COUNTRY REPORTS



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QUESTIONS POSED:

1. **What are the policies and best practices implemented in your country to maximize the societal impact of knowledge and technology transfer?**

2. **What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?**

AUSTRALASIA (KCA)

Peter Kambouris

Knowledge Commercialisation Australasia (KCA) is the peak body for knowledge exchange, research translation and technology transfer professionals across Australia and New Zealand. KCA represents more than 760 practitioners across 98 organisations and is a founding member of the Alliance of Technology Transfer Professionals (ATTP).

For this report, Australia's position is presented separately, with KiwiNet addressing New Zealand's perspective independently.

Australia's policies, programs, and institutional practices have changed, with weakening translational funding mechanisms, industry collaboration programs, and startup and commercialisation initiatives. Specifically, the underlying intent is

- The shift from research excellence to research impact
- The recognition of technology transfer as a national capability
- Stronger industry engagement and translation pathways
- Evidence-based measurement of outcomes

These themes increasingly shape how Australia approaches knowledge and technology transfer across government, universities and publicly funded research organisations, but ambition still outpaces delivery.

What are the policies and best practices implemented in your country to maximize the societal impact of knowledge and technology transfer?

From Research Excellence to Research Impact

Australia's innovation policy has shifted from measuring research outputs towards measuring research impact. While the nation performs strongly on research quality and scientific capability, policymakers and institutions increasingly recognise that excellence alone does not guarantee societal benefit. Research translation, adoption and impact are now central objectives of the national innovation system.

Yet the shift from outputs to impact has outpaced the funding architecture needed to sustain it. Rhetoric about impact has run ahead of the dedicated, sustained resourcing

required to deliver it, leaving a system that measures impact aspirationally but funds it inconsistently and institutions to absorb translation costs from already-strained operating budgets.

Technology Transfer as National Capability

A distinguishing feature of Australia's evolving approach is the growing recognition that impact depends on specialised translation capability. Technology transfer professionals, industry engagement teams, and innovation intermediaries bridge research and its eventual users in industry, government, and society. They identify opportunities, build partnerships, manage intellectual property, and navigate the pathway from discovery to adoption. Recent policy discussions have emphasised that successful research translation requires investment not only in research itself, but in the people, systems and expertise that move discoveries into practical application.

That recognition has not, however, been matched by commensurate investment in the people who deliver it. Technology transfer offices are typically funded directly by the institution rather than through a dedicated national or regional program. Moreover, knowledge exchange professionals are often funded through short-term contracts rather than stable institutional budgets. This creates a fragile capability that is difficult to scale and vulnerable to funding cycles. Australia has yet to establish a dedicated, national funding mechanism for translation capability itself; the very infrastructure policy now describes as essential.

Industry Engagement and Translation Pathways

Australia has increasingly emphasised earlier and deeper collaboration between researchers and end users, through co-design, industry partnerships, translational funding, proof-ofconcept activities, customer discovery and entrepreneurial support.

But the incentives to pursue early engagement remain weak. Researchers are still evaluated primarily on publications and grant income, and the career rewards for industry engagement and commercialisation lag far behind academic prestige metrics. Translation also places disproportionate demands on small and medium enterprises. They simply don't have the time, capital, and in-house technical capacity needed to engage with research institutions and absorb their outputs. This creates a "missing middle" between proof-of-concept and scale-up that no single program adequately bridges.

The Gap Between Ambition and Delivery

KCA's SCOPR® (Survey of Commercialisation Outcomes from Public Research), Australia's national longitudinal dataset on commercialisation and knowledge transfer outcomes, makes this gap visible. It shows steady activity against the metrics that are easy to count: licences, spinouts, industry engagement. What it does not yet show is accountability; strong commercialisation data has not translated into binding, sustained capability funding the sector says it needs.

Australia's policy settings now articulate the right ambitions: impact over outputs, translation as capability, early engagement, evidence-based measurement. The persistent gap is delivery: funding for translation remains fragmented, short-term and unevenly

distributed; institutional incentives still favour academic prestige over societal application; and the commercialisation pipeline continues to leak at the scale-up stage.

What are the practices in your country for professionalising knowledge and technology transfer talent beyond on-the-job or one-off training?

Knowledge and technology transfer is increasingly recognised as a specialised field of practice that requires recognised capabilities, structured development pathways, ongoing professional learning, and clear career progression.

A defining feature of the Australian landscape is the diversity of operating models across organisations. Some technology transfer offices focus primarily on intellectual property management, licensing and commercial transactions, while others operate across the broader research translation continuum, encompassing industry engagement, venture creation, investment readiness, entrepreneurship, impact delivery and ecosystem development. As a result, practitioners require a wide range of capabilities.

KCA has explored a range of accreditation and capability development models, including those offered by LES, CLP and ARMS. While these provide valuable capability development opportunities, they focus mostly on legal frameworks rather than overall pragmatic dealmaking. KCA supports the RTTP framework as a broader competency-based approach that better reflects the multidisciplinary nature of modern knowledge and technology transfer. KCA also supports ongoing efforts to expand RTTP to ensure it encompasses the valorisation spectrum, not only the commercialisation end point.

Because of its volunteer base, KCA has found it challenging to maintain a sustainable training model and is actively exploring partnerships with international technology transfer associations and specialist providers to co-develop, adapt or license proven capability-building content. This approach seeks to leverage global leading practice, minimise duplication and ensure professional development remains cost-effective and accessible to practitioners across the sector.

Professional development increasingly occurs through continuous learning pathways rather than isolated training events. Mentoring programs, communities of practice, conferences, special interest groups and peer-learning networks all play an important role in capability development. Australia's relatively small but highly connected KTT community has fostered a strong culture of collaboration, enabling practitioners to share experience, exchange leading practices and collectively address emerging challenges.

An emerging theme across the sector is the recognition that technology transfer capability should itself be viewed as innovation infrastructure. Increasingly, successful research translation is seen as depending not only on research funding and investment capital, but also on the skilled practitioners who connect discovery with adoption and impact. Consequently, capability development is increasingly linked to broader national objectives including productivity growth, sovereign capability, industrial transformation and international competitiveness.

BELGIUM

Bram Verbinnen

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

In Flanders, knowledge and technology transfer is embedded in a strong regional innovation policy that combines structural funding for university technology transfer, targeted valorisation instruments and close university–industry collaboration. A distinctive instrument is the Industrial Research Fund (IOF), which provides universities with structural resources to develop promising research towards societal and economic application, complemented by VLAIO (Flanders innovation & entrepreneurship) programmes such as Baekeland and Innovation Mandates, TETRA and COOCK, which bridge different stages between research and implementation. The five Flemish universities operate professional TTOs and cooperate through TTO Flanders/VLIR, including common principles for socially responsible licensing. Importantly, impact is understood increasingly broadly: beyond patents, licences and spin-offs, the Flemish approach promotes long-term industry partnerships, entrepreneurship, researcher mobility, knowledge dissemination and contributions to societal challenges, while maintaining a strong focus on creating economic and societal value in Flanders.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Professionalisation of technology-transfer professionals in Flanders is primarily organised through institutional TTO career paths combined with strong inter-university learning and networking, rather than through a single national certification programme. The five university TTOs cooperate within TTO Flanders and the VLIR TTO network, where professionals systematically exchange practices and expertise on IP management, licensing, spin-off creation, industry collaboration, funding and TTO governance; this cooperation also increasingly includes exchanges with other Belgian and international TTO networks. Universities complement this with specialised external training, conferences, peer learning, mentoring and participation in European and international knowledge-transfer networks. At the same time, Flanders is increasingly investing in the broader professionalisation and mobility of research talent, for example through inter-university initiatives involving all five Flemish universities that expose PhD candidates and postdocs to industry and non-academic careers. A remaining opportunity is to develop this further into a more structured Flemish competency and career-development framework for knowledge-transfer professionals, with defined competency levels, recurring advanced training, mobility between TTOs and industry, and recognised professional development pathways.

BRAZIL

Elizabeth Ritter and Shirley Coutinho

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Brazil has developed a comprehensive legal and institutional framework to promote the societal and economic impact of knowledge and technology transfer. The main foundation is the Brazilian Innovation Law of 2004, strengthened by Constitutional Amendment No. 85 and by the 2016 Legal Framework for Science, Technology and Innovation. This framework recognizes science, technology and innovation as strategic for social and economic development, encourages public–private collaboration and seeks to reduce regional inequalities.

One of its most important features is the requirement that public research institutions establish an institutional innovation policy and have access to a Technology Innovation Office, known in Brazil as a NIT. These offices are responsible not only for IP protection, but also for technology prospecting, commercialization strategies, industry engagement and the negotiation and management of technology-transfer agreements. Institutional policies must also address entrepreneurship, extension services, the sharing of laboratories and infrastructure, human-resource development and partnerships with companies and independent inventors.

In practice, societal impact is pursued through multiple pathways: licensing, collaborative R&D, research services, the creation of spin-offs, incubation, open laboratories and technology-based entrepreneurship. Brazil also has important demand-driven mechanisms. EMBRAPII, for example, connects accredited research institutions with companies, provides non-reimbursable funding and shares the technological risks of pre-competitive R&D. The Catalisa ICT Program, coordinated by SEBRAE—the Brazilian Micro and Small Business Support Service—helps researchers transform academic research into technology-based businesses or transfer their technologies to existing companies.

A growing best practice is to assess impact more broadly than through patent and licensing numbers alone. Institutions are increasingly considering whether technologies address health, environmental, social and regional needs; whether they reach the market or public services; and whether partnerships generate long-term research and innovation capabilities. Nevertheless, this remains a work in progress. Brazil still needs more consistent impact indicators, stronger technology-maturation funding and greater professional and financial stability for its technology-transfer offices.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Brazil has progressively moved beyond a model based exclusively on learning by doing or attending isolated courses. One of the country's most significant initiatives is PROFNIT, the national Professional Master's Program in Intellectual Property and Technology Transfer for Innovation, created by FORTEC in 2016. Delivered through a nationwide network of

higher-education institutions, PROFNIT combines academic foundations with practice-oriented education and has made an important contribution to the qualification of professionals working in Technology Transfer Offices and other organizations within the Brazilian innovation ecosystem.

The Brazilian Patent and Trademark Office, INPI, also plays a central role through its Academy of Intellectual Property, Innovation and Development, which offers graduate education, structured professional-development courses and distance-learning programs, including initiatives developed in cooperation with WIPO.

FORTEC complements formal education by maintaining a national professional community, promoting annual and regional meetings, thematic courses, exchange of practices and institutional-development programs. A recent example is Acelera NIT Brasil, which combines training, mentoring and practical support to strengthen the capabilities of Technology Innovation Offices at federal universities.

Its recent admission as a member of the Alliance of Technology Transfer Professionals—ATTP—represents an important step toward aligning Brazilian professional development with internationally recognized standards. The first ATTP-recognized FORTEC short courses were delivered during its 2026 Annual Meeting, and further editions are planned for later this year. This affiliation is also expected to encourage Brazilian technology-transfer professionals to pursue recognition as Registered Technology Transfer Professionals—RTTPs.

Brazil, through FORTEC, is also contributing to capacity-building for technology-transfer professionals across the BRICS countries. The first training course has already been delivered, and a second course is scheduled for October and November 2026. This initiative promotes the exchange of experiences, shared professional standards and stronger cooperation among technology-transfer practitioners in emerging economies.

Brazil does not yet have a unified national career structure or mandatory competency-based certification for technology-transfer professionals. The current challenge is therefore to connect graduate education, continuing professional development, practical experience and internationally recognized certification into a coherent and sustainable professional pathway.

Brazil has made significant progress in professional education and communities of practice. FORTEC's affiliation with ATTP now creates an important bridge between national capacity-building and internationally recognized professional standards.

BULGARIA

Kostadin Kostadinov

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT.

Policies and Best Practices to Maximize Societal Impact

Bulgaria maximizes the impact of technology transfer by combining modernized governance, specialized regional infrastructure, and targeted research funding:

- **Legislative Reforms:** The Law on the Promotion of Research and Innovation creates a unified legal environment for IP management, supported by an Innovation & Research Council that coordinates strategy across key ministries (MIDT and MES). The Innovation Strategy for Smart Specialization (IS3) directs public investments toward priority high-impact sectors like ICT, mechatronics, and biotechnology.
- **Specialized Infrastructure:** Pioneer institutions like the GIS-TransferCenter Foundation (operating since 2000 on the German Steinbeis model) provide a decentralized national network of transfer centers focused on practical SME integration. This physical ecosystem is further strengthened by EU-supported Centers of Excellence and Competence, university-based Technology Transfer Offices (TTOs), and regional innovation hubs like Sofia Tech Park.

