

INTERNATIONAL PANEL REVIEW OF KTI PROGRESS 2014–2017

SUMMARY REPORT

Knowledge Transfer Ireland is the national office that helps business to benefit from access to expertise, technology and intellectual property available within the publicly funded research base in Ireland.

KTI's aim is to make it simpler for companies to find, connect and engage with Irish research. We are a unique central reference point, providing signposting and resources for companies, investors, research organisations and funders.

KTI is supported by Enterprise Ireland and the Irish Universities Association and is accountable to the Department of Enterprise and Innovation and to the presidents of the Irish Universities.

For more information, visit www.knowledgetransferireland.com

Supported by:



KTI THREE YEAR REVIEW

Over 90,000 visitors
to KTI website



11 Practical Guides
25 Model Agreements
5 Pro Forma Templates



4 Conferences
6 Workshops &
Masterclasses



27 Impact Awards
presented across
3 Award Ceremonies



3 Expert Groups
Consultations
Industry Advisory Board



Managed €28.5m
funding under TTSI2
Secured €34.5m
funding for TTSI3



38.5 FTE funded (TTSI2)
34 RTTPs in Ireland



Produced National
IP Protocol 2016



Meetings with
representatives from
18 countries



3 Annual Knowledge
Transfer Surveys (AKTS)



2 AKTS
Outcomes Reports



ABOUT THIS REPORT

This report summarises the findings of an international panel of Knowledge and Technology Transfer (KTT) experts that met in early 2017 to review the progress of Knowledge Transfer Ireland (KTI) over its first three years of operation.

The panel was chaired by Feargal O'Morain, Enterprise Ireland's former Director of Research, Innovation and Commercialisation. Robert Marshall & Associates facilitated the panel review and preparation of the report.

The panel members were:

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| Alastair Hick | Director, Monash Innovation, Australia Chair, Knowledge Commercialisation Australasia (KCA), Australia |
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| Kaare Jarl | Senior Consultant, Danish Agency for Science, Technology & Innovation, Denmark |
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| Siobhán Jordan | Director, Interface Scotland |
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| Karen Lewis | Executive Director, Innovation and Skills, BBSRC, UK Board member, PraxisUnico, UK |
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| Lesley Millar-Nicholson | Director, MIT Technology Licensing Office, USA |
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| Christian Stein | CEO, Ascenion GmbH, Germany Past Chair ASTPProton |
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The report and recommendations represent the panel members' considered and professional views, taking into account the feedback and ideas from the wide range of stakeholders that they met, as well as drawing on their own experience and understanding of the knowledge transfer landscape at an international level and their independent perspectives on the Irish context.

MAIN OBJECTIVES OF THE REVIEW

The main aims of this three-year review were to reflect on KTI's achievements and performance to date, particularly in terms of its outputs, the impact KTI has had and the value that it has delivered.

In addition, the panel and stakeholders were asked to identify which aspects of KTI's work they would like to see continue and any areas of interest that KTI could consider developing in the future.

Following on from their review of the documentation provided and the discussions with stakeholders, panel members were asked to comment on what they saw as the key findings from their investigations and to make recommendations on KTI's priorities for the future. These comments and recommendations will be used to inform the final version of the KTI Strategic Plan 2018–21.

BACKGROUND AND PROCESS

To inform its findings, the panel held face-to-face discussions with representatives from five key groups of stakeholders, supported by an experienced external facilitator, on 24 January 2017 in Dublin.

The following groups were represented:

- Government agencies and those responsible for providing research funding.
- Industry and investors.
- Industry/sector associations.
- Higher Education Institutions (HEIs) & Technology Transfer Offices (TTOs).
- Those to whom KTI is immediately accountable (its 'owners').

It is important to recognise that while contributors were chosen to be representative of their stakeholder population insofar as possible and had some level of interaction with KTI, the groups themselves were small (typically 4–5 people) and their opinions and assessments may to some extent be personal and anecdotal.

Before the face-to-face meetings with stakeholder groups, the panel considered a range of background materials supplied by KTI. With the exception of those representing KTI's 'owners', the stakeholder contributors had not seen the broader range of documents circulated to panel members. There was also a discussion ahead of the stakeholder submissions, between the KTI Director and the panel, to enable contextual matters and address any specific questions around the background materials to be explored.

The remit of this international panel review was to focus primarily on KTI's strategic role and activities and did not extend to considering broader empirical or statistically based evidence. In particular, the commercialisation outputs from Irish TTOs and their performance under the Technology Transfer Strengthening Initiative (TTSI) programme are already available elsewhere – for example, in KTI's Annual Knowledge Transfer Survey (AKTS).

