

HEIs, Regional Knowledge Exchange and Lessons from the HEInnovate Review of Ireland

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- The Past
- The National Strategy for Higher Education to 2030
- The Present
- Impact?

1960's

- **OECD**

'In the light of projected trends in the regional distribution of population and of industrial and agricultural activity, how would the delegation view the possibility of improving facilities for higher technical education in the western and southern regions of Ireland?'

- **Regional Technical Colleges**

'We believe that the main long term-function of the Colleges will be to educate for trade and industryThey will ...be more immediately concerned with...filling gaps in the industrial manpower structure'

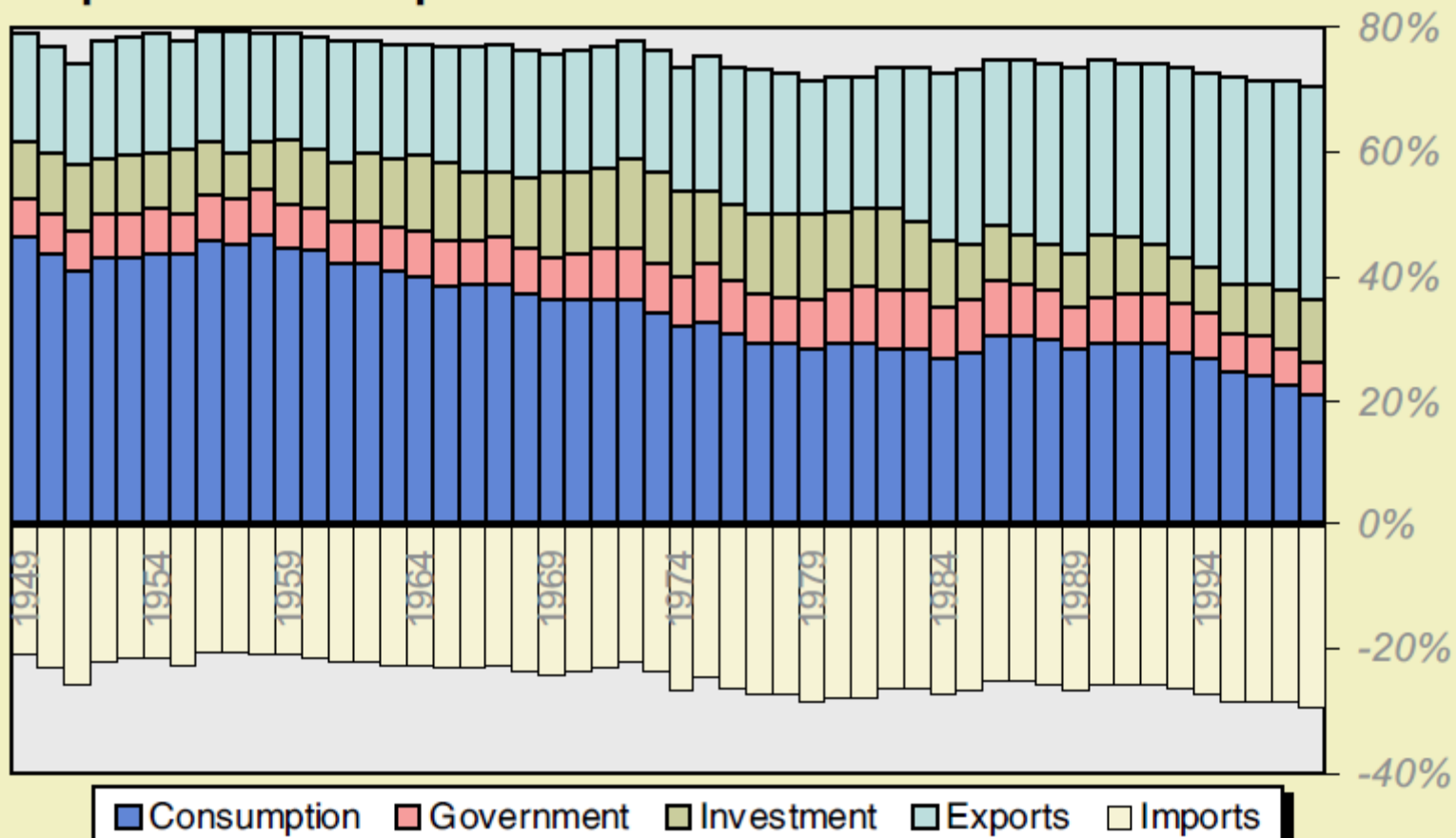
1970's – 1990's

- Industrial development policy shifted from an explicit regional focus to a strategic industry focus.
- *'The principal focus of a college shall...be to provide vocational and technical education and training...with particular reference to the region served by the college...'*
- Shift from traditional manufacturing to knowledge economy

