



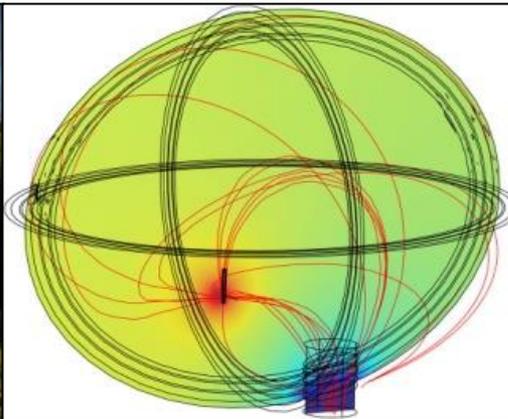
2012 Conference of Rectors and Presidents of European Universities of Technology Istanbul, Turkey

HORIZON 2020: An Irish Perspective

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College Principal and Dean of Engineering

[Former Member of EURAB – Preparation of FP7]
University College Dublin, Ireland
College of Engineering & Architecture
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Presentation slides prepared by Caroline Tracey, Research & Innovation Manager, UCD



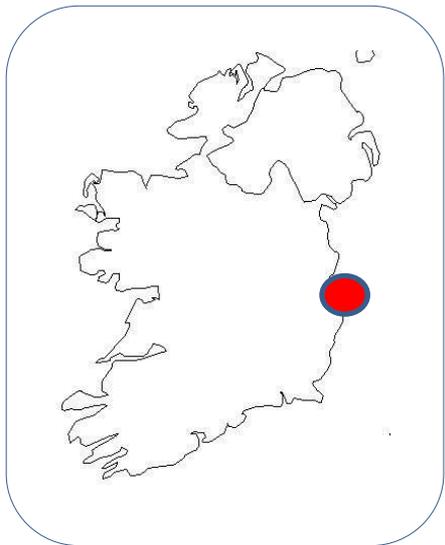
Ireland in Europe

Population: 4.5 million people

Island: It is the third largest island in Europe

Land Area: 70,282 km² (68,890 km²)

Coastline: 1,448kms



Ireland – Industry



- 8 out of top 10 pharmaceutical
- 8 out of top 10 technology
- 15 out of top 25 medical devices
- 50% of world's leading financial services
- US investment into Ireland greater than into Brazil, Russia, India, China combined





- Largest university in Ireland
- Most comprehensive range of degree programmes
- Founded in 1854 (Cardinal Newman)
- Has educated half of Ireland's Prime Ministers
- Belfield, the largest urban campus in Europe (350 acres)



Innovation – a third pillar in this plan
Focus on Creativity

University College Dublin – Campus Development



Overall Student Numbers



- Total > 25,000
- Undergraduate > 18,000
- Graduate > 7,000



- Agriculture, Food Science and Veterinary Medicine
- Arts and Celtic Studies
- Business and Law
- **Engineering and Architecture**
- Health Sciences
- Human Sciences
- Science

UCD College of Engineering & Architecture – 6 Schools

ENGINEERING

- UCD School of Architecture
- UCD School of Biosystems Engineering
- UCD School of Chemical & Bioprocess Engineering
- UCD School of Civil, Structural & Environmental Engineering
- UCD School of Electrical, Electronic & Communications Engineering
- UCD School of Mechanical & Materials Engineering

UCD Profile

- QS World Rankings 2012 UCD overall 131st in the World
- National leader in Fourth Level Education producing 25% of Irelands PhD graduates each year
- Over 1,963 peer-reviewed journal publications in 2010
- In the top 1% worldwide for the impact of its research publications in 15 areas, including Engineering
- Research funding of €103M in 2010/11 - 22% of which is from European Commission
- UCD' has a diversity of academic disciplines
- UCD College of Engineering & Architecture is the largest Faculty of Engineering in Ireland



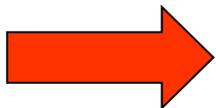
FP7: Ireland's National Target and Performance

National target of €600m for FP7 i.e. 1.25% of total FP7 Budget 2007-13

	Applicants in Submitted Proposals	Applicants in Successful Proposals	Success Rate %
Ireland	5,961,	1, 376	23.08 %

