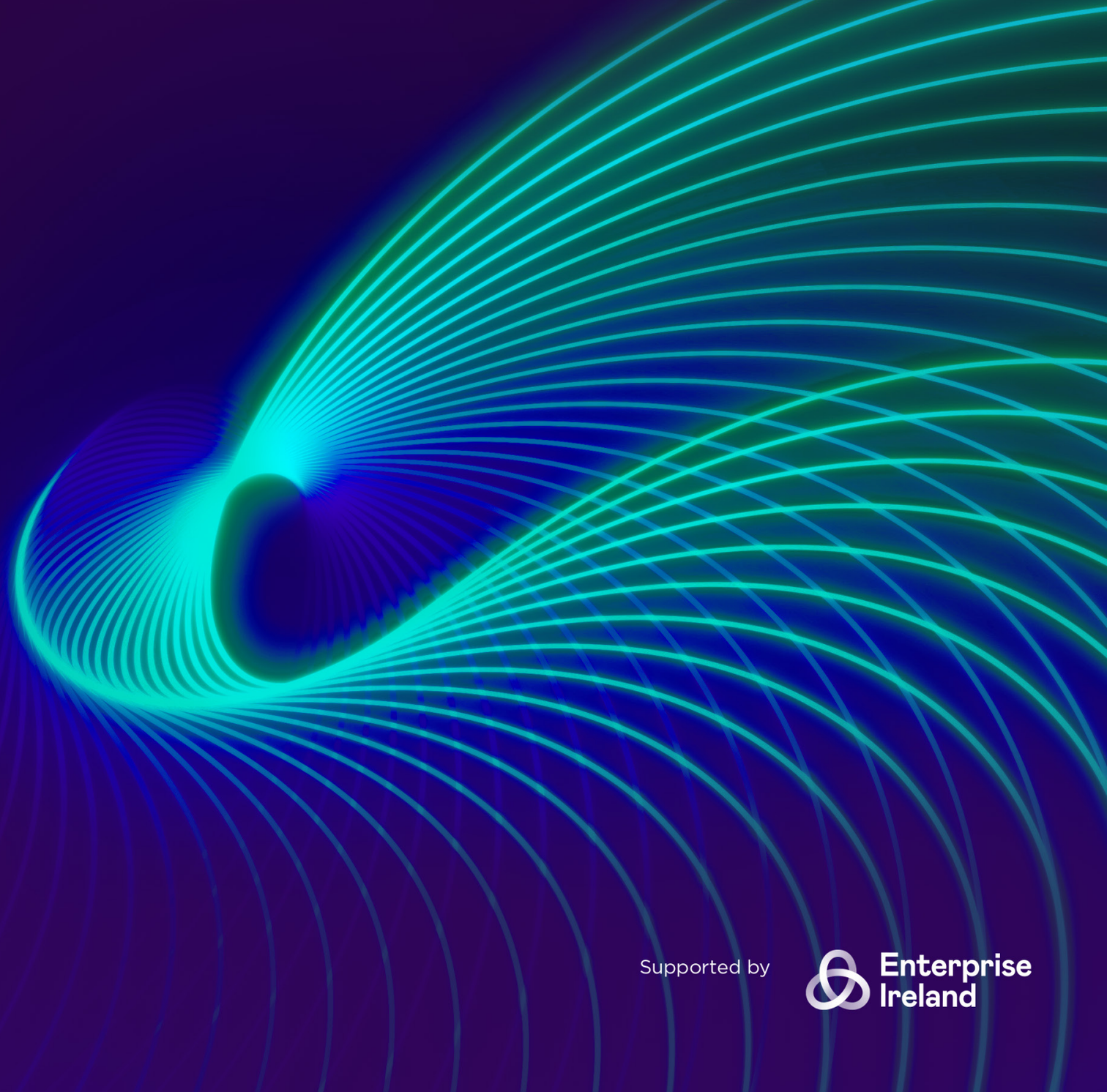
KTI Knowledge Transfer Ireland

Annual Knowledge Transfer Survey 2025



Supported by Enterprise Ireland

In 2025

€953m
Total research expenditure by Research Performing Organisations (RPOs)

1,450
R&D projects with industry were active on 31st December 2025

118
New patent applications were filed

25
New products and services launched

20
New spin-out companies were established

1
Spin-out was acquired or merged

2,467
Active spin-out companies (3+ years post-incorporation) employed 2,467 people

528
New invention disclosures were recorded

178
Active spin-out companies (3+ years) were in operation as of December 2025

263
Licence, Option, and Assignment (LOA) agreements were executed

2,393
New R&D and consultancy agreements were established with industry and non-commercial entities

Foreword

Joe Healy
Divisional Manager, Research, Innovation & Infrastructure,
Enterprise Ireland

Enterprise Ireland's strategy places innovation, research commercialisation, and strong collaboration between enterprise and the research system at the centre of Ireland's future economic growth. The Annual Knowledge Transfer Survey continues to play a vital role in demonstrating the strength of this ecosystem and evidencing the impact of publicly funded research on Irish industry and society.

The 2025 results highlight a research and innovation system that is both expanding in scale and increasing in impact. Total research expenditure across Research Performing Organisations reached €953 million, reflecting sustained investment and confidence in Ireland's research base. This investment is delivering tangible outcomes, with 2,393 new R&D and consultancy agreements and 1,450 active industry-linked research projects demonstrating a high level of engagement between researchers and enterprise.

A key priority within Enterprise Ireland's strategy is to support Irish companies, particularly SMEs, to innovate, scale, and compete successfully in international markets. It is therefore encouraging to see that 63% of industry R&D & Consultancy agreements involve Irish SMEs, while 86% of all collaborations are with Irish-based companies.

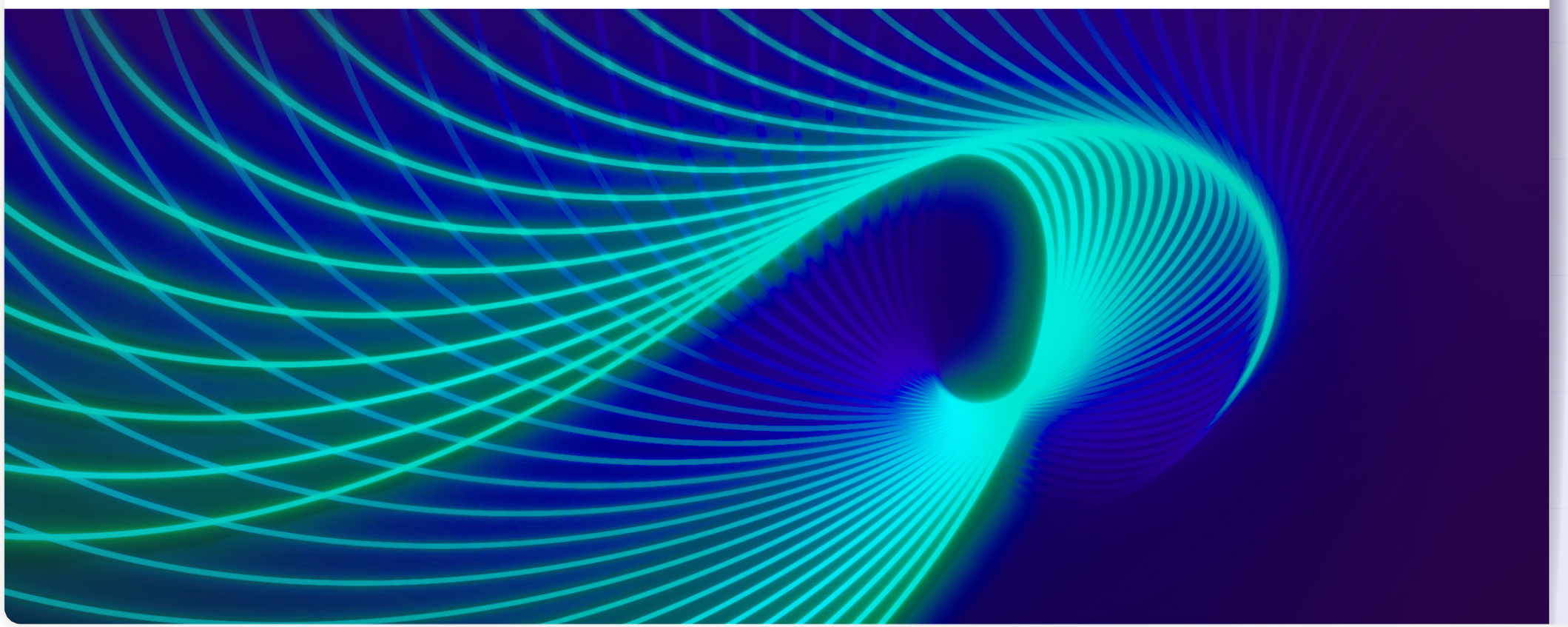
These figures reflect a maturing innovation ecosystem in which indigenous enterprises are increasingly leveraging research expertise to enhance competitiveness, productivity, and growth.

The survey also demonstrates continued progress in research commercialisation. In 2025, Research Performing Organisations reported 528 invention disclosures, 118 patent applications, and 263 Licence, Option and Assignment agreements. These results highlight the sustained focus on converting research outputs into market-ready solutions and align closely with Enterprise Ireland's ambition to accelerate the commercial impact of research while strengthening the pipeline of high potential start-ups emerging from the research system.

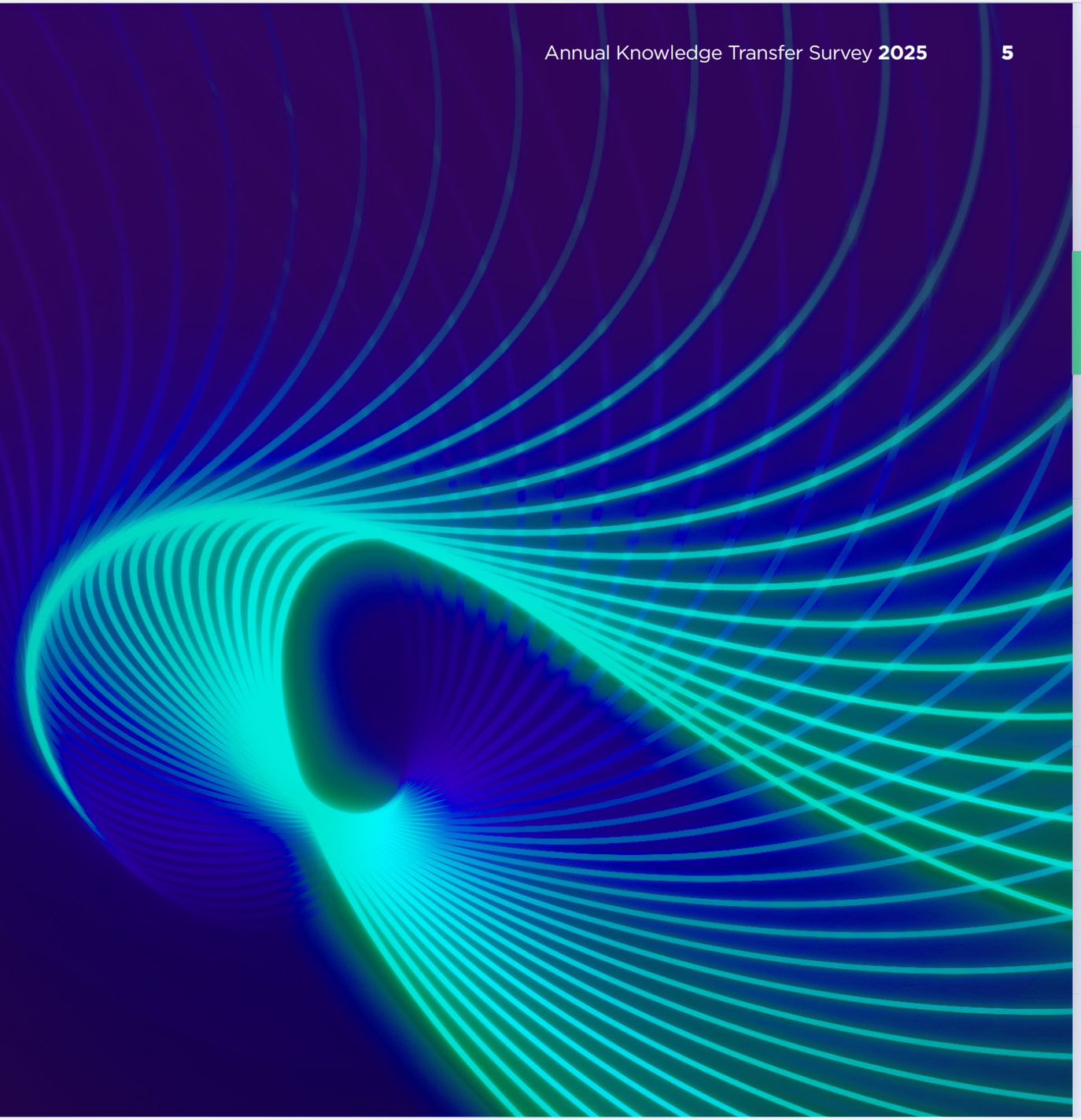
The creation of new companies remains a critical measure of success. The establishment of 20 new spin-out companies during 2025, together with a base of 178 active spin-outs employing 2,467 people, demonstrates the significant contribution research commercialisation continues to make to job creation and the development of innovation driven enterprises. These companies play an important role in strengthening Ireland's long term competitiveness and building globally scalable businesses founded on Irish research excellence.

The data also point to continued momentum across key knowledge transfer indicators, including licensing activity, SME engagement, invention disclosures, and patent applications. Taken together, these trends demonstrate a knowledge transfer ecosystem that is becoming increasingly effective, more accessible to industry, and better aligned with the evolving needs of enterprise.

Enterprise Ireland, through Knowledge Transfer Ireland, will continue to work in close partnership with the Higher Education Authority, Research Ireland, and the Research Performing Organisations to further strengthen this ecosystem. Through targeted supports, strategic investment, funding programmes, and national initiatives, we remain committed to ensuring that research and innovation deliver meaningful economic and societal impact, enabling companies to start, scale, innovate, and succeed in global markets.



Executive Summary



Executive Summary

Imelda Lambkin
Head of Knowledge Transfer Ireland,
Enterprise Ireland

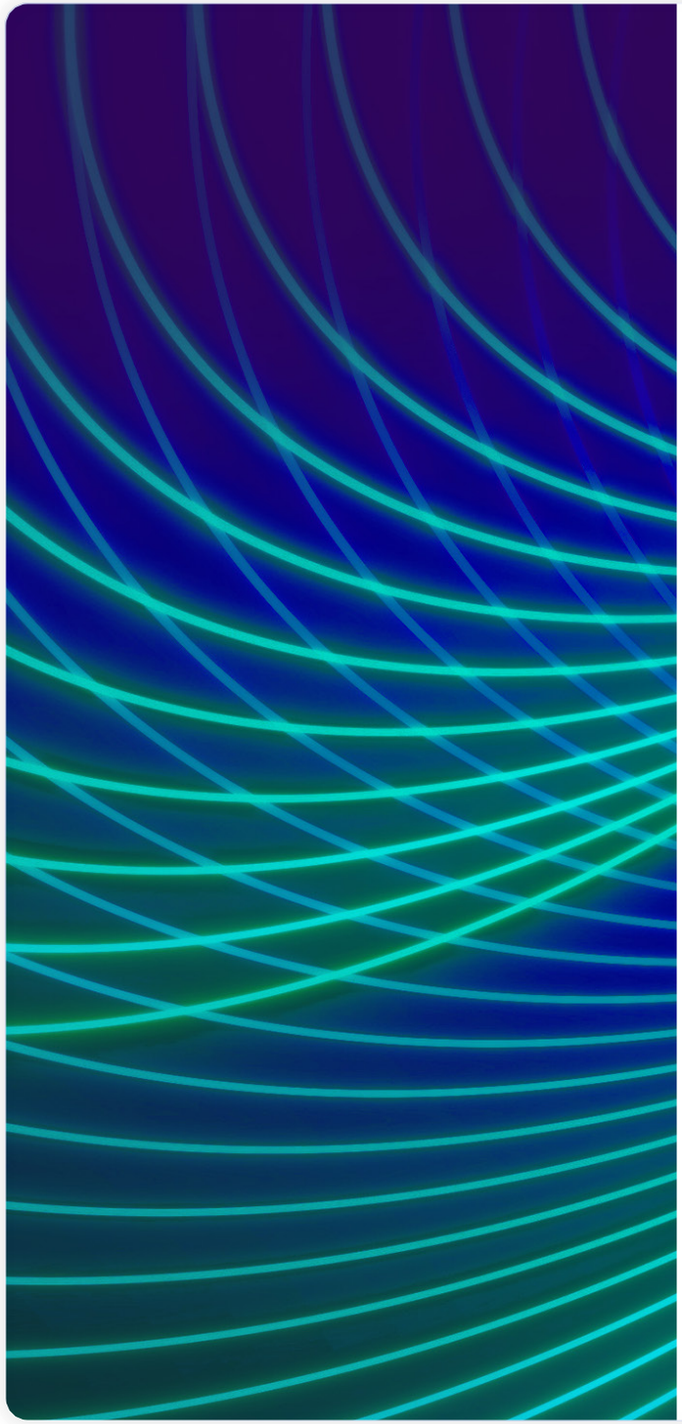
The Annual Knowledge Transfer Survey 2025 highlights a strong and evolving knowledge transfer ecosystem in Ireland, demonstrating sustained progress in research commercialisation, enterprise engagement, and economic impact. The findings confirm that Ireland's publicly funded research system continues to deliver tangible value to industry, particularly to indigenous SMEs, while strengthening its pipeline of innovation and enterprise creation.

