

# University College Dublin Research & Innovation

*Using a CRIS to allocate research funding based  
on research outputs*

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Ireland's **largest** university

- 32,000 students
- 1,300 academic staff
- 700 research staff
- 1,700 support staff
- 5,600 overseas students
- 6,500 international students in Dublin
- 8,000 graduate students
- 1,600 PhD students

Some **numbers**

# Introduction

- Research activity is critical to University College Dublin's reputation as a leading international university
- Many of the day-to-day costs of research activity are not covered by research grants
- In recognition of this, UCD has developed the *Output-Based Research Support Scheme (OBRSS)* to disburse research support funds to faculty based on their research outputs, as captured in **UCD's Research Management System**

# UCD Strategy

- Objective 1: Strategy 2020
  - *“increase the quality, quantity and impact of our research, scholarship and innovation to levels equal to or exceeding those of a comparator group of top 100 universities”*

# Context

- International
  - Several countries have used output based funding models, e.g. Norway and Denmark
- UCD
  - Resource Allocation Model discontinued in Nov 2014
  - Need a method of financial resource allocation that is aligned to the UCD strategy

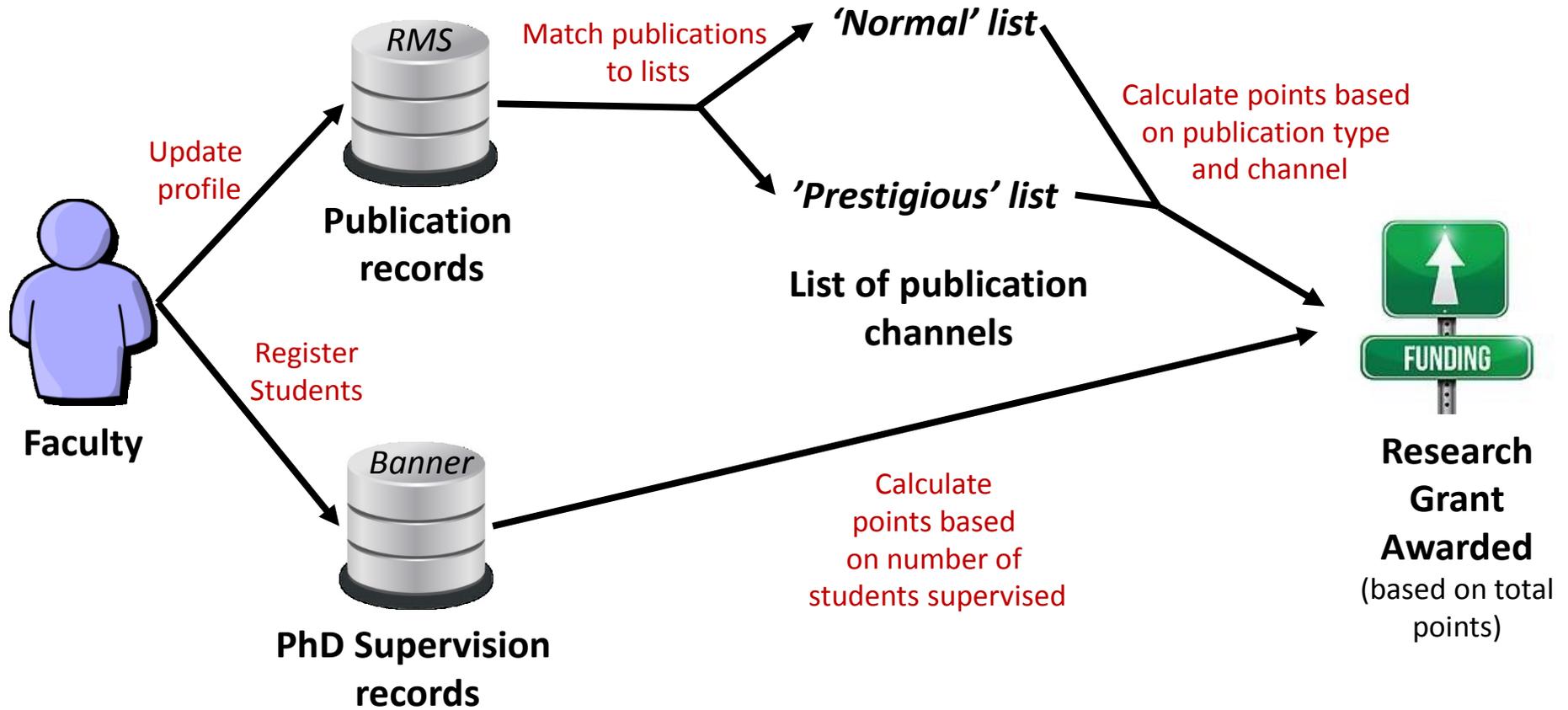
# What is the Output based research support scheme?

