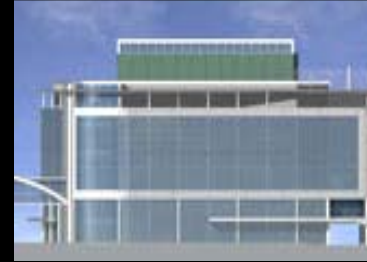


# The Costing of Research In European Universities

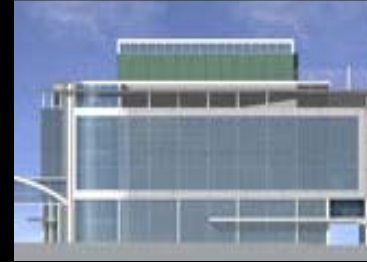
Ian Robertson  
Dean of Research  
Trinity College Dublin

[iroberts@tcd.ie](mailto:iroberts@tcd.ie)



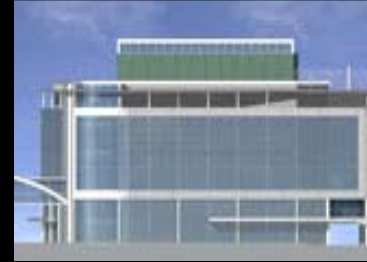
# Universities and Research

- The mission of universities
- Globalisation of education
- Technological changes and their implications for education
- What are the core competences of state-funded universities?
- Research as a core competence?
- Third level versus Fourth Level Education
- The enterprise agenda in the context of this mission
- University alliances and research



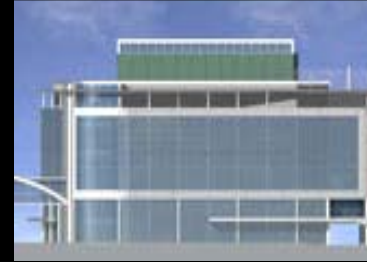
# David Westbury

- EUA website for presentation
- Partial funding models are a mistake
- 1.3 billion underfund of research costs in UK, and that is with 40-100 overheads, on 13 billion budget
- Fiddling while Rome burns
- Bureaucracy



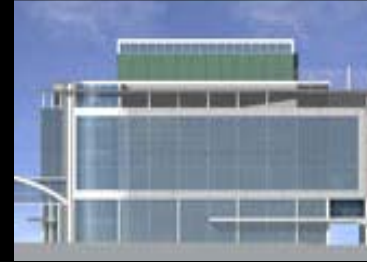
# The Costing of Research

- Teaching and research – separation or integration?
- Measurement and the time sheet question
- Information systems
- Governance of universities
- Strategic positioning of universities within national and European plans.
- Big is beautiful?



# Research in Ireland

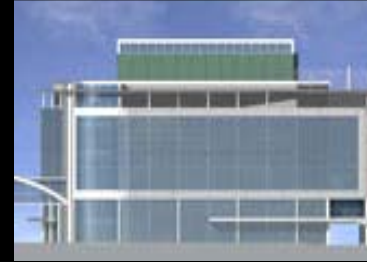
- History of very low investment
- Government policy changed last 5 years
- €2.5 billion invested in R and D 2000-6
- Establishment of Science Foundation Ireland, IRCSETT, IRCHSS.



# Trinity College Dublin

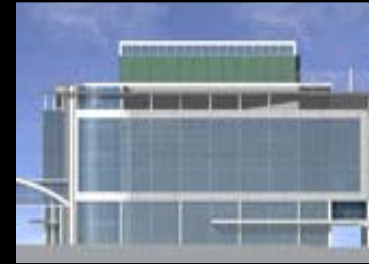
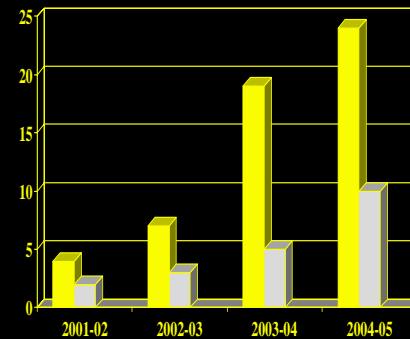
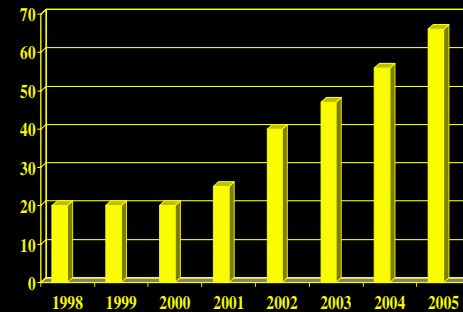


- 28<sup>th</sup> in Europe, 87<sup>th</sup> in world (2004 THES)
- 2005 rankings for science – moved to 75<sup>th</sup> in world (28<sup>th</sup> in Europe) from 94<sup>th</sup> in 2004.
- TCD €189 million euro annual budget, University of Edinburgh €489 million euro (15<sup>th</sup> in Europe for science)
- Student-staff ratio 16.6:1 TCD, 7.5:1 University of Edinburgh
- Context of inadequate core funding for Science Foundation Ireland's Overheads Investment Plan