Ireland's research base remains an extremely important asset, with total research expenditure reaching €953 million in 2025, representing an 8.3% increase on the previous year. This growth reflects continued investment and confidence in the research system as a driver of innovation and competitiveness. At the same time, engagement between Research Performing Organisations (RPOs) and external partners continues to expand, with 2,393 new R&D and consultancy agreements established during the year. Notably, industry collaboration increased by 9.8%, with 63% of agreements involving Irish SMEs, underlining the central role of knowledge transfer in supporting indigenous enterprise development.

The survey also demonstrates a strengthening innovation pipeline. In 2025, 528 invention disclosures were reported, representing an 18% increase on 2024 levels, while 118 patent applications were filed, marking a significant 49% year-on-year increase. These figures indicate improved capability across the research system in identifying, protecting, and preparing intellectual property for commercial application. The continued growth in patenting activity further signals a maturing system with a focus on generating high quality, market relevant innovations.

This strengthening pipeline is translating into positive commercial outcomes. A total of 263 Licence, Option, and Assignment (LOA) agreements were executed in 2025, an increase of 19% compared to 2024. Importantly, the majority of these agreements (80%) were concluded with Irish companies, with 49% involving SMEs, demonstrating the effectiveness of the knowledge transfer system in delivering value to the domestic enterprise base. These activities supported the launch of 25 new products and services, further evidencing the real world impact of publicly funded research.

Enterprise creation remains a core pillar of Ireland's knowledge transfer strategy. In 2025, 20 new spin-out companies were established, contributing to a total of 127 spin-outs created over the past five years. While this represents a slight decrease compared to 2024, the broader trend points to a stable and productive pipeline.



More significantly, the focus is shifting towards scale and sustainability: 178 spin-out companies (operating for three years or more) are now active, employing 2,467 people, a substantial increase on the previous year. This growth in employment highlights the maturation of spin-outs and their increasing contribution to the Irish economy.

Industry engagement remains deep and widespread. At the end of 2025, 1,450 collaborative R&D projects with industry partners were active, reinforcing the strong links between research institutions and enterprise. Furthermore, 86% of engagements involved Irish-based companies, demonstrating the strong national impact of the system. While engagement with non-commercial entities declined slightly, the overall trend indicates a sharpening focus on industry collaboration and economic outcomes.

Overall, the AKTS 2025 results position Ireland's knowledge transfer system as robust, enterprise aligned, and delivering increasing impact. The system is successfully translating research investment into innovation outputs, commercial agreements, and high value employment, particularly within the SME sector.

Looking ahead, several strategic priorities emerge. There is an opportunity to sustain and deepen SME engagement, ensuring continued access to research expertise and innovation supports. At the same time, efforts should focus on enhancing the quality and scaling potential of spin-outs, building on the strong base of established companies. Continued emphasis on accelerating IP commercialisation pathways will be critical to converting growing patent activity into market ready solutions. Finally, maintaining a balance between industry focused collaboration and broader societal engagement will remain important in delivering both economic and public value.

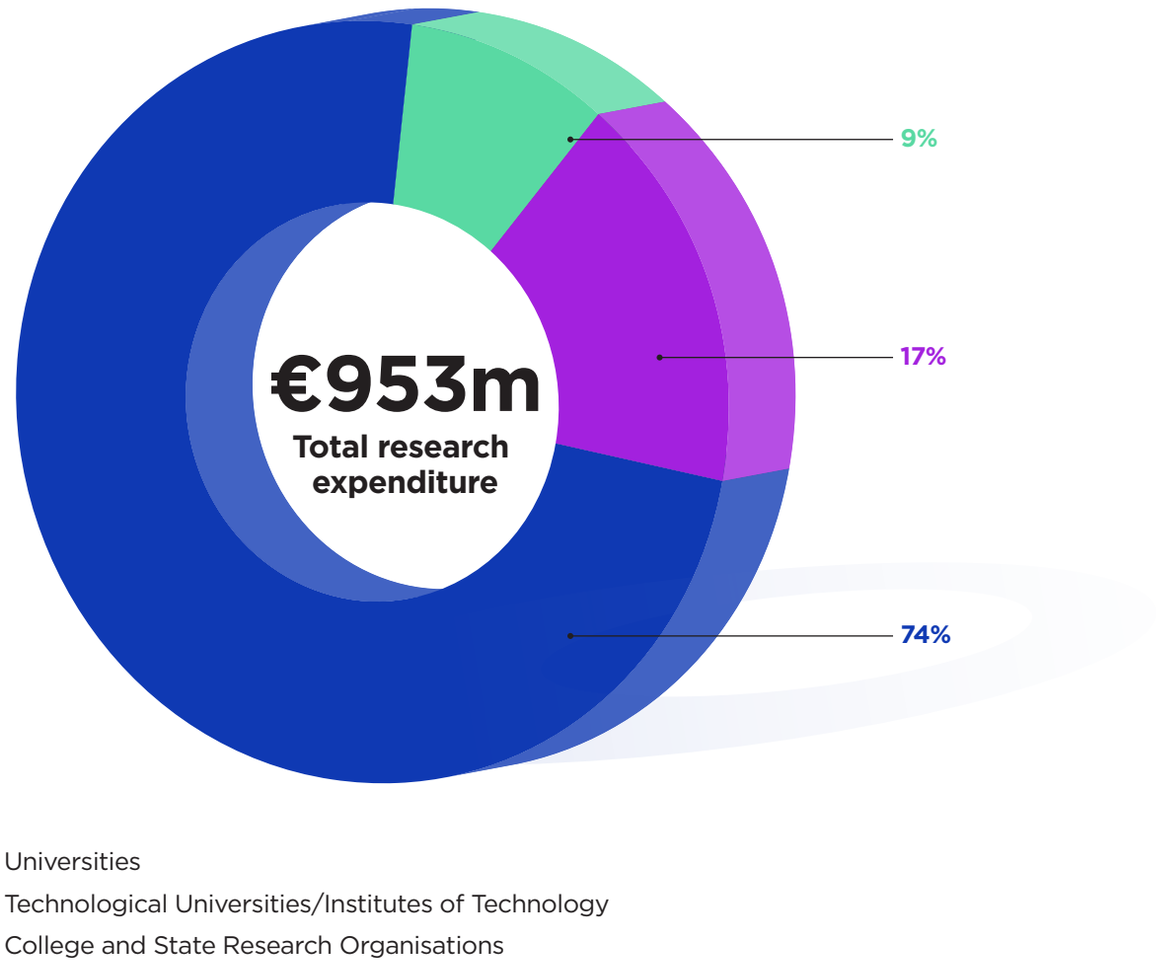
In conclusion, AKTS 2025 confirms that Ireland's knowledge transfer ecosystem is performing strongly and evolving effectively, with clear evidence of its role in driving innovation, supporting enterprise growth, and contributing to national competitiveness.

Research Funding in Ireland

Research Funding in Ireland

The AKTS uses annual research expenditure data reported directly by RPOs, enabling alignment with international reporting standards. This dataset excludes block grants and capital expenditure. In 2025, total research expenditure amounted to €953 million, representing an increase of €73 million (8.3%) compared to 2024.

Research Expenditure by RPO Type 2025



Working with Companies & Non-commercial Entities

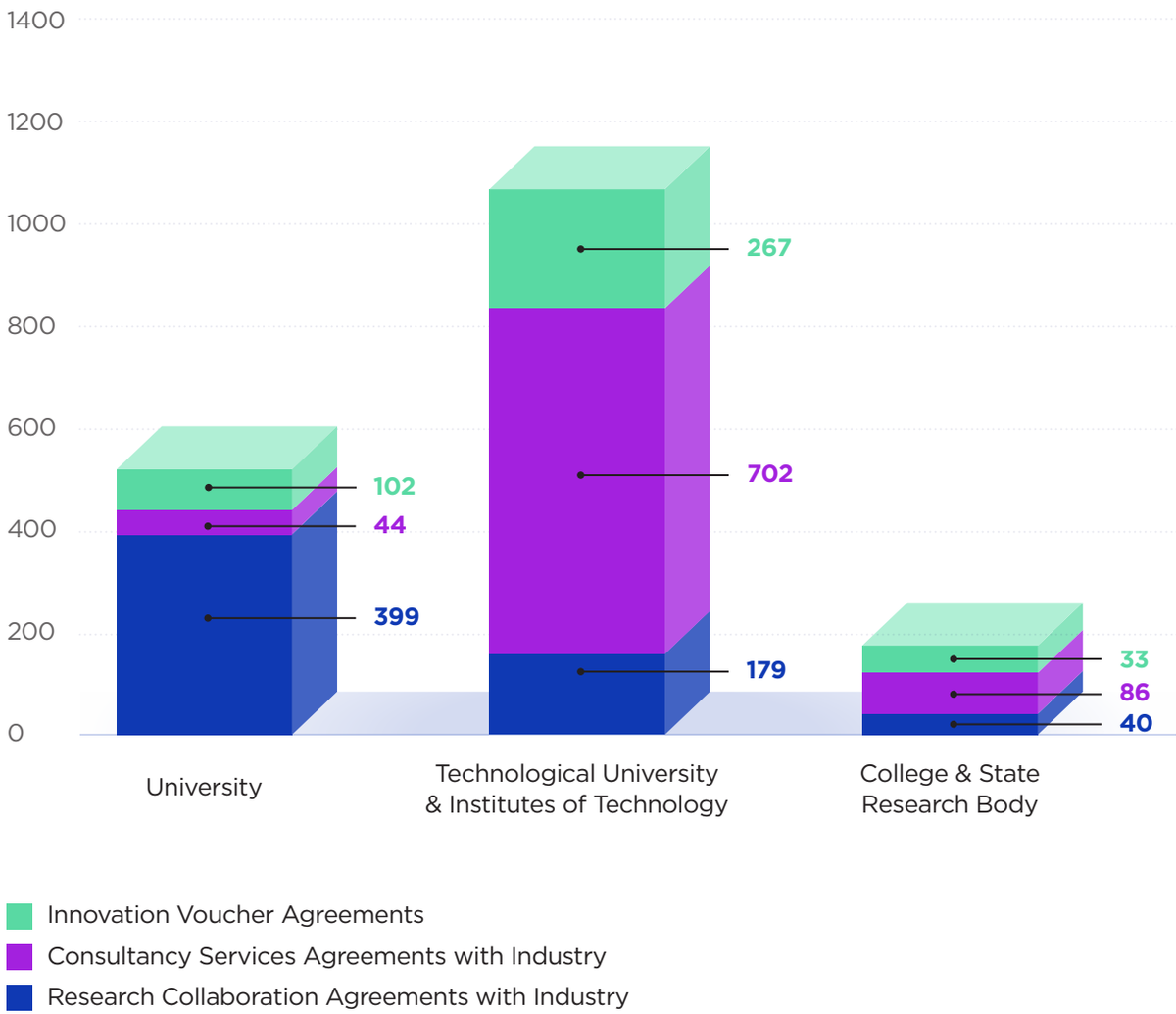
R&D and Consultancy

Collaboration between RPOs, industry, and non-commercial organisations is a key driver of innovation and competitiveness. These partnerships support the creation of new knowledge and provide access to specialist expertise through consultancy and collaboration services.

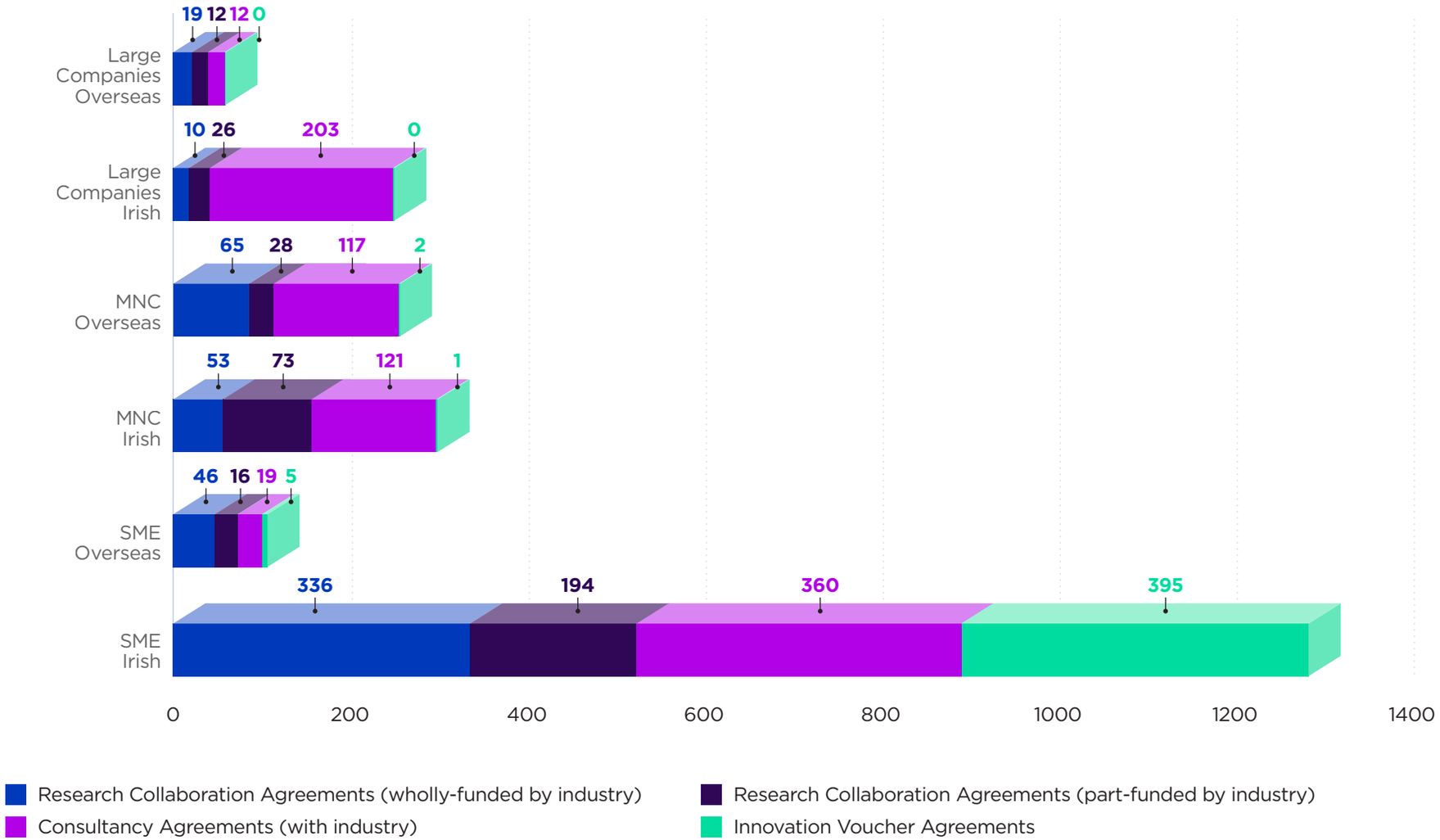
In 2025:

