



Advisory Council for Science  
Technology and Innovation  
An Comhairle Eolaíochta

# **Towards a Framework For Researcher Careers Advisory Science Council Report**

**Prof Dolores Cahill  
9 October 2008**

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# What is the Advisory Science Council



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- The ASC is the Irish Government's high-level advisory body on Science, Technology and Innovation (STI) policy issues
- It was established by Government in April 2005 under Forfás legislation
- The ASC operates within the context of the new institutional arrangements announced in June 2004, these include:
  - Cabinet Committee on STI
  - Inter-Departmental Committee on STI
  - Chief Scientific Adviser to Government
- Strategy for Science, Technology and Innovation announced new virtual organisation (June 2006)
  - Technology Ireland
  - Higher Education Research Group

# Advisory Science Council



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## *Mission Statement*

- *To bring the experience, excellence and independence of Ireland's science, technology and innovation practitioners to the heart of Government policy to ensure the application of scientific endeavour for the benefit of the people of Ireland*

## *Terms of Reference*

- **To act as the primary interface between stakeholders and policymakers in the STI arena, contributing to the development and delivery of a coherent and effective national strategy on STI**
- **To provide advice to Government on medium and longer-term policy for STI and related matters**

# Advisory Science Council

## - Membership



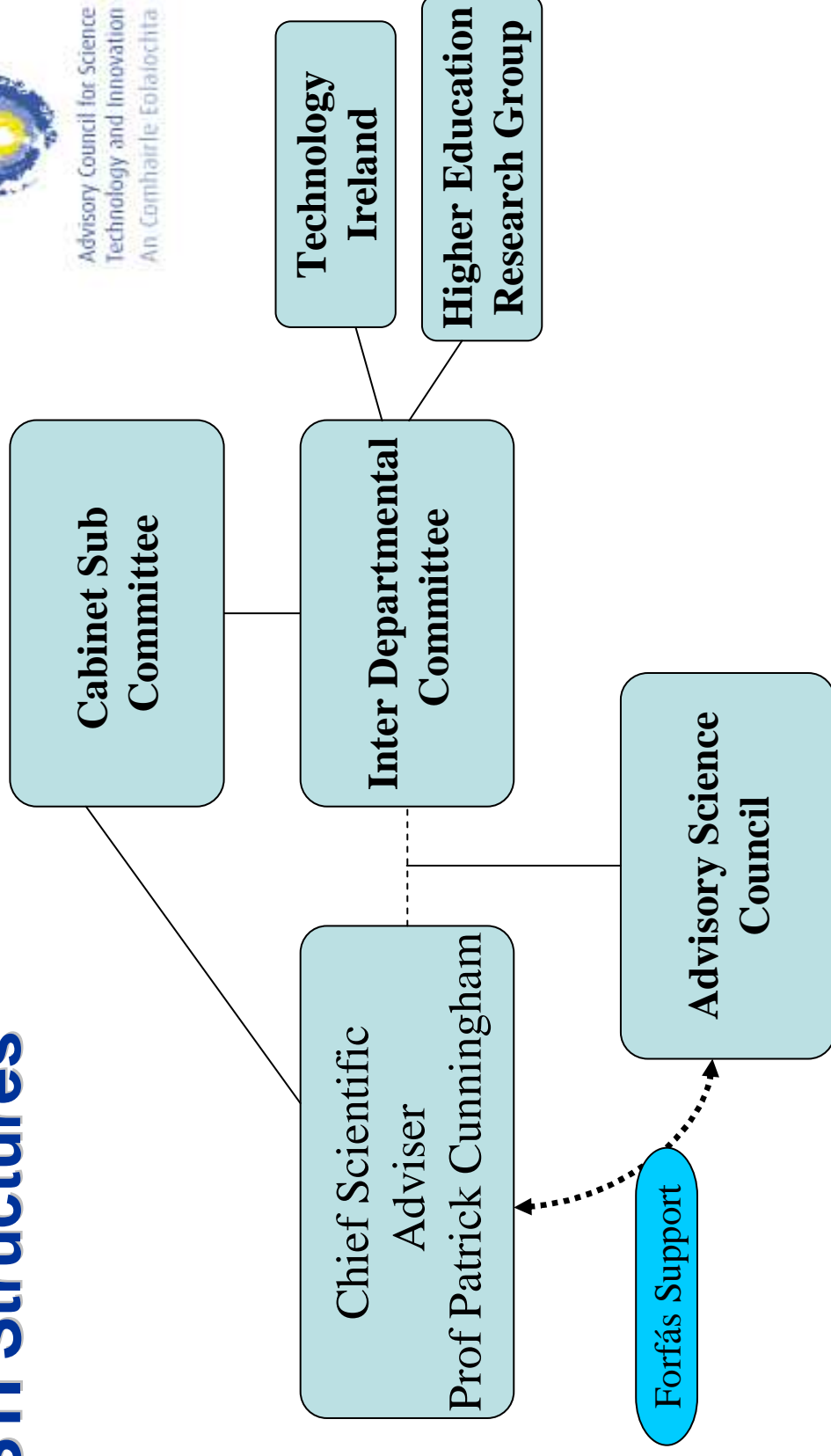
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**Ms. Mary Cryan**      **Cryan Associates (Chairman)**  
**Prof. Dolores Cahill**      **Professor of Translational Science, Conway Inst., UCD**  
**Mr. Martin Cronin**      **Chief Executive, Forfás**  
**Prof. Tom McCarthy**      **Chief Executive, Irish Management Institute**  
**Prof. Anita R. Maguire**      **Prof. of Pharmaceutical Chemistry, NUI Cork**  
**Prof. Timothy O'Brien**      **Director, Gene Therapy Programme,  
Regenerative Medicine Institute (REMEDI), National  
Centre for Biomedical Engineering Science & Prof. of  
Medicine and Consultant Endocrinologist, NUI Galway**  
**Dr. Siobhán O'Sullivan**      **Scientific Director, Irish Council for Bioethics**  
**Dr. Reg Shaw**      **Managing Director, Wyeth Ireland**