2000's

- OECD Review in 2004 reasserts binary system.
- Universities and IoTs to have '*...complementary...*' roles in the provision of education.
- IoTs to focus on applied research and technology development in the context of regional innovation
- IoTs to '*...provide flexible training options...*'

Expenditure components of GDP



Share of GDP at factor cost

■ Agriculture ■ Industry ■ Services

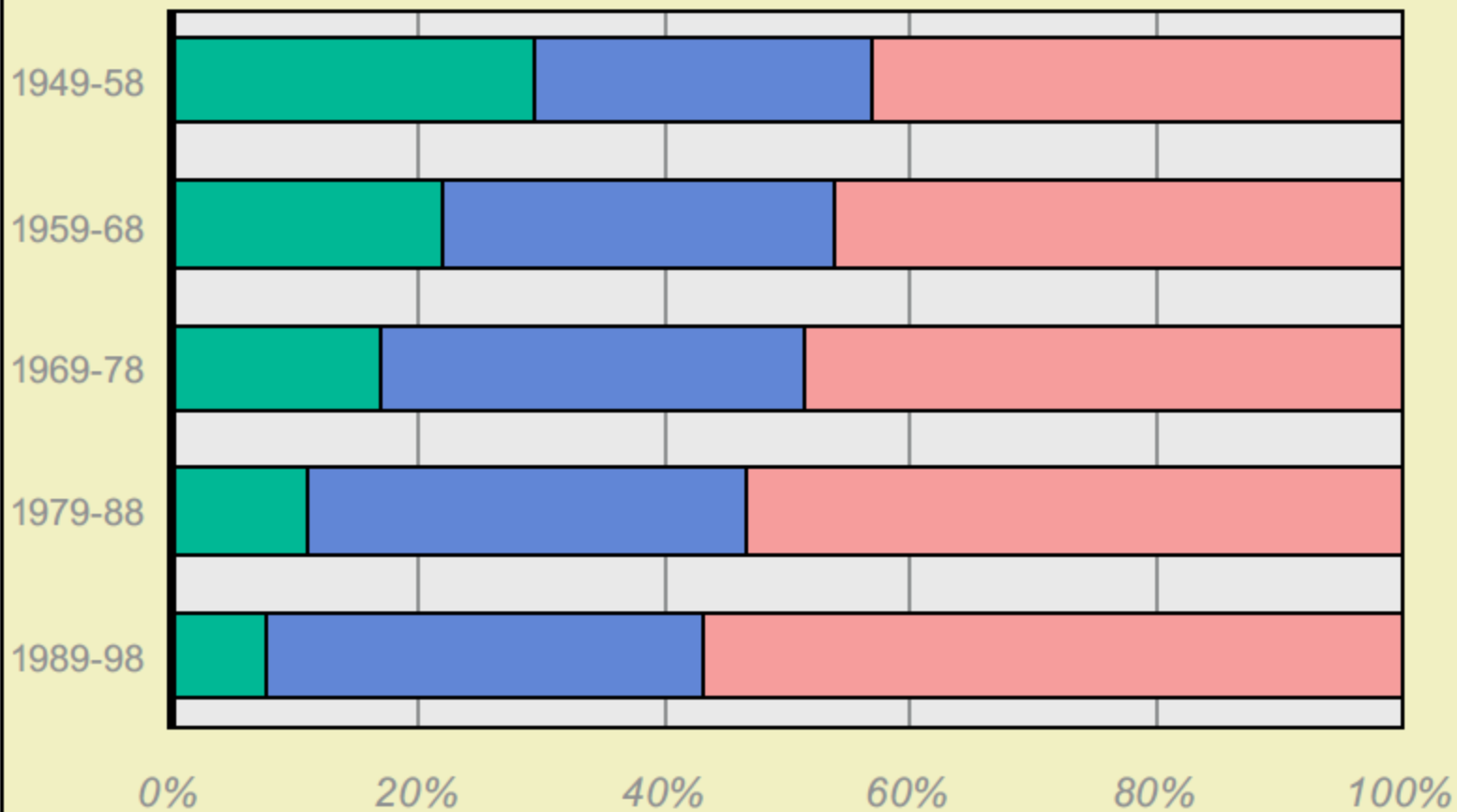
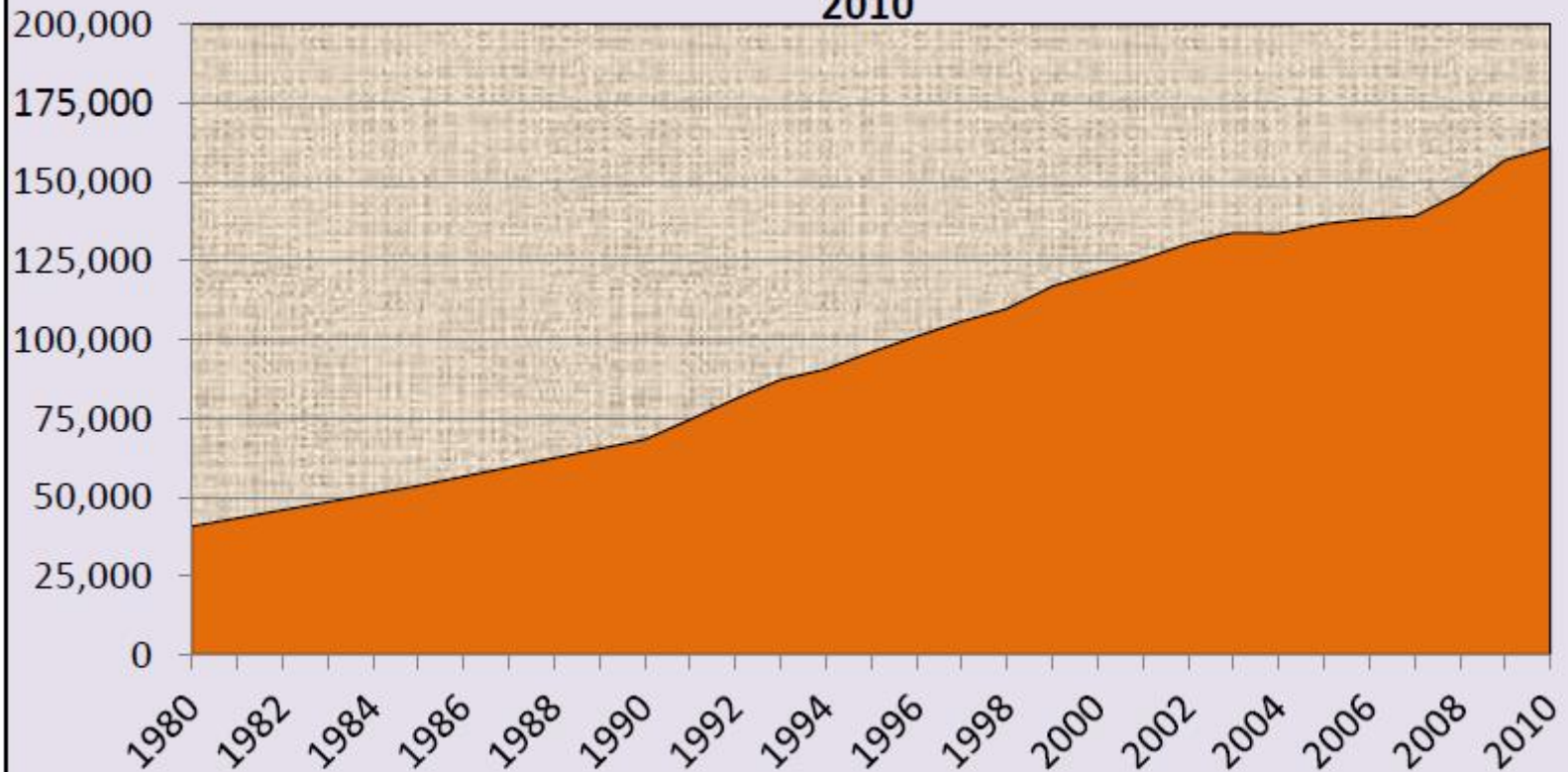