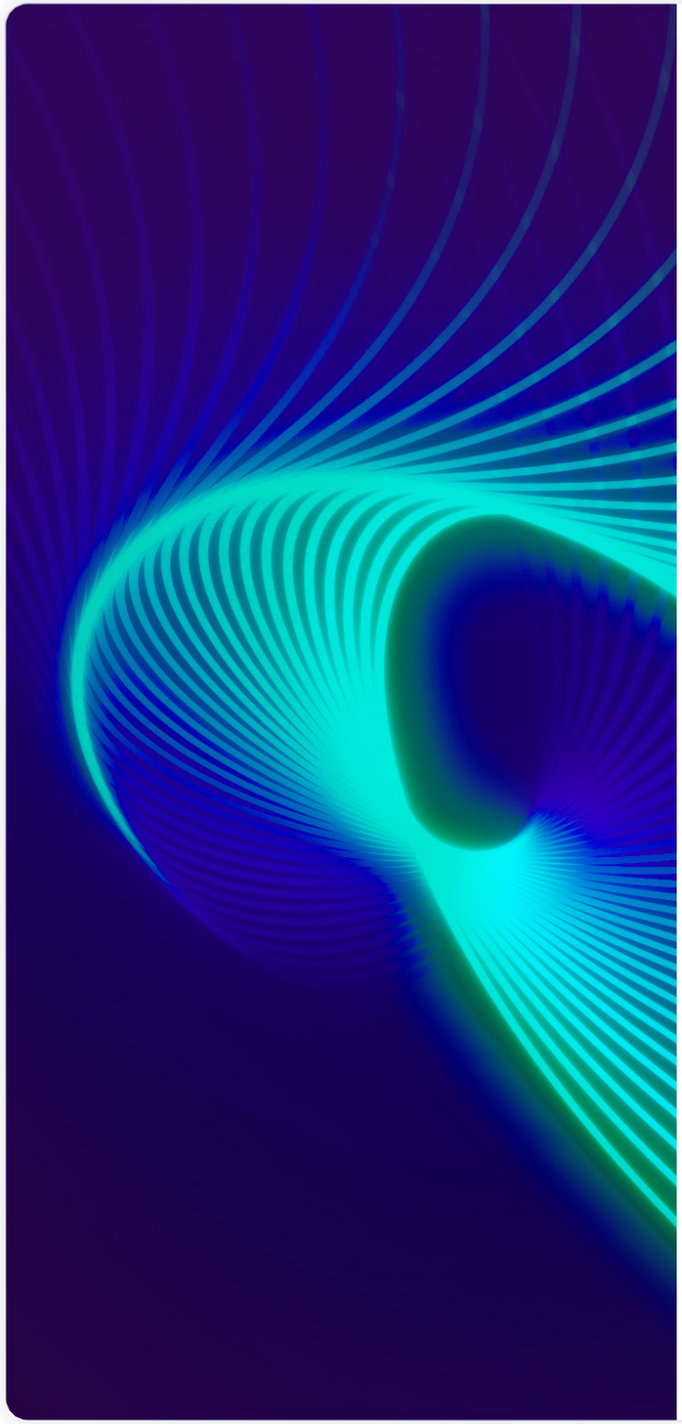
- 1,852 R&D and consultancy agreements were established with industry
- 63% of these agreements involved Irish SMEs, an increase of 5% on the previous year
- Overall agreements with industry increased by 9.8% compared to 2024

No. of R&D and Consultancy Service Agreements with Industry 2025 - RPO Type



No. of R&D and Consultancy Service Agreements with Industry 2025 - Company Type





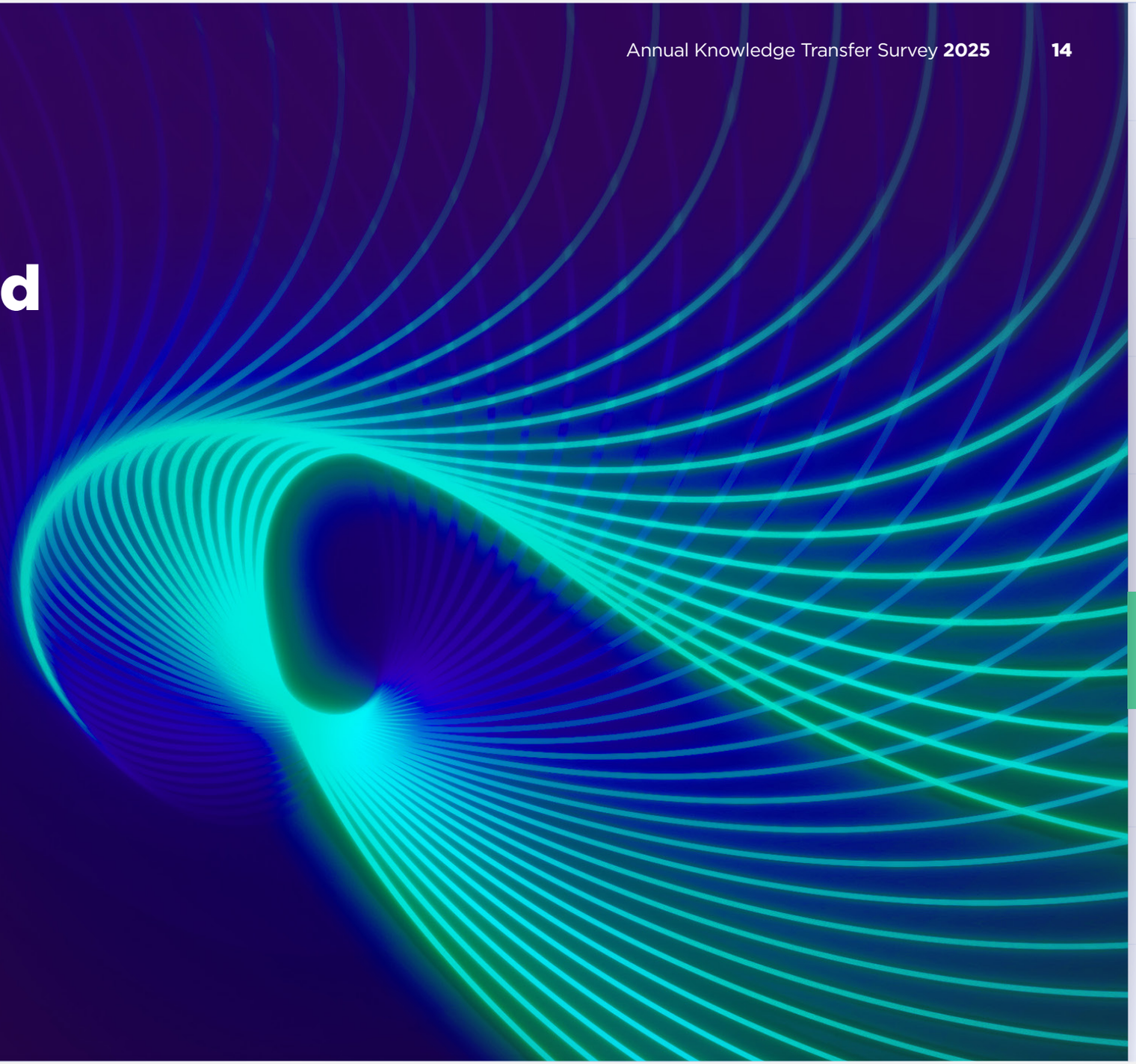
Engagement with non-commercial entities, including public sector and charitable organisations, decreased, with agreements declining by 7.4% compared to the previous year.

Additional highlights:

86%
involved Irish-based companies

9,055
agreements with industry were recorded over the five-year period (2021–2025)

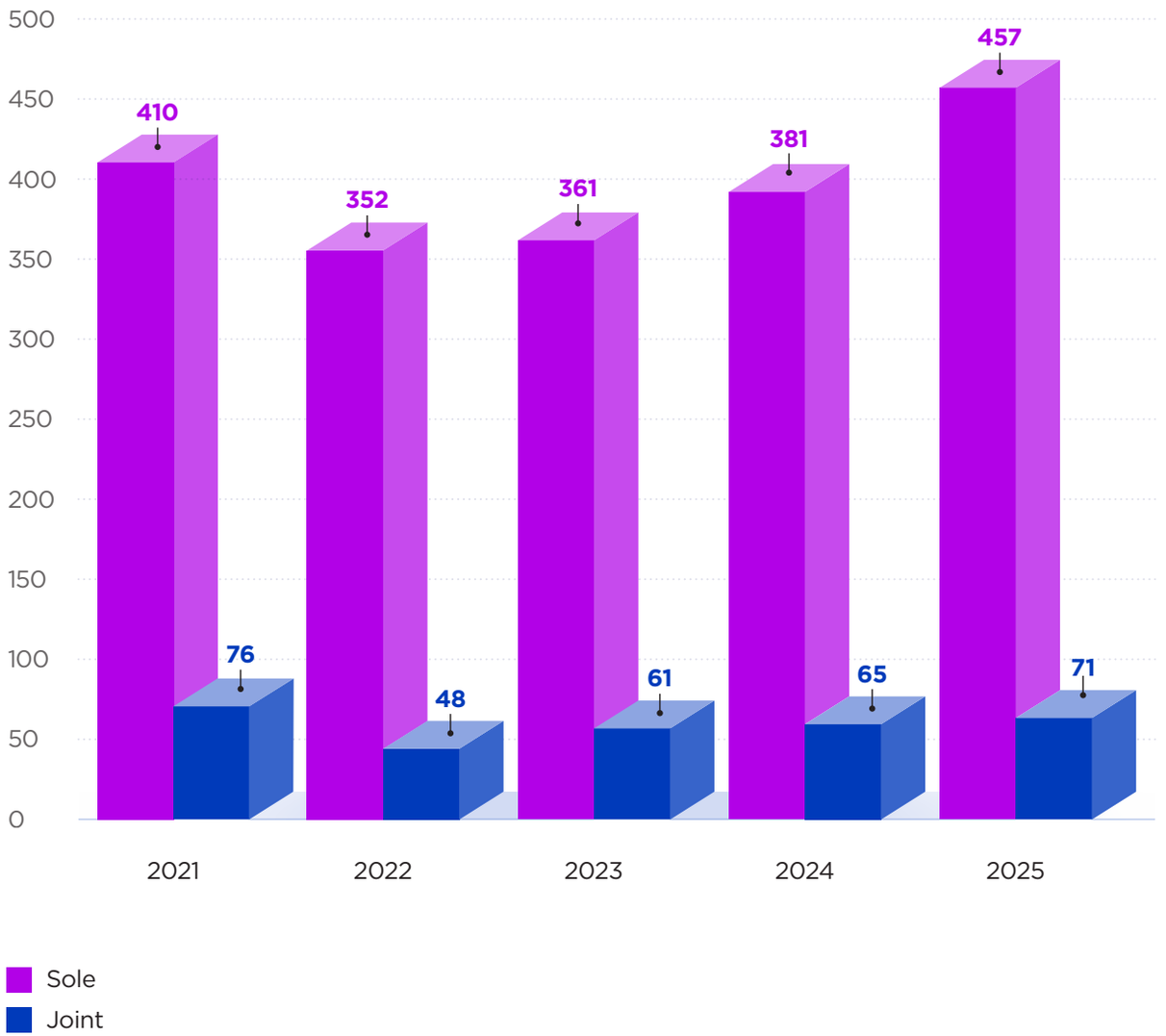
Inventions, Intellectual Property, and Licensing



Inventions, Intellectual Property, and Licensing

A total of 2,282 Invention Disclosures were recorded over the past five years, with 2025 showing an 18% increase compared to the previous year. Most disclosures continue to be single-institution (sole) inventions, with the distribution between sole and joint disclosures remaining stable.

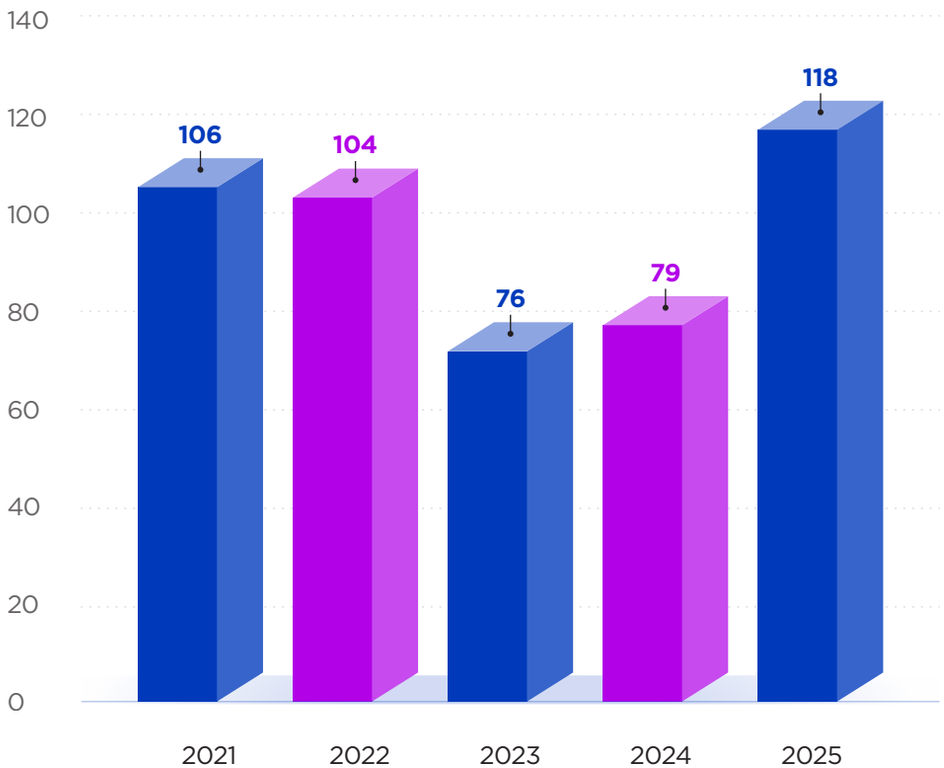
Invention Disclosures 2021-2025



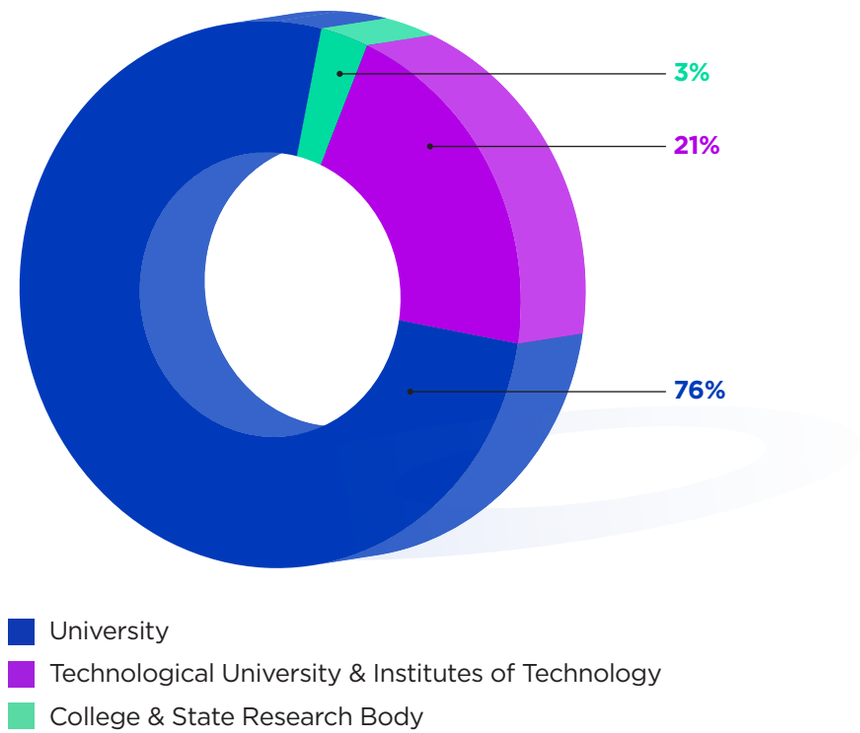
Patent activity also increased in 2025, with filings rising from 79 in 2024 to 118, an increase of 49%. Of the patents filed in 2024, 59% progressed to Patent Cooperation Treaty (PCT) applications in 2025.