Funding & Open Science: Financial instruments like the National Innovation Fund (NIF) offer matching grants to encourage business-academic R&D partnerships, while the National Open Science Plan accelerates knowledge diffusion by mandating open access to research data.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Practices for Professionalizing KTT Talent Beyond One-Off Training

Professionalization in Bulgaria has transitioned from informal workshops to structured academic, institutional, and international pathways:

- **National Hub-and-Spokes Model:** Under the EU-funded Program "Research, Innovation and Digitalisation for Smart Transformation" 2021–2027, Sofia Tech Park serves as the direct beneficiary establishing the Central Management Hub for Knowledge and Technology Transfer. This central hub systematically coordinates, supports, and guides decentralized KTT units across universities, research organizations, and Centers of Excellence/Competence nationwide—moving the country from fragmented initiatives to a unified, professional national system.
- **Academic Degrees & Credentials:** Universities provide formal qualification tracks, including Sofia University's WIPO-partnered Master's in IP and Technology Transfer, as well as specialized postgraduate innovation management certificates at Technical University of Sofia and UNWE.

- **Institutional Skill Networks:** Organizations like the GIS-TransferCenter Foundation train cross-functional practitioner teams (engineers, lawyers, economists), while regional platforms like Digital Innovation Hubs (DIHs), Sofia Tech Park's FITT, and the Bulgarian Technology Transfer Network (BgTTN) offer multi-year mentorship and standardized operational toolkits.
- **International Standards & Exchanges:** Bulgarian practitioners build long-term capabilities by completing accreditation requirements for the international RTTP designation, participating in ASTP and TTO Circle masterclasses, and taking part in multi-year Horizon Europe twinning programs and internships with European bodies like the EPO and EUIPO.

CANADA

Steve De Brabandere and Paula Mendonça

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Canada's approach to maximizing the societal impact of knowledge and technology transfer is characterized by multiple pathways. Unlike the United States, with its focus on commercialization under the Bayh-Dole Act, Canada has a more decentralized, multi-stakeholder ecosystem involving government, regional organizations, and academic and research institutions.

The federal government's 2018 Intellectual Property Strategy, led by Innovation, Science and Economic Development Canada, serves as a cornerstone, aiming to ensure that Canadian ideas and IP stay in Canadian hands. At the provincial level, there is growing support to link a portion of institutional base funding to commercialization outcomes.

The ecosystem is reinforced by a network of government-funded regional organizations designed to bridge the gap between research and commercialization. These include Innovate BC in British Columbia, Alberta Innovates, IPON in Ontario, Axelys in Quebec, and Springboard Atlantic in Atlantic Canada, each operating under different models. This federal and provincial coordination helps tailor support to the unique needs of each region. A significant challenge is the fragmentation of IP policies across Canadian universities. The IP Central toolkit launched by the Canadian Intellectual Property Office in 2026 provides a valuable resource for navigating these processes.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Professional standards and continuing education for Canada's knowledge mobilization and technology transfer workforce are supported through a combination of national and international organizations and strong peer networks.

The primary professional body remains AUTM, which provides a framework for Canadian practitioners through conferences, online education, and dedicated Canadian Regional

Meetings tailored to the country's specific policy, legal, and institutional environment. The Canadian Association of Research Administrators (CARA) also offers professional development for the broader research administration ecosystem, and the Intellectual Property Institute of Canada (IPIC) provides specialized education and certification in areas relevant to intellectual property management. Volunteer-led networks like the Canadian Technology Transfer Professionals (CTTP) foster peer-to-peer learning, mentoring, and communities of practice.

International professional designations, such as the Registered Technology Transfer Professional (RTTP) and Certified Licensing Professional (CLP), are available and valued, though they currently have a limited uptake in Canada. In the absence of a single national standard, Canadian professional development continues to thrive on institutional support, experiential learning, and a robust culture of mentorship and collaborative communities of practice.

CHILE

Varinka Farren, Ignacio Merino, and Alvaro Ossa

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

In Chile, over the past decades, a set of policies and instruments has been developed to strengthen the link between research, innovation and society. The system has evolved from a model focused mainly on building R&D capacities and protecting results toward one that seeks to transfer knowledge, generate impact and professionalize the technology transfer function.

a. Legal and public policy framework to strengthen technology transfer

One of the most relevant advances has been the evolution of the science, technology and innovation regulatory framework, which has explicitly incorporated knowledge and technology transfer as part of the mission of higher education institutions and the national innovation system. In this context, the development of a specific legal framework for technology transfer represents an opportunity to move from scattered instruments toward clearer rules for the valuation, protection, transfer and commercialization of research results. One positive aspect of this law is that it creates a level playing field between public and private universities to create spin-offs.

b. Public funding to develop institutional capacities

ANID, CORFO and other public agencies have implemented programs aimed not only at funding research, but also at strengthening the institutional capacities needed to bring results to the market and society. Particularly important has been the support for Technology Transfer and Licensing Offices (OTLs) and intermediary structures that connect researchers, companies, investors and the public sector.

c. Professionalization of Technology Transfer and Licensing Offices

Chile has developed a network of professionals and specialized offices focused

on intellectual property management, technology transfer, licensing, scientific and technological entrepreneurship, and engagement with companies. Key capabilities include intellectual property management, technology assessment and valuation, strategic patenting, licensing, creation of spin-offs and startups, university-industry engagement, attraction of private investment, and management of technology portfolios. An important lesson has been the shift from a logic of "more patents" to a logic of "better technology assets and greater impact."

d. Promotion of scientific and technological entrepreneurship

The promotion of university startups and spin-offs is another relevant mechanism for technology transfer. Science-based entrepreneurship allows technologies that do not find an appropriate licensing model to reach society through the creation of new companies.

e. National and international networks

The creation of networks such as the Chilean Network of Technology Transfer Managers (RedGT) has been fundamental for sharing experiences, developing capabilities and establishing common standards among institutions. There is also growing engagement with Latin American technology transfer networks to share good practices and advance the region in these areas.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Chile has made significant progress in professionalizing this field. However, unlike traditional professions, technology transfer remains a relatively new and multidisciplinary area. Therefore, training has developed through a combination of professional networks, specialized programs, certifications, communities of practice and international learning.

a. RedGT as a professional community

The Chilean Network of Technology Transfer Managers (RedGT) is one of the country's main mechanisms for professionalizing talent in technology transfer. The network enables professionals from different universities and research centers to share good practices, transfer cases, contractual models, intellectual property strategies, negotiation experiences, valuation methodologies and funding information. This creates peer learning and a common professional identity. The Technology Manager Academy (TMA) provides access to international standards, methodologies and experiences. These networks are especially valuable because technology transfer requires competencies that are difficult to develop exclusively within a university.

b. National meetings and communities of practice

Annual meetings, seminars, conferences and workshops have played a highly relevant role. More than traditional training activities, these spaces enable the development of a true community of practice, where professionals discuss real cases and concrete problems, especially in licensing negotiations, spin-offs, equity, valuation, international patenting, conflicts of interest and relationships with researchers.

c. Learning based on real cases

One of the best practices that has become established in Chile is the use of real technology transfer cases as a training mechanism. This is particularly relevant because technology transfer combines science, technology, intellectual property, business, negotiation, regulation and investment.

d. Building professional careers

A remaining challenge is for institutions to recognize technology transfer as a specialized professional career, with defined job profiles, competencies associated with each level, evaluation systems, development pathways, continuous training and institutional recognition. This would allow a shift from a model in which the technology transfer manager is viewed as an administrative professional to one in which they are recognized as a strategic specialist in innovation and technology transfer.

Key messages from the Chilean case

- Chile has moved from a model focused mainly on funding research and protecting its results toward a model that seeks to generate value and impact from knowledge.
- The challenge is to consolidate this shift by strengthening both technology transfer policies and instruments and the professionalization of the people who make it possible for knowledge to effectively reach the market and society.
- Professionalizing technology transfer does not depend solely on training individuals. It requires building a professional community, establishing standards, creating career pathways, sharing cases and good practices, and connecting national technology transfer managers with international networks.

CROATIA

Vedrana Bosanac

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Croatia is gradually broadening its approach to knowledge and technology transfer beyond traditional IP protection and commercialisation. The 2022 National Guidelines for Knowledge and Technology Transfer, together with the new multi-year programme agreements and targeted funding instruments, encourage publicly funded research institutions to strengthen IP management, entrepreneurship and industry collaboration while setting measurable objectives related to wider economic and societal impact.

The University of Zagreb Faculty of Electrical Engineering and Computing (FER), Croatia's leading technical faculty, is one of pioneers in knowledge and technology transfer. FER manages more than 200 research projects and cooperates extensively with Croatian and international companies, providing access to its research expertise, laboratories and infrastructure while contributing to the development of technologies with practical industrial applications.

FER's structured technology-transfer approach includes IP identification and protection,

patenting, licensing, spin-off support, contract research, joint R&D and consultancy. Its portfolio includes more than 50 active patents, over 30 licensing agreements and more than 20 spin-off companies, which employ approximately 60 people and generate substantial revenues that continue to grow year on year. FER also maintains extensive bilateral cooperation with industry through commercial agreements and provides professional training through its well-established Centre for Lifelong Learning.

FER supports researchers and students through innovation-incubation and academic-entrepreneurship programmes. Nuqleus, a pioneering deep-tech venture-building programme established by FER, provides continuous education, mentoring, industry collaboration and investment-readiness support. FER has also joined the European Patent Office's Modular Intellectual Property Education Framework (MIPEF), which integrates practical IP knowledge into university education and strengthens the capacity to manage and commercialise intellectual property.

FER's role is further strengthened through CROBOHUB++, a Croatian European Digital Innovation Hub that offers SMEs free lifelong-learning programmes and "test before invest" services while supporting networking and strengthening the innovation ecosystem in robotics, artificial intelligence and other digital technologies. The programme's recently approved continuation for the coming years will allow these activities to expand further.

Finally, FER HUB provides companies with a single point of access to FER's researchers, laboratories and technologies, while centres of excellence, strategic partnerships and the FER SPARK project strengthen industry cooperation, research-infrastructure management and commercialisation. Together, these practices transform research into applicable technologies, new companies, highly skilled jobs and wider economic and societal benefits.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

The professionalisation of knowledge and technology transfer in Croatia is progressing, although a nationally standardised career path or professional accreditation system for technology-transfer professionals has not yet been fully established. Current practices include recurring workshops, mentoring programmes, peer learning, participation in international training, and the dissemination of good practices through conferences, networking events and innovation programmes. Croatian professionals also increasingly participate in programmes and networks organised by bodies such as WIPO, EPO, ASTP and AUTM. Additionally, local ecosystem is being upgraded with national network of Technology Transfer Offices and a recently established TTO Register introducing common organizational and quality standards.

CROATIA

Vlatka Petrović

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Croatia has increasingly sought to broaden knowledge and technology transfer beyond traditional IP protection and commercialization.

The National Guidelines for Knowledge and Technology Transfer, adopted by the Ministry of Science, Education and Youth in 2022, provide a common framework for the effective use of publicly funded research through improved IP management, commercialization, entrepreneurial capabilities and collaboration between research organizations and business.

The current system of four-year programme agreements was introduced as part of a new institutional funding model in 2023, first implemented with public research institutes and extended to public universities in 2025. For Croatia, this represents a significant shift towards multi-year, performance-oriented institutional funding: institutions agree on strategic priorities, activities and measurable indicators, with progress formally monitored and evaluated. Importantly from a societal-impact perspective, the system goes beyond scientific excellence and commercialization and allows institutions to set measurable objectives related to cooperation with industry, engagement with public-sector and other societal stakeholders, and broader economic and social development.

New funding instruments under the national DIGIT project reflect the same broader approach; for example, the 2026 VALID call supports the development and validation of social innovations addressing identified societal challenges and aiming for measurable social outcomes. Overall, the Croatian policy framework is gradually moving from a relatively narrow focus on technology commercialization towards a broader concept of knowledge valorisation and societal impact.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Croatia does not yet have a fully developed national career pathway or accreditation system for knowledge and technology transfer professionals, and expertise has traditionally been built mainly through practice, projects and occasional training.