Figure 1: Full-time enrolment in Irish higher education - 1980 to 2010



Source: HEA and Dept of Education & Skills data

The Irish Higher Education System - 2014



- 160,000 students (120k FT and 40k PT)
- Fragmented – 7 universities, 14 institutes of technology (IoTs), 10+ publicly funded smaller colleges, c. 10 private colleges.
- Variable in size – 20,000 – 500
- Reasonably well funded. A drop in recent years.
- Little inter-institutional cooperation. This is being addressed.
- Quality generally good.
- Research credibility good
- Not very strong on international recruitment (c. 10%)

The National Strategy for Higher Education to 2030

“...**system** needs to evolve within a clear framework that is aimed at developing a **coherent set** of higher education institutions, each of significant strength, scale and capacity and with **complementary and diverse missions** that **together meet** individual, enterprise and societal needs...”

“...The system should be strengthened by the development of **regional clusters of collaborating institutions** (universities, institutes of technology and other providers), and by **institutional consolidation** that will result in a smaller number of larger institutions. There should be a particular focus on encouraging the emergence of **stronger amalgamated institutes of technology...**”

“When, over time, the **amalgamated institutes of technology** demonstrate significant **progress against stated performance criteria**, some could potentially be re-designated as **technological universities.**”

“A new contractual relationship or service level agreement between the State and the higher education institutions should be established, as part of a wider **strategic dialogue**, and this should be used to ensure that the requirements for **performance**, autonomy and accountability are aligned.”