The majority (94%) of patent filings in 2025 were made through the UK Intellectual Property Office (IPO) and the European Patent Office (EPO), which remain the primary filing jurisdictions.

Priority patent applications filed 2021-2025



Patent Applications Filed 2025 - RPO Type



Licensing

Licence, Option, and Assignment (LOA) agreements increased from 221 in 2024 to 263 in 2025, representing growth of 19%.

Of the 263 LOAs executed in 2025:

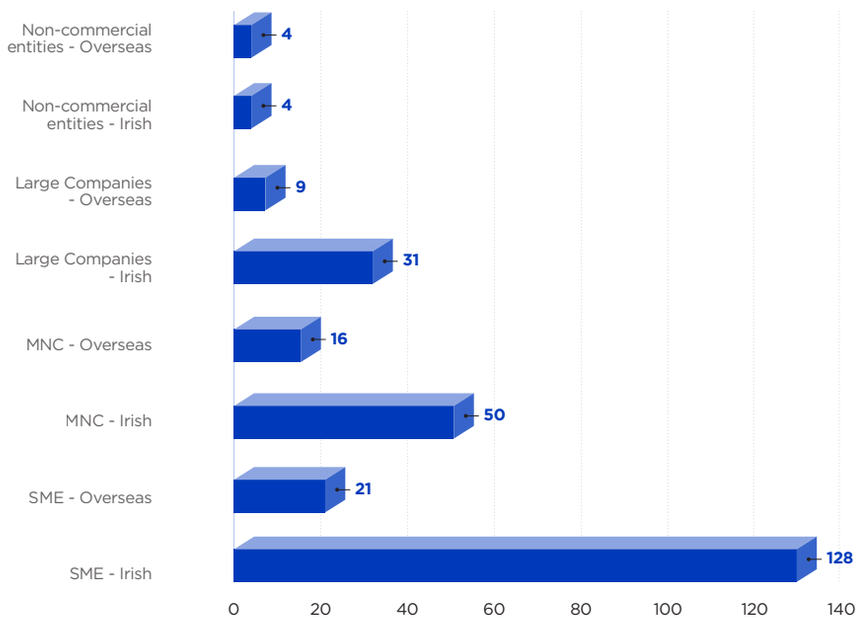
- 80% were granted to Irish companies (SMEs, MNCs & Large)
- 49% were issued to Irish SMEs

While the overall number of LOAs granted to Irish companies decreased slightly (1%), there was an increase in SME participation compared to 2024 rising from 44% to 49%.

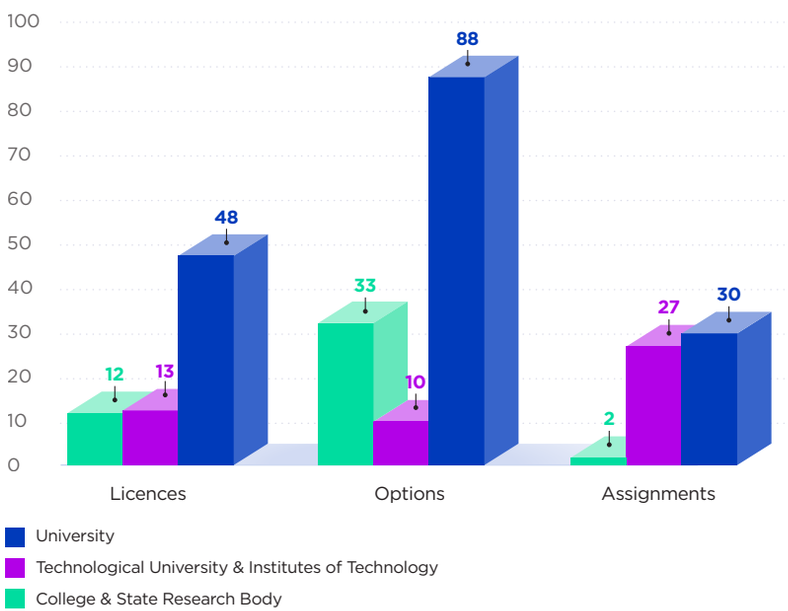
By sector:

- Universities accounted for 63% of LOAs
- Technological universities and institutes of technology accounted for 19%
- Colleges and state research bodies accounted for 18%

No. of Licences, Options & Assignments by Company Type 2025



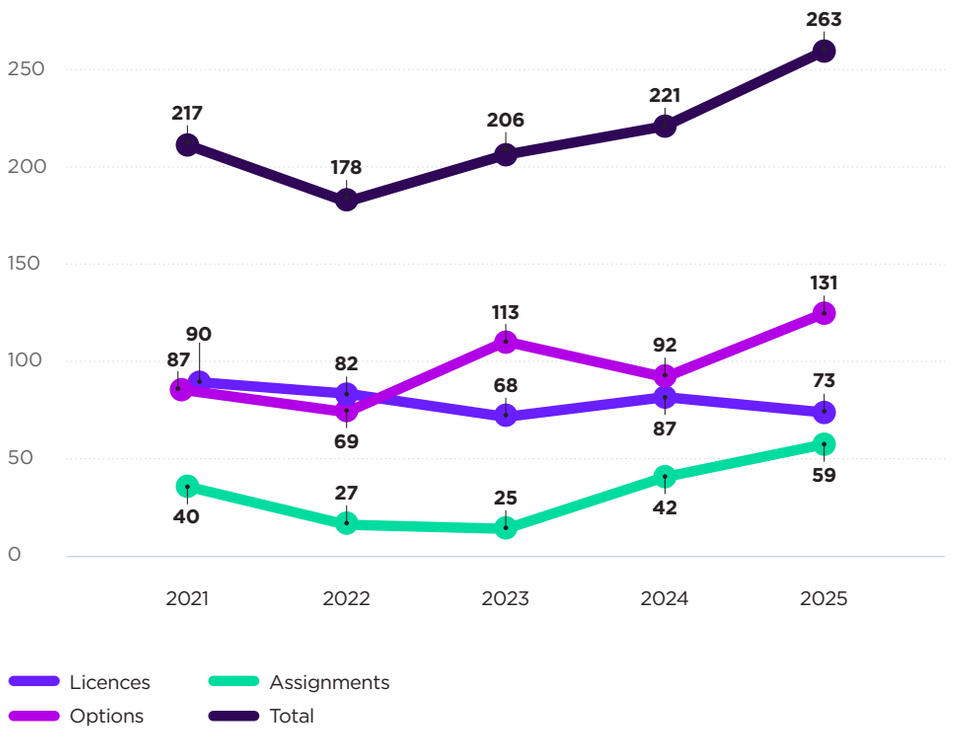
No. of Licences, Options & Assignments 2025 - RPO Type



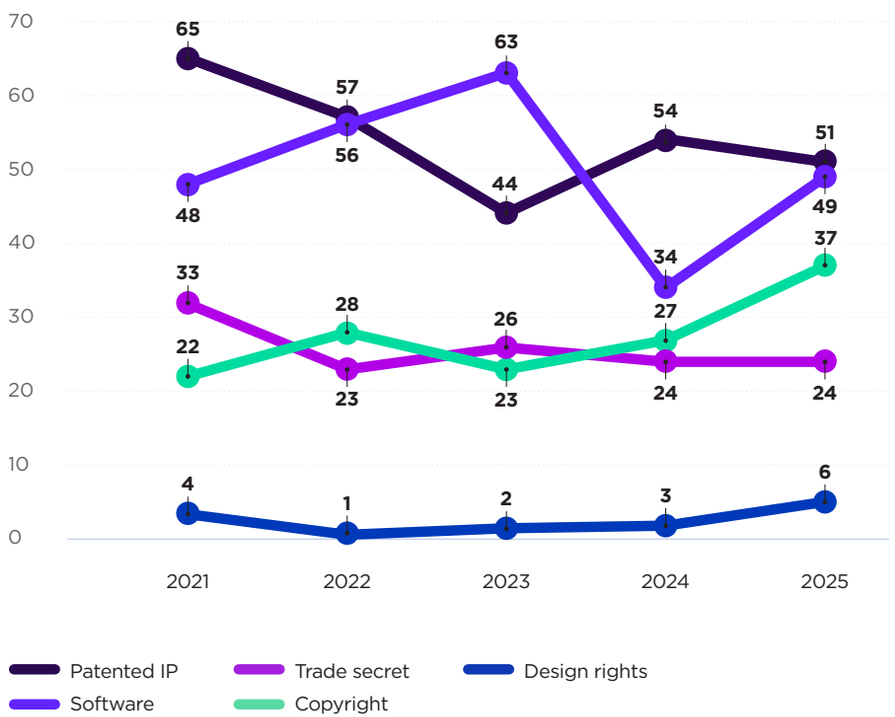
Over the period 2021–2025 a total of 1,085 Licences, Options and Assignments were executed of which Options accounted for 45%, licences 37%, and assignments 18%.

Across the five-year period, patented intellectual property and software represented approximately 65% of all IP types included in LOAs.

No. of Licences, Options & Assignments executed 2021-2025



Main Types of Intellectual Property in LOAs 2021-2025



New Company Creation

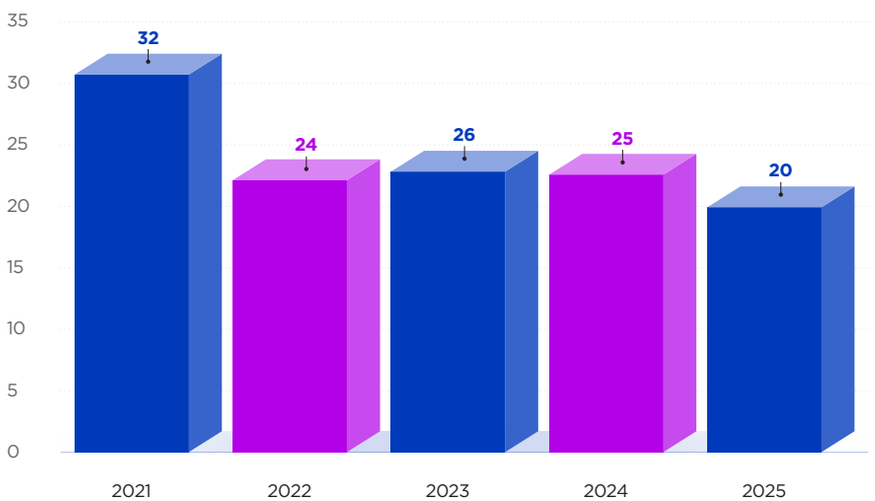
New Company Creation

In 2025, 20 new spin-out companies were established from 9 RPOs (compared with 25 in 2024). 22 were reported under the survey however, 2 were joint spin-outs. 1 spin-out was acquired or merged.

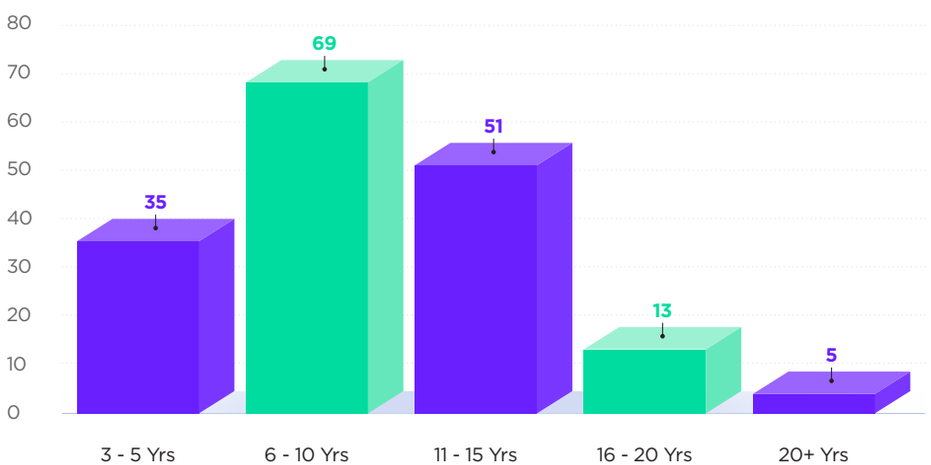
Between 2021 and 2025, 127 spin-out companies were created which represents an average of 25 companies per year.

By the end of 2025, RPOs held equity or share options in 233 companies (similar to 2024 when the figure was 236). 178 spin-outs were active (defined as operating for at least three years) and these active spin-outs employed 2,467 full-time equivalents. This represents an increase of 12 active spin-outs and an increase of 369 jobs compared to 2024. Employment figures reflect positions held at the end of 2025, and do not capture total employment over the lifetime of the companies.

Spin-Outs established 2021-2025



Active Spin-outs No. of Year Incorporated



Case Studies

Aerogen and University of Limerick: A Long-Term Collaboration Driving Global MedTech Innovation

Aerogen, the world leader in acute care aerosol drug delivery, first engaged with the University of Limerick (UL) in 2007 when the company employed approximately 70 people and faced critical technical challenges affecting its core nebuliser technology. Seeking expertise in materials science and manufacturing excellence, Aerogen partnered with UL through the Enterprise Ireland Innovation Partnership Programme. Over the following 14 years, the relationship evolved from solving immediate engineering issues to supporting Aerogen's strategic growth and innovation ambitions.

Working together across five Enterprise Ireland Innovation Partnership projects, UL researchers helped Aerogen address product reliability challenges, improve manufacturing capability, and strengthen internal technical expertise. The collaboration generated valuable intellectual property, including jointly developed patented technologies that contributed to the continued advancement of Aerogen's aerosol drug delivery platform. The UL Innovation Office played a key role in proposal development, contract negotiation, IP management, and facilitating long-term collaboration.

Led by Dr. Mark Southern and colleagues from UL's School of Engineering, the research team contributed world-class expertise in materials science and medical device engineering. The collaboration also supported PhD research, capability building, and knowledge transfer directly into Aerogen's product development and manufacturing operations.

Since the collaboration began, Aerogen has grown from a 70-person SME to Ireland's largest indigenous MedTech company, employing more than 700 people. Aerogen technology has now been used to treat over 30 million patients in more than 75 countries, supported by over 300 patents and a substantial body of clinical evidence. The partnership also strengthened UL's research reputation and industry engagement capabilities.

Aerogen continues to expand its manufacturing, product development, and research activities, including next-generation aerosol drug delivery technologies and new therapeutic applications. The longstanding relationship with UL provides a strong foundation for future innovation and continued knowledge exchange.

> **"The collaboration between Aerogen Ltd and the University of Limerick over many years has contributed to characterising aspects of our core technology which in turn has helped to facilitate the scaling of the drug delivery system to have treated 30 million patients to date, in a period when employee numbers have increased from 70 to 700."**
>
> Dr. Brendan Hogan, Chief Engineering Operations Officer, Aerogen

Biscuit Factory Games and Dún Laoghaire Institute of Art, Design and Technology: Powering Innovation in Ireland's Creative Technology Sector

Biscuit Factory Games is an Irish independent games studio established in 2024 to develop original intellectual property for the global PC gaming market. The company first engaged with Dún Laoghaire Institute of Art, Design and Technology (IADT) through its participation in the Enterprise Ireland New Frontiers programme and later connected with academic expertise during IADT Industry Day 2025. Seeking to enhance its game development pipeline and explore innovative approaches to character production, the company partnered with IADT through an Enterprise Ireland Innovation Voucher project.