	Funding Requested by Applicants (€)	Funding Granted to Applicants (€)	Success Rate %
Ireland	2,012,904,764	438,356,756	21.78 %

*Source: FP7 Ireland import of eCORDA release
(post cleaning and addition of Marie Curie financial contributions)



Ireland's drawdown already above target

As at 2012, Ireland already awarded €438 m representing 1.55% of FP7 budget (in calls to date)

FP7: Ireland's National Target and Performance

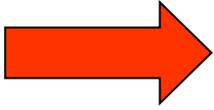
Country	Applicants in eligible proposals from country	Applicants in retained proposals from country	Funding Granted to applicants (€)	Success Rates	
				Applicants from country	EC financial contribution to applicants from country
UK - United Kingdom	50,529	11,997	3,981,628,464	23.74%	21.79%
AT - Austria	10,801	2,370	736,946,235	21.94%	21.40%
FI - Finland	8,299	1,883	652,791,654	22.69%	20.13%
DK - Denmark	7,805	1,899	656,902,640	24.33%	23.52%
IE - Ireland**	5,961	1,376	438,356,756	23.08%	21.78%
<i>EU Average</i>				<i>22.18 %</i>	<i>20.72%</i>

**European Commission data pre-cleaning and without Marie Curie funding

Ireland is quite strong in FP7

BUT needs to aspire to bigger finance...