# STI Structures



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# Inter-Departmental Committee



- Deals with cross-cutting and horizontal issues and challenges and acts as a forum for the exchange of information and analysis at senior official level.
- Works to enhance cohesion and synergy in STI policy.
- Make recommendations to Cabinet/Government on the implementation of the SSTI and will oversee and report to Cabinet/Government on the delivery of the Strategy's targets to 2013.
- Will seek advice from the Advisory Science Council and mandate it to take forward particular pieces of work.
- All reports and findings of the Council will be submitted to the IDC, which will bring them forward to Government as appropriate.

# Inter-Departmental Committee Membership



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**Chair, OSTI,**

**D/ETE**

**Chief Scientific Adviser**

**D/Taoiseach,**

**D/Finance**

**D/Education and Science**

**D/Health and Children**

**D/Agriculture and Marine**

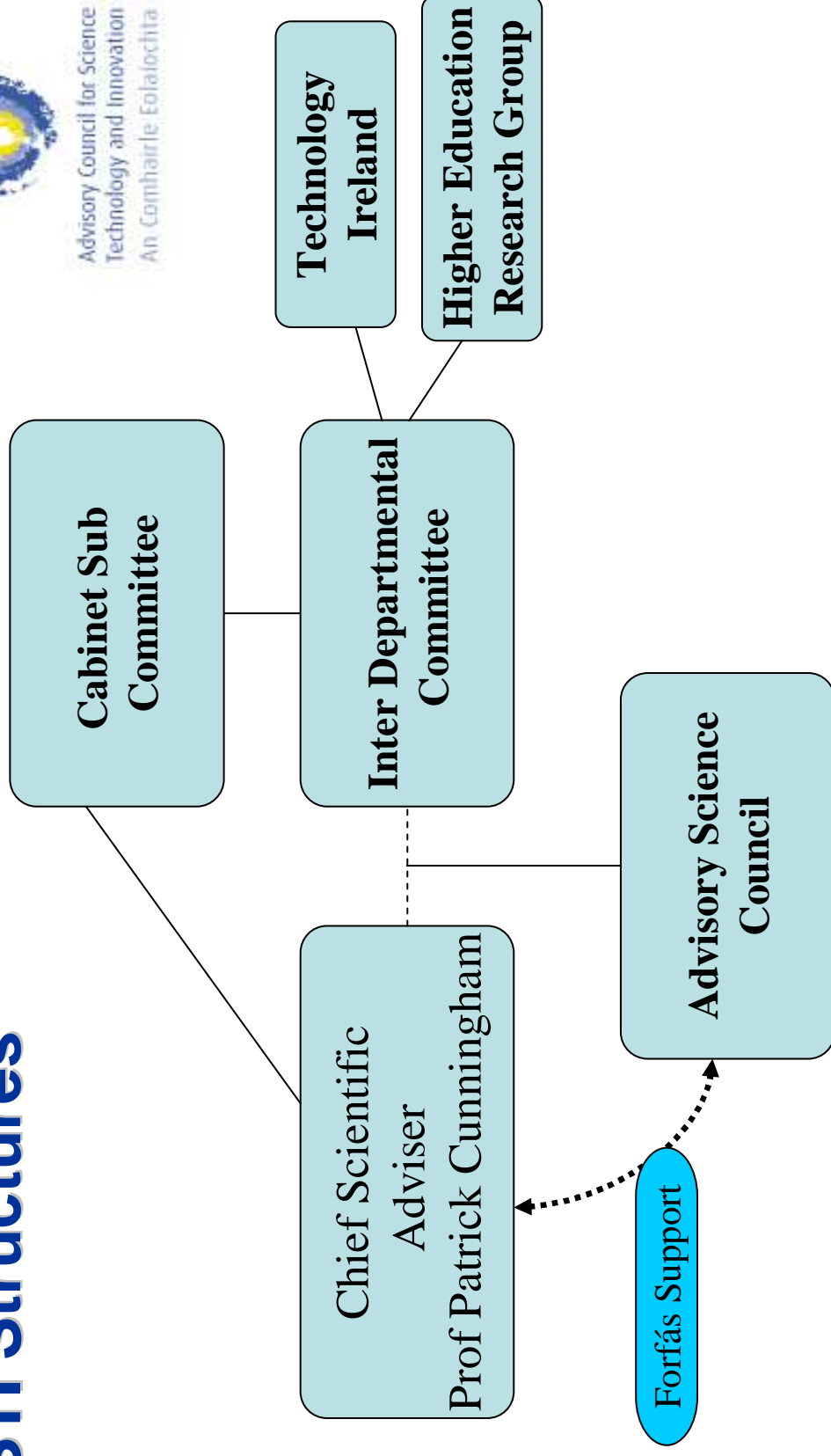
**D/CENR,**

**D/Environment**

# STI Structures



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# Higher Education Research Group (HERG)



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- Established to ensure coherence among funding initiatives such as PRTLl and the funding award schemes of the relevant agencies and councils
- Particular responsibility for ensuring good fit between infrastructural investments in the institutions and research and postgraduate education programmes
- Comprises representatives of the main Departments responsible for funding HE based research – D/ES, D/ETE and D/Fin along with senior executives from the funding agencies of those Departments.