The collaboration focused on designing and prototyping an advanced animation workflow for a new game title, addressing both creative and technical production challenges. A key objective was to develop scalable character development processes involving sculpting, optimisation, rigging, animation integration, and the application of AI-enabled technologies to improve production efficiency and enhance gameplay experiences. IADT's Enterprise & Innovation Office supported the project through scoping, project coordination, agreement management, and ensuring alignment with Enterprise Ireland Innovation Voucher requirements.

Led by Dr. Naoise Collins from IADT's Department of Technology & Psychology, the project also involved lecturer Dave McEvoy and a team of undergraduate 3D Animation students. The research team contributed expertise in real-time game development, character design, animation workflows, and production pipeline optimisation. Through a structured research approach, the team helped create technically robust assets and workflows suitable for commercial game development.

The project delivered production-ready animation workflows and refined AI-driven development processes that can be integrated directly into the company's game production pipeline. The collaboration resolved key technical challenges, accelerated development, strengthened the studio's internal capabilities, and enhanced the quality and distinctiveness of its upcoming title. For IADT, the project showcased the value of industry-academic collaboration while providing students with hands-on experience working on a live commercial challenge.

Building on the success of the project, Biscuit Factory Games and IADT are exploring further innovation opportunities, including additional Innovation Voucher projects and collaborations focused on game development technologies. Two of the students went to work in internships at the company. The company is also investigating opportunities in the browser-based gaming market while continuing its expansion into international gaming markets.

> **"The collaboration with IADT was a fantastic experience from start to finish. The team approached the project with professionalism, creativity, and technical skill, and they delivered work that felt industry-ready at every stage. Beyond the immediate results, what stood out was the way IADT fostered a genuine spirit of collaboration. Communication was clear, the process was efficient, and the outcome exceeded our expectations."**
>
> Dan Bergin-Holly, Founder,
> Biscuit Factory Games

AI-Supported Automated Construction Compliance Inspection: TU Dublin and Fenagh Engineering & Testing

Fenagh Engineering & Testing Ltd. provides assigned certifier, specialist inspection, and material testing services for public and private sector construction projects. The company partnered with TU Dublin through Construct Innovate following earlier engagement on inspection research and a shared interest in applying artificial intelligence and computer vision to construction quality assurance processes. As Fenagh established its Irish operations, the collaboration provided an opportunity to explore innovative approaches to construction inspection and compliance monitoring.

The project focused on developing a proof of concept AI computer vision tool capable of assisting inspectors in identifying construction defects in real time using smartphone cameras. The system aims to detect issues such as missing fire stopping, installation defects, service penetrations, and external envelope failures, enabling faster and more consistent inspections. TU Dublin researchers contributed expertise in artificial intelligence, computer vision, background intellectual property, and model development, while Fenagh provided industry knowledge, real world data, imagery, and practical insight into inspection workflows. The TU Dublin Innovation Office supported the collaboration by structuring research agreements, managing IP considerations, and facilitating commercial planning.

The project was led by Dr. Mark Mulville from the School of Surveying and Construction Innovation and Dr. Susan McKeever from the School of Computer Science, supported by two research assistants. The collaboration combined expertise in construction technology and artificial intelligence to develop a practical solution capable of operating in real site environments. TU Dublin's cross disciplinary approach provided a strong foundation for translating research into industry impact.

The collaboration has strengthened Fenagh's innovation capacity and helped embed the company within Ireland's construction ecosystem. Training datasets developed through purpose-built construction mock-ups have enabled the AI system to identify defects typically hidden within wall assemblies using standard camera imagery. For TU Dublin, the project has enhanced industry engagement, fostered interdisciplinary collaboration, and established a pathway towards future commercialisation opportunities. A project launch event hosted at TU Dublin also generated significant industry visibility and stakeholder engagement.

The next phase will involve industry trials with Fenagh Engineering & Testing and Cairn Homes as the partners advance towards an Enterprise Ireland Commercialisation Fund application. The collaboration is expected to strengthen Fenagh's position in both the Irish and US construction markets while supporting further commercial development of the technology.

> **"Working with TU Dublin allowed us to explore advanced AI-based inspection tools that we simply could not develop alone at this early stage of our Irish expansion. The collaboration kept the research grounded in real site conditions, and the support from the Innovation Office ensured the process was clear, structured, and easy to navigate."**
>
> Darren Bergin, Managing Director, Fenagh Engineering & Testing Ltd

AI-Driven Personalised Fall Detection and Emergency Response System: Technological University of the Shannon and Tunstall Emergency Response

Tunstall Emergency Response Ltd. provides telecare and emergency response services that support independent living through connected alarms, monitoring technologies, and 24/7 response services. To address challenges associated with traditional fall detection systems, including false alarms, limited coverage, and the need for more personalised monitoring, the company partnered with the Software Research Institute (SRI) at Technological University of the Shannon (TUS) through the Enterprise Ireland Innovation Partnership Programme.

The FallResp project explored the development of an AI-enabled mobile fall detection and emergency response system capable of extending monitoring beyond traditional indoor environments. Researchers applied advanced artificial intelligence, mobile sensing, and data analytics techniques to develop and validate a smartphone-based solution designed to improve fall detection reliability and support faster emergency response. Tunstall contributed operational expertise, service requirements, and industry insights, while the TUS Knowledge Transfer and Commercialisation Office supported project agreements, IP management, and collaboration governance from the outset.

Led by Dr. Yuansong Qiao within the COMAND Technology Gateway at TUS, the research team brought expertise in artificial intelligence, mobile application development, data analytics, network systems, and user-centred design. The collaboration translated real-world telecare challenges into technical requirements and delivered prototype technologies validated through experimental testing.

The project successfully developed and validated a prototype mobile-based fall detection system, demonstrating how AI and mobile technologies can improve detection accuracy and enhance responsiveness within telecare services. The collaboration provided researchers at TUS with an opportunity to apply advanced research in Artificial Intelligence and mobile technologies to a healthcare challenge, while providing Tunstall with valuable insights into next-generation digital health solutions capable of supporting more flexible and personalised care services.

The project has established a strong foundation for continued collaboration in digital health and telecare innovation. Tunstall is exploring opportunities to further develop and integrate the technology into its services, with potential applications across remote patient monitoring, smart home healthcare, telecare, and ageing-in-place solutions.

> **“Working with the Technological University of the Shannon enabled us to explore innovative AI-driven approaches to fall detection and emergency response. The collaboration brought together our operational expertise in telecare services with TUS’s advanced research capabilities in artificial intelligence and mobile systems. The results demonstrate the potential to significantly improve fall detection accuracy while extending monitoring services beyond traditional indoor environments.”**
>
> James Doyle, Managing Director, Tunstall Emergency Response Ltd..

Total Plastic Solution and Atlantic Technological University MET Technology Gateway: Driving Circular Manufacturing

Total Plastic Solution, an Enterprise Ireland client company, engaged with the Atlantic Technological University (ATU)' MET Technology Gateway to solve a significant manufacturing challenge involving high-moisture polypropylene powder waste containing up to 65% liquid content. The material was difficult to recycle and expensive to dispose of, creating both environmental and commercial challenges for the business.

Through a consultancy engagement, MET Technology Gateway applied materials engineering expertise, process optimisation methodologies, and circular economy principles to identify a viable recycling solution. The ATU Innovation Office supported the collaboration by facilitating engagement, project development, and contractual arrangements that enabled effective knowledge transfer between the parties.

Led by Dr Jamie Meehan and supported by specialists within the MET Technology Gateway, the project combined technical analysis with practical manufacturing expertise. The team worked closely with Total Plastic Solution to assess waste streams, optimise recovery processes, and validate sustainable recycling pathways.

The engagement enabled Total Plastic Solution to recycle and reintegrate previously problematic waste materials back into production, reducing disposal costs while creating a valuable secondary raw material stream. The project improved operational efficiency, strengthened sustainability performance, and enhanced circular manufacturing practices within the company. The success of the consultancy has already resulted in further collaborative research activity, including the submission and approval of an Innovation Partnership proposal.

Total Plastic Solution intends to continue working with MET Technology Gateway on future projects involving the optimisation & circularity of waste materials as part of their transformative recycling facility in Co. Limerick, Ireland. Future collaborations with MET are being explored through the lens of advanced manufacturing technologies, including data-driven optimisation, change management and IN5.0 digital adoption solutions. The relationship has evolved from consultancy into a broader innovation partnership focused on sustainable manufacturing growth.

> **"MET's evidence-based approach to solving the high-moisture waste challenge enabled us to move from costly disposal to valuable material recovery, unlocking new possibilities for circular manufacturing."**
>
> Jason McLaughlin, Chief Operating Officer, Total Plastic Solution (TPS)

Letsbuyhealthcare and South East Technological University (SETU)'s Walton Institute: Advancing Digital Healthcare Through Innovation Consultancy

Letsbuyhealthcare is an Irish SME focused on improving access to private healthcare through digital technology solutions. The company engaged with South East Technological University (SETU)'s Walton Institute to explore how emerging technologies, including artificial intelligence (AI), blockchain, and advanced cloud-based architectures, could be integrated into its platform to enhance its offering and support future growth. Having collaborated previously with Walton Institute, the company sought specialist expertise to evaluate opportunities for technology-driven innovation within its business model.

Through the consultancy engagement, Walton Institute provided technical expertise in cloud architecture, communications technologies, AI, and blockchain applications. The project assessed how these technologies could be leveraged to strengthen the platform, improve operational efficiency, and support the development of innovative healthcare services. The Innovation Office supported the engagement by providing guidance on intellectual property considerations, commercialisation pathways, and potential future licensing opportunities, helping to establish a framework for longer-term collaboration.

The consultancy was led by David Ryan, Technical Lead at Walton Institute, supported by a multidisciplinary team that included senior and junior software developers and divisional leadership. The research team brought specialist technical knowledge and industry insights, enabling Letsbuyhealthcare to better understand the practical application of emerging technologies within the healthcare sector.

The consultancy provided strategic direction for the company's technology roadmap and delivered valuable insights that are helping shape future platform development. The work positions Letsbuyhealthcare to further strengthen its digital healthcare offering, supporting a more efficient and technologically advanced experience for consumers navigating the private healthcare market. The collaboration has also laid the foundations for future research and development activity.

Building on the success of the consultancy, Letsbuyhealthcare and Walton Institute are actively exploring further innovation opportunities. Potential next steps include collaborative contract research and development projects or participation in an Enterprise Ireland Innovation Partnership Programme as part of the company's 2026 R&D strategy. ICS Technology Gateway @ Walton Institute initiated and developed the relationship with Letsbuyhealthcare and leads discussions on next steps.

> **"Letsbuyhealthcare is delighted to acknowledge the valued collaboration with The Walton Institute since 2023. The three quality reports delivered by Walton Institute have directly assisted and guided Letsbuyhealthcare's technology development, providing robust insights and direction as we continue to enhance our platform. We truly appreciate their expertise and look forward to future assignments together, confident that our ongoing partnership will yield further benefits for our technology and members."**
>
> David Allen, CEO, Letsbuyhealthcare

Future Cast and the Dundalk Institute of Technology Regulated Software Research Centre: Applying AI Expertise to Medical Device Innovation

Future Cast, is an innovation centre focused on the construction and quarrying industries, engaged with the Dundalk Institute of Technology Regulated Software Research Centre to access specialist expertise in medical devices, artificial intelligence (AI), and machine learning. The organisation sought consultancy support to strengthen its product development activities and address technical challenges within the highly regulated medical device sector. The engagement represented Future Cast's first collaboration with the research organisation and was facilitated through the Technology Transfer Office.

The consultancy brought together researchers with expertise in AI, machine learning, and medical device technologies, particularly infrared thermometry applications. Working closely with Future Cast, the research team provided targeted technical insights and guidance to support product development, improve regulatory alignment, and strengthen the centre's innovation strategy. The Technology Transfer Office played a key role in establishing the collaboration, coordinating stakeholders, managing timelines, and ensuring expectations were aligned throughout the project.

The project was led by PhD researchers Niamh St John and Kayla Aniela Cepeda Zapata, with support from Dr. Roisin Loughran, Manager of the Regulated Software Research Centre. The team contributed specialist knowledge in AI, machine learning, and medical device technologies, providing research-led solutions tailored to the centre's technical needs and commercial objectives.

The consultancy enabled Future Cast to enhance its product development capabilities and address critical technical and regulatory challenges. By integrating specialised research expertise into its development process, the organisation improved product quality, strengthened compliance readiness, and advanced its innovation roadmap. The collaboration has also increased the centre's potential for future product launches, business growth, and job creation.

The success of the consultancy has already created new opportunities for ongoing engagement. Future Cast's partner company, Trimedika, successfully secured a €10,000 Enterprise Ireland Innovation Voucher to build on the initial work, providing a pathway for continued research collaboration and technology development.

> **"The consultancy delivered significant value to our business, particularly in strengthening our capabilities within the medical device sector. Access to specialised academic expertise enabled us to address key technical challenges, improve our product development approach, and better align with regulatory requirements. The support from the Innovation Office was particularly valuable in coordinating the collaboration and ensuring a smooth process from initiation to completion."**
>
> John James O'Hara, CEO, Future Cast

Watermark Coffee Technology and Dublin City University Water Institute: Supporting Marine Restoration Through Scientific Expertise

Watermark Coffee Technology Limited is an Irish SME that combines sustainability initiatives with its coffee business operations. The company engaged with Dublin City University's (DCU) Water Institute to access specialist expertise in water quality, marine ecology, and environmental monitoring in support of large scale native oyster and seagrass restoration projects. The consultancy was initiated through the Enterprise Ireland Innovation Voucher Programme and marked the company's first engagement with DCU.

The consultancy brought together Watermark Coffee's environmental ambitions with DCU Water Institute's scientific expertise in water quality monitoring, marine ecosystems, sensor technologies, and environmental assessment. The project provided the scientific validation and monitoring capabilities required to support marine restoration activities and measure environmental impact. DCU:Innovate played a central role in facilitating the engagement, coordinating project scoping, contracting, and collaboration management throughout the project lifecycle.

The consultancy was led by Professor Fiona Regan, Professor of Chemistry at DCU and Director of the DCU Water Institute. The research team provided scientific guidance and environmental monitoring expertise, helping to ensure that restoration activities were evidence-based, measurable, and capable of delivering meaningful ecological outcomes.

The consultancy supported the expansion of Ireland's largest native oyster and seagrass restoration initiative, resulting in the reintroduction of more than 18,000 oysters into Dublin Bay. For Watermark Coffee, the project strengthened its sustainability credentials, enhanced customer confidence, and contributed to national recognition through awards including Sustainability Champion and Irish Food & Beverage Supplier of the Year at the Guaranteed Irish Awards 2025. The consultancy demonstrated how scientific expertise can help businesses deliver measurable environmental impact while supporting commercial objectives.

The success of the project has led to ongoing monitoring activities, plans for expanded restoration sites, and discussions around future collaborative research in water quality, biodiversity, and marine restoration technologies. A second Enterprise Ireland Innovation Voucher project between Watermark Coffee and DCU is currently being progressed, providing a foundation for a longer-term strategic partnership.

> **"Working with DCU and Prof. Fiona Regan has been transformative for our organisation. The scientific guidance and credibility provided by the DCU Water Institute strengthened every aspect of our marine restoration work. DCU:Innovate made the process seamless, and the partnership is now central to our sustainability strategy."**
>
> David Lawlor, Founder, Watermark Coffee Technology Limited

Reivr Fusion and Tyndall National Institute: Advancing Real-Time Equipment Tracking in Hospitals

Reivr Fusion is an Irish SME developing AI-enhanced Real-Time Location System (RTLS) solutions for the global hospital equipment management market. Through an Enterprise Ireland Innovation Partnership project, the company collaborated with researchers at Tyndall National Institute to address a major healthcare challenge: enabling hospital staff to quickly locate critical medical equipment. The collaboration resulted in the development and licensing of specialised ultra-wideband (UWB) positioning technology that forms a key component of Reivr Fusion's next-generation tracking platform.