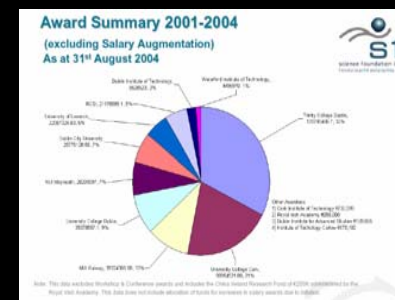
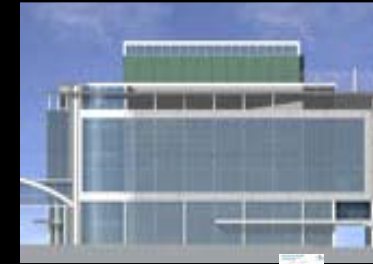
# Research in TCD

- Research budget has trebled in 4 years
- Projected approx €70 million for 2006
- Patent filings have quadrupled
- Enormous strains to physical, scientific and administrative infrastructure



# Science Foundation Ireland

- SFI major science funder in Ireland
- Based on US NSF model, with US Director General and many senior staff from NSF
- Major PI-driven research grants up to € million over 5 years.
- Also funds Centres for Science, Engineering and Technology
- Trinity receives roughly one third of all Irish SFI funding



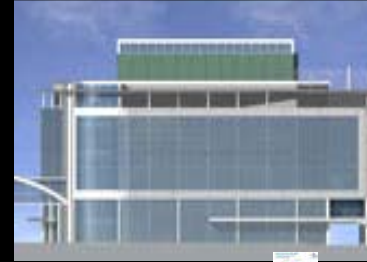
# Science Foundation Ireland

- Influx of PI's from North America, Asia and Europe
- Different expectations of infrastructure
- Pressure from SFI on universities to improve infrastructure for world-class research
- SFI only Irish funding agency to provide 30% overhead



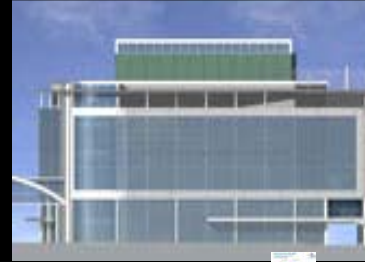
# SFI Overheads Investment Plan

- 2005 introduced
- Overheads have to be competitively applied for
- Strategic plan required towards improving research capacity and infrastructure
- Budget placed under the control of a single individual – usually VP/Dean of Research



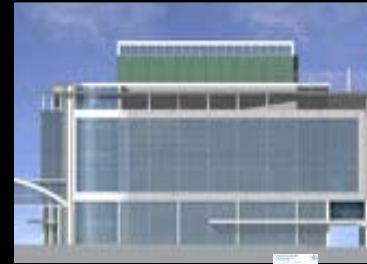
# SFI Overheads Investment Plan

- Expenditure limited to non-direct costs
- Auditable expenditure only, specifically related to research infrastructure
- €5.2 million placed under control of Dean of Research
- Had to be spent within one financial year
- Based on previous, not current, financial year's activity.
- Encouragement to apply for additional funding for major strategic initiatives.



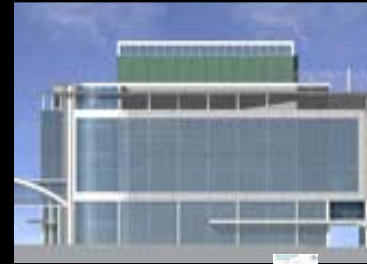
# SFI Overheads Investment Plan – positive effects 1

- Greatly strengthened Dean of Research's hand in speeding up and focussing strategic planning for research in university
- Empowered scientists to have influence on level of service provided by administrative services in College
- Spurred Dean to create first ever dialogue between scientists and administrative science – very successful
- Secured more staff to improve services from research administration, tech transfer, finance, human resources etc.
- Funding contingent on service level agreements



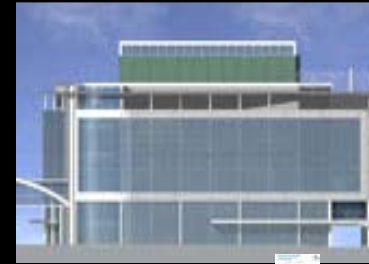
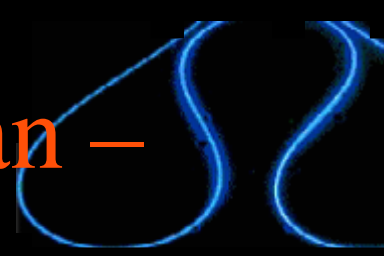
# SFI Overheads Investment Plan – positive effects 2

- Creation of increased transgenics, bioinformatics and bioresources capacity in College
- Creation of very successful interdisciplinary PhD programme
- Greatly increased level of Intellectual Property capture and protection
- Primed planning for new biosciences building with seed funding for financial and architectural feasibility studies.