# Technology Ireland (TI)



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- **Established to bring coherence to the enterprise dimensions of STI**
- **Made up of senior executives from SFI, IDA, EI and Forfás under the aegis of the OSTI, DETE**
- **TI operates its management and monitoring/ oversight function through ensuring coherence and alignment of developments in line with the SSTI e.g. RTI schemes outputs and BERD targets**

# Background



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**The Inter-Departmental Committee has requested the ASC to examine and bring forward proposals on a career structure for researchers**

**Source: *Strategy for Science Technology and Innovation 2006- 2013.***

# Context



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- SSTI recognises the economic and social contribution of research endeavour
- Significant investment in research capacity of HEIs, industry and the public sector
- People are the key drivers of research: SSTI commits to doubling number of PhD graduates
- Welcome the introduction of structured graduate education e.g. Graduate Schools

# Context



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- Investment presents new challenges:
  - Continue to assure world-class excellence through an appropriate academic career structure for researchers
  - Ensuring mobility between HEIs, enterprise and the public sector at all levels
  - Ensure the internationalisation of Irish research through international mobility
  - Optimise the contribution of all researchers and all fields of research

# Taskforce Membership



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Organisations	Representatives
Advisory Council for Science, Technology and Innovation	<ul style="list-style-type: none"><li>• Prof. Dolores Cahill, Leader</li><li>• Dr. Siobhan O’Sullivan</li><li>• Prof. Anita Maguire</li><li>• Prof Tom McCarthy</li></ul>
Higher Education Institutions	<ul style="list-style-type: none"><li>• Mr Tom O’Leary - former HR Director, NUI Cork</li><li>• Prof Janet Allen - Director for UCD Conway Institute</li><li>• Prof Vincent Cunnane - former Vice-President Research, Research Office, University of Limerick</li><li>• Prof Brian Fynes - Smurfit School of Business at University College Dublin</li><li>• Prof Michael Cronin - Centre for Translation and Textual Studies, DCU</li><li>• Dr Willie Donnelly, Head of Research &amp; Innovation, WIT</li></ul>
Enterprise	<ul style="list-style-type: none"><li>• Brendan O’Callaghan - Schering Plough</li></ul>

# Objectives

- Review
  - the current structures and processes in IE and EU
  - career paths for researchers
  - good practice - EU & global hotspots
- Analyse
  - the current state of career opportunities incl. mobility
- Develop
  - a vision and strategy to drive a step change in the career structure and mobility of researchers in public and private research in Ireland
- Recommendations



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# Process

- **ASC approved Taskforce - ToR 15 Nov06**
- **TF held 9 meetings between Oct06 and Nov07**
- **Consultants were appointed Jan07 (Technopolis)**

<b>1) To carry out a study on:</b>	<b>2) To carry out survey of PhD holders in:</b>
Current system in Ireland	Irish HEIs in SET and HSS
Good practices in 5 EU and 3 other countries	To review and analyse feedback
To develop recommendations	To use results of study & formulate recommendations

- **Two consultation workshops July 07 – Researchers & Stakeholders**
- **Consultant’s report completed – August 07**
- **Consultations held with HEA, HERG, IUA, IOTI**
  - Consultants study and survey reports
  - ASC Taskforce report



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# Recommendations

# Framework for Developing Professional Researcher Careers within the HEIs



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in **Óbchtá**

1. **Clearly defined levels within the researcher career path with:**
  - continuous professional development; and
  - transparent and rigorous competition at all levels.
- a. 1<sup>st</sup> phase - Internship - PhD graduates gain practical experience while supervised by PI who has secured funding for position
- b. 2<sup>nd</sup> phase - Research Fellow, personally funded but with a PI as mentor who will enable access to research facilities
- c. Limited number of highly prestigious and competitive Senior Research Fellowships should be available - independent funding on the same basis as Principal Investigators
- d. Transparent and rigorous selection process at each transition phase of career path with ongoing structured performance and personal development reviews throughout the career

# Framework for Developing Professional Researcher Careers within the HEIs



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2. The terms and conditions under which researchers are employed should be consistent irrespective of the sources of funding for their positions
3. Ireland should reach EU average of female participation rates among researchers at senior academic levels by 2018
4. Increase level of funding for Humanities and Social Sciences to support researcher careers in these disciplines