A notable recent initiative is the Technology Scouts programme under the national DIGIT project, launched in December 2024. The first group of 20 participants completed a six-month programme combining training in innovation management and technology scouting with practical work and mentoring and received certificates in May 2025. Certified scouts are now being engaged through the Technology Scouting funding programme to help companies identify and articulate technology needs and connect them with relevant research expertise.

There have also been recent steps towards building a stronger professional KTT

community. CRO-LINK, the Croatian network of Technology Transfer Offices, was established in late 2025 to connect professionals across universities, faculties and research institutes and support the exchange of experience and good practice. It now also represents Croatia within ASTP's National Associations Advisory Committee (NAAC). In December 2025, the Ministry also established a TTO Register, introducing common organizational and quality standards for technology transfer offices. Together, these developments indicate a gradual move from a largely experience-based model towards a more structured approach to KTT professionalization.

EGYPT

Heba Labib

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Egypt has significantly strengthened its policy framework for knowledge and technology transfer, although implementation and institutional capacity remain uneven.

A major milestone was the Science, Technology and Innovation Incentives Law No. 23 of 2018, which enables universities and research institutions to establish technology valleys, incubators and companies to commercialize research. Several institutions—including Mansoura, Alexandria, Cairo, Benha and Sohag Universities, as well as Zewail City—have since established or initiated university-owned companies. These structures provide more flexible vehicles for commercializing technologies and holding equity in spin-offs and start-ups, reducing reliance on conventional university administrative procedures.

The enabling environment has also expanded through the Innovation Support Fund, established under Law No. 1 of 2019; the Egyptian Intellectual Property Authority, established under Law No. 163 of 2023; and the National Policy for Sustainable Innovation 2030, which brings technology transfer, innovation finance, talent and university-industry collaboration within a broader national framework.

Institutionally, the Academy of Scientific Research and Technology began establishing Technology Innovation Commercialization Offices (TICOs) in universities and research institutions in 2013, and the network has continued to expand. However, performance across these offices has been uneven, and effective technology commercialization remains limited. In contrast, universities have witnessed substantial growth in entrepreneurship, incubation and start-up support activities, creating an increasingly active pathway for translating knowledge into economic and societal value.

A more recent development is the Alliance and Development Initiative, which establishes regional, multi-stakeholder alliances bringing together universities, research institutions, industry, investors, entrepreneurs and government. The approach reflects the multi-stakeholder regional innovation model promoted by MIT's Regional Entrepreneurship Acceleration Program (MIT REAP), in which Egypt previously participated. The initiative seeks to link research and innovation more directly to regional economic priorities, with measurable outcomes including start-ups, commercialization, jobs and exports.

Knowledge transfer in Egypt also extends beyond patents and licensing. Agricultural extension, industry-oriented research, technical services, entrepreneurship and start-up creation are important channels through which knowledge reaches society, often generating impact without formal IP transactions.

Significant gaps nevertheless remain. The OECD Review of Innovation Policy: Egypt 2026 reports that only 7% of innovation-active SMEs and 3% of innovation-active large firms cooperated with academia in 2017–2019. It calls for stronger incentives, professionalized support structures and deeper industry–research collaboration.

Egypt is therefore moving from building the enabling infrastructure for knowledge transfer toward making it work effectively—strengthening professional capabilities, industry engagement, commercialization mechanisms and incentives to translate research into measurable societal and economic impact.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Professionalization of knowledge and technology transfer in Egypt is still emerging. TICO offices have helped establish dedicated technology-transfer functions within universities and research centers, rather than leaving commercialization entirely to individual researchers. Their activities include researcher support, intellectual property, industry engagement, technology marketing and training.

Capacity-building programmes for TICO and innovation staff have also been implemented through national and international initiatives, while the Egyptian Intellectual Property Authority provides a stronger institutional basis for sustained IP awareness and capacity development.

Nevertheless, Egypt does not yet have a widely established professional career pathway, competency framework or certification system for knowledge-transfer professionals comparable with more mature ecosystems. Professionalization therefore remains an important next step: developing defined competencies and career paths, sustained practitioner training, stronger exposure to real transactions, and communities of practice connecting professionals across institutions.

This reflects the wider transition underway in Egypt—from establishing technology-transfer offices and enabling legislation toward building the professional capabilities, incentives and industry relationships required to convert research into measurable economic and societal impact.

ESTONIA

Kadi Rahuoja

This report presents Estonia's current policies and practices for increasing the societal impact of knowledge and technology transfer and for developing knowledge and technology-transfer professionals beyond informal or one-off training.

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Estonia's strategic framework for knowledge transfer is set principally by the Estonian Research, Development, Innovation and Entrepreneurship Strategy 2021–2035 (TAIE). The strategy recognises knowledge transfer as a link between research, enterprise and society, and frames the use of research results more broadly than commercialisation alone. Relevant pathways include the application of research-based knowledge in business, public services, health, education, culture, environmental protection and policy development.

The Organisation of Research and Development and Innovation Act provides the broader legal framework for research and innovation. Within this framework, universities and research organisations establish their own approaches to intellectual-property management, research collaboration, commercialisation and the use of research results. Larger universities, notably Tallinn University of Technology (TalTech) and the University of Tartu, have dedicated technology-transfer, business-development and research-support functions. At TalTech, for example, the Technology Transfer Centre supports invention assessment, IP protection and management, contractual arrangements, collaboration with external partners, licensing and research-based entrepreneurship. Comparable functions exist in other research institutions, although capacity, resources and the range of available services differ between institutions.

Estonia also has intermediary mechanisms that help external partners access research knowledge and capabilities. The Adapter platform brings together universities and research institutions and helps companies and other organisations identify relevant research expertise, testing, development and consultancy services. The DeepTech Startup Network connects universities, science parks, incubators and other ecosystem actors to support research-based entrepreneurship and improve access to mentoring, business-development support and relevant contacts.

These mechanisms are developing, but they do not yet form a uniform national pathway from research to societal or commercial uptake. In particular, smaller institutions may have limited dedicated capacity for IP management, commercial assessment, licensing, business development and long-term management of external partnerships.

A key challenge is to translate this strategic and legal framework into consistent practice across institutions. Estonia would benefit from stronger and more continuous collaboration between research organisations and businesses, public authorities, municipalities, hospitals, cultural institutions and civil-society organisations. Further priorities include proportionate access to specialist IP and commercialisation expertise, clearer institutional processes for research exploitation, and recognition of impact pathways that do not

depend on patents, licensing income or spin-off creation.

For Estonia, societal impact should include not only new products, services and companies, but also research uptake in policy, public services, professional practice, education, cultural institutions and environmental solutions. Evaluation should therefore consider user adoption, longer-term partner relationships, capability development, public-service improvements, environmental benefit and contributions from the social sciences, humanities and arts, alongside more conventional commercialisation metrics.

Further information: TAIE Strategy 2021–2035; Organisation of Research and Development and Innovation Act; TalTech Technology Transfer; Adapter; DeepTech Startup Network.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Estonia currently has no dedicated formal education programme or nationally established qualification pathway for knowledge- and technology-transfer professionals, nor a common national competency framework. Professional development is instead built through institutional experience, peer learning, international training and project-based capacity-building activities.

Knowledge-transfer roles are multidisciplinary and can include intellectual-property management, research contracts, industry collaboration, technology assessment, licensing, business development, entrepreneurship support, research funding and impact planning. The structure of these roles differs by institution. In some organisations, a small number of staff combine several functions; larger universities are more likely to have separate technology-transfer, legal, research-support and entrepreneurship-related roles. This creates variation in career paths, workloads and opportunities to develop specialist expertise.

A major recent development is the ASTRA+ programme, including the TULEVIK project. TULEVIK is a multi-institutional capacity-building project running from 2025 to 2029. It provides training in knowledge transfer, business development and innovation management, alongside study visits and an innovation-management development programme. The project is important because it supports shared learning across higher-education and research institutions. However, it should be regarded as a time-limited development initiative rather than an established national qualification pathway.

Estonian knowledge-transfer professionals also develop expertise through international communities and training opportunities, including programmes offered by the European Patent Academy, WIPO Academy, Licensing Executives Society International and the Association of European Science and Technology Transfer Professionals (ASTP). These opportunities contribute to professional development and international peer connections, although participation depends on institutional resources, language proficiency, workload and individual initiative.

Looking ahead, Estonia could develop a shared and flexible national framework for professional development rather than a centrally regulated profession. Such a framework could provide common competence areas, progressive learning opportunities, mentoring, practical exchanges between institutions and clearer career paths. It would help establish

knowledge transfer as a recognised long-term profession rather than a support function developed mainly through individual initiative.

Given Estonia's relatively small research and innovation system, institutions could pool specialist expertise and build a stronger national community of practice while retaining flexibility for different institutional and disciplinary needs.

Further information: ASTRA+; TULEVIK; ASTP; WIPO Academy.

EUROPE REGION (ASTP)

Art Bos and Laura MacDonald

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

As an association with membership across the breadth of the European region, ASTP community comes together to promote exchanges of best practices and experiences across the whole spectrum of research and innovation management. This manifests as a series of

- Professional development activities (from formal training recognised by ATTP) to informal online updates such as via Tea With ASTP series and our European Forum sessions. Knowledge Transfer Training | ASTP
- Member communities with common experiences and responsibilities exchanging good practices and inspirational approaches to the many challenges of delivering the expectations of their roles. These include Special Interest Groups looking at the nature and role of Impact of knowledge valorisation so we have dedicated SIGs for SHAPE (Society, Humanities, Arts for People and Economy): CCI (Connect and Communicate with Impact) Special Interest Groups (SIGs) | ASTP
- We run an annual survey and publish the results- sharing insights which go beyond quantitative impact of the outputs of KT offices Surveys | ASTP
- NAAC Our National Associations Advisory Committee also generates White papers such as on KPIs to drive understanding of the broadest impact of KV activiites: ASTP Releases White Paper on Holistic KTT Metrics | ASTP plus the full data report here ktt-metrics-report-to-boost-harmonisation-across-europe-released.pdf. Also one around maximising the impact of Spin-offs: ASTP White Paper Endorsed by NAAC plus full report here naac-report-released-a-comprehensive-expansion-of-the-white-paper.pdf
    - On a wider European level we also engage directly with the European Commission's policy development, programmes and consultations as they seek to offer direct measures to enhance innovation management and impact. ASTP EU Projects | ASTP shows the overview but here we highlight IMPAC3TIP and collaboration with the Impact Licensing Initiative ILI - Impact Licensing Initiative | ILI and New framework to measure knowledge valorisation - Research and innovation

ALL4KV : **objective:** Led by ASTP, it will establish a coordinated European ecosystem of knowledge valorisation intermediaries, offering seamless access to services, training, and collaboration opportunities through a smart signposting directory and structured pathways. **Important:** The aim is not to create new parallel network structures but to coordinate and align the existing ones. **Start date:** 1 October 2026

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

ASTP activities beyond specific training include engaging in efforts to ensure broader recognition of the skills, competences and career needs of knowledge valorisaton professionals.

- European landscape development of tools: As mentioned before, there are significant policy measures sweeping across the EU region, in many cases driven by national agencies supporting R&D or R&I, while much is also being driven by the European Commission, exerting influence and pressure on the Member States. Examples can be found in many active EU funded projects such as IAM4RE and IP4OS, see ASTP EU Projects | ASTP;
- EU Knowledge Valorisation Platform: A central hub for connecting R&I stakeholders, sharing experiences, best practices, and lessons learned to facilitate the transformation of knowledge into societal and economic value. General Principles of Knowledge Valorisation plus the 4 codes of Practice PowerPoint Presentation on the approach from E Commission with links to key resources.
- European Landscape embracing enhanced recognition of KV careers: KV capacity building : The European Commission is developing a competence framework for knowledge valorisation (KV) intermediaries under the European Research Area Policy Agenda 2025–2027. The initiative shifts focus toward institutional capacities and organizational metrics, mapping key actors who translate research into societal, economic, and policy impact, identifying technology and knowledge transfer professionals at the top of the list of intermediaries.

