibodies Ltd	Stiefel GSK	VI Systems
Polyplus Transfection	Senexis	Storm Technology Ltd	Viridian Group
Profactor	Seniormind	Stranger Testing Services Ltd	Vistakon Ireland
Progenik	Sensinode	Summit	VistaTEC
Prognosys Biosciences Inc.	SensL	Superlum Ireland	Vitalograph (Ireland) Ltd
Prospect 23	Sentry Wireless	Sygnature Chemical Services Ltd	Vitesse
Protagen	Seroba-Kernel Life Sciences	Symantec Corporation	Vivasure Medical Ltd
Protneteomix	Servier Laboratories	Synopsys International Ltd	Waters Corporation
Proxy Biomedical Ltd	Sheeran Ltd	T2M	Weedle
Qiagen GmbH	Shimadzu Corporation	Taiho Pharmaceutical Co Ltd	Western Digital
QinetiQ	Shupon	Tango Telecom SA	Willis Plumbing and Heating
Quintiles	Siemens AG	TBC Inc.	Wirelite Sensors Ltd
Racktivity	Sigma Aldrich Corporation	Technicolor	WIS
Radisens Ltd	Sigmoid Pharma	Technology From Ideas Ltd	Xilinx Research Labs
RealTime Technologies	Skyware Global	Telabs	Zamano
Recitell Ltd	Slattery Communications	Telefonica R&D	Zeus Inc.
RedBoxDirect Ltd	SLR Consulting Ltd	Tell Lab	Ziel
Renault Group	Smartex	Temis	Zignals
Renishaw Ltd	Smith & Nephew	Tenesol SA	
ReResearch Ltd	Snap-On Inc	Teva Pharmaceuticals Ireland	
Resource Kraft Ltd	SOCOWAVE	Thales Group	
Ricerca sul Sistema Energetico (RSE)	Softedge Systems	The Walt Disney Company	
Rio Tinto Minerals	Software Mind	ThermoFisher Scientific	
Roche Group	Solae	Theta Chemicals	
	Solaprint Ltd	TiGenix Inc. (Orthomimetics)	
		Tmtfactory	

Government Departments or Semi-State Bodies

BBC
 Bord Gáis
 Bord na Mona
 BreastCheck
 Centre Scientifique et Technique du Bâtiment
 Coillte
 Commission for Energy Regulation (CER)
 Competence Centre For Biorefining and Bioenergy
 Deutsche Welle
 Dublin City Council
 EirGrid
 Electricity Supply Board (ESB)
 Environmental Systems Research Institute, (ESRI)
 Environmental Protection Agency (EPA)
 European Investment Bank
 European Space Agency
 Health Service Executive (HSE)
 INRIA Inventeurs du Monde Numerique
 Irish Navy / Department of Defence
 Met Éireann
 National Institute for Bioprocess Research & Training (NIBRT)
 National Institute of Standards & Technology (NIST)
 National Oceanic and Atmospheric Administration (NOAA)
 National Roads Authority (NRA)
 Netherlands Institute for Sound and Vision (NISV)
 Northern Ireland Electricity
 Teagasc

Private Foundations/Charities/Non Government Organisations (NGO)

Carers Ireland
 Centre d'Immunologie Pierre Fabre
 Centre for Inclusive Technology
 Crosscare
 DEBRA Ireland
 Electric Power Research Institute (EPRI)
 European Ocean Energy Association
 European Research Consortium for Informatics and Mathematics (ERCIM)
 Fondazione Bruno Kessler (FBK)
 Fraunhofer Institute
 Fundacion Labein
 Incubaid
 Information Retrieval Facility
 Irish Hockey Association
 National Cattle Breeding Centre (NCBC)
 National Museum of Ireland
 Pat Falvey Foundation
 Scottish Association for Marine Science
 Tennis Ireland
 Utility Wind Integration Group (UWIG)
 VTT Finland
 WiSen - Wireless Sensors Enterprise Led Network

Appendix B: Glossary

CP	SFI Charles Parsons Energy Research Award
CSET	SFI Centres for Science, Engineering and Technology
DCENR	Department of Communications, Energy and Natural Resources
DJEI	Department of Jobs, Enterprise and Innovation
EI	Enterprise Ireland
EPA	Environmental Protection Agency
EU	European Union
FDI	Foreign Direct Investment
HEA	Higher Education Authority
HEI	Higher Education Institutions
HRB	Health Research Board
HSE	Health Service Executive
IDA	Industrial Development Authority, Ireland
IRCSET	Irish Research Council for Science, Engineering and Technology
MI	SFI Mathematics Initiative
MNC	Multi-National Corporation
NIH	National Institute of Health, USA
PI	SFI Principal Investigator Programme
PICA	SFI Principal Investigator Career Advancement Award
PIYRA	SFI President of Ireland Young Researcher Award
RD&I	Research, Development and Innovation
RFP	SFI Research Frontiers Programme
RP	SFI Research Professor Recruitment Award
SIRG	SFI Starting Investigator Research Grant
SME	Small-Medium Enterprise
SRC	SFI Strategic Research Cluster
SSTI	Strategy for Science, Technology & Innovation 2006 - 2013
US Irl	US Ireland R&D Partnership Programme

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