To allow for a frank assessment of KTI's performance, no KTI staff were present during the discussions between panel members and representatives of the stakeholder groups. In addition, panel members and contributors were encouraged to speak freely and were made aware beforehand that no comments during the review would be attributed to individuals.

SUMMARY OF EXPERT PANEL FINDINGS AND RECOMMENDATIONS

In summary, the panel found that KTI has achieved a great deal in a short time, under strong leadership and with very limited resources.

Its success and achievements to date have been endorsed by all stakeholders – particularly those from industry – while recognising that the knowledge transfer (KT) sector in Ireland is on a continuing journey of professionalisation, growth and improvement. KTI is developing an increasingly strong and trusted ‘brand’, especially among larger industry players; although there is more to be done in this area particularly with regards to the academic/research community and the senior leadership in HEIs, as well as with small to medium-sized enterprises (SMEs). In terms of its operating style, KTI has contributed to culture change in an unobtrusive way. The panel noted a clear commitment from KTI’s ‘owners’ to its long-term future, which creates a good opportunity for it to evolve.

The panel clearly recognised that KTI cannot do everything that its stakeholders might want it to do and that it is important not to significantly dilute the organisation’s mission or lose clarity of purpose.

While the discussion with stakeholders was wide ranging, the panel concentrated its findings and recommendations on the following areas, which seem to be the most seminal in KTI’s current and future success:

- Building ‘thought leadership’ and consistency in knowledge transfer.
- KTI’s role as a repository for information and knowledge and as an ‘honest broker’/ matchmaker between Ireland’s Research Performing Organisations (RPOs) and industry.
- Communication with HEIs related to commercialisation, technology transfer and entrepreneurship.
- Proactive outreach to industry, particularly SMEs.
- Addressing issues around understanding and the interpretation of State Aid rules in Ireland.
- KTI’s own management, leadership and the resources needed to sustain its impact on the economy.

Each of these areas is explored in more detail below.

Thought leadership and consistency in knowledge transfer

KTI can justifiably be characterised as an ‘intervention organisation’ and a thought leader in knowledge transfer. It has played a key role in demonstrating the wider impact of KT – for example, by supporting coherence in Ireland’s complicated innovation ecosystem and showcasing the broad societal value and benefit of KT.

KTI has made a significant contribution to the continuing culture shift in the professionalism of TTOs, evidenced by ever increasing consistency between TTOs and a greater uniformity and transparency of approach to KT activities. However, particularly in the eyes of industry, there is still more work to be done to improve responsiveness and standards in some HEIs and KTI has an on-going role to play in this.

KTI has helped to achieve acceptance and consensus regarding the national Intellectual Property (IP) protocol and model agreements. While this infrastructure is now well established, the tools that KTI has developed will need to be regularly reviewed, updated and refined as necessary. Increasingly, KTI's focus will need to be on nurturing its relationships with industry and academic stakeholders, as well as on the technical mechanisms for ensuring that consistent standards are advocated and implemented.

KTI is also seen as a channel for best practice in KT. In some cases, this has led to it being called in as a mediator or problem solver when individual interactions between industry and HEIs run into difficulties. However, this may have resulted in some friction with TTOs.

Because of this, KTI will need to continue to build relationships with and develop a greater acceptance from, the TTO community if it is to fulfil its mission into the future, particularly in terms of achieving even clearer demarcation between the different roles played by KTI and by the TTOs within the KT ecosystem. There is also a question as to whether KTI should continue to act as an informal mediator in individual deals.

KTI's educational role to date has been well received, as have the KTI Impact Awards, events and seminars it has delivered. KTI should continue to play a key role in demonstrating the outcomes and impact from RPOs to Government and other funders via annual reports, case studies etc. KTI can play a pivotal part in widening the current narrative on impacts beyond 'traditional technology transfer' – for example, to showcase students involved in entrepreneurship and industry-led research collaborations.

Acting as a repository for information and an 'honest broker'/matchmaker between RPOs and industry

Discussions with stakeholders clearly indicate that industry is looking for one point of contact to find research expertise and to access ideas and technology created by the RPOs. KTI is increasingly recognised as a trusted and impartial adviser and an 'honest broker' in enabling potential commercial partners to access technologies and experts from within the Irish research base.