GERMANY

Thomas Gazlig

From Research Excellence to Innovation Impact: Recent Developments in Knowledge and Technology Transfer in Germany.

Germany is currently witnessing a renewed political commitment to knowledge and technology transfer. Since taking office in 2025, the Federal Government, particularly the Federal Ministry of Research, Technology and Space (BMFTR) and the Federal Ministry for Economic Affairs and Energy (BMWE), has elevated technology transfer, especially spin-off creation, to a key policy priority. This commitment is reflected in extensive stakeholder consultations on a national IP strategy, barriers to knowledge valorization and commercialization, spin-off creation, and future funding mechanisms.

A broad consensus has emerged that Germany must do more to translate its world-class research excellence into societal and economic impact. While the country's research institutions produce world-class science, too few results reach the innovation pipeline. A central structural challenge is that technology transfer, entrepreneurship, and societal impact still play only a limited role in academic career progression and research evaluation. As a result, many researchers show little motivation to engage in commercialization activities, and transfer-oriented funding programs often struggle to achieve the desired impact.[1]

In response, a range of new funding initiatives for transfer and innovation are being developed by the federal government. for example, the startup and scale strategy[2] and the high-tech agenda with the FAST transfer program[3]. However, many stakeholders emphasize that funding alone will not solve the problem. Germany continues to face a significant capacity gap in technology transfer and increasingly, Germany's federal structure is proving to be an obstacle to technology transfer. Compared with leading international innovation ecosystems, many universities and university hospitals lack sufficient transfer personnel, commercialization expertise, and proof-of-concept funding capabilities. A growing discussion therefore focuses on building long-term institutional capacity rather than relying solely on project-based support. TransferAllianz, the German association of technology transfer professionals, together with other stakeholders, has proposed dedicating 5% of public research funding to transfer and innovation activities. The underlying rationale is that sustainable changes in priorities and culture are most likely to occur when transfer and innovation activities are reflected in funding structures.

One of the most significant recent developments has been the creation of a more transparent and internationally competitive framework for academic spin-offs. Building on sector-specific "Standard Spin-off Terms" developed by Charité & Berlin Institute of Health[4], TransferAllianz[5], and German University Medicine[6], the German Spin-off Framework (GSOF) was introduced in 2026[7]. Developed jointly by technology transfer professionals, venture capital representatives, legal experts, and ecosystem stakeholders, the framework aims to provide pragmatic and internationally compatible standards for university spin-offs. It draws on international best practices, including the AUTM Standard Term Sheet[8] and the USIT Guide[9].

At the same time, Germany is engaged in an active debate about how intellectual property generated through publicly funded research should be transferred into start-ups. While some stakeholders advocate more founder-favorable approaches, including "IP for Free" concepts or special founder privileges, TransferAllianz and many others emphasize that sustainable innovation ecosystems require a balanced approach that aligns entrepreneurial incentives with fair participation by research institutions. A related concern is the growing emergence of parallel support structures with only limited integration into institutional technology transfer activities and the academic research environment. Many stakeholders therefore caution that creating additional programs and intermediaries should not come at the expense of building sustainable transfer capabilities within universities, university hospitals, and research organizations themselves.

Closely linked to these discussions is the professionalization of technology transfer talent. Professional development is increasingly supported through professional associations such as TransferAllianz, national and international networks, peer-learning formats, specialized conferences, and communities of practice. Germany has made progress through national and international networks, peer learning, and professional exchange platforms. Organizations such as TransferAllianz increasingly contribute to the dissemination of best practices and the development of common standards. Nevertheless, technology transfer remains under-resourced in many institutions, and there is still no comprehensive national framework for systematically developing, certifying, and retaining technology transfer professionals. The need for a stronger professional community, structured career paths, and continuous competency development is widely recognized.

Overall, the German debate is increasingly moving beyond transactional questions of IP ownership and licensing terms toward a broader strategic challenge: strengthening the innovation pipeline itself. The key objective is to move from research productivity to innovation productivity by creating stronger impact orientation, expanding transfer capacities, professionalizing technology transfer organizations, and fostering a culture in which societal impact is recognized as an integral component of academic excellence.

[1]Gazlig, Thomas: Wirkung steigern, DUZ Transferraum, 6.11.2025

[2]https://www.bundeswirtschaftsministerium.de/Redaktion/EN/Publikationen/Wirtschaft/federal-governments-startup-and-scaleup.html now

[3]https://www.bmftr.bund.de/DE/Forschung/TransferInDiePraxis/TransferinitiativeF.A.S.T/transferinitiative-F.A.S.T_node.html

[4]https://www.bihealth.org/fileadmin/Charit%C3%A9_BIH_Innovation/CBI_Dateien/Spin-Off_Terms_f%C3%BCr_EXT_Ver%C3%B6ffentlichung_250815_clean.pdf

[5]https://drive.google.com/file/d/1_nIqXpYSIph2SG_mI6V4GLRlRdgo5A57/view

[6]03.07.2025: https://www.deutsche-hochschulmedizin.de/wp-content/uploads/2025/07/MFT_Empfehlung_Transfer-v1_4_final-3.pdf

[7]https://esmt.berlin/sites/default/files/2026-06/260618_esmt_deep-german-spin-off-framework.pdf

[8]Toolkits | AUTM

[9]https://www.ten-u.org/news/the-usit-guide

GHANA

Diana Adobea Owusu Antwi

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Ghana has implemented a mix of legal frameworks, national policies and institutional best practices to increase the societal and economic value of knowledge and technology transfer. The main policies and best practices are:

- **The Science, Technology and Innovation (STI) Policy** which seeks to drive socio-economic development by strengthening collaboration among universities, research institutions, industry, and government; promoting research commercialisation, supporting the development of innovation ecosystems that transform knowledge, innovation and creativity into marketable products and services, building capacity in science, technology, engineering, and entrepreneurship; and fostering a knowledge-based, innovation-driven economy. The STI policy framework for 2024-2030 is designed to strengthen Ghana's innovation capacity and facilitate transition to a knowledge-based economy.
- **The National Intellectual Property Policy and Strategy** supports scientific progress, technological innovation, industrial and national development by strengthening the intellectual property protection framework to enable the effective commercialisation and transfer of knowledge and technologies.
- **The Ghana National Research Fund** supports innovative research initiatives for sustainable development across all sectors of the economy. Related best practices include linking research funding to national development priorities, research and innovation management capacity, collaboration among researchers and industry, innovation and commericalisation support and research uptake.
- **The Science Granting Councils Initiative (SGCI)** enhances the ability of national science institutions to fund, promote and advance research that addresses national development needs.
- Many universities and research institutions have established **Technology Transfer Offices (TTOs)** to promote research-industry partnerships and facilitate the translation of research into practical real-life solutions that benefit society.
- **Institutional intellectual property (IP) policies and strategies** provide a framework for managing IP within universities and research institutions, facilitating knowledge and technology transfer, and providing incentives for the commercialisation of research outputs.
- International Technology Transfer is regulated through **Technology Transfer Agreements** under the Ghana Investment Promotion Authority Act, 2026 (Act 1093). This is aimed at ensuring fair value, strengthening local capacity, enhancing innovation and contributing to the sustainable development of Ghana’s economy.

- Several **incubators and accelerators** provide support services to bridge the gap between research and market application.
- These policies and best practices support the transformation of knowledge and technology into commercial products, social innovations, jobs, sustainable industrial and economic development, improved livelihoods and drive inclusive growth.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Efforts to professionalize knowledge and technology transfer (KTT) talent are increasingly moving beyond informal, on-the-job learning or training towards the development of structured professional communities, institutional career pathways, fellowships and specialised capacity-building programmes.

A recent initiative focused on developing a community of practice and defining professional standards for intellectual property and technology transfer practitioners is the Ghana Intellectual Property and Technology Transfer Network. Many universities support KTT capacity development through trainings on industry engagement, research contracting, intellectual property management and technology commercialisation. These may be complemented by opportunities for cross-institutional learning and international training.

The Registrar General's Department has been at the forefront of KTT talent development through the support of the World Intellectual Property Organisation. Other externally funded programmes aimed at professionalizing KTT talents are the University Administrators Support Programme (supported by IREX), which aims at strengthening research management, technology transfer and commercialisation capabilities of research and technology transfer officers, the Knowledge Transfer to Africa programme (a European Patent Office initiative) which provides training and mentoring to participating universities, as well as twinning partnerships to enable consolidation and application of the knowledge gained. The Royal Academy of Engineering, UK, Technology Transfer Training and the Science Foundation for Africa masterclass and immersion programmes support innovators and technology transfer officers to gain practical exposure to advancing research innovations towards product development, commercialisation, uptake as well as strengthening institutional support for technology transfer.

While progress has been made, the professionalisation of KTT in Ghana is still developing and presents opportunities to develop formal competency frameworks, structured career pathways, mentoring programmes and continuous professional development initiatives.

HUNGARY

Tamás Haidegger

Please see Appendix 1.

INDIA

Vijay Vijayaraghavan

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

At the national level in India, there is significant recognition of innovations that can transform society's lives. This recognition takes many forms, including 1) investing in such innovations to establish a strong market presence and create affordable products and services, 2) supporting such products and services through the national procurement system, 3) recognising such founders and inventors by providing affordable incubation support to help these innovations reach market readiness, and 4) connecting philanthropy, including Corporate Social Responsibility-driven funds, to scale such innovations. There is a proposal to create a public listing platform for such ventures to raise funds for scaling innovation and delivering impact.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Some of the initiatives relate to 1) Regional technology transfer offices or larger offices of established institutions providing mentoring support to smaller entities; 2) engaging with national associations for professional networks, creating peer-learning opportunities; 3) placements in international institutions to gain cross-country experience and supporting younger professionals to undertake ATTP courses to gain RTTP recognition.

INDONESIA

Rofiq Iqbal

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Indonesia has strengthened its research and innovation ecosystem through national policies that increasingly emphasise the translation of research into economic and societal impact. The National Science and Technology System Law (Law No. 11/2019) provides the legal foundation for strengthening science, technology, innovation, and technology transfer as part of national development. The current National Medium-Term Development Plan (RPJMN) 2025–2029, established through Presidential Regulation No. 12/2025, also

places economic transformation, innovation, industrial development, and human-resource development within the national development agenda.

A major current initiative is the Promoting Research and Innovation through Modern and Efficient Science and Techno Park (PRIME STeP) programme, implemented by the Ministry of Higher Education, Science and Technology (Kemdiktisaintek) with support from the Asian Development Bank. Running from 2023–2027, the programme strengthens four university Science and Technology Parks such as IPB, ITB, UGM and UI through research facilities, innovation and partnership funding, startup incubation, and institutional capacity building. In parallel, Kemdiktisaintek has introduced Research Downstreaming and Priority Research Commercialisation programmes to support testing, prototyping, and the transition of research outputs toward industry and societal use.

At the institutional level, TTOs, Science and Technology Parks, incubators, IP centres, and TISCs support technology transfer from IP protection and technology assessment to industry matchmaking and commercialisation through licensing, collaboration, or spin-offs. However, commercialisation is still often dependent on individual researchers' networks, while structured strategies, incentives, market validation, PoC/TRL development, and professional TTO capacity remain areas for improvement. Stronger coordination among government, universities, TTOs, industry, and investors is therefore needed to increase the societal and economic impact of research

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Professional development for technology transfer personnel in Indonesia is supported through domestic and international training, professional forums, and specialized programs. TTO personnel participate in programs covering intellectual property, technology and IP valuation, WIPO programs, TISC training, and international professional development pathways such as the Registered Technology Transfer Professional (RTTP) framework and Continuing Education (CE) activities. A significant recent development is the establishment of the Perkumpulan Transfer Teknologi Indonesia (PTTI), which is affiliated with the Alliance of Technology Transfer Professionals (ATTP Global). The association provides a platform for knowledge sharing, professional networking, competency development, and engagement with the international technology transfer community.

However, professional development has not yet been consistently connected to formal professional recognition and structured career pathways for TTO personnel. There is not yet a clearly established national mechanism linking training, professional experience, competencies, and certification with career progression and institutional recognition. This creates challenges in retaining experienced professionals and maintaining institutional knowledge. Technology transfer requires skills beyond IP, including commercialization, negotiation, market understanding, valuation, and communication. Professionalization should combine training and certification with practical experience, supported by mentoring, networking, professional recognition, and clear career pathways through collaboration among government, universities, research institutions, and professional associations.