- Uses publication and PhD supervision records, to allocate research funding to academic staff
- Points are allocated to different types of publications and supervision
  - Publications – last 3 years e.g. 2013 - 2015
  - PhD Supervision – current academic year
- Research Grants are awarded on points

# Principles of the scheme

- **Fair**
  - Faculty should be actively involved in its creation and define its methodology
- **Transparent**
  - Metrics and data used in the model should be based on accessible and reproducible data
- **Easy to understand & implement**
  - to ensure that everyone in the university can play a part in performance improvement
- **Underpinned by the strategic objectives**
  - the model should reinforce the objectives of the Strategy 2015-2020 by rewarding progress towards those objectives
- **Rewards excellence**
  - the model should be designed so as to encourage excellence

# Points scoring



# Points for publication & supervision

Publication types	Points Level 1	Points Level 2
	'normal' (per publication)	'prestigious' (per publication)
Books	5	8
Journals Article	1	3
Book Chapters	1	3
Conference Publication	0.5	2
Edited Book	1	3
Other Publication	0.5	2
Published Report	1	3
Supervision types	Points for Secondary	Points for Primary
	Supervision (per student)	Supervision (per student)
PhD Supervision	2	2

# Assigning publication levels

- The channel list is divided into 2 levels: 'normal' & 'prestigious'
- Level 1 (normal) comprises 87% of the source titles, while level 2 (prestigious) comprises 13%.
  - There are 22,699 journal titles and 1,407 publishers on the Danish authoritative list. In modelling this scheme a further 19,703 journal titles from Scopus were added – **all level one by default.**
- Danish model uses two overall guidelines for nomination to level 2
  - Perceived by the international research environment as the indisputably leading within the research area
  - In total publish a maximum of 1/5 of the research area's scientific publications worldwide.

# Additional paramaters

- **UCD author factor**
  - multiply by 0.7 if there are two UCD academic staff on the paper;
  - multiply by 0.6 if there are three UCD academic staff on the paper;
  - multiply by 0.5 if there are four or more UCD academic staff on the paper
- **When total number of authors on a paper exceeds 100, multiply the result by 0.1**
- **International collaboration is rewarded by multiplying publication points for a publication with authors from different countries by 1.25**

# Timeline

- **Design:**

- Dec 2015- Jan 2016: Refine the draft model

- **Refine:**

- Feb – Apr 2016: Review of the publication channels contained in the authoritative lists
  - Feedback on draft model by 25<sup>th</sup> March
  - Feedback on publication channel lists by 29<sup>th</sup> April

- **Harvest:**

- May 2016: First harvest
- Oct 2016: Final harvest

- **Award:**

- Nov - Dec 2016: Awards grants

# 2016 Results

- **724:** UCD Academic staff receive additional grant monies to help support their research activities.
- **€650k** in new research funding was allocated to academic staff to support their research activities using this scheme
- **The creation of ranked publication channel lists** will guide academic staff on where to publish. This will help achieve objective #1 of the strategy to 2020 i.e. *“increase the quality, quantity and impact of our research, scholarship and innovation to levels equal to or exceeding those of a comparator group of top 100 universities”*. Improved research outputs directly influence international rankings and help enhance the university’s reputation - leading to increased rates of enrolment by high fee paying international students.
- **85% of academic staff updated their profiles** More complete and up to date information is available in the Research Information System for reporting purposes. This leads to time saving in report production.
- **Only 3% of academic staff queried the results of the scheme.** This compares with 50% on other internal funding schemes.
- Academic staff are automatically entered into the scheme, if successful their awards are registered for them by the research office. This **saves academic time where compared to other funding schemes** where staff have to apply for funding.