Some Recent Policy Developments

Technological Universities

*'A **technological university** will have a systematic focus on the preparation of graduates for complex professional roles in a changing technological world. It will advance knowledge through research and scholarship and disseminate this knowledge to meet the needs of society and enterprise. **It will have particular regard to the needs of the region in which the university is located.**'*

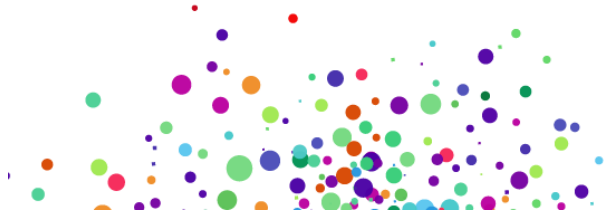
IRELAND'S NATIONAL SKILLS STRATEGY 2025



‘The establishment of Regional Skills Fora will enable employers to have their say in what skills mix will best serve their region into the future.’

INNOVATION

2020

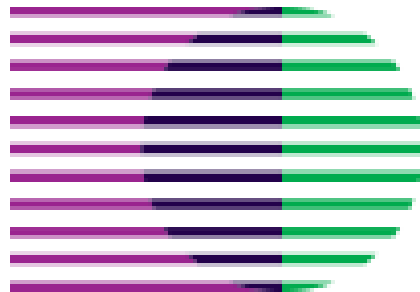


- *‘The expansion of higher education has been a key enabling factor in the growth of the Irish economy over the past four decades.’*
- *‘...encouraging diversity in keeping with institutional strategic strengths...’*

- Prepares the participant for a specific occupation
- Leads to an award, recognised under the National Framework of Qualifications from Level 5 to Level 10

- Industry led
- Occupation specific
- Minimum 2 years in duration
- Learning alternates between the workplace and the formal learning setting
- A minimum of 50% of the apprenticeship is allocated to on-the-job training
- New apprenticeships are substantial in depth and duration, in order to prepare apprentices to work autonomously and competently in a specific occupation
- Apprentices are employed and paid under a Contract of Apprenticeship

Impact?