## Mobility of Researchers



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5. All sectors need to work together to develop a researcher careers competency framework
  - Framework should value the experience and skill sets of researchers in all sectors to facilitate mobility
6. A national programme to provide career info
  - Including info on personal and professional researcher skills required by each sector

# Mobility of Researchers



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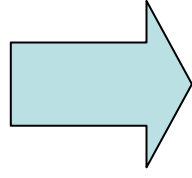
7. Graduate Schools - PhD's to learn practical business skills
  - E.g. project, people and financial management, marketing and skills required for commercialisation
  - PhD programmes to include formal placements in enterprise
  
8. Funding agencies should facilitate international mobility, both inward and outward
  - By providing continuity of funding to those seeking international experience and that seek to return to Ireland

# Implementation

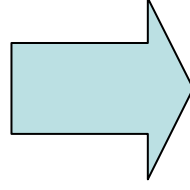


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## 9. Inter-Departmental Committee on STI



## Higher Education Research Group (HERG)



## Structured Researcher Career Paths



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# Thank you

Reports available on ASC website: <http://www.sciencecouncil.ie/>

# Appendix 1

- **Full Text of Recommendations**



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# Framework for Developing Professional Researcher Careers within the HEIs



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1. **Clearly defined levels within the researcher career path should be established with continuous professional development and to maintain excellence there should be transparent and rigorous competition at all levels;**
  - a. The first phase of the researcher career path could be regarded as an internship where the PhD graduates would gain practical experience while supervised by the PI who has secured funding for the position.
  - b. The second phase should be that of a Research Fellow, who has completed the first phase of the research path and is personally funded but in association with a Principal Investigator as mentor who will enable access to research facilities. This will require establishment of a new internationally competitive programme for support of these researchers. The new programme could be funded by restructuring the current funding mechanisms within the agencies.
  - c. A limited number of highly prestigious and rigorously competitive Senior Research Fellowships should be available. Senior Research Fellows should be allowed to apply for independent funding on the same basis as Principal Investigators.
  - d. To maintain quality and research excellence, there should be a clearly defined transparent and rigorous selection process at each transition phase of the career path with ongoing structured performance and personal development reviews throughout the career.

# Framework for Developing Professional Researcher Careers within the HEIs



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2. The terms and conditions under which researchers are employed should be consistent irrespective of the sources of funding for their positions.
3. The funding agencies and HEIs should establish a programme to ensure Ireland reaches the EU average of female participation rates among researchers at senior academic levels by 2018.
4. The funding agencies should increase the level of funding available to Humanities and Social Sciences to further support researcher careers in these disciplines.

## Mobility of Researchers



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5. The HEIs, public sector research institutes, enterprise and their respective representative bodies need collectively to develop and implement a researcher careers competency framework. This framework should recognize and value the experience and skill sets of researchers in all these sectors to facilitate mobility of researchers between all these sectors.
6. A national programme should be established providing career information, including information on the personal and professional researcher skills required by each sector – HEIs, the public sector and enterprise.

## Mobility of Researchers



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7. As the first stage of professional career development of researchers, Graduate Schools should be developed consistently and coherently to ensure PhD students learn practical business skills such as project management, people and financial management, marketing and skills required for the commercialisation of research. PhD programmes in appropriate disciplines should facilitate collaboration with enterprise including formal placements.
8. Funding agencies should facilitate international mobility, both inward and outward, among all researchers by providing continuity of funding to those seeking international experience and those that seek to return to Ireland.

# Implementation



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9. These recommendations should be implemented and monitored through the existing Strategy for Science, Technology and Innovation (SSTI) structures, such as the Higher Education Research Group (HERG), to ensure that the increase in PhD output is aligned with both future national requirements under SSTI and researcher career opportunities.