Generally, KTI (including its website) was acknowledged as an extremely valuable source of information for industry about potential collaborators and researchers, as well as about what is 'normal practice' in HEI-industry interaction; although there is more to be done to promote this resource, particularly to SMEs. The panel recommended that KTI increasingly aims to provide tailored search services for industry, working in partnership with TTOs. This may require a change in perception from some of the TTOs – to overcome their view that KTI should focus its efforts on the strategic and policy issues, rather than supporting operational delivery.

In order to be more responsive and proactive to industry – especially SMEs – and to deliver more of the one-to-one 'matchmaking' services that some key industry stakeholder groups would like to see, the panel felt that greater resources would need to be dedicated to KTI. It seems very likely that the additional costs involved in boosting KTI headcount would indirectly deliver growth and create jobs in the Irish economy.

KTI should clearly continue to act as the creator, owner and disseminator of national knowledge transfer strategies, standards and protocols.

Communication with HEIs

Most stakeholders acknowledged that the TTOs in Irish RPOs have significantly improved, but there is still a need for greater consistency. KTI has an important and continuing role to play in this process.

Firstly, the panel felt that there is a need for even greater clarity about the role that KTI plays in relation to the TTOs. There was some discussion among panel members as to whether KTI should evolve from its current role in supporting TTO capability into providing a single, central TTO for the whole country or provide operational services (under a shared service model) to support some of the smaller TTOs. Such approaches might address industry perceptions of inconsistency or lack of skills within TTOs. However, the vast majority of stakeholders and panel members believe that this kind of centralisation would be impractical at an operational level, at odds with KTI's strategic national and impartial remit and unlikely to succeed. In particular, KTI should not take on the role of a negotiator in individual deals as this could potentially represent a conflict of interest and divert resources from key activities. KTI needs to continue to focus on setting standards and channelling good practice and to make sure that its activities do not duplicate existing efforts within TTOs. Equally the TTOs need to understand that KTI is there to help and facilitate, not to centralise operational activities.

The panel felt that KTI can best contribute to improving consistency and professionalism in on-the-ground KT activities through a combination of:

- On-going **relationship building** both between KTI and TTOs and also connecting TTOs with each other.
- **Skills enhancement and education** of TTO staff – focusing increasingly on metrics-based assessment of KT activities as a prerequisite for future funding allocations.
- **Supporting and growing the TTO talent-base** in Ireland-to build greater strength and capacity in the system and address current issues with TTO leadership and difficulties in recruiting to key Director-level posts in HEIs.
- **Awareness-raising among non-TTO staff in HEIs**, particularly those in senior academic and leadership roles who are key to the implementation of policies and decision-making, – a critical factor in achieving consistency in approach. This should also include education so that they understand 'what is KT' and what their institution can expect to achieve from a successful KT programme.
- **Encouraging engagement** in KT and enterprise in HEIs and continuing to celebrate and demonstrate success.
- Ensuring **greater clarity** in the roles played by KTI and by the TTOs in these KT activities.

In terms of educating TTOs, KTI's priorities should include helping staff understand industry partners' risk profiles and the commercialisation milestones for technologies/ideas once they are out in industry, to foster a common and shared understanding of risk and reward. If KTI is to be a 'broker' going forward, the TTOs must be in a position to deliver the resulting collaborations effectively, to ensure that they are successful and beneficial and a pre-requisite for this success is that academic staff are also properly engaged.

In particular, the panel thought that KTI should seek to be more engaged with HEI leadership, leveraging the influence of its 'parent' – the Irish Universities Association (IUA) – to establish a more effective and open dialogue with Vice Presidents (VPs) for Research and Innovation so as to ascertain how else KTI can help them achieve their goals and to advocate in favour of the KT agenda. Areas of common interest across HEIs and VPs would include enabling clarity of metrics for RPOs from key funders (such as Science Foundation Ireland, Enterprise Ireland and others) and common methodologies to define and capture the longer-term social and economic impacts from academic research. However, the resources needed to establish greater buy-in from HEI leaders should not be under-estimated.

Across all these activities, KTI should extend its understanding of the different needs of different types of RPOs (universities, Institutes of Technology (IoTs), other research centres). In particular, the localised knowledge, engagement and impact of IoT activities should continue to be recognised and respected, especially since they are likely be instrumental when it comes to engaging SMEs.

Outreach to industry, particularly SMEs

The industry-focused stakeholder groups, in particular, stressed the vital importance of outreach activities, engagement and promotion with regards to SMEs. It was felt that this was a very considerable and largely untapped source of potential partnerships for HEIs and that it was currently very difficult for these smaller businesses to navigate the research landscape in Ireland and to understand how they might benefit from the wealth of IP and expertise on offer in RPOs. While larger enterprises are increasingly capable of doing this, there needs to be a recognition that SMEs, in particular, are likely to find it much easier to access the most appropriate expertise and technologies in RPOs through person-to-person interactions than by searching and interpreting KTI's current on-line repositories.