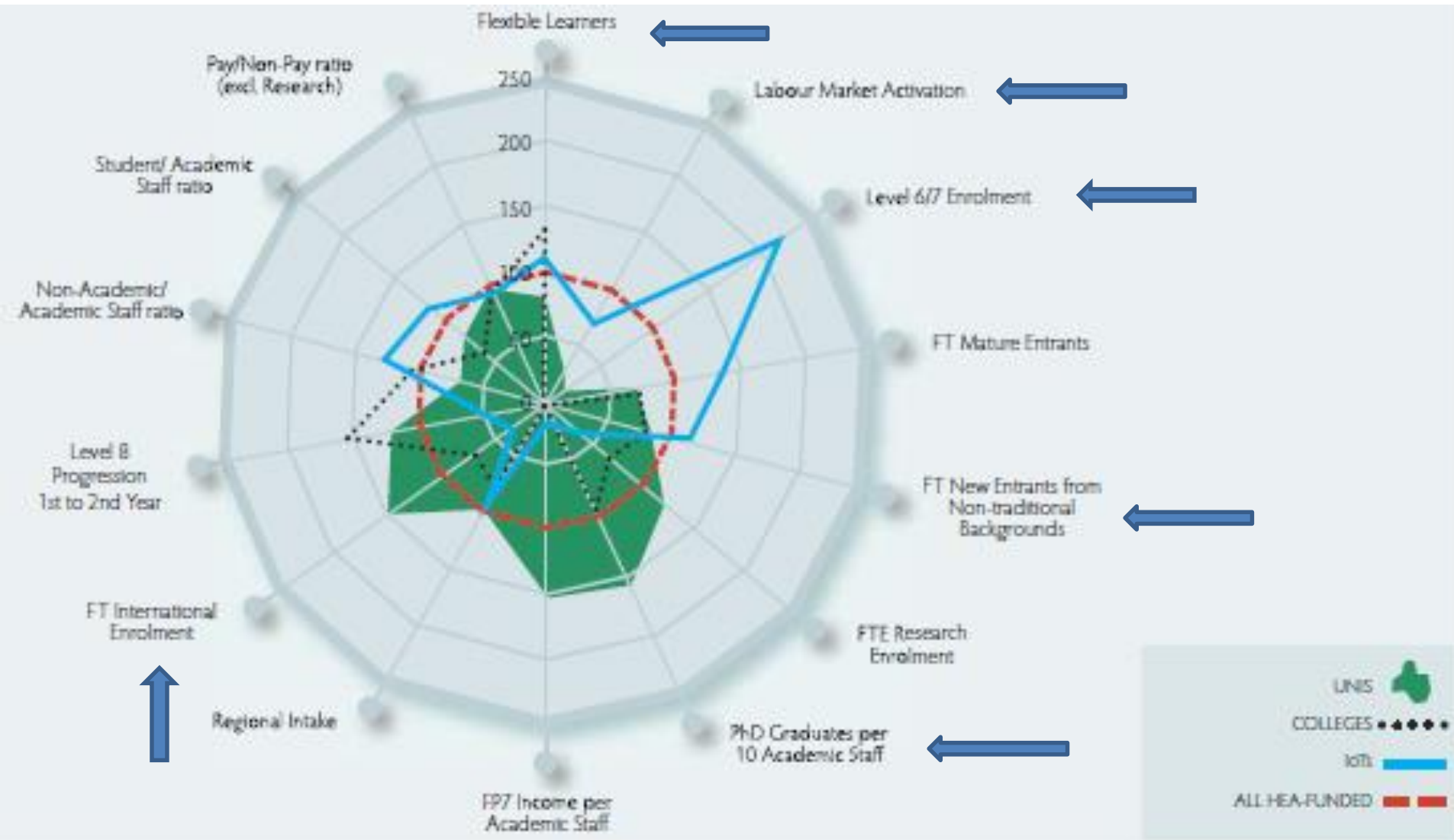
KTI

Knowledge Transfer Ireland

Where Research & Business Connect

- 748 collaborative research agreements signed between industry and research organisations in 2015 – 16% increase on 2014.
- Ireland has highest number of Registered Technology Transfer Professionals (RTTP) per capita in the world.
- 94% of collaborative research agreements with the SME sector were with Irish SMEs
- 1st in Europe for Knowledge Transfer in Public Research Organisations
- 8th in the Global Innovation Index in 2015