IRELAND

James O'Sullivan

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Ireland has developed a coordinated national framework that places knowledge and technology transfer (KTT) within a broader research and innovation strategy focused on economic, societal and environmental impact. The national strategy, Impact 2030: Ireland's Research and Innovation Strategy, positions research and innovation as key tools for addressing societal challenges and explicitly promotes stronger links between research, enterprise, policymakers and communities. It emphasises mission-oriented research, public engagement, regional development, research-informed policymaking, and the commercialisation of publicly funded research.

A cornerstone of Ireland's approach is Knowledge Transfer Ireland (KTI), which provides a national infrastructure for knowledge transfer and supports consistent practices across the higher education and public research sectors. Ireland's National IP Protocol 2019 establishes a common framework for research commercialisation, providing guidance on industry engagement, intellectual property management, licensing, collaborative research and spin-out creation. The protocol is supported by standardised model agreements, IP management guidelines and best-practice resources that reduce transaction costs and increase transparency for both researchers and industry partners.

Irish best practice increasingly recognises that impact extends beyond patents and licences. Universities and technological universities are encouraged to support multiple pathways for knowledge exchange, including collaborative research, consultancy, student engagement, professional education, policy contributions, social innovation and community-based projects. National initiatives such as Creating Our Future, Smart Specialisation, Horizon Europe participation and the National Grand Challenges Programme further reinforce the goal of generating measurable societal benefits from research and innovation investments.

Enterprise Ireland's support for technology transfer offices, commercialisation funds, innovation partnerships and spin-out development has also been critical in translating research outcomes into new products, services, companies and public-sector innovations. More recently, the KT Boost Programme has sought to strengthen knowledge transfer capacity across the higher education sector while promoting more consistent and professional service delivery nationwide.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Ireland has increasingly adopted a professional workforce-development approach to KTT. The sector benefits from a well-established national community coordinated through Knowledge Transfer Ireland, which provides training programmes, practitioner networks, guidance documents, communities of practice and access to national and international

expertise. Standardised processes under the National IP Protocol also help ensure consistent professional practice across institutions.

A significant feature of the Irish system is the strong professional community that has developed around knowledge transfer. Alongside formal qualifications such as RTTP accreditation, the Irish Knowledge Transfer Association (IKTA) plays an important role in professionalising the sector by providing a national forum for practitioners to share experience, promote best practice, develop professional networks and support continuous professional development. This community-based approach has helped establish knowledge transfer as a recognised professional discipline within the Irish research and innovation ecosystem.

Professionalisation is also supported through participation in international networks and structured training programmes, including activities delivered by organisations such as ASTP, PraxisAuril, the European Commission knowledge valorisation initiatives, and sector-specific innovation programmes. Irish practitioners regularly engage in peer learning, national workshops, specialist legal and IP training, licensing and negotiation programmes, and technology-commercialisation masterclasses. These activities create a pathway from early-career practitioner to senior strategic leadership roles within innovation and research offices.

Most recently, the KT Boost Programme has explicitly recognised workforce capability as a strategic priority. The programme provides funding for innovation office staffing, skills development, operational excellence and the harmonisation of best practices across universities and technological universities. The objective is not simply to increase activity levels, but to build a sustainable, highly skilled profession capable of delivering long-term economic and societal impact from Ireland's research investments.

ITALY

Alessandra Baccigotti

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Traditionally, the Italian knowledge and technology transfer system has been largely focused on IP management, technology transfer and the commercialisation of research results, with success often assessed in terms of patents, licences, spin-offs and industry collaborations. However, in line with the recent evolution of the European policy framework on Knowledge Valorisation[1], Italy is progressively moving towards a broader understanding of how knowledge generated by research can create value. This emerging approach goes beyond traditional technology transfer and purely commercial returns, recognising that research and innovation can generate economic, societal and public value through multiple pathways, including collaboration, entrepreneurship, public-sector innovation, standards, open science, citizen engagement and the uptake and use of knowledge by different stakeholders.

Italy has recently taken an important step towards a more systemic approach to Knowledge Valorisation (KV) and Technology Transfer (TT). In 2026, the Ministry of Enterprises and Made in Italy (MIMIT) and the Ministry of University and Research (MUR)

jointly adopted the Strategic Guidance Act 2026–2028 on Knowledge Valorisation and Technology Transfer[2]. This is the first national strategic framework specifically designed to coordinate KV and TT policies across ministries, regions, universities, public research organisations and other actors of the innovation ecosystem. The Act responds to a key structural challenge identified in Italy: a strong scientific and technological base but a fragmented TT ecosystem and persistent difficulties in translating research results into economic and societal value.

A first distinctive feature is the introduction of multilevel governance and coordination. An interministerial MIMIT–MUR Steering Committee is established as the central body for strategic coordination, monitoring and evaluation, with the objective of aligning research and industrial policies, coordinating national and regional interventions, avoiding duplication and ensuring complementarity among European, national and regional funding instruments. The approach is explicitly results-oriented and provides for continuous monitoring and corrective action. The Act also introduces a single monitoring and evaluation framework, based on measurable indicators, together with annual public accountability, strengthening the evidence-based dimension of national TT policy.

A second pillar is the strategic orientation of innovation towards societal and industrial needs. The Act foresees national and sectoral Technology Roadmaps developed through thematic tables involving public and private stakeholders. These roadmaps are intended to connect technological development with industrial needs and to guide investments across the entire TRL chain. Publicprivate collaboration is explicitly promoted, including shared infrastructures, pre-competitive projects, risk sharing and joint industrialisation pathways, so that roadmaps become instruments for actual adoption and investment rather than purely planning documents.

The policy also seeks to strengthen the infrastructure and intermediaries supporting the journey from research to impact. Measures include the creation of a national register of TT actors, stronger and more structurally supported University TTOs, inter-university hubs, the further development of the national Knowledge Share platform[3], more structured Proof-of-Concept programmes, and a national network for technology scouting and awareness raising in universities and doctoral programmes. Importantly, the Act promotes a more strategic role for TTOs and greater standardisation of processes across the ecosystem. It also envisages national guidelines for universities and public research organisations to develop their own Strategic Knowledge Valorisation Plans, thereby encouraging institutions to embed valorisation within their long-term strategies rather than treating it as a projectbased activity.

A further best practice is the use of targeted de-risking and financing mechanisms along the innovation pipeline. The national approach combines intellectual property protection, Proof of Concept, prototyping, technology validation, industrial demonstration and access to private investment. Projects supported through the Technology Transfer Fund are expected to address the "valley of death" and involve companies, investors and, importantly, end users from an early stage, reducing the risk of developing technologies that cannot ultimately be adopted. Performance indicators include TRL progression, TT effectiveness, spin-offs and deep-tech companies created, licensing and co-development agreements, and private investment attracted; performance can influence subsequent funding allocations.

An important complementary measure is the Programme for capacity building and the strengthening and evolution of the Hubs created through the National Recovery and Resilience Plan4 investments, supported by the Ministry of University and Research. The programme addresses a key challenge associated with the end of the NRRP: ensuring that the organisational capabilities, competences, networks and results developed through these large-scale initiatives are not lost when temporary funding ends, but evolve into stable and sustainable components of the national research and innovation ecosystem. The proposed capacity-building programme would accompany the Hubs in their transition towards longer-term institutional and organisational consolidation, strengthening their economic and financial sustainability, their capacity to valorise research results and their contribution to national and European research and innovation policy. The model envisages Hubs evolving into permanent coordination platforms for strategic research and innovation value chains, connecting universities, public research organisations, companies, investors and public administrations. Their role would extend beyond project management to include strategic support to policy makers, identification of emerging technological trajectories and sectoral needs, and operational support across the research and innovation value chain. The proposed capacity-building actions cover governance and leadership, strategic planning, business sustainability, knowledge transfer and research valorisation, research entrepreneurship and scale-up, internationalisation and participation in European networks. Particularly relevant from a knowledge valorisation perspective is the proposed strengthening of capabilities in IP management, proof of concept, licensing and valorisation across the full TRL range, together with support for deep-tech start-ups, venture building and market validation. The NRRP itself has also created important structural assets for knowledge valorisation. The National Centres, Extended Partnerships and Innovation Ecosystems have brought together universities, public research organisations, companies and other innovation actors around strategic technological and territorial priorities, creating new mechanisms for collaboration and knowledge transfer. The 2026 policy framework seeks to consolidate these experiences and connect them more systematically with the wider national knowledge valorisation ecosystem, rather than treating them as isolated project-based initiatives.

Overall, Italy is therefore moving from a model centred predominantly on IP and technology transfer outputs towards a broader ecosystem approach to knowledge valorisation, in which research results are expected to generate economic, industrial, societal and public value through multiple pathways. The emerging policy architecture combines national coordination, institutional strategic planning, professional and intermediary capacity building, de-risking instruments, stronger links with industry and investors, and greater involvement of public administrations and end users. A key challenge for the coming years will be to ensure that these policy instruments and project-based investments are translated into lasting institutional capabilities, sustainable organisations and changes in the culture and incentives of the research system.

[1]https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/euvalorisation-policy_en

[2]https://www.mimit.gov.it/it/normativa/decreti-interministeriali/decreto-interministeriale-22-giugno-2026valorizzazione-delle-conoscenze-e-trasferimento-tecnologico-atto-di-indirizzo-strategico-2026-2028

[3]https://www.knowledge-share.eu/en

[4]https://www.italiadomani.gov.it/content/sogei-ng/it/en/home.html

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Practices for professionalising knowledge and technology transfer talent beyond on-the-job or one-off training.

Compared with the increasing policy attention devoted to knowledge valorisation and technology transfer, the professionalisation of KT/TT talent remains a significant gap in Italy. Knowledge and technology transfer professionals working in universities are generally employed within the technical and administrative staff of public institutions and are not yet systematically recognised as a distinct professional category. Recruitment in state-owned universities is largely based on public selection procedures, which can make it difficult to recruit highly specialised profiles combining scientific, legal, business, managerial and entrepreneurial competences. Moreover, public-sector remuneration and career structures can make universities relatively unattractive to experienced professionals moving from industry or other parts of the innovation ecosystem. As a result, professional development has traditionally relied heavily on learning by doing, peer exchange and on-the-job experience, complemented by individual courses, workshops and other one-off training initiatives, rather than on structured national career paths, recognised qualifications or continuing professional development frameworks.

Against this background, NETVAL (Network for the Valorisation of Research)[5] has played an important role over the past two decades in supporting the development of the professional community. Through its training and capacity-building activities, NETVAL has provided university and public research organisation professionals with opportunities for structured learning, exchange of experience and development of competences in areas such as intellectual property management, technology transfer, licensing, entrepreneurship, research–industry collaboration and, increasingly, broader knowledge valorisation. Its activities have contributed to building a common professional community and culture across Italian universities and research organisations, complementing the predominantly on-the-job nature of professional development within individual institutions. NETVAL is also part of the Alliance of Technology Transfer Professionals (ATTP) and has promoted the international recognition and accreditation of Italian KT/TT professionals through the RTTP framework. In this context, NETVAL has progressively aligned elements of its training offer with the competences and evidence requirements associated with RTTP accreditation, encouraging professionals working in its institutional member organisations to pursue an internationally recognised professional qualification. This represents an important step towards moving from training as an ad hoc activity towards continuous professional development and externally recognised professional standards.

This above-mentioned gap is increasingly recognised at policy level. The newly launched ITA.VAL project – "Enhancing the Valorisation of Research in Italian State-Owned Universities through Networks, Infrastructures, and Services"[6], supported by the European Commission's Technical Support Instrument and implemented by the

OECD in cooperation with the Italian Ministry of University and Research (MUR), places the development and institutionalisation of Knowledge Exchange (KE) professionals at the centre of one of its main outputs. The project explicitly builds on the previous ITA.CON project[7], which identified the potential role and skills profile of a new university KE professional, and aims to move from defining the role towards its practical training and system-wide integration.

A key innovation of ITA.VAL is that professionalisation is conceived as more than training. The project will develop a model curriculum for KE professionals covering competencies such as IP management, partnership building, entrepreneurship support, innovation ecosystems, funding and finance, stakeholder engagement and data management. Importantly, the proposed learning model goes beyond one-off courses and may combine workshops, online and blended learning, mentoring and peer learning, with practical exercises, project work or other forms of assessment and a monitoring and evaluation framework.