Panel members felt that the need for some kind of 'brokering' or matchmaking service between SMEs and RPOs is an important area to be addressed by KTI. However, KTI does need to ensure that any initiatives it may undertake in this area do not overlap with any existing provision. Nevertheless, KTI's future plans clearly need to take the SME sector into account and to address its needs. In particular, KTI can play a very valuable role in helping the TTOs fully appreciate and tackle the issues and difficulties faced by SMEs when it comes to interacting with HEIs.

Addressing lack of understanding around State Aid rules

Many of those to whom the panel spoke raised the issue of confusion over interpretation of regulations on State Aid in Ireland, as applied to knowledge transfer deals. There was general consensus among the stakeholder groups that a lack of clarity had caused problems on a significant proportion of KT deals involving transfer of IP rights created out of publicly funded research to for-profit enterprises, particularly larger companies.

As a result of this, the panel recommended that this issue is addressed with some urgency and felt that KTI is well placed to facilitate open dialogue leading to clarification and further education on this matter, in collaboration with relevant bodies such as the Department of Enterprise and Innovation.

This could be achieved through a number of channels including:

- Setting up and orchestrating an expert group around State Aid issues, with a view to achieving some clarification and consensus on 'the Irish position'.
- Developing training and accessible resources for stakeholders.

KTI management and leadership

There is a clear commitment from KTI's 'owners' (the Irish Universities Association and Enterprise Ireland) to its long-term future, which creates a good opportunity for KTI to evolve.

While KTI has achieved a great deal in its short existence, it has done so with extremely limited resources – effectively fewer than 6 full-time equivalent staff. Comments were made by stakeholders about the impressive outcomes by KTI which were achieved *"on a shoestring."*

Without exception, all the stakeholder groups spoke of the strong leadership at KTI being key to what has already been achieved, especially in the person of the Director.

However, a lack of explicit succession planning presents a significant risk to KTI's on-going success. In addition, there is inherent vulnerability in KTI's organisational model with the majority of its expertise concentrated on a very small number of skilled individuals, compared with (say) a larger, more mature office where the collective expertise is likely to be shared across a larger number of people. In the next phase of its development, one of the priorities for KTI should be to 'spread the load' in terms of expertise, possibly by bringing in more senior-level subject matter experts across the team. This could also contribute to more effective succession planning and reduce the risk inherent in having the majority of the organisation's knowledge capital and dynamism embodied in its leader.

SUMMARY OF KEY RECOMMENDATIONS

While the panel would not want to prescribe exactly how KTI delivers the following recommendations, it suggested that KTI's focus for the future (2018–2021) should be to:

- Further strengthen its own position by providing additional resourcing and addressing structural and succession planning issues.
- Consider developing an industry-facing brokering/introduction service which goes beyond the current, mainly on-line, resources to provide direct intervention and guidance from knowledgeable staff, without duplicating any existing provision.
- Make specific efforts to reach out to SMEs and foster links between smaller businesses and RPOs.
- Continue to build relationships with and to support and develop TTO staff in Ireland, in order to further raise standards of professionalism and consistency.
- Maintain a strong involvement in improving operational delivery through consistent approaches within the TTOs, without centralising such functions – KTI's role should be to continue developing and communicating best practice leading to greater effectiveness and efficiencies.
- Nurture closer relationships with senior academics and leadership in HEIs.
- Help all stakeholder groups to understand and navigate State Aid regulations.

GLOSSARY

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| AKTS | Annual Knowledge Transfer Survey: a survey and report produced by KTI |
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| EI | Enterprise Ireland: Irish government agency responsible for the development and growth of Irish companies |
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| HEI | Higher Education Institute: encompasses the 14 IoTs and seven universities |
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| IoT | Institutes of Technology |
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| IUA | Irish Universities Association: representative body of the seven Irish universities |
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| KTI | Knowledge Transfer Ireland |
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| KT | Knowledge Transfer |
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| KTT | Knowledge and Technology Transfer |
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| RPO | Research Performing Organisation: encompasses the 14 IoTs and seven universities (the 'HEIs'), plus State-funded research organisations |
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| SME | Small to medium-sized enterprise employing fewer than 250 people |
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| TT | Technology Transfer |
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| TTO | Technology Transfer Office |
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| TTSI | Technology Transfer Strengthening Initiative: Enterprise Ireland funding programme to support TTOS |
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