Institute of Technology Sector Profile versus University Sector Profile

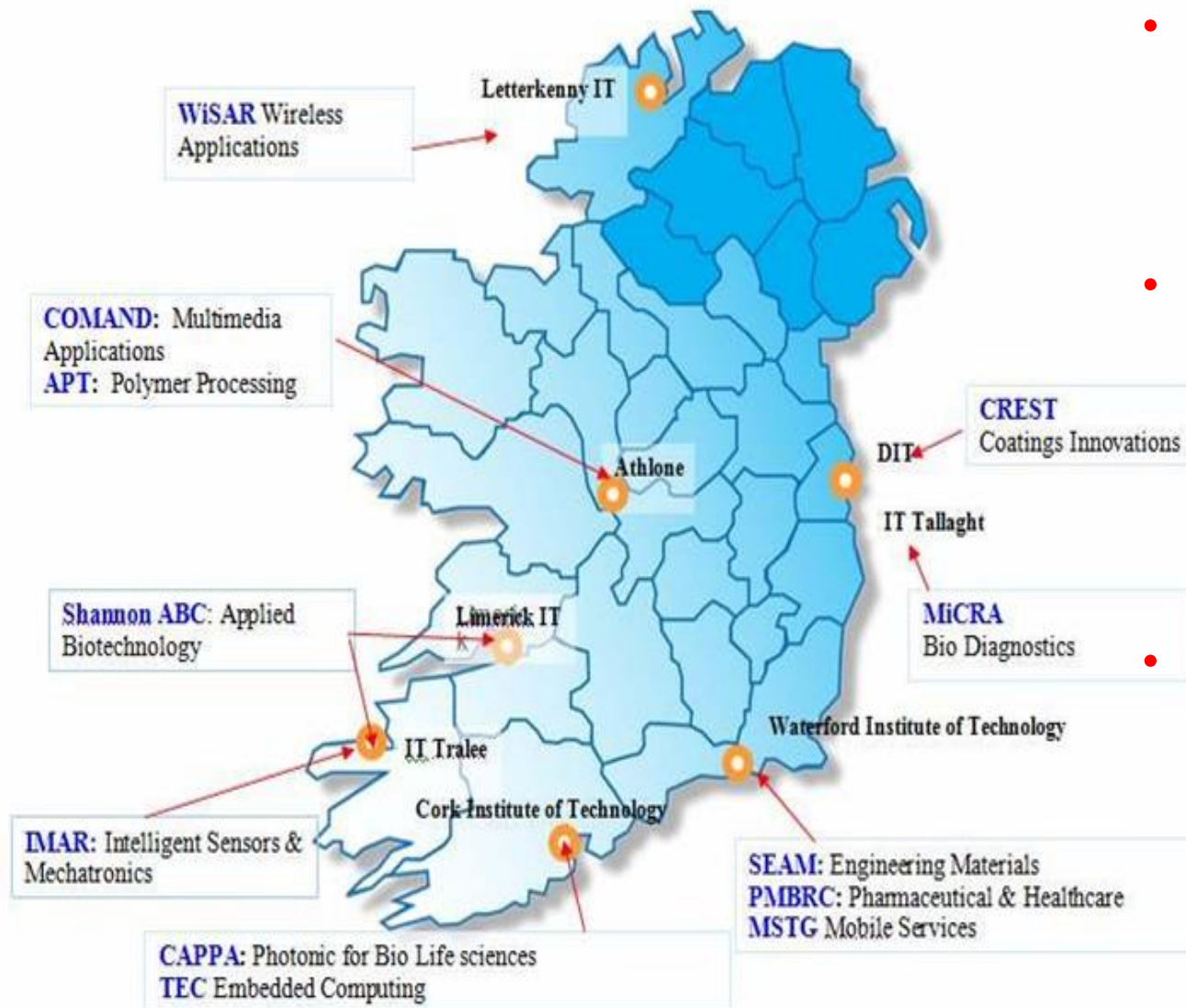


Industry-Focused Research Solutions

	2008	2009	2010	2011	2012	Total
Industrial Collaborations	36	69	117	150	150	522
Innovation Voucher Projects	20	45	70	52	64	251
Innovation Partnership Projects	2	7	13	19	13	54
Projects Directly Funded by Industry	14	17	34	79	73	217
Income from Collaborative Projects	€570,000	€451,000	€1,550,000	€3,200,000	€1,932,938	€7,703,938
Industry Contribution to Collaborative Projects	€226,000	€102,000	€615,000	€1,500,000	€592,104	€3,035,104
Industry Contribution %	39.7%	22.2%	39.7%	46.7%	31%	39%

Further examples of IoT RDI industry impact available at
<http://www.ioti.ie/rdi/delivering-impact-for-industry>

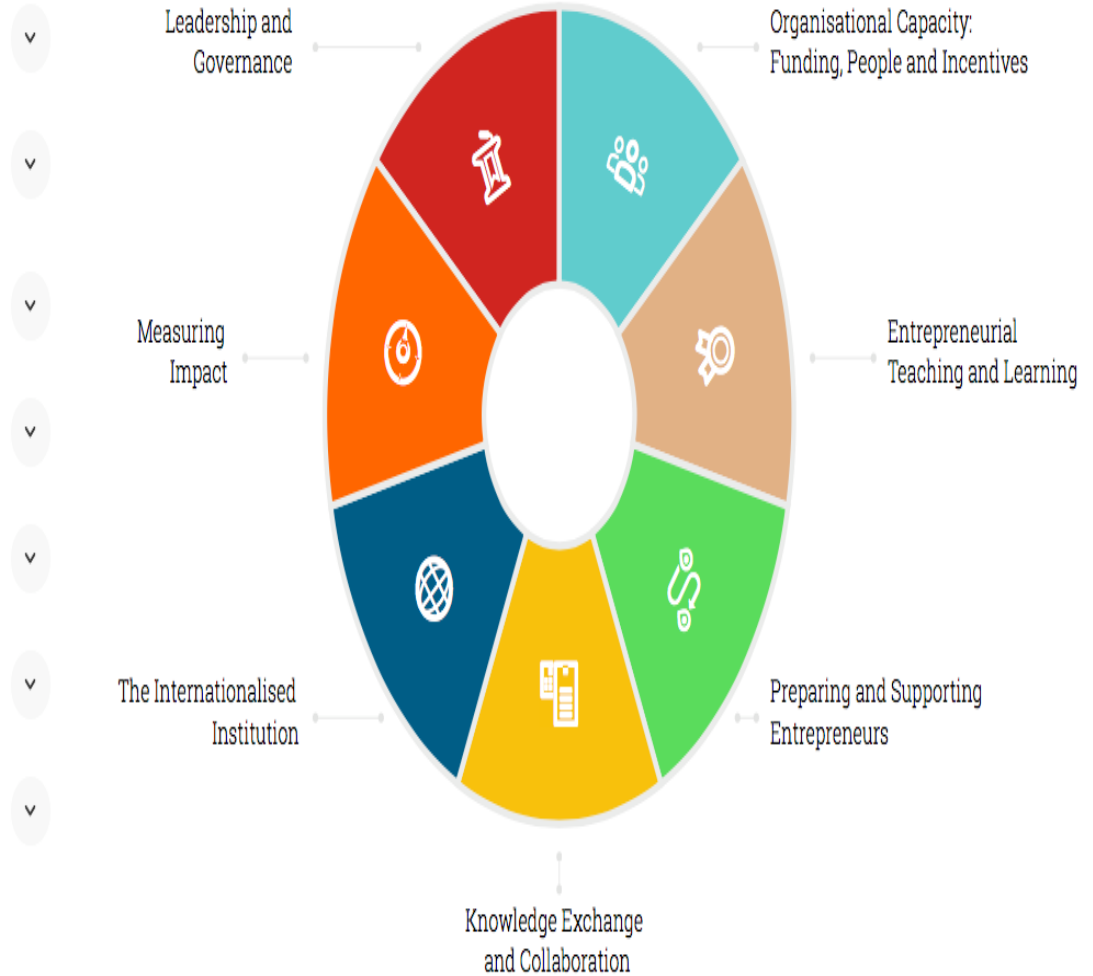
A Clear Regional and Industry Focus Through Technology Gateways