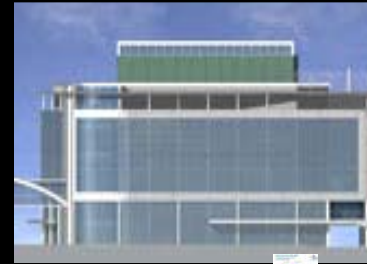
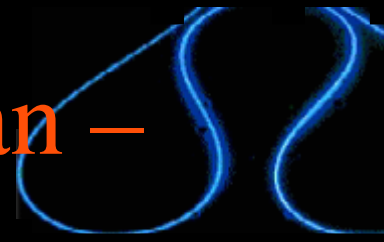
# SFI Overheads Investment Plan – negative effects 1

- Generated large additional workload for research office and Dean – monitoring, audit-readiness, allocation of funds, shaping service level agreements, preparing the application etc.
- Diverted funds from true overhead costs (heat, light, buildings, security, library, administration etc etc) into scientific infrastructure and programmes
- 30% does not cover these basics, so true costs of research not met.



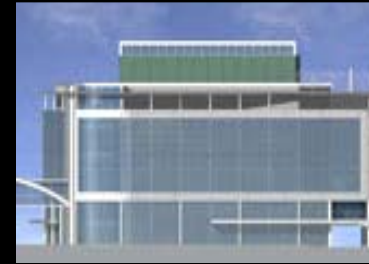
# SFI Overheads Investment Plan – negative effects 2

- As new major interdisciplinary centres come on stream (Nanoscience, and Neuroscience) – overheads planned to support them no longer available
- Distorted our new Academic Resource Allocation Model where budgets are devolved to schools, including overheads.
- Reduced capacity of PI's and Schools to use overheads for flexibility – eg priming new areas, bridging funding etc.
- Caused difficulties between Schools and new interdisciplinary institutes.



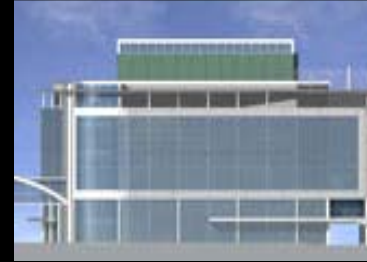
# Indirect Cost Analysis of TCD Research: Premises

- SFI space atlas results 5261m<sup>2</sup> net, 6839 m<sup>2</sup> gross
- Costs/m<sup>2</sup>: approaching €219 (7-9% MTDC)  
- currently higher (Crann Building)
- Depreciation (buildings, equipment), refurbishment  
not included
- Total Premises Costs 2006: €2.38M



# Indirect Cost Analysis of TCD Research: Common and Support Services

- Basis: 2004 departmental budgeting exercise
  - Integrated Research Office: 7.2% MTDC
  - Common Services: 3.9% MTDC
  - Departmental support: 12.65% MTDC
- Total Services Costs 2006: 3.9M

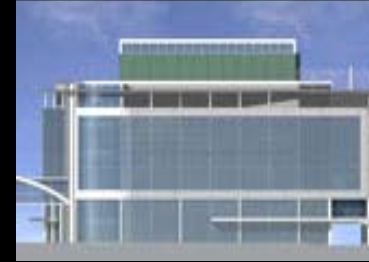


# Indirect Cost Analysis of TCD Research: Overall Total Costs

€1.14M, or 61% MTDC

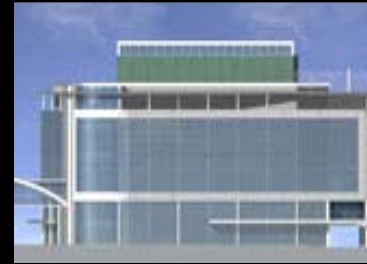
Lessons learned:

- Many non-traditional overheads included
- Use of prior year MTDC results in ‘real’ rate of eg. 25%
- Provision not made for depreciation
- Need for multi-annual rate setting and budgeting
- Strategic investments leading to ongoing commitments



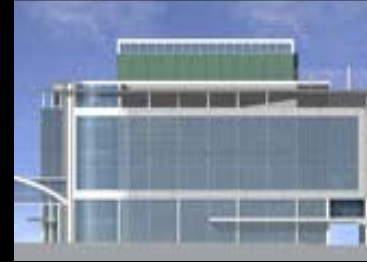
# SFI OIP Success: 2005

- Strategic infrastructure improvements: Refurbishments, Bioresources and Transgenics
- 10 critical staff added in Research Office, Tech Transfer, Library
- Bioinformatics expert (Dr. Karsten Hokamp)
- Fundraiser and Science Communications Officer
- SFI space atlas and customer service survey
  - PI satisfaction high overall
  - key tools for targeting 2006 improvements



# SFI OIP Strategy: 2006-2009

- World class research in one or more of eight areas
  - Double PI pool by 2010 (5 added 2005)
- Major capital projects: Nanoscience building, Life sciences audit/Biosciences building, Enterprise Centre
- Refurbishments (especially incubational)
- Expand impact of service area efficiencies (help desks)
- Outreach
- Leverage



# Conclusions

- TCD ambition: improved standing in international rankings
- TCD reputation: quality of researchers we attract and keep
- Focus on the researcher: support, infrastructure, funding
- SFI OIP the first step in the funding process