FP7: Ireland's National Target and Performance

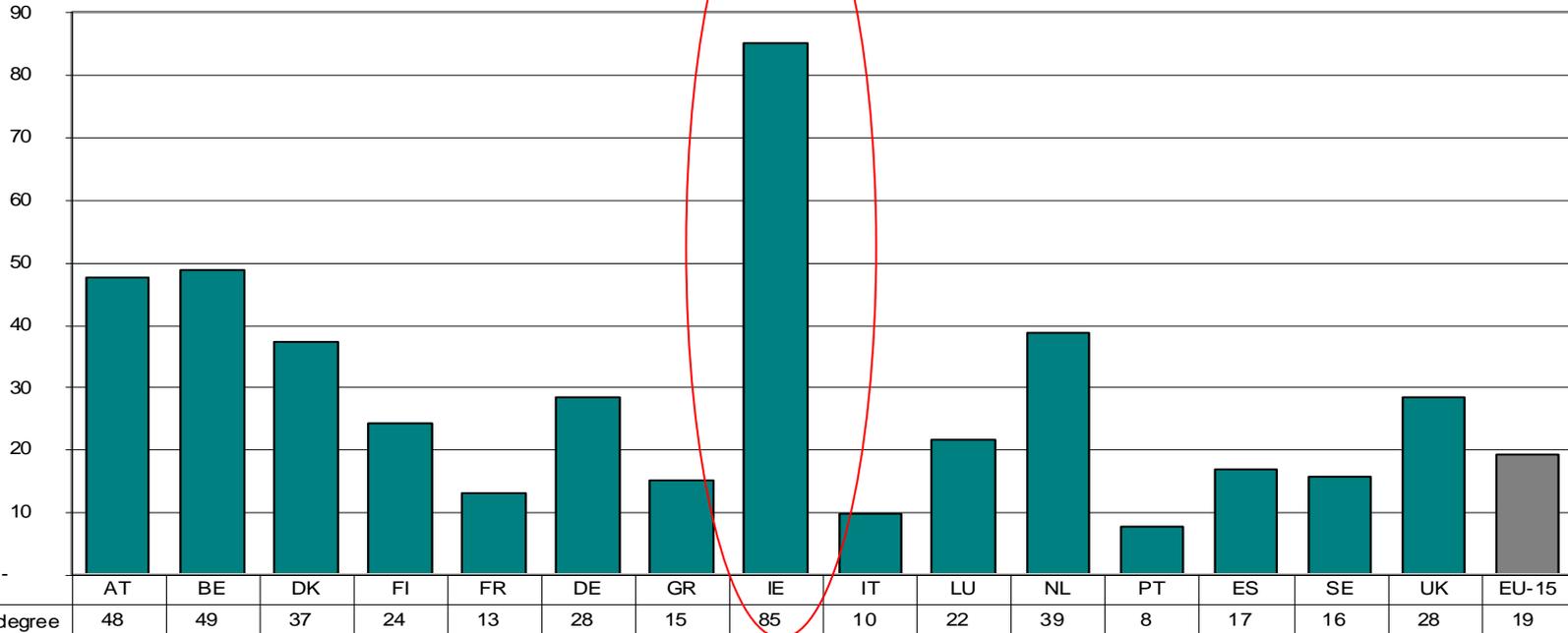


Ireland's SME drawdown of €87m is comfortably above the EU 15% target

EU-15
Number of SMEs participating in EU funded Research (FP7)
per 100.000 SMEs (Contracts signed in 2011), per country

Number of SMEs

AT	308.941
BE	440.772
DK	206.247
FI	223.346
FR	2.673.799
DE	1.897.142
GR	719.772
IE	85.729
IT	3.728.934
LU	27.672
NL	598.814
PT	1.087.066
ES	2.421.876
SE	591.498
UK	1.672.037



Source:

- SMEs in Grant Agreements signed in FP7 (EU funded Research), European Commission - CORDA data warehouse (1 January 2012)
- Source SMEs per country: EUROSTAT, 2011



- UCD average success rate (conversion of proposals into grants) across all FP7 programmes is 16% (College of Engineering & Architecture ~15% success rate)
- EU funding accounts for **10%** of UCD's total research income over the last 5 years
- UCD research funding of **€103M in 2010/11** and 22% of which is from European Commission
- 17% of the university's EU FP7 funding was awarded to the College of Engineering & Architecture
- College of Engineering & Architecture total Research Funding for 5 years to 2010/11 = €74m

FP7: UCD's Performance

€25.8M awarded to UCD, 13 % of which to Engineering & Architecture with strong success under Energy, Environment, Security and Transport

Cooperation

Ideas (ERC)

€8.75m representing 7 grants awarded to UCD.

2 Starter Grant in College of Engineering & Architecture

Opportunity to aim for ERC Advanced Grants

€9.3m awarded to UCD, 19% of which to Engineering & Architecture

Opportunity to improve Industry-Academia Pathway Partnerships and ITN's

People (Marie Curie)

Capacities

€3.77m awarded to UCD.

Number of applications low but College of Engineering & Architecture particularly strong success rate in Research for the Benefit of SME's.

FP7: UCD's Experience

No stated University Strategy for FP7

- Engagement was fortuitous and piecemeal
- Small number of PI's participated (increased in latter years)
- Some PI's understand EU funding and how to network, others do not
- Those PI's with experience and expertise eg as reviewers were not drawn on in an organised way
- Most individual PI's put off by perceived bureaucracy of EU funding
- New National Programmes offered easier lower hanging fruit
- Ireland has invested heavily to build human capital and knowledge base

EU FP7 - Complex and very difficult for Universities in Ireland

H2020 Clear Opportunity – to be proactive and get more PI's participating in, winning, and leading EU funded programmes

Horizon 2020: UCD's Strategy

- Focus on large scale multidisciplinary programmes
- University's 4 major themes
 - Earth Sciences, Energy and the Environment
 - Global Ireland
 - Health and Healthcare Delivery
 - Information, Computation and Communications

**Recurrent funding for research income:
cut by as much as 40%**

UCD - **must** increase and diversify non-Exchequer funding
- EU grants and industry partnerships

UCD Target Increase - 30% of university's Research Funding to be from EU

Horizon 2020 - a new central dedicated EU research infrastructure with the sole aim of assisting UCD researchers to increase their EU funding

Strategy and Plans for Horizon 2020: Industry Engagement & Innovation in SME's

Ireland's National Intellectual Property (IP) Protocol June 2012

'Putting public research to work for Ireland'

- Central Technology Transfer Office (by Autumn 2012)
- Generous commercial terms to encourage businesses to engage with researchers
- Standardised IP to facilitate easy-to-set-up agreements
- Improved IP management and promote best practice