- Enterprise Ireland funded Technology Gateways in IoTs
- Model that engages SMEs in innovation for 1st time & deepens research partnership
- Typifies flexibility & responsiveness which underpins approach to research & innovation across IoTs

HEInnovate

-  Leadership and Governance
-  Organisational Capacity: Funding, People and Incentives
-  Entrepreneurial Teaching and Learning
-  Preparing and Supporting Entrepreneurs
-  Knowledge Exchange and Collaboration
-  The Internationalised Institution
-  Measuring Impact



Key Findings

- HEIs in Ireland play several roles in their communities and, particularly outside the capital city, one of their key functions is to support and drive regional, social and community development.
- HEIs outside the capital are vitally important to their surrounding economies.
- Several of the HEIs visited demonstrated embedded entrepreneurship within the institute strategy and in the organisation as a whole.

Knowledge Exchange and Collaboration Dimension

- Based on the evidence provided the Irish **higher education system is committed to collaboration and knowledge exchange** with industry, society and the public sector.
- All of the HEIs visited demonstrated **active involvement in partnerships and relationships** with a wide range of stakeholders including for example active participation and involvement with local, regional and national organisations such as county development boards, local and regional authorities, business and industry representative groups, chambers of commerce, professional bodies and state boards.
- External stakeholders ...all expressed the view that **HEI participation in networks and partnerships was not only of great value but also essential to the operation of these groupings** given the strength and range of expertise the HEIs had at their disposal.
- Networks and linkages supporting knowledge exchange considered by external stakeholders to be of most value included those involving **HEI research and development centres, business incubation and business support facilities and their staff**.
- Evidence was presented by the visited HEIs that they avail of **every opportunity to link research, education and industry activities together to affect the whole knowledge ecosystem**.

Case Studies (HEInnovate and Higher Education Academy)

**‘Knowledge Exchange and Collaboration in an
Institute of Technology – A Case Study’**

Institute of Technology, Tallaght

- Qualitative

- ‘...on the **excellent working relationships** that it has with external stakeholders, including industries, schools, communities and business organisations.’
- ‘...**the work being done with Synergy Global** and through the Synergy centre with 5 High Potential Start-Ups and a further 3 in the pipeline’
- ‘**ITTD has exceeded its three targets** in this category ...’

- Quantitative

- €2.1m of research funding of which 10.4% was industry funded **which in value terms was one of the highest in the Institute of Technology sector**
- 42 collaborative research agreements, which was the **largest number within the Institute of Technology sector**
- Made 4 invention and software disclosures and progressed 2 international patent applications to PCT (Patent Cooperation Treaty,
- Supported 75 companies in its incubator and entered into 56 contracts with companies for the use Institute based equipment and facilities, the latter figure **being the highest within the Institute of Technology sector.**
- **Student Enterprise Awards.** 35 second level schools were visited and provided with materials, 643 students from 18 schools took part, 30 workshops took place in the 18 schools and 160 student entrepreneurs participated in the County Final in ITTD.

‘Shared Governance, Leadership and Regional Development – A Case Study’

University of Limerick and Limerick Institute of
Technology

- Institutional Reviews – **Commendations**
- SIF evaluation - ‘Throughout its projects, it is evident that the partners can **think as a group** rather than just as individual institutions’
- Strategic Dialogue Evaluation ‘...**compact is very strong on job creation** and support throughout most sections of the compact’ and ‘**The regional cluster is operational, performing strongly...**’.
- Ireland’s National Skills Strategy 2025 cites **Limerick for IT for its team based approach** to the identification of future skills needs