The licensed intellectual property comprises know-how and hardware design rights for an optimised UWB indoor positioning architecture, including compact tracking devices capable of highly accurate equipment location with extended battery life. This technology supports the precision radio-positioning capability underpinning Reivr Fusion's AI-powered sensor fusion platform, which combines UWB and vision technologies to help healthcare staff locate equipment instantly and accurately. UCC Innovation supported the commercialisation process by identifying, assessing, valuing, and negotiating the licence agreement, ensuring the technology could be transferred efficiently for commercial deployment.

The technology was developed by Miomir Todorovic at Tyndall National Institute, University College Cork. The research combined advanced expertise in wireless positioning technologies with practical industry requirements, resulting in a deployable solution tailored to healthcare environments. The collaboration demonstrates the impact of applied research in translating cutting-edge technology into commercial products that address real-world challenges.

The licensed technology is enabling Reivr Fusion to develop a manufacturable RTLS platform for hospitals, including the integration of UWB positioning with AI-driven vision systems. Planned clinical pilots will track up to 100 medical devices and evaluate improvements in operational efficiency and equipment utilisation. By reducing time spent searching for equipment and improving asset visibility, the solution has the potential to enhance patient care delivery, optimise procurement decisions, and deliver operational efficiencies across healthcare systems.

Reivr Fusion's immediate focus is the deployment of a hospital pilot to validate the technology in a live clinical environment. Longer term, the company aims to address the global hospital equipment management market and scale its RTLS platform internationally, building on the technological enhancements developed through the partnership with Tyndall National Institute.

> **"We were very satisfied with the outputs of the project and would recommend the Innovation Partnership programme to other companies as a cost-effective means of accessing expertise from Irish universities."**
>
> Joe Moore, CEO, Reivr Fusion Ltd

TU Dublin SM:ART Technology: Improving Infrastructure Monitoring Through Research Commercialisation

The SM:ART (Structural Monitoring and Automated Response Treatment) system is an innovative structural health monitoring technology developed at Technological University Dublin (TU Dublin) to help infrastructure owners monitor the condition of reinforced concrete bridges and other critical assets. Developed by Dr. Sean Bond and colleagues within the HEMS Research Hub, the technology combines embedded sensors, monitoring electronics, and data analytics to detect early signs of corrosion and structural deterioration. The system has been advanced through an Enterprise Ireland Commercialisation Fund project and is now being evaluated by the Department for Infrastructure (DfI) Northern Ireland.

SM:ART enables infrastructure managers to identify deterioration earlier, improve maintenance planning, reduce repair costs, and minimise disruption. The licensed intellectual property includes TU Dublin know-how, software, monitoring systems, and associated technology architecture developed through years of research in structural health monitoring and corrosion remediation. TU Dublin's Innovation Office played a key role in identifying and protecting the intellectual property, developing the commercialisation strategy, structuring the licence agreement, and supporting engagement with industry partners.

The technology originated from research undertaken within TU Dublin's Civil and Structural Engineering Department and HEMS Research Hub. Dr. Sean Bond's doctoral research formed the foundation of the innovation, which was subsequently developed into a deployable monitoring platform. TU Dublin researchers continue to work closely with DfI Northern Ireland during the evaluation phase, supporting installation, monitoring, and interpretation of structural data collected from operational infrastructure assets.

The evaluation licence with DfI Northern Ireland represents a significant milestone in validating the technology in real world infrastructure environments. The project enables the deployment of SM:ART monitoring systems on operational reinforced concrete bridges, generating valuable performance data and demonstrating the potential of proactive infrastructure management. The collaboration highlights the commercial potential of TU Dublin's research while supporting safer, more efficient maintenance of public infrastructure assets.

The ongoing evaluation is expected to generate critical validation data that will support further development and commercialisation of the SM:ART platform. The project has strengthened the pathway towards additional licensing opportunities and has the potential to support the creation of a future TU Dublin spin-out focused on infrastructure monitoring technologies. Continued collaboration with infrastructure authorities will help accelerate adoption across national and international infrastructure networks.

> **"Working with the Department for Infrastructure Northern Ireland provides an important opportunity to evaluate the technology in real operational conditions and gather the data needed to further refine the system. The support of TU Dublin's Innovation Office has been instrumental in helping translate our research into a practical solution with real industry relevance."**
>
> Dr. Sean Bond, Research Project Manager, SM:ART Project, Technological University Dublin

ODOS Tech: Commercialising Research to Support Net-Zero Agriculture

ODOS Tech (Carbon Harvesters Ltd.) is an Irish SME providing an agri-food sustainability platform that helps customers measure greenhouse gas emissions, assess biodiversity, and develop pathways to net-zero operations. The company was created to commercialise technologies developed through the Farm Zero C project, a Research Ireland Challenge Fund initiative involving University College Dublin (UCD), Trinity College Dublin (TCD), BiOrbic, Carbery and other partners focused on advancing carbon neutral farming and biodiversity enhancement. The company licensed complementary intellectual property from both UCD and TCD, creating a joint university spin-out built on sustainability focused research.

The licensed technologies combine UCD's decarbonisation monitoring platform with TCD's biodiversity monitoring software. Together, these tools enable agri-food businesses to calculate carbon footprints, identify emissions reduction opportunities, map biodiversity across supply chains, and support sustainability reporting requirements. NovaUCD and TCD's Knowledge Exchange Office played key roles in identifying, protecting, and licensing the underlying intellectual property, while coordinating a multi-party licensing agreement that brought separate research assets together within a single commercial platform.

Researchers from the UCD School of Biosystems and Food Engineering and TCD's Department of Botany developed the technologies through the Farm Zero C project. Innovation teams at both universities supported intellectual property management, software commercialisation, licensing negotiations, and company formation activities. Their collaboration enabled the seamless transfer of research outputs into a market-focused business.

Since licensing the technology, ODOS has launched carbon footprinting, biodiversity measurement, and mitigation products for the agri-food sector. The company now employs twelve people and is continuing to grow. In 2025, ODOS secured seed investment led by Capsa Food with participation from TTAF by CLAVE and Angels, providing further momentum for expansion and product development. The platform is helping customers across sectors including dairy, beef, wine, and food production to meet growing sustainability and reporting requirements.

ODOS continues to collaborate with UCD and TCD through the Horizon Europe BioReFarmeries project, where it supports emissions monitoring and carbon mitigation activities. The ongoing relationship demonstrates how university-developed technologies can create long-term commercial and environmental impact while supporting continued research collaboration.

> **"NovaUCD and the TCD Knowledge Exchange Office have provided incredible support for the company for years now. Both Innovation Offices ensured that the IP was kept safe so that the separate IP assets could be transferred to the company in the licence. It was seamless as UCD and Trinity coordinated between them in executing the IP licence."**
>
> Luis Alejandro Vergara,
> CEO and Co-Founder, ODOS Tech

Output Sports: Transforming Sports Performance Through University Research

Output Sports is a University College Dublin (UCD) spin-out company developing software and wearable technologies for sports performance and digital health monitoring. The company was founded on intellectual property generated through an Enterprise Ireland Commercialisation Fund project that built on doctoral research undertaken within the UCD School of Public Health, Physiotherapy and Sports Science. The assignment of all remaining IP rights to the company in 2025 strengthens its position for future growth, investment, and potential strategic opportunities as it continues to expand internationally.

The technology was developed by Dr. Martin O'Reilly, Dr. Darragh Whelan, Julian Eberle, Joe Duffin and Professor Brian Caulfield, with the resulting IP licensed to Output Sports in 2019.

The licensed IP comprised know-how, software, algorithms, and data associated with wearable sensor systems designed to measure and enhance athletic performance. The technology created a data driven platform that allows athletes, coaches, and practitioners to assess performance metrics quickly and accurately using wearable devices and software analytics. NovaUCD supported the process from early IP disclosure through to licensing, spin-out creation, contract negotiation, and ongoing licence management, helping the founders successfully commercialise the research outputs.

UCD researchers worked closely with NovaUCD to identify, protect, and commercialise the intellectual property, creating the foundation for a successful venture-backed company. The relationship has continued beyond licensing through further collaborative research activities, including an Enterprise Ireland Innovation Partnership project on machine vision-enabled sports performance analysis.

The licensed technology underpinned Output Sports' early product development and helped the company secure an initial €1.25 million seed investment round in 2020. Since then, the company has completed additional investment rounds, expanded its product offering, created more than 20 high-value jobs, and established early commercial revenues. In addition, Output Sports currently provides more than 1,500 high performance teams in over 40 countries with the insights needed to make more informed, data backed decisions to improve athletic performance. The success of Output Sports demonstrates how university research can be translated into scalable, internationally focused businesses with strong growth potential.

Output Sports continues to engage with UCD through collaborative research and innovation projects.

> **"NovaUCD efficiently and effectively facilitated the spin-out process right from our initial expression of interest in forming a company through to finalising our IP agreement and securing our investments."**
>
> Dr. Martin O'Reilly,
> CEO and Co-Founder, Output Sports Ltd.

Glyvantis Bio: Translating University College Dublin Research into Next-Generation Biopharmaceutical Innovation

Glyvantis Bio is a University College Dublin (UCD) spin-out company established in 2025 to commercialise a proprietary cell engineering platform that optimises the glycosylation, or sugar profiles, of therapeutic proteins such as monoclonal antibodies. The technology improves the efficacy and safety of biopharmaceutical products and is designed to support pharmaceutical companies in accelerating drug development. The company emerged from research led by Associate Professor Ioscani Jiménez Del Val at UCD, with support from the Enterprise Ireland Commercialisation Fund.

At the heart of Glyvantis Bio is a portfolio of licensed patents and datasets developed through UCD research. The company's platform enables more precise engineering of therapeutic proteins, creating opportunities to improve biopharmaceutical manufacturing and product performance. NovaUCD played a central role throughout the commercialisation journey, supporting intellectual property strategy, licensing, company formation, and business development to help position the company for future growth and investment.

The company was founded on research conducted within the UCD School of Chemical and Bioprocess Engineering. Academic founder Dr Ioscani Jiménez Del Val led the underlying research and Enterprise Ireland Commercialisation Fund project that resulted in the spin-out. UCD licensed the core intellectual property to the company, retaining an equity stake, and continues to support the commercialisation of the technology. Dr Jiménez Del Val also serves as Chief Scientific Officer of Glyvantis Bio.

Since its formation, Glyvantis Bio has rapidly engaged prospective customers across Europe and the United States and is working with leading contract development and manufacturing organisations (CDMOs) and biopharmaceutical companies to develop a next generation product pipeline. The company has also established an industry-leading scientific advisory board, reinforcing its position within the global biotech sector.

Glyvantis Bio continues to work closely with Enterprise Ireland and aims to achieve High Potential Start-Up (HPSU) status. The company plans to expand across key international markets including Europe, North America, and China while continuing to build its intellectual property portfolio and commercial partnerships.

> **"Working with UCD and Enterprise Ireland was an exceptionally smooth experience. They balance rigorous commercialisation standards with a genuine willingness to listen to the company's goals and provide pragmatic support, a collaborative approach that directly influenced how we built the business from the ground up."**
>
> Gertjan Bartlema, CEO, Glyvantis Bio

CergenX: AI-Powered Newborn Brain Assessment Device from University College Cork Research

CergenX is a University College Cork (UCC) spin-out company developing an AI-powered newborn brain assessment device called Wave, which analyses EEG data to identify newborns at risk of brain injury. The technology originated from decades of research conducted by Professor Geraldine Boylan and the INFANT Research Centre at UCC, including the development of the extensive NEObase neonatal EEG database. Established as a UCC spin-out in 2021, CergenX was founded by Professor Boylan, Jason Mowles, and Sean Griffin with the vision of making newborn brain assessment a standard part of clinical care worldwide.

The company's innovation combines artificial intelligence with one of the world's largest collections of anonymised neonatal EEG recordings to enable rapid brain health assessment by non-specialist healthcare professionals. UCC Innovation played a crucial role in commercialising the technology, supporting intellectual property evaluation, licensing negotiations, company formation, shareholder agreements, and governance arrangements. An exclusive licence for the NEObase database rights and related technologies provided the foundation for product development and commercial growth.

Professor Geraldine Boylan, Founder and Director of the INFANT Research Centre, led the research that underpins the technology and continues to serve as Chief Scientific Officer of CergenX. UCC retains an equity stake in the company and remains actively engaged through intellectual property management and collaborative initiatives. CergenX also leads a €6.7 million Disruptive Technologies Innovation Fund (DTIF) consortium including UCC, to further advance the Wave platform.

Since its formation, CergenX has raised in excess of €6 million in equity investment, secured Enterprise Ireland High Potential Start-Up (HPSU) status, and grown to a team of 16 employees. The company achieved several significant milestones in 2025, including FDA Breakthrough Device Designation and acceptance into the FDA Total Product Lifecycle Advisory Program (TAP). In addition CergenX made significant progress towards CE marking under the EU Medical Device Regulation (MDR). CergenX has also received multiple awards, including UCC Spin-out Company of the Year and Digital Innovation of the Year at the Irish Medtech Awards.

CergenX continues to work closely with UCC as it advances regulatory approval and prepares for commercial launch of the Wave device. The company is focused on expanding into international healthcare markets, particularly the United States, where recent FDA milestones provide a strong pathway toward market entry and adoption.

> **"The licence negotiated with UCC Innovation gives us access to one of the world's largest database of fully anonymised neonatal EEG recordings. This data bank is key to our algorithm development programme. We are using AI to identify infants most at risk of brain injury to allow hospitals to refer these infants for further testing and treatment. Receiving the Breakthrough Device Designation and being accepted into the TAP programme are significant milestones for CergenX, validating both the clinical need for our technology and its potential to improve neonatal care."**
>
> Jason Mowles, CEO, CergenX

Visuality: Transforming STEM Learning Through AI-Powered Assessment

Visuality Limited is an EdTech spin-out commercialising UniDoodle, an AI-powered assessment platform that provides real-time grading and feedback on freehand mathematics and STEM answers. Developed to improve teaching and learning outcomes, the technology helps students identify mistakes immediately while reducing assessment workloads for educators. The company emerged from Enterprise Ireland Commercialisation Fund projects undertaken jointly by Maynooth University (MU) and University College Dublin (UCD) and was formally recognised as a university spin-out in 2025.

UniDoodle combines artificial intelligence with digital assessment tools to support both second-level and third-level education. The platform provides instant feedback on handwritten STEM responses, helping students improve understanding while saving valuable time for teachers and lecturers. The company licensed commercialisation rights to technologies developed through Enterprise Ireland-funded research projects at MU and UCD. MaynoothWorks played a central role in supporting the commercialisation journey, facilitating funding, licensing arrangements, partner engagement, and the transition from research to market, in collaboration with NovaUCD.

The technology originated from research led by Dr. Seamus McLoone in the Department of Engineering at Maynooth University. The research was initially undertaken to support better teaching and learning experiences and subsequently progressed through Enterprise Ireland Commercialisation Fund projects. Dr. McLoone continues to support the company as an informal consultant and user of the technology in educational settings.

Since its formation, Visuality has secured Pre-Seed Start Fund (PSSF) investment, expanded its team, and established itself within Ireland's innovation ecosystem as a NovaUCD incubator client. The company has also gained international visibility, securing a speaking opportunity at BETT UK 2026, one of the world's leading education technology events. UniDoodle is already helping educators across Ireland and the UK improve learning outcomes while reducing grading workloads.

Visuality is continuing its growth trajectory with the ambition of achieving Enterprise Ireland High Potential Start-Up (HPSU) status. The company is actively developing new product features and exploring future collaborations with academic partners to further enhance its AI-driven educational technology offerings.