ERC Support Programme

**Pending: SFI will support
ERC re-submission
applicants for 1-1.5 year**



September 2011



ERC Enabler Seed Funding

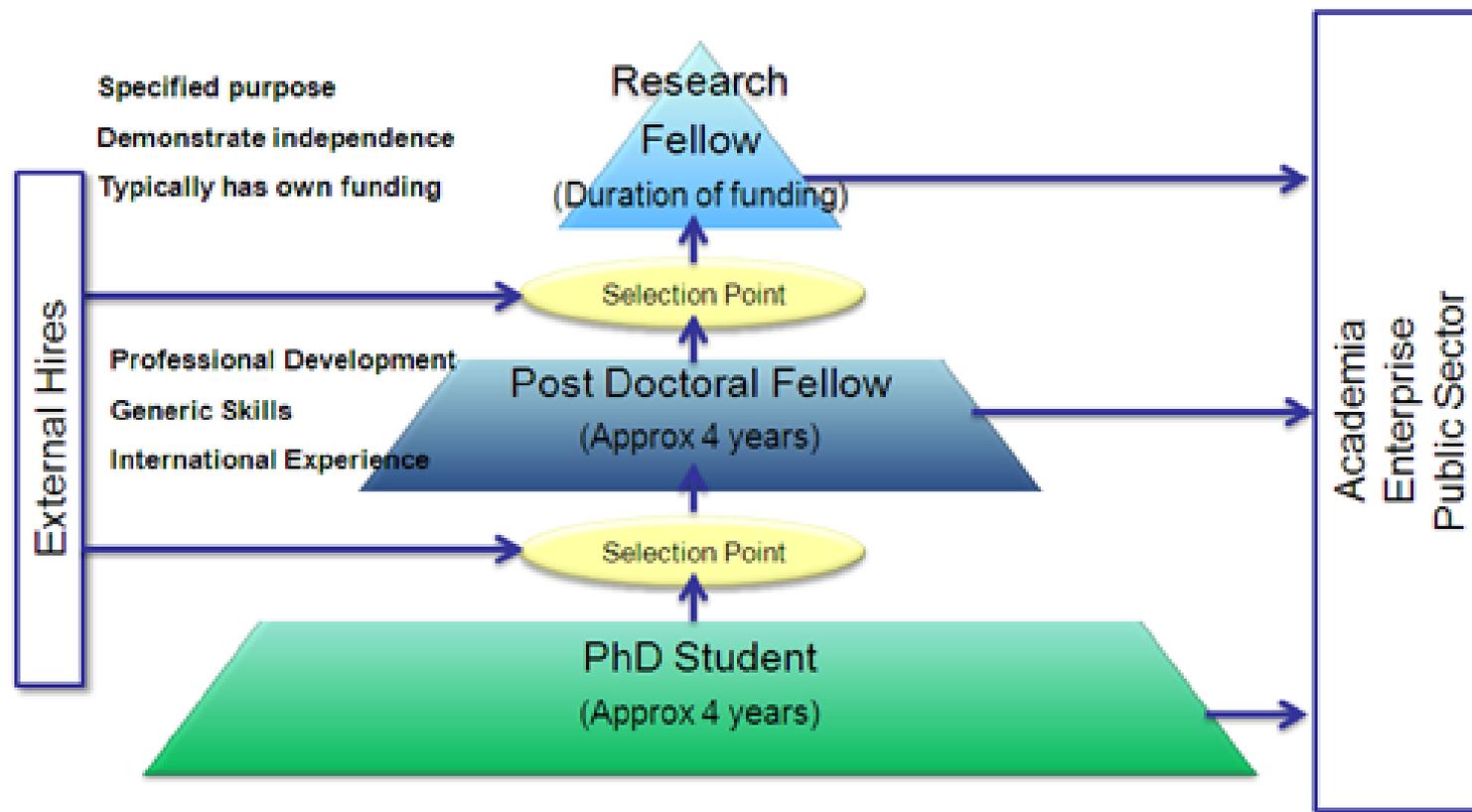
Academic Staff Retention Policy

ERC – UCD currently holds 9 ERC award holders

Horizon 2020 Target – UCD to have 1 ERC holder in each of 35 Schools

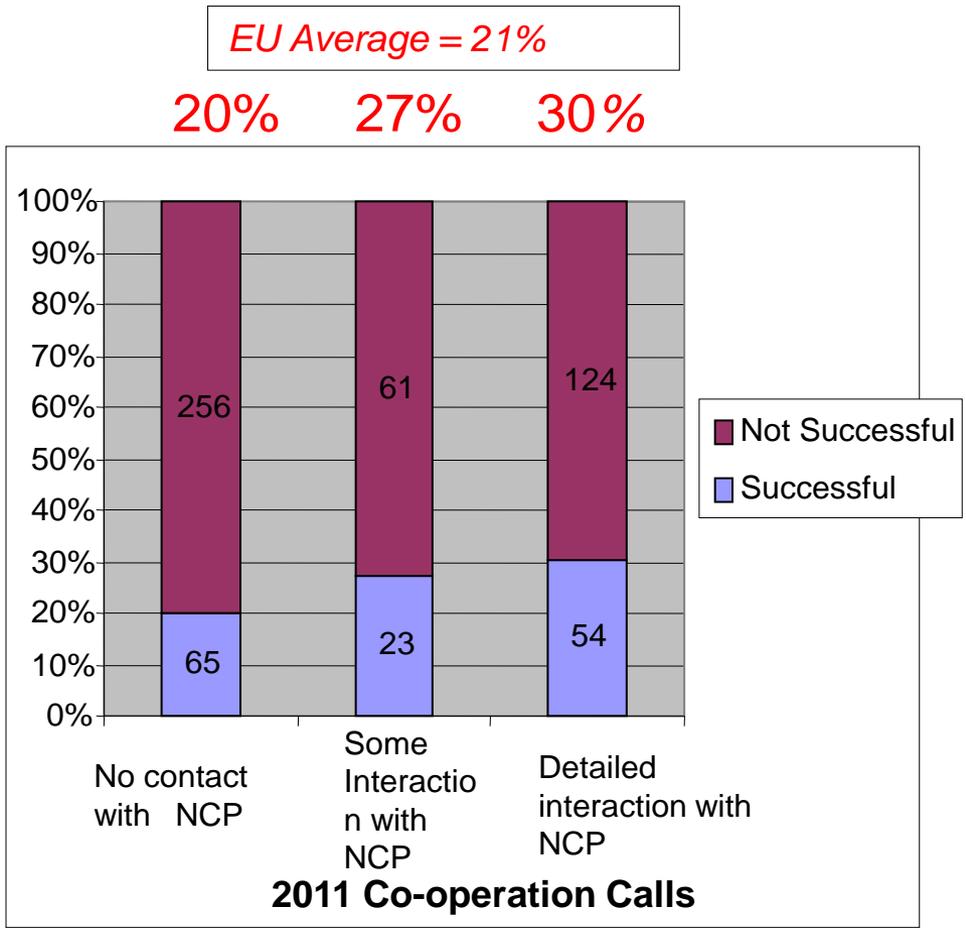
Strategy and Plans for Horizon 2020: Focus on Researchers and their Mobility

UCD Research Careers Framework



Strategies and Plans for Horizon 2020: Develop Ireland's National Contact Point's (NCP's) Support System

Irish NCPs interacted with 38% of FP7 Cooperation applicants in 2011-2012



FP7 - NCPs interaction associated with a 1:3 success compared to 1:5 without

Some Conclusions

- Currently an extremely difficult Higher Education Climate in Ireland
- Irish Higher Education Authority (HEA) presenting extreme challenges
- Engineering highly challenged because of year on year funding cuts and the Resource Allocation Model (which disadvantages laboratory based disciplines such as engineering and architecture) -
- Internationalisation of Student Body – critical for budgets
- FP7 – good funding success but very difficult to manage – overly complex
- Local Funding diminishing significantly
- Horizon 2020 – critical for continuity in research and for industrial development in Ireland – new target from 10% to 30% EU Funding

HORIZON 2020: An Irish Perspective

Thanks for Ms Caroline Treacey,
College Research and Innovation Manager
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END