Institute of Technology Sligo (IT Sligo), Ireland

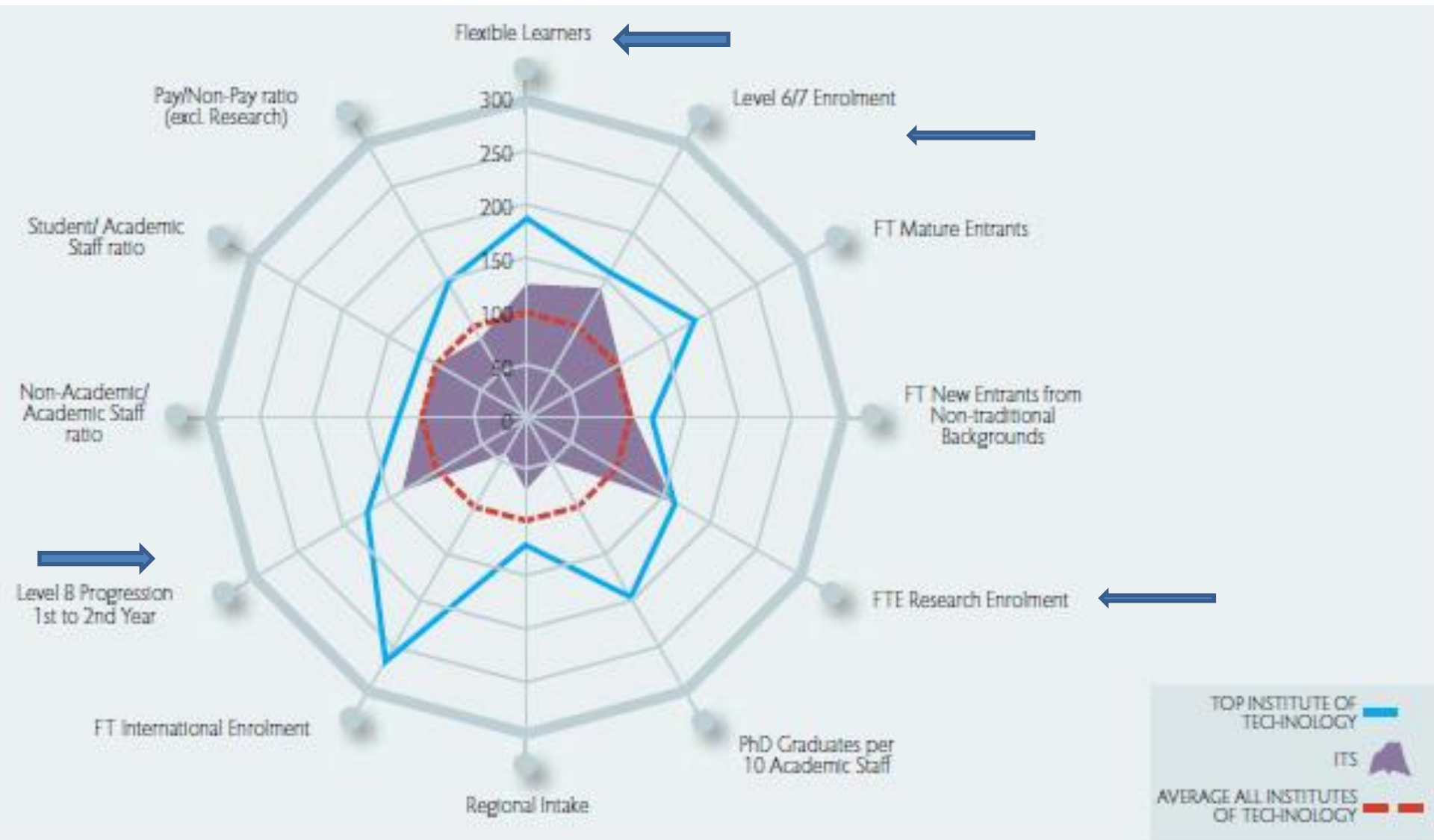
Andrée Sursock

<http://itsligo.ie>

HEA topics

Approaches to assessing learning		Ensuring graduates are employable	
International students and learning styles across cultures		Recruiting new types of domestic students and the pedagogical developments required	<input checked="" type="checkbox"/>
Improving student retention and attainment		Engagement with the community and co-development of curricula	<input checked="" type="checkbox"/>

Institute of Technology Sligo - Profile



- Bespoke online courses for industry.
- Partnerships.
- Blended learning for the public sector.
- 200 to 2,000 part time and online students.
over a five year period.
- Turnover €200,000 to €4,000,000.
- One of only four of the 14 IoTs that has
currently got long term financial viability.

- Thorn, R (2011) Institutes of Technology in Ireland: Strategic Position, Workforce Education and Societal Need. *Administration*, 59(1), 69-86
- Thorn, R. (2016) 'Knowledge Exchange and Collaboration in an Institute of Technology – A Case Study'. OECD, Paris. 10pp.
https://heinnovate.eu/sites/default/files/knowledge_exchange_and_collaboration_in_an_institute_of_technology_-_a_case_study.pdf
- Thorn, R. (2016) 'Shared Governance, Leadership and Regional Development – A Case Study'. OECD, Paris. 11pp.
https://heinnovate.eu/sites/default/files/shared_governance_leadership_and_regional_development_-_a_case_study.pdf
- Sursock, A (2016)
https://www.heacademy.ac.uk/system/files/learning_excellence_international_case_studies.pdf

Thank You

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