> **"UniDoodle is saving hours of teachers and university lecturers across Ireland and the UK while also improving learning outcomes. The technology and the commercial innovation for UniDoodle came from the hard work of Seamus McLoone and funded by Enterprise Ireland. MaynoothWorks facilitated the smooth transition from research to start-up and beyond."**
>
> Denise O'Grady, Founder, Visuality Limited

Phyxiom: From Royal College of Surgeons in Ireland Research to Digital Respiratory Health Innovation

Phyxiom is a Royal College of Surgeons in Ireland (RCSI) spin-out company improving outcomes for asthma and COPD patients through a patented digital analytics platform that provides clinicians with real time, data driven diagnostic and treatment support. The company is built on more than a decade of clinical research led by Professor Richard Costello at RCSI and Beaumont Hospital. Following support from an Enterprise Ireland Commercialisation Fund project between 2020 and 2022, Phyxiom became an RCSI spin-out in 2022, achieved Enterprise Ireland High Potential Start-Up (HPSU) status in 2024, and secured a €2 million seed investment round in 2025.

Phyxiom commercialises a portfolio of patented digital respiratory health technologies and know-how developed at RCSI. Its platform enables more precise diagnosis and management of respiratory diseases through advanced data analytics and clinical decision support tools. RCSI's Innovation Team played a central role throughout the commercialisation journey, supporting intellectual property protection, commercial validation, funding applications, company formation, investor engagement, licensing negotiations, and business development activities.

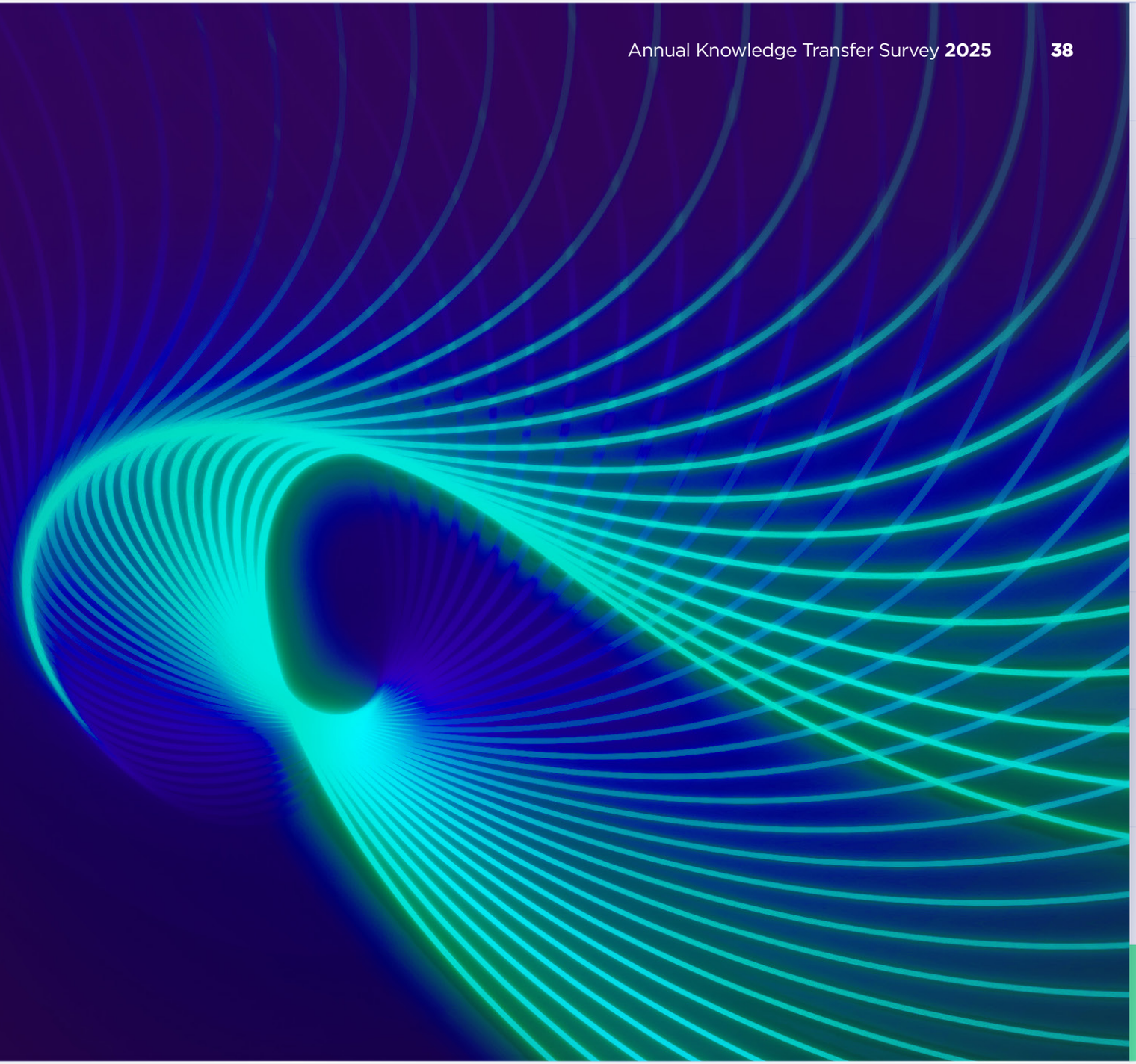
The technology originated from research led by Professor Richard Costello, Professor of Respiratory Medicine at RCSI. As Academic Founder and Chief Medical Officer of Phyxiom, Professor Costello remains actively involved in the company's scientific and clinical direction. RCSI continues to support the company through intellectual property management, investor introductions, patent filings, industry events, and entrepreneurship programmes.

Since its formation, Phyxiom has established its headquarters in Dublin, secured Enterprise Ireland HPSU status, raised €2 million in seed funding, signed a service contract with the HSE, and built a growing team of employees. The company has successfully transitioned patented academic research into a market ready healthcare solution with the potential to improve respiratory care at scale.

Phyxiom is pursuing a Series A investment round targeted for 2027 and plans to expand into the UK and US markets. Longer term, the company is exploring opportunities in additional international markets including China and Japan. RCSI continues to work with the company through ongoing IP management and innovation support activities.

> **"Our relationship with RCSI has been fundamental to Phyxiom's success, through providing the supports needed to successfully spin-out, raise investment and bring our evidence based respiratory platform to market. The RCSI Office of Research and Innovation was instrumental in shaping that journey, guiding us through IP strategy, commercial pathways, and funding mechanisms, and ultimately enabling us to convert years of clinical research into a high potential spin-out with global ambition."**
>
> Grace O'Donnell, CEO, Phyxiom

Appendices



Appendix 1 - Summary data by RPO

Selected data relating to the returns made by the 20 RPOs are presented in tables A1-C2.

A1: Research Expenditure, research agreements and consultancy with Industry 2025: Universities

RPO	Research expenditure (less block grant) in the reference year (€)	Research Expenditure derived from Industry	Number of Collaborative Research Agreements with Industry	Number of Innovation Vouchers with Industry	Number of Consultancy Agreements with Industry	Total Number of Collaboration, innovation voucher and consultancy services agreements with industry
Universities						
Dublin City University	47,422,358	1,968,028	22	17	1	40
Maynooth University	57,790,814	710,827	2	23	4	29
Royal College of Surgeons Ireland	37,687,402	3,316,491	38	2	5	45
Trinity College Dublin	138,773,276	7,077,437	65	28	1	94
University College Cork	143,973,354	11,517,868	91	3	14	108
University College Dublin	136,547,603	4,232,976	100	17	15	132
University of Galway	98,101,117	5,886,067	45	5	-	50
University of Limerick	47,761,398	7,450,778	36	7	4	47
Total	**708,057,322**	**42,160,472**	**399**	**102**	**44**	**545**

A2: Research Expenditure, research agreements and consultancy with Industry 2025: Technological Universities & Institutes of Technology and College & State Research Organisations

RPO	Research expenditure (less block grant) in the reference year (€)	Research Expenditure derived from Industry	Number of Collaborative Research Agreements with Industry	Number of Innovation Vouchers with Industry	Number of Consultancy Agreements with Industry	Total Number of Collaboration, innovation voucher and consultancy services agreements with industry
Technological University/Institutes of Technology						
Atlantic Technological University (ATU)	27,145,904	2,171,672	105	30	68	203
Munster Technological University (MTU)	30,490,122	2,134,309	33	73	73	179
South East Technological University (SETU)	30,754,298	1,771,448	8	71	280	359
Technological University of the Shannon (TUS)	24,240,194	969,608	15	44	216	275
TU-Dublin	36,133,486	578,136	10	18	62	90
Dún Laoghaire Institute of Art, Design and Technology	3,359,115	-	-	12	-	12
Dundalk Institute of Technology	6,785,000	18,998	8	19	3	30
Total	**158,908,119**	**7,644,170**	**179**	**267**	**702**	**1,148**
College & State Research Organisations						
Irish Manufacturing Research	15,091,457	241,463	7	15	23	45
Marine Institute	10,935,000	-	-	-	-	-
National College of Art and Design	267,740	88,354	8	6	10	24
National College of Ireland	179,101	143,281	-	4	-	4
Teagasc	59,925,000	7,790,250	25	8	53	86
Total	**86,398,298**	**8,263,348**	**40**	**33**	**86**	**159**
Grand Total	**953,363,738**	**58,067,990**	**618**	**402**	**832**	**1,852**

A3: Research Expenditure, research agreements and consultancy with non-commercial entities 2025: Universities

RPO	Research expenditure (less block grant) in the reference year (€)	Research expenditure derived from non-commercial entities	Number of collaborative research agreements with non-commercial entities	Number of consultancy services agreements with non-commercial entities	Total number of collaboration and consultancy services agreements with non-commercial entities
Universities					
Dublin City University	47,422,358	6,544,285	-	35	35
Maynooth University	57,790,814	-	6	20	26
Royal College of Surgeons Ireland	37,687,402	5,163,174	13	1	14
Trinity College Dublin	138,773,276	4,440,745	100	13	113
University College Cork	143,973,354	7,198,668	80	14	94
University College Dublin	136,547,603	11,592,891	72	19	91
University of Galway	98,101,117	12,753,145	1	-	1
University of Limerick	47,761,398	3,916,435	6	2	8
Total	**708,057,322**	**51,609,343**	**278**	**104**	**382**

A4: Research Expenditure, research agreements and consultancy with non-commercial entities 2025: Technological Universities & Institutes of Technology and College & State Research Organisations

RPO	Research expenditure (less block grant) in the reference year (€)	Research expenditure derived from non-commercial entities	Number of collaborative research agreements with non-commercial entities	Number of consultancy services agreements with non-commercial entities	Total number of collaboration and consultancy services agreements with non-commercial entities
Technological University/Institutes of Technology					
Atlantic Technological University (ATU)	27,145,904	325,751	14	7	21
Munster Technological University (MTU)	30,490,122	-	11	49	60
South East Technological University (SETU)	30,754,298	307,543	2	-	2
Technological University of the Shannon (TUS)	24,240,194	242,402	1	15	16
TU-Dublin	36,133,486	-	1	2	3
Dún Laoghaire Institute of Art, Design and Technology	3,359,115	-	1	-	1
Dundalk Institute of Technology	6,785,000	-	1	-	1
Total	**158,908,119**	**875,696**	**31**	**73**	**104**
College & State Research Organisations					
Irish Manufacturing Research	15,091,457	-	-	-	-
Marine Institute	10,935,000	-	-	-	-
National College of Art and Design	267,740	8,032	19	28	47
National College of Ireland	179,101	-	1	-	1
Teagasc	59,925,000	5,393,250	-	7	7
Total	**86,398,298**	**5,401,282**	**20**	**35**	**55**
Grand Total	**953,363,738**	**57,886,321**	**329**	**212**	**541**

B1: IP and IP Transactions 2025: Universities

RPO	Total number of invention/ software disclosures received during the year	Total number of new patent applications filed during the year	Previously filed priority patent applications filed progressed to PCT in year	Total number of patents granted in year	Total number of patent families owned by the RPO at year end	Total number of licences, options and assignments executed (LOAs)	Market launches of products or services in year based on RPO licence
Universities							
Dublin City University	31	5	1	5	48	13	2
Maynooth University	8	3	-	3	21	2	-
Royal College of Surgeons Ireland	15	4	3	2	36	9	2
Trinity College Dublin	57	27	10	51	165	31	4
University College Cork	67	21	8	9	93	48	3
University College Dublin	88	17	10	19	150	31	3
University of Galway	43	8	3	5	94	16	2
University of Limerick	39	4	3	17	67	16	2
Total	**348**	**89**	**38**	**111**	**674**	**166**	**18**

B2: IP and IP Transactions 2025: Technological Universities & Institutes of Technology and College & State Research Organisations

RPO	Total number of invention/ software disclosures received during the year	Total number of new patent applications filed during the year	Previously filed priority patent applications filed progressed to PCT in year	Total number of patents granted in year	Total number of patent families owned by the RPO at year end	Total number of licences, options and assignments executed (LOAs)	Market launches of products or services in year based on RPO licence
Technological University/Institutes of Technology							
Atlantic Technological University (ATU)	14	3	-	2	4	8	-
Munster Technological University (MTU)	19	5	2	-	13	12	-
South East Technological University (SETU)	39	8	1	3	13	7	-
Technological University of the Shannon (TUS)	12	-	-	1	-	9	-
TU-Dublin	45	9	2	2	38	12	-
Dún Laoghaire Institute of Art, Design and Technology	10	-	-	-	-	-	-
Dundalk Institute of Technology	4	-	-	-	1	2	-
Total	**143**	**25**	**5**	**8**	**69**	**50**	**-**
College & State Research Organisations							
Irish Manufacturing Research	3	-	-	-	-	6	-
Marine Institute	-	-	-	-	-	-	-
National College of Art and Design	-	-	1	-	1	1	-
National College of Ireland	9	-	-	-	-	-	-
Teagasc	25	4	3	2	30	40	2
Total	**37**	**4**	**4**	**2**	**31**	**47**	**2**
Grand Total	**528**	**118**	**47**	**121**	**774**	**263**	**20**

C1: Spin-out companies, start-ups and use of facilities 2025: Universities

RPO	Number of spin-outs established during the year	Number of staff or student start-ups established during the year	Number of active spin-outs in existence at the end of the year	Number of spin-outs merged or acquired during the year	Number of contracts with companies for use of facilities and equipment at the RPO
Universities					
Dublin City University	4	0	13	0	14
Maynooth University	1	0	5	0	4
Royal College of Surgeons Ireland	0	0	4	0	0
Trinity College Dublin	3	0	42	1	11
University College Cork	3	14	23	0	0
University College Dublin	5	1	25	0	0
University of Galway	2	0	28	0	0
University of Limerick	1	0	15	0	190
Total	**19**	**15**	**155**	**1**	**219**

C2: Spin-out companies, start-ups and use of facilities 2025: Technological Universities & Institutes of Technology and College & State Research Organisations

RPO	Number of spin-outs established during the year	Number of staff or student start-ups established during the year	Number of active spin-outs in existence at the end of the year	Number of spin-outs merged or acquired during the year	Number of contracts with companies for use of facilities and equipment at the RPO
Technological University/Institutes of Technology					
Atlantic Technological University (ATU)	0	1	0	0	69
Munster Technological University (MTU)	1	4	3	0	6
South East Technological University (SETU)	0	0	7	0	0
Technological University of the Shannon (TUS)	0	0	0	0	88
TU-Dublin	2	0	8	0	4
Dún Laoghaire Institute of Art, Design and Technology	0	0	0	0	3
Dundalk Institute of Technology	0	0	1	0	0
Total	**3**	**5**	**19**	**0**	**170**
College & State Research Organisations					
Irish Manufacturing Research	0	0	0	0	0
Marine Institute	0	0	0	0	2
National College of Art and Design	0	0	0	0	0
National College of Ireland	0	0	1	0	0
Teagasc	0	0	3	0	58
Total	**0**	**0**	**4**	**0**	**60**
Grand Total	**22**	**20**	**178**	**1**	**449**