At the same time, the project addresses the structural conditions needed to make KE a recognised profession. Its planned roadmap will examine how KE professionals can be embedded within universities and public research organisations, including how to attract, retain and valorise these professionals through career paths, professional recognition and remuneration, as well as appropriate governance arrangements and funding mechanisms. It will also consider the organisational changes required within universities, including the relationship between the new KE function and existing TTOS.

The professional profile envisaged by ITA.VAL is also broader than the traditional TTO specialist. KE professionals are expected to work across disciplines and sectors and across the full knowledge value chain, from early-stage research and opportunity scouting through partnership development, industry–academia collaboration and team building with researchers. They are conceived as embedded actors within research teams who actively guide valorisation processes, rather than professionals intervening only once a potentially commercialisable result has emerged. This reflects the broader transition in Italy from a predominantly IP- and technology-transfer-oriented model towards a more systemic knowledge valorisation approach.

The project is also designed to create a structured pathway towards national uptake, rather than simply producing a training programme. The OECD will consult universities, public authorities, industry and potential training or certification providers on the proposed curriculum and on measures to roll out the KE professional function across the university and public research organisation system. International good practices on intermediary roles between academia and industry will also be analysed to inform the Italian model. The project ultimately aims to provide Italian authorities with practical recommendations for integrating and embedding the profile within existing institutional structures.

ITA.VAL therefore represents an important shift from professional development based mainly on experience and ad hoc training towards a more structured model combining competence frameworks, dedicated curricula, assessment, professional recognition, career development and institutional integration. While the process is still at an early stage, it represents one of the most concrete current initiatives in Italy to address the

professionalisation of the KT/TT workforce as a systemic policy issue rather than simply as a training need.

[5]https://netval.it/en

[6]Website not yet available (project o icial launch 15th Sept. 2026)

[7]https://www.oecd.org/en/about/projects/itacon-enhancing-the-system-of-knowledge-exchange-andcollaboration-between-universities-and-society-in-italy.html

JAPAN

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What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Japan has developed a layered framework that connects university-industry collaboration, technology transfer, translational R&D, startup creation, co-creation, and strategic standardization. The Ministry of Education, Culture, Sports, Science and Technology (MEXT) identifies university industry-academia collaboration organizations as important actors in returning research outcomes to society. Its recent study on maximizing opportunities for societal implementation presents an institution-wide process extending from the creation of implementation opportunities, through business and technology development, to implementation via technology transfer or startup formation, and emphasizes the people, mechanisms, organizational structures, and management commitment required to sustain that process [1]. MEXT also maintains the Approved TLO framework and national information on university-industry-government collaboration [2].

The Japan Science and Technology Agency (JST) complements this institutional framework with programs that bridge research and use. A-STEP supports university research outcomes through matching with corporate needs, industry-academia collaborative R&D, proof-of-concept and development toward practical implementation, and transfer to companies or startups [3]. START and the new industry creation fund for startups out of universities support university-originated startups and innovation ecosystems that enable academic knowledge to be used in society [4][5]. COI-NEXT promotes university-centered co-creation involving companies, local governments, citizens, and other stakeholders,

using backcasting from a shared future vision while building sustainable systems for R&D, commercialization, societal implementation, venture creation, and talent development [6]. NEDO's Young Researchers Support Program ("Wakasapo") adds another pathway by identifying promising young researchers, facilitating industry-academia matching, and supporting collaborative R&D toward practical application, while also developing the next generation of innovation talent [7].

Japan is also strengthening strategic standardization as a route to societal implementation. METI's OCEAN (Open & Close strategy with Exploiting Academic kNowledge) project promotes open-and-close strategies that integrate intellectual property and standardization from the early stages of collaborative R&D between companies and universities [8]. A recent example is SANKEN at The University of Osaka. On 24 August 2026, The University of Osaka was recognized as a joint implementer, with Sony Global Manufacturing & Operations Corporation as the certified operator, of an OCEAN plan related to a SANKEN-led nanosensing sequencer research program. The initiative aims to support global market formation for peptide-sequencer technology through international standardization [9]. SANKEN also established an International Standardization Initiative on 1 August 2026. It plans continuing professional development and reskilling programs that use live standardization projects as practical learning cases, enabling graduate students, young researchers, and corporate standardization staff to gain experience in standards drafting, coordination with IP strategy, and consensus building in international standardization bodies such as ISO and IEC [9][10]. In parallel, the GISHW Consortium was established within The University of Osaka Research Association of Industry and Science (RAIS) in late 2025. GISHW is a global framework dedicated to advancing Safety, Health and Well-being as the foundation of a sustainable future society. The GISHW Consortium is an international co-creation platform that draws on a broad range of technologies—including artificial intelligence, semiconductor technologies, information and communication technologies, quantum technologies, and biotechnology—to address social challenges and advance safety, health, and well-being. Its activities complement SANKEN's International Standardization Initiative by providing a platform for global collaboration and practical standardization activities [9][11].

Taken together, these policies and practices point to several emerging best practices in Japan: engage potential users and partners early; combine technical validation with market and societal needs; support multiple implementation pathways including licensing and startups; develop researchers through hands-on industry collaboration; and incorporate IP, international standardization, and market-formation strategies early enough to shape global societal implementation.

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What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

In Japan, professionalization of knowledge and technology transfer (K/TT) personnel is increasingly supported through structured competency development, experiential learning, peer networks, continuing education, and international certification. One important national platform is the University Network for Innovation and Technology Transfer (UNITT), whose stated objectives include developing professionals engaged in industry-academia collaboration, technology transfer, and societal implementation; strengthening professional networks; conducting surveys and statistical research and disseminating their findings; and promoting and supporting the Registered Technology Transfer Professional (RTTP) credential [12].

UNITT provides progressive, practice-oriented training rather than relying only on lectures or informal workplace learning. Its License Associate training uses small-group discussion and role-playing in basic and advanced courses to develop skills across inventor engagement, IP and commercialization strategy, identification of potential licensees, company presentations, term-sheet preparation, and negotiation [13]. UNITT's five-session "The ABCs of Contracts" basic course develops core capabilities for research, licensing, material-transfer, data, know-how, software, and consulting agreements, while practical courses use workshop-based analysis of real-world problems for more experienced practitioners [14]. UNITT also offers startup-support training for practitioners who advise university researchers considering entrepreneurship; this training is accredited by the Alliance of Technology Transfer Professionals (ATTP) and awards continuing-education points [15].

Professional development is reinforced through repeated peer interaction and overseas

experiential learning. UNITT organizes recurring exchange activities and an Annual Conference where practitioners from universities, TLOs, and related organizations share cases, discuss emerging issues, and build cross-institutional networks [14]. Since 2023, UNITT's Global Human Resource Development Committee also endorsed a special overseas training program at the University of New Mexico's technology transfer and economic development office. The five-day, practitioner-oriented program provides on-site learning in U.S. university technology-transfer operations, IP management, licensing negotiation, technology marketing, university spin-off support, and regional innovation ecosystems [16]. Such immersive programs complement domestic training by exposing practitioners to different institutional models and professional practices.

International professional standards provide a further pathway. UNITT promotes RTTP, provides information sessions and individual consultation for applicants, and supports preparation of the required achievement documentation. UNITT reports that its current training portfolio can be combined to support the RTTP training pathway, linking domestic professional education with an internationally recognized credential [17]. The resulting model - structured basic and advanced training, experiential learning, continuing communities of practice, overseas exposure, continuing-education credits, and professional certification - provides a foundation for moving beyond one-off training and purely informal OJT toward sustained professional development in Japan's K/TT community.

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JORDAN

Mohammed Al-Jafari

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Last year the Scientific Research and Innovation Support Fund relocated from the Ministry of Higher Education and Scientific Research to the Higher Council for Science and Technology. The Council has since redeveloped the fund's policies and funding mechanisms to open available funding beyond academic research, and to fine-tune application evaluations, favoring projects and teams more likely to create tangible outcomes. New funding regulations can now better support joint industry/academia research, while IP regulations have been updated to improve the likelihood of transferring research outcomes to industry. Further reforms driven by the National Council for Future Technology are anticipated to further align public funding of research and innovation with economic development priorities.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

The Jordan Technology Transfer Network is a network of institutions organized and supported by the Intellectual Property Commercialization Office (IPCO) at the Royal Scientific Society. IPCO implements multiple awareness sessions at Jordanian academic institutions every year, and is always willing to hold capacity development sessions for research and technology transfer teams at member institutions. IPCO has also mentored technology transfer professionals, both on site and remotely. The Ministry of Industry, Trade and Supply maintains a TISC network, which includes outreach driven by regular WIPO online events. Independently, efforts are underway to bring Jordanian technology transfer officers together in Jordan's first association for technology transfer professionals. This currently ad hoc association aims to improve peer-to-peer learning, deal sourcing, capacity development, and resource sharing. Though legal advice is currently being sought, this association will likely be registered as a civil society organization over the coming few months.

LATVIA

Jurijs Jastržembskis

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Latvia has established a legal framework to maximize the societal and economic impact of publicly funded research through the protection, transfer and commercialization of knowledge, technologies and inventions. The main legal basis is the Scientific Activity Law, which regulates the ownership and management of intellectual property created through publicly funded research and requires state scientific institutions to protect and assess the commercialization potential of research results. Commercialization should be carried out in a way that is as beneficial as possible to the state and based on market-value principles.

A more detailed framework is provided by Cabinet Regulation No. 404, "Regulations on the Economic Use of Know-how, Technologies and Inventions of State Scientific Institutions, Evaluation of Investments, Risk Tolerance and Determination of Remuneration." The Regulation establishes procedures for identifying and evaluating new know-how, technologies and inventions, assessing their commercialization potential, managing investment risks and determining remuneration for researchers. This creates a clearer pathway from research results to practical applications, business development and societal benefits.

The overall direction in Latvia is therefore shifting from simply generating research results towards creating measurable economic and societal value from knowledge, intellectual property, and technology. This approach aims to ensure that publicly funded research is effectively translated into practical applications, innovation, and broader benefits for society and the economy.

https://likumi.lv/ta/id/107337-zinatniskas-darbibas-likums

https://likumi.lv/ta/id/

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

In Latvia, the professionalization of knowledge and technology transfer (KTT) specialists is supported through a combination of international training opportunities, professional networks, practical experience and international cooperation. Organizations such as the World Intellectual Property Organization (WIPO) and the European Patent Office (EPO) provide a range of training programmes and professional development opportunities accessible to specialists in Latvia. The Patent Office of the Republic of Latvia plays an important role in coordinating, promoting and supporting access to these initiatives, helping to develop the necessary competencies of both emerging specialists and experienced experts.

Professional development is also supported through international forums and events that bring together internationally recognized experts in areas such as deep-tech start-up

development, investment attraction and commercialization of research-based solutions. Initiatives such as DeepTechAtelier and Innovation Impact Forum provide opportunities not only to acquire practical knowledge, but also to develop the entrepreneurial and innovation mindset needed among both emerging and experienced KTT professionals. Ultimately, successful technology transfer depends not only on skills and tools, but also on visionary leadership and the ability to turn research potential into real economic and societal impact.

Overall, Latvia is moving towards a more continuous and ecosystem-based approach to professionalizing KTT talent, combining international expertise, peer-to-peer learning, practical experience, cross-border cooperation and leadership development rather than relying solely on one-off training.

LITHUANIA

Greta Žėkienė

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Lithuania is strengthening knowledge valorisation through a combination of institutional responsibility for research results, national capacity-building for technology transfer and more targeted support for the transition from research to market and societal use. The national system remains relatively young, but its direction is increasingly clear: technology transfer is being treated not only as IP protection or licensing, but as an institutional capability connecting research, companies, investors, public-sector partners and research-based entrepreneurship.

Under Lithuania's higher-education and research framework, universities and research institutes are responsible for managing intellectual-property rights arising from their activities, according to their institutional IP policies. In practice, the more mature institutions are increasingly integrating IP management with research contracting, collaborative R&D, licensing, spin-off support and business engagement. This matters because the societal value of publicly funded research is usually created through a portfolio of routes – not only through patents and licences.