# Very positive reactive to the scheme

What a lovely surprise! Many thanks for this

Lecturer in Business

Just a note to say thanks for getting this going.  
I think it is a really good idea.  
It is a welcome positive communication to get!.  
I will be hoping to keep my grant in reserve so that I  
can buy a pump when the next one breaks down  
completely (that is one of my extreme irritations in  
the lab - there is no other source of such funding)

Professor of Chemistry

Thank you for your message. I am delighted with the  
award.

I think it is a great initiative.

Associate Professor of Law

Thank you very much for the support. This will  
encourage me to improve further.

Professor of Medicine

Many thanks for confirming this award. **For what it is worth, I think this is one of the most interesting, well thought out and well managed initiatives I've encountered in over 30 years in academia.**

Trying to capture an element of quality (over quantity) remains important and this scheme seems to attempt to do that. It would be wonderful to see similar scheme adopted for teaching efforts - one that included an element of quality.

Professor of Medicine

Many thanks for this. I am extremely happy to hear that I have been awarded this grant, and I look forward to putting it to good research use.

Lecturer in English

# Next Steps following last years scheme

- The scheme should be run again (this year)
- Publication channel lists should be reviewed
  - especially the percentage of outputs that are classified as ‘prestigious’ by the scheme in some schools
- OBRSS points system should be adopted by the university as the measure of research activity
  - i.e. if a person has more than zero OBRSS points they are research active; the total number of OBRSS points indicate the intensity of the research activity.
- OBRSS results should inform the academic promotions process
- OBRSS channel lists should be used by schools to inform their publication strategies

# APPENDIX

# How points are calculated

- **Publication output points** =  $B \times C \times F \times N$ , where
  - B = Basic points (based on if publication is on 'normal' or 'prestigious' list)
  - C = collaboration factor (multiply by 1.25 if there are any external authors on the paper)
  - F = UCD author factor (multiply by 0.7 if there are two UCD academic staff on the paper; multiply by 0.6 if there are three UCD academic staff on the paper; multiply by 0.5 if there are four or more UCD academic staff on the paper)
  - N = if the total number of authors on a paper exceeds 100, multiply the result by 0.1
- **PhD supervision points** = number of PhD students supervised by each academic staff member in the current academic year. Two points are awarded for being a primary or secondary supervisor. Points are capped at 20 for PhD supervision.

# Worked Example

PUBLICATION TYPE	Journal_Name / Publisher	Publication list	International Multiplier?	UCD Author Multiplier	Total Author Multiplier	Basic Points	Points per publication
Book	Blackwell Publishing Ltd.	'prestigious'	1	0.7	1	8	5.60
Conference Publication	9th International Conference on Equine Exercise Physiology	Not on list	1	0.7	1	0	0.00
Peer Reviewed Journal	Equine Veterinary Journal	'prestigious'	1	0.7	1	3	2.10
	Journal of Applied Physiology	'prestigious'	1	0.6	1	3	1.80
	Nature communications	'normal'	1.25	0.6	1	1	0.75
	P L o S Genetics	'prestigious'	1	0.7	1	3	2.10
	P L o S One	'normal'	1	0.7	1	1	0.70
<b>Total Publication Points:</b>							<b>13.05</b>
€ per point:							€35.00
<b>€ for publications:</b>							<b>€456.75</b>

Supervision Type	Student	Supervision type	Basic Points
Phd Supervision	Student 1	Primary	2
	Student 2	Primary	2
	Student 3	Primary	2
	Student 4	Secondary	1
<b>Total Supervision Points:</b>			<b>7</b>
€ per point:			€35.00
<b>€ for publications:</b>			<b>€245.00</b>

**Value of Total Grant: €701.75**