Appendix 2 - List of Ireland's Research Performing Organisations

Reporting sector	Institution	Year of foundation of TTO
University		
	Dublin City University	2007
	Maynooth University	2005
	University of Galway	2005
	Royal College of Surgeons in Ireland	2007
	Trinity College Dublin	1987
	University College Cork	1982
	University College Dublin	2003
	University of Limerick	2005
Technological University/Institutes of Technology		
	Technological University Dublin	2000
	Technological University of the Shannon	2008
	Munster Technological University	2009
	Atlantic Technological University	2024
	South East Technological University	2008
	Dundalk Institute of Technology	2012
	Dún Laoghaire Institute of Art, Design and Technology	2012
Colleges and State Research Organisations		
	Irish Manufacturing Research (IMR)	N/A
	National College of Art and Design	2013
	National College of Ireland	2011
	Marine Institute	N/A
	Teagasc	2011

Appendix 3 - Ireland's Internationally Recognised Technology Transfer Professionals

	Name	Institution/Organisation
2012	Mr Tom Flanagan	Independent Consultant ex. University College Dublin
2015	Dr Andrew Marsh	IBM ex. TU-Dublin
2015	Dr Anthony Morrissey	University College Cork
2015	Dr Carolyn Hughes	I-Form ex. Dublin City University
2015	Dr David Corkery	University College Cork
2015	Dr Emily Vereker	The National Office for Research Ethics Committees ex. Trinity College Dublin
2015	Dr Ena Walsh	University College Dublin
2015	Dr Gordon Elliott	Trinity College Dublin
2015	Dr Graham McMullin	Trinity College Dublin
2015	Dr Jacinta Thornton	University of Galway
2015	Dr James O'Sullivan	South East Technological University
2015	Dr Karl Quinn	Lifebit ex. University College Dublin
2015	Dr Paul Tyndall	Maynooth University
2015	Dr Peter Olwell	Dublin City University
2015	Mr Kevin Dalton	University College Cork
2015	Mr Patrick O'Boyle	Dublin City University
2015	Mr Paul Dillon	University of Limerick
2015	Mr Richard Stokes	Independent Consultant ex. Dublin City University
2015	Mr Ronan Coleman	Munster Technological University
2015	Ms Emma O'Neill	Trinity College Dublin
2016	Dr Aoife Gallagher	Royal College of Surgeons in Ireland
2016	Dr Derek John	Royal College of Surgeons in Ireland
2016	Dr Margaret Lawlor	University of Limerick
2016	Dr Miriam Walsh	Teagasc
2016	Dr Seamus Browne	Royal College of Surgeons in Ireland

	Name	Institution/Organisation
2016	Mr Conor Morris	University of Limerick
2016	Mr John Gleeson	CONFIRM ex University of Limerick
2016	Mr Kieran O'Connell	Technological University - Dublin
2016	Mr Neil McLoughlin	Dundalk Institute of Technology
2016	Mr Peter Conlon	Maynooth University
2016	Ms Breda Lynch	Technological University of the Shannon
2017	Dr Kieran Ryan	Atlantic Technological University
2017	Dr Paul Maguire	Technological University - Dublin
2017	Dr Siobhan Mac Sweeney	Munster Technological University
2017	Dr Stacey Kelly	University College Dublin
2018	Dr Joan O'Sullivan	University of Limerick
2019	Mr Aidan Browne	Dundalk Institute of Technology
2019	Mr Brian Ogilvie	South East Technological University
2019	Mr Ian Gallivan	University of Galway
2020	Dr Samantha Williams	Trinity College Dublin
2020	Dr Stephen Donoghue	University College Dublin
2020	Mr David Gardiner	Technological University - Dublin
2020	Mr Vincent Coole	Trinity College Dublin
2020	Ms Josette O'Mullane	Munster Technological University
2021	Mr Brian Callaghy	Trinity College Dublin
2021	Mr Michael Lonergan	Technological University of the Shannon
2024	Dr Sally Cudmore	University College Cork
2024	Ms Emer O'Shea	University College Cork
2025	Karen McCarthy	University College Cork
2025	Rachel O'Leary	University College Cork
2025	Ian Gallivan	University of Galway

Appendix 4 - Glossary

Active Spin-out: An Active Spin-out is an RPO-created spin-out company that is at least three years' post-formation (three years since being reported as an RPO spin-out) and, as at the end of the reference year, has at least one paid employee and has raised equity and/or has booked sales revenue. It is an incorporated entity which at the time of formation was dependent on the exploitation of specific intellectual property rights of the RPO. The RPO will have executed a licence to the spin-out for the IPR and/or will hold equity in the spin-out. (Excludes, Start-ups, companies to whom your RPO licensed IP but where the academic founder(s) were based at another RPO – this will prevent double counting. Spin-out companies that have been acquired by or merged with another company).

Assignment: Contract transferring ownership of right in IP to a third party.

Collaborative Research with industry: A research project/programme between an industry party and an RPO. The project/programme may be: wholly-funded by the industry party or; part-funded by the industry party (in cash and/or in kind, including participation in the research itself) and part-funded by the State or other external sources. Collaborative research may involve two or more parties.

Characteristics of collaborative research with industry: The purpose of collaborative research is the generation of new knowledge. Typically, there will be an expectation of publication although the project may be governed by aspects of confidentiality. Intellectual property may be created and how the company benefits will be determined in the collaboration agreement and will depend on the contribution to the project made by the company. (Includes Collaborative Research agreements with industry wholly-funded by industry, Collaborative Research agreements with industry part-funded by industry, Innovation Partnerships) and (Excludes, Consultancy Services, Academic collaboration, Research Grants, Collaborative Research with non-commercial entities, Innovation Vouchers, Cases where a company funds a research chair).

Collaborative Research (with non-commercial entities): A research project/programme between non-commercial entities and an RPO. The project/programme may be: wholly-funded by the non-commercial entity or; part-funded by the non-commercial entity (in cash and/or in kind, including participation in the research itself) and part-funded by the State or other external sources. Collaborative research may involve two or more parties.

Characteristics of collaborative research with non-commercial entities: The purpose of collaborative research is the generation of new knowledge. Typically, there will be an expectation of publication although the project may be governed by aspects of confidentiality. Intellectual property may be created and how the non-commercial entity benefits will be determined in the collaboration agreement. (Includes, Collaborative Research agreements with non-commercial entity wholly-funded by non-commercial entity, Collaborative Research agreements with non-commercial entity part-funded by non-commercial entity, Innovation Partnerships.) and (Excludes, Collaborative Research with Industry, Consultancy Services, Academic collaboration, Innovation Vouchers, Cases where a company funds a research chair).

Consultancy Services: RPO provides professional-level work to an external client organisation through an academic, researcher or other member of RPO staff in exchange for a commercial fee. The work is specified (or agreed) by the client against deliverables agreed with the RPO.

Characteristics of consultancy services: The purpose of consultancy is not typically the generation of new knowledge, rather it draws on existing knowledge. There will usually be no expectation of publication, results will be confidential and will be transferred to the client. The type of work might typically involve one or more of the following: advice; analysis; production of a report. Projects will generally be of a short term. (Includes, Consultancy agreements, "Contract services" or Research Services agreements, Projects contracted under a work order) and (Excludes, Collaborative research (wholly- or part- funded by industry), Innovation Vouchers, Academic collaboration, Research Grants, Training and provision of Continuing Professional Development (CPD).

EI ID No: This is the reference number generated on submission of KT Boost Metrics for Spin-outs, Active Spin-outs, start-ups etc.

Equity: Shareholding in a legal entity.

FTE: Full Time Equivalents - People working part-time are only included for the fraction that they are employed.

Gross Licence Revenue: Total Revenue from all types of know-how and IP (e.g. patents, copyright, software, designs, materials etc.) achieved through LOA before disbursement to the inventor or other parties.

Innovation Vouchers: Innovation Vouchers worth €10,000 are available to assist a company or companies to explore a business opportunity or problem with a registered knowledge provider (i.e. higher education institutes, public research bodies).

Invention Disclosure: The "invention" disclosure is the first actual recording of potential new intellectual property (IP). The researcher/ inventor and TTO/ Innovation office will complete an Invention Disclosure Form (IDF) which is a written, signed and dated record. The IDF contains basic information, including supporting data, which helps to evaluate and subsequently, potentially protect and commercialise the intellectual property. For avoidance of doubt, the IP may be software which, in some situations may be disclosed under a Software Disclosure Form (SDF).

Innovation Office: the team responsible for managing KT services, including intellectual property management, licensing, partnering with industry and the creation of new companies. Also referred to as TTO.

Joint Invention Disclosure: Simultaneous reporting of an Invention Disclosure for the same invention or software to more than one RPO that has been created jointly by more than one RPO via the TTO/ Innovation office.

KT: Knowledge Transfer – the sharing of expertise, capability, technology and intellectual property between the research base and industry or the public sector with the aim of developing new or improved products, processes and services that deliver societal and economic benefit.

Large Company: A company which is based in one country only and which has more than 250 employees and has either an annual turnover greater than €50M or an annual Balance Sheet total greater than €43M. (Excludes; companies returned under MNC, SME)

Large Company Irish: A Large Company which is based in Ireland

LOA: Licence, Option or Assignment – these encompass agreements between a public research organisation and one or more commercial or non-commercial undertakings, whereby IP rights are transferred, or are agreed to be transferred, to that undertaking for the purpose of commercialisation. LOA must be for tangible IP i.e. IP already created.

- Licence – a grant of rights for the purpose of commercialisation of IP
- Option – a grant of a time limited right to secure a position in respect of IPR that may or may not lead to a licence depending on development of the IPR and/or evaluation of the technology/IP and/or external circumstances e.g. company tech development, fundraising etc.
- Assignment – a grant of ownership of IPR for the purpose of commercialisation of IP.

MNC: A multi-national corporation that has its facilities and other assets in at least one country other than its home country. Such companies have offices and/or factories in different countries and usually have a centralized head office where they co-ordinate global management. (Excludes, SMEs and Large Companies).

MNC (Irish): An MNC which has its HQ based in Ireland and/or which has a significant R&D presence in Ireland.

Multi-party: A Research collaboration agreement or Consultancy Agreement where there are multiple companies/non-commercial entities involved. The 'Company Type' Table will allow for this data to be captured.

NERF: Non-Exclusive Royalty-Free (NERF) Licence Agreement

Non-commercial entity (NCE): Public sector organisation, charity or other (excluding government funding agencies and EU).

PCT: Patent Cooperation Treaty – the Treaty makes it possible to seek patent protection for an invention simultaneously in a large number of countries by filing an "international" patent application.

Priority Filing: The first filing of a patent application which will establish a priority date from which all national patents will derive. Depending on patent strategy the priority filing may be done as a provisional application or national patent application or regional or international (PCT) patent application.

Reference Year: The twelve-month reporting period from 1st January to 31st December 2024.

Repeat Business: Number of companies with whom the RPO has executed collaborative research or consultancy services agreements or LOAs in the reference year that represent repeat business i.e. with whom RPO has entered into a commercial transaction on at least one other occasion in the past 3 years. By default, previous commercial transaction will exclude engagements such as giving talks, lecturing, sitting on advisory groups etc.

Research Grant: An academic grant not involving industry. An award to an RPO by a research funding agency (e.g. government agency, charity) to perform a programme of research with the intention of disseminating the research results and in which an industry party is not involved. Typical research funders may include; SFI, ERC, Welcome Trust etc.

Research Services: Research services typically provided using RPO equipment or laboratories.

Revenue: The amount of money that the RPO actually received during the reference year which may also be considered as the "top line" or "gross income".

RPO: Research Performing Organisations. Universities, Technological Universities, Institutes of Technology and other research institutions funded primarily by public funds.

SME: Has less than 250 employees and has either an annual turnover not exceeding €50M or an annual Balance Sheet total not exceeding €43M.

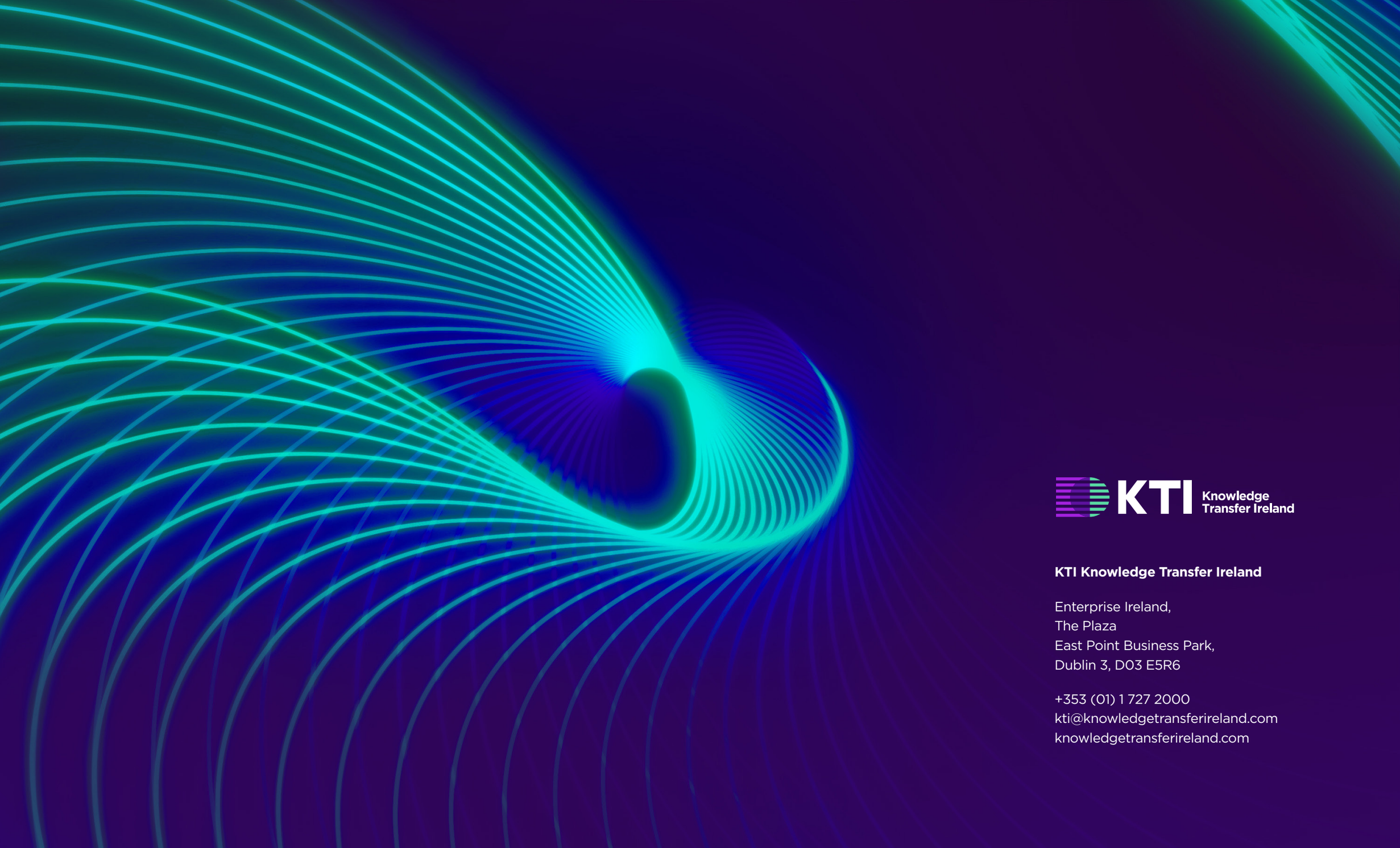
SME (Irish): SME which has its head office in Ireland.

Sole Invention Disclosure: An Invention Disclosure for an invention or software created by one RPO and reported to that RPO via the TTO/ Innovation office.

Registered Spin-out: A registered spin-out company is an incorporated entity which at the time of formation was dependent on the exploitation of specific intellectual property rights of the RPO. The rights to the company can be linked to a specific researcher who was within the RPO at the time of company formation and who would be considered an academic founder. The RPO will hold equity in the spin-out and/or has issued the company with a licence to the IP. (Excludes, start-up companies).

Start-up: Company formed by staff or students from the RPO not based on knowledge or IP generated by the RPO and where there is no formal IP licence or equity share with the RPO. (Excludes, spin-out companies).

TTO: Technology Transfer Office – the team responsible for managing KT services, including intellectual property management, licensing, partnering with industry and the creation of new companies.



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