This institutional development is reinforced by a clearer national policy signal. In April 2024, the Seimas approved the Description of Directions for the Development of Lithuania's Long-Term Policy on Science, Technology and Innovation, alongside the wider long-term vision set out in Lithuania 2050. The policy framework identifies the creation, protection, transfer, acquisition and use of intellectual property as a dedicated national direction, together with the strengthening of the knowledge and technology transfer ecosystem and the regional development of the knowledge economy. This gives universities and research institutes a stronger strategic basis for treating knowledge valorisation and technology-transfer capacity as part of their institutional mission and national innovation policy, rather than as an optional ancillary activity. The direction is consistent with the EU Council Recommendation on the guiding principles for knowledge valorisation.

At national level, knowledge valorisation, science–business collaboration and the development of knowledge-intensive business are reflected in Lithuania's long-term science, technology and innovation priorities. The Innovation Agency Lithuania provides a more integrated business-facing interface for innovation support, while the Research Council of Lithuania plays an important role in strengthening institutional commercialisation capacity and research-based entrepreneurship.

The following instruments illustrate the direction of travel:

- A **€13.39 million** national project for strengthening the competences of Innovation and Technology Transfer Centres brings together the Research Council of Lithuania and 12 research and higher-education institutions. Running until the end of 2028, it supports the development of a national TTO network and strengthens institutional capability in commercialisation, IP management, entrepreneurship, international cooperation and science–business engagement. The project is significant because it invests in the longer-term professionalisation of the technology-transfer function, rather than treating knowledge transfer as a series of isolated training activities.
- Lithuania has committed **€5.1 million** to a dedicated spin-off R&D commercialisation initiative expected to support **38 projects involving 46 partners**–research-based spin-off companies and research and higher-education institutions. The instrument supports the development of results from **TRL 7 to TRL 9,** from prototype demonstration to final product evaluation, with funding of up to €120,000 for 15 months or **€150,000 for 24 months** where product-certification preparation is included. Funding intensity is up to 100%, helping to address the difficult "last mile" between a validated research result and a market-ready, investable solution. The scheme is also designed to preserve a clear university–spin-off IP relationship: the funding agreement is concluded with the spin-off, while the spin-off must hold a licence to the relevant research result from the research and higher-education institution.
- **Collaborative and mission-oriented funding.** Lithuania has also used funding instruments that bring companies and research organisations together at an earlier stage of innovation. In 2022–2023, the *InoStartas* call allocated approximately **€1.8 million** to **11 early-innovator projects** involving new-product development, researcher participation in company R&D, IP protection and market preparation; funding was available from €40,000 to €200,000 per project. In parallel, Lithuania's mission-based science and innovation programmes bring research institutions and business together through large collaborative consortia. The original programme design envisaged approximately **€77.7 million** for implementation and required each consortium to include at least **two research institutions and two businesses.** The programmes are now being implemented through three mission consortia in the areas of health, climate-neutrality and a safe and inclusive e-society.

Several practices from the Lithuanian experience may be of interest to other countries with small or developing technology-transfer ecosystems.

First, supporting the last mile of commercialisation. Lithuania is increasingly complementing early-stage research support, proof-of-concept activity and IP protection with support for later development, market validation and – in appropriate cases –

regulatory or certification preparation. This is particularly relevant for engineering, health, food, deep-tech and other sectors in which scientific validation and a protected invention are necessary but not sufficient to make an opportunity investable, licensable or procurement-ready.

Second, embedding collaboration earlier in research. Collaborative and mission-oriented R&D programmes increasingly encourage or require meaningful participation by research institutions and companies. This shifts technology transfer upstream: rather than waiting until a project is completed and then searching for an external partner, researchers and companies can shape agendas, develop solutions and address market needs together from the beginning.

Third, developing capacity through a network model. Most Lithuanian technology-transfer offices are small and work across a wide portfolio: intellectual property, research agreements, licensing, funding, researcher engagement, business development and spin-offs. No single office can realistically maintain deep expertise in every area. National and regional networks therefore play an important role in enabling peer consultation, shared learning, practical exchange and access to specialised competences.

Fourth, recognising multiple pathways to impact. Patents, licences and spin-offs remain important indicators, but they are not the whole picture. Societal and economic value may also arise through collaborative research, contract research, standards, researcher mobility, data and software, public-sector innovation, professional services, social innovation and the application of social sciences, humanities and design. At Kaunas University of Technology, for example, one of the indicators used to assess innovation and knowledge-transfer activity is the volume of funding attracted by business partners through university–industry collaboration projects. This recognises that value is created not only when a university receives licensing income, but also when it helps companies access research capability, develop solutions and mobilise resources for joint R&D. A broader understanding of knowledge valorisation is therefore important for aligning measurement with the actual diversity of university impact.

Lithuania has made progress in innovation performance, while private-sector R&D intensity, business demand for research-based innovation and the availability of scale-up capital remain priorities. An important next step will be securing more stable, long-term funding for technology-transfer capacity beyond individual project cycles, while also strengthening the ability of companies and investors to engage with research-based opportunities.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Lithuania is moving from developing individual specialists towards building a stronger professional community. This is important in a small ecosystem, where TTO teams are usually small and one person may need to work across IP, research contracts, licensing, business engagement, funding and spin-off support. In such a setting, professional growth cannot depend only on occasional training; it needs stable roles, trusted peers and opportunities to learn from real cases.

A major national step is the €13.39 million project for strengthening the competences

of Innovation and Technology Transfer Centres. Running until the end of 2028, it brings together the Research Council of Lithuania and 12 research and higher-education institutions. It supports longer-term TTO capacity in commercialisation, IP management, entrepreneurship, science–business collaboration and international engagement. For practitioners, this matters because it gives institutions a stronger basis to invest in people and professional development over time.

WIPO's regional capacity-building work has also been very important for Lithuania. One outcome was the establishment of national TTO networks in Lithuania, Latvia and Estonia. In Lithuania, this led to TTO Lithuania, established in 2020 by five universities; the three national networks later joined forces to create the Baltic TTO Network in 2022. These networks are valuable because they make it possible to discuss real questions with colleagues: a difficult research agreement, an IP clause, a licensing case, a spin-off structure or an institutional policy issue. For small offices, this kind of peer support is often as important as formal training.

The Baltic TTO Network also brings professionals together through regular regional meetings, creating a space to exchange practical experience, discuss current challenges and maintain relationships between formal training activities. Recent meetings have combined peer exchange with wider discussions on science–business collaboration, commercialisation and the role of TTOs in the regional innovation ecosystem.

The WIPO Mentorship Programme for Spin-offs of the Baltic States was a particularly useful next step. It brought together technology-transfer professionals from Lithuania, Latvia and Estonia in a structured programme focused on supporting research-based spin-offs. The most valuable outcome was not only the programme itself, but the continuing community it created. Participants can still exchange experience on spin-off assessment, founder support, IP strategy, investor readiness and commercialisation pathways. The earlier WIPO capacity-building work supported the formation of the regional network, while the later mentorship programme focused specifically on developing TTO managers' practical capacity in spin-off creation.

International accreditation and continuing education provide another important layer. KTU's membership of the European Consortium of Innovative Universities (ECIU) provides an additional route for international peer learning, staff mobility and exchange of good practice in innovation, entrepreneurship and knowledge transfer. Lithuanian professionals increasingly engage with RTTP/ATTP pathways and learning opportunities offered by WIPO, AUTM, ASTP and the European Patent Office. Accreditation is helpful not simply as a credential, but because it provides a shared language for explaining competence and professional responsibility to researchers, universities, companies, investors and international partners.

Professional development also takes place through international expert work. ESNA's IP & Technology Transfer Volume, released in May 2026 as part of the ESNA Compendium series, is one example. Lithuania was represented in its development, to which I contributed as the Lithuanian expert. The volume enabled an exchange of practical experience on spin-off investment terms, researcher incentives, TTO transformation and other conditions for research-based entrepreneurship.

For Lithuania, and for smaller technology-transfer ecosystems more generally, it is neither

realistic nor necessary to recreate every specialised competence within each TTO. A more sustainable model is to combine stable institutional roles with strong national and regional networks, international professional standards and shared access to expertise in areas such as IP valuation, complex licensing, deal structuring, regulatory strategy and investment readiness. In this model, leadership support and sufficient time for professionals to build practical judgement, trusted relationships and institutional memory are as important as formal training; otherwise, the loss of a single experienced colleague can have a disproportionate effect on an institution's commercialisation capacity.

MEXICO

Marcela Castillo Figa and Guillermo Roura

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

In Mexico, national policies and institutional frameworks have increasingly aligned knowledge and technology transfer with public welfare, the reduction of inequalities, and social development. While historically focused on commercialization and industrial competitiveness, these mechanisms now place equal importance on addressing priority national issues—such as water scarcity, public health, agricultural sustainability, and rural development. This shift is guided by national science, technology, and innovation frameworks that encourage public research institutions and universities to generate measurable social value.

At the institutional level, major public universities—such as the National Autonomous University of Mexico (UNAM) and the National Polytechnic Institute (IPN)—along with Public Research Centers (CPIs), have established social innovation units. Notable best practices include the adoption of social licensing models and open-access technology strategies, which enable low-income communities, agricultural cooperatives, and public entities to implement academic innovations at minimal cost; public-private partnerships tailored to vulnerable populations have also been implemented.

Furthermore, regional ecosystems and collaborative networks actively promote localized technology linkages. These networks directly connect researchers and academics with local governments, civil society organizations, and small-scale producers. Current efforts emphasize ensuring that technical solutions are culturally, economically, and socially viable for the target communities. This multi-stakeholder strategy transforms academic research, shifting the focus from isolated patents to functional social programs, community-based technology spin-offs, and public policies that directly address structural inequality in the country.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

To drive national innovation and ensure that knowledge generated in universities and research centers transforms society, the personnel responsible for promoting and managing technology transfer must be highly skilled. While digital tools offer flexibility,

in-person and hybrid training models are essential for developing the complex, practical competencies required in this field. Technology transfer is an inherently relational endeavor requiring strategic negotiation, trust-building, direct interaction with scientists, and real-time project evaluation. Face-to-face interaction allows managers to practice negotiation tactics, evaluate intellectual property portfolios, and build networks with researchers, entrepreneurs, and investors—dynamics that are difficult to replicate in purely virtual environments.

In Mexico, hybrid educational frameworks are being leveraged to comprehensively professionalize this talent pool. By combining asynchronous digital modules with intensive in-person workshops, bootcamps, and mentorships, theoretical knowledge regarding intellectual property, technology valuation, and market validation is immediately translated into structured learning and the exchange of experiences among diverse stakeholders. A key component of this professionalization strategy is the ecosystem coordinated by Red OTT México in collaboration with international associations—such as the Licensing Executives Society (LES)—as well as other networks and the government. Rather than offering sporadic courses, Red OTT promotes training, continuous professional development, and structured mentorship programs. Experienced professionals guide managers from Technology Transfer Offices who are just starting out, supporting them in structuring real agreements, managing IP portfolios, and handling project management, among other topics. Having well-trained personnel—developed through these hybrid and in-person schemes—is the critical factor in effectively bridging the gap between the research and knowledge generated in universities and research centers and their practical application in Mexico's economic and social development.

NEW ZEALAND

James Hutchinson

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Aotearoa New Zealand is in the midst of its most significant reform of the public research system in more than 30 years. The current Government has framed research impact primarily in economic terms: commercialisation, new companies and jobs, technologies entering the market, more entrepreneurial researchers, and greater business and investor access to publicly funded research. Many within the New Zealand system would apply a broader concept of research impact, in that commercialisation is only one of several pathways through which research creates social, cultural, environmental and economic value; non-commercial pathways can also produce significant economic benefits.

The broader approach is represented by the Impact Pathways Conceptual Framework developed by the Aotearoa Research Impact Community of Practice (ARI-CoP, formerly iPEN). It identifies policy, practice, public and community, commercialisation, and kaupapa Māori (pathways grounded in Māori values and approaches) as distinct but interconnected routes to impact, underpinned by knowledge, capability, relationships and infrastructure. Te ao Māori (the Māori world) brings an inherently holistic, multidimensional and multigenerational conception of impact to this framework. Importantly, these pathways

are not mutually exclusive: a research programme may generate several forms of impact through multiple pathways, with feedback between them. *See Appendix B

Within the Government's predominantly commercial and economic framing, several recent reforms should nevertheless strengthen the foundations for wider societal impact. The Government began the reform process with the view that shifting ownership of publicly-funded research IP from institutions to individual researchers would unlock greater commercialisation. Through an iterative policy-development process involving engagement with the wider sector, this has evolved into a more flexible and pragmatic national IP and commercialisation framework that provides clearer expectations and direction while recognising the continuing importance of capable institutional support for researchers. It is being complemented by practical Commercialisation Engagement Guidelines, direct government investment in university commercialisation capability, and continued proof-of-concept funding through the PreSeed Accelerator Fund. A new Commercialisation Outcomes Measurement Framework (COMF) will also establish clearer top-down expectations and incentives across universities and public research organisations; within the new Tertiary Research Excellence Fund, commercialisation will carry a 7.5% weighting based on a set of commercialisation outcomes measures. It is hoped that these institutional incentives will translate into corresponding objectives, recognition and career incentives for individual researchers, whose progression remains largely determined by traditional measures such as publications and research funding. National coordination through the Commercialisation Partner Network (CPN) combines locally embedded commercialisation teams with shared funding, investment scrutiny, expertise and networks. Within this system, KiwiNet connects 14 universities and research organisations and, alongside The Lighthouse, helps move research discoveries towards commercial and wider real-world impact.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

New Zealand has a small and highly specialised knowledge and technology transfer workforce, spread across universities and public research organisations of very different sizes. Historically, professional development has relied heavily on experience, peer networks and individual institutional investment. Recent developments are beginning to turn these elements into a more coherent national pathway.

The new University Commercialisation Centre funding is critical. For the first time, government is investing directly in the institutional teams required to turn research into impact, including funding that can be used for workforce and professional development. This recognises that training alone cannot professionalise a workforce if roles are insecure, teams lack critical mass, or institutions cannot create entry and progression opportunities. The funding also includes an expectation of collaboration, creating opportunities for shared programmes, secondments, specialist support and cross-institution learning rather than each institution developing capability in isolation.

This builds on KiwiNet's Commercialisation Professional Framework, which describes career stages, roles, competencies and development pathways for current and aspiring professionals. An accompanying assessment tool allows individuals to evaluate their capability and identify areas for growth. KiwiNet's membership of the Alliance of

Technology Transfer Professionals (ATTP) is creating a more seamless pathway for New Zealand practitioners to work towards internationally recognised Registered Technology Transfer Professional (RTTP) accreditation. Local training is increasingly being accredited for RTTP points, connecting national professional development with an international standard and a commitment to continuing learning.

Professional capability is also developed through structured participation in real commercialisation work. Through the Commercialisation Partner Network (CPN), practitioners participate in national investment and pipeline committees operated by KiwiNet and The Lighthouse. These expose professionals to experienced peers, investors, entrepreneurs and industry experts as they collectively test proposals and shape project strategies. Secondments, internships, mentoring, peer review, national workshops and cross-institution project support provide further opportunities to develop judgement and experience over time. These mechanisms make the wider CPN community a continuing professional-development environment rather than relying solely on classroom training.

The system is not yet complete. New Zealand still needs more visible entry pathways, succession planning and consistency of opportunity between institutions. However, the combination of sustainable workforce funding, a national capability framework, practical assessment, structured peer learning and an internationally recognised accreditation pathway provides the basis for a more deliberate and enduring professional system.

NORTH MACEDONIA

Vladimir Kitanovski

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

North Macedonia is developing an increasingly structured innovation ecosystem in which knowledge and technology transfer are linked to economic, societal and environmental development. The main national framework is the Smart Specialisation Strategy of North Macedonia (S3-MK) 2024 – 2027, which promotes stronger cooperation between academia and industry, innovation capacity, human capital development, and green and digital transformation. Its priority areas include smart agriculture and high-value-added food, ICT, Industry 4.0, and sustainable materials and smart buildings.

A key recent development is the establishment of INOVA, the national agency supporting innovation, scientific and technological development and entrepreneurship, which provides an institutional mechanism for connecting research, innovation, businesses and entrepreneurial initiatives.

At the university level, Mother Teresa University (MTU) is translating these priorities into practice through the establishment of the Innovation Partnerships and Project Acceleration Nexus (IPAAN) under the EIT HEI HEI2MARKET – Transforming Education into Innovation project. The centre supports innovation partnerships, project development, entrepreneurship, startup initiatives and stronger university–industry connections.

These developments reflect a broader understanding of technology transfer: societal

impact is not limited to patents and licensing, but also includes solving real problems, supporting SMEs and startups, developing new products and services, building entrepreneurial capacity, and connecting academic knowledge with societal needs.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

In North Macedonia, the professionalization of knowledge and technology transfer (K/TT) is still developing, with capacity building increasingly moving beyond one-off training towards structured education and practical experience. Universities are beginning to integrate innovation, entrepreneurship and technology-transfer competencies into formal learning, while EU-funded initiatives provide opportunities for international peer learning and professional development.

A relevant example from Mother Teresa University (MTU) is the HEI2MARKET – Transforming Education into Innovation project under the EIT Higher Education Initiative. Within the project, MTU established the Innovation Partnerships and Project Acceleration Nexus (IPAAN) and developed standalone curricula focused on entrepreneurship and startups. These curricula address competencies directly relevant to future K/TT professionals, including opportunity identification, innovation management, commercialization, business-model development, intellectual-property awareness, project development and university–industry collaboration.

This approach helps create a talent pipeline in which K/TT-related competencies are developed before individuals enter technology-transfer or innovation-support roles. While a nationally standardized K/TT career and certification framework is not yet established, the direction is towards more systematic professionalization through formal education, practical innovation environments, continuous professional development and international collaboration.

PHILIPPINES

Christopher E. Cruz and Peter Immanuel Tenido

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT.

The Philippines has a legal framework for knowledge and technology transfer (KTT). The Philippine Technology Transfer Act of 2009 (Republic Act No. 10055) explicitly links government-funded research to useful products and services that benefit Filipinos, regardless of the income generated. It generally assigns ownership of intellectual property (IP) arising from government-funded research to the research institution, subject to exceptions, and establishes responsibilities for IP management, commercialization, and researcher incentives. This legal framework is supported by programs that address barriers between research and use.

IPOPHL's Innovation and Technology Support Office (ITSO) network, comprising 103 ITSOs nationwide, has been central to building capacity at universities and research institutions

in IP protection, management, and commercialization. The network helped IP filings reach a record 53,231 in 2025 and generated ₱24.3 million in income from IP assets, a 19% increase from 2024.

The Department of Science and Technology (DOST) launched its Program PROPEL in 2024 as a national platform integrating its services, facilities, and programs for technology transfer and commercialization. The Synergized Innovation and Business-Oriented Launchpads (SIBOL) would connect universities and industry with regional value chains, infrastructure, financing, and market pathways. The Philippine Technology Evaluation and Standards for Testing (PHITEST), being advanced by DOST and the Commission on Higher Education (CHED), is intended to provide a national framework for testing, validation, certification, and standards development, enabling Filipino technologies to reach industrial scale and meet global benchmarks.

DOST's IMPACT and IMPACT NXT initiatives under its Philippine Council for Industry, Energy, and Emerging Technology Research and Development (PCIEERD) complement these programs by strengthening KTT offices and institutional systems. The IMPACT NXT projects implemented by De La Salle University (DLSU) and Ateneo de Manila University (ADMU) use maturity-based frameworks to assess policies, processes, practices, and people. These initiatives reflect a sound research-to-impact principle: institutions need capability, commercialization pathways, credible evidence, and professional expertise. Progress should ultimately be assessed by technology adoption and benefits to users and communities, alongside IP, licensing, and enterprise indicators.

The critical issue is commercialization at scale. Rising patent and other IP filings signal stronger innovation and IP awareness, but filings alone do not ensure successful technology transfer. The next phase should therefore shift the primary measure of success from IP filings to IP utilization. Philippine universities and research institutions need stronger capabilities in technology assessment, market validation, valuation, licensing, industry matching, startup support, and investment. The Philippines has built substantial IP infrastructure. Now its central technology-transfer challenge is to convert that infrastructure into a reliable pipeline from research and IP creation to commercial and societal impact.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

The Philippines is developing academic and practitioner pathways beyond on-the-job learning and one-off training. De La Salle University (DLSU) recently launched the Master in Intellectual Property Management and Innovation (MIPMI) in collaboration with the World Intellectual Property Organization (WIPO) and the Intellectual Property Office of the Philippines (IPOPHL). Within the emerging research-to-market structure described above, MIPMI offers a formal postgraduate pathway to build the expertise needed to manage, protect, license, and commercialize Filipino innovation.

AToP, an Associate Member of the Alliance of Technology Transfer Professionals (ATTP), is developing its KETTC program into a planned certificate program of approximately three modules totaling 18–20 hours. Its first six-hour module has been approved by the ATTP Course Review Committee and will serve as the pilot course. AToP plans to evaluate and

refine the pilot, potentially through repeated offerings, before submitting Modules 2 and 3 for accreditation.

These pathways complement ATTP's Registered Technology Transfer Professional (RTTP) framework, which recognizes demonstrated skills, experience, and achievements. Together, they provide a foundation for sustained professional development. Further work is needed to link learning to demonstrated competence, ongoing development, and stable institutional career pathways for KTT professionals.

Professionalization is also supported by dedicated institutional positions. The government's 2025 revised staffing standards for state universities and colleges include technology transfer and patent unit functions. Selected private universities likewise maintain or recruit specialized IP and commercialization personnel. These arrangements can support continuity, retention of expertise, and sustained professional development, complementing structured training and postgraduate education.

SERBIA

Dr. Nedeljko Milosavljević

Executive perspective. Serbia has developed several valuable but still fragmented mechanisms for knowledge and technology transfer. The strongest combine early-stage validation funding with business and commercialization advice, connect research organizations with companies and public-sector users, and support selected institutions in strengthening their transfer capacity. However, these mechanisms do not yet constitute a coordinated national KTT system. Responsibilities, decision-making authority, procedures and resources remain dispersed among universities, legally independent faculties and institutes, public funds and other innovation actors. Professional capacity is similarly uneven and often dependent on experienced individuals, temporary projects and external support rather than recognized institutional positions and career pathways. The next stage of development should therefore focus on coordinated decentralization: connecting existing instruments through common standards and referral mechanisms, providing stable institutional KTT capacity and developing a professional workforce able to manage technologies from initial disclosure to measurable economic and societal impact.

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Serbia has established a number of relevant policies, funding instruments and institutional support mechanisms for knowledge and technology transfer (KTT). However, these elements still operate as a fragmented ecosystem rather than as a coordinated national transfer system. The Law on Innovation Activity recognizes technology transfer centers, science and technology parks, startups, spin-offs and other innovation actors, while the Smart Specialisation Strategy 2020–2027 directs public attention towards Food for the Future, ICT, Future Machines and Manufacturing Processes, and Creative Industries. These policies provide an enabling framework, but implementation remains distributed among the Ministry, the Science Fund, the Innovation Fund, universities, faculties, research institutes, science and technology parks and other innovation-support organizations.

An important structural constraint is the legally non-integrated organization of Serbia's major public universities. Under the Law on Higher Education, universities have an integrative responsibility that includes intellectual property management in knowledge transfer. In practice, however, constituent faculties—and a number of research institutes within university systems—operate as separate legal entities, with their own governing bodies, employees, accounts, contracts and internal regulations. Consequently, a university-level TTO may be expected to coordinate and support transfer activities across the university, but it does not necessarily have delegated authority over invention disclosure, IP ownership decisions, patent budgets, industry contracts, revenue sharing or spin-off formation at every constituent institution. This creates multiple decision-making chains, inconsistent procedures and a less transparent interface for companies wishing to access university knowledge and technologies.

Within this fragmented structure, some of Serbia's most effective practices are targeted programs that combine project financing with specialist advice. The Science Fund's Proof of Concept Program addresses the early validation of research results as commercially or socially valuable propositions. The 2023 call had a total budget of EUR 1 million, with up to RSD 2.4 million and a maximum duration of 12 months per project. Each funded team was required to engage a business adviser to assist with product definition, the business model and further development after the proof-of-concept stage. The program, financed through the World Bank loan under SAIGE, is particularly relevant because it addresses the gap between a promising research result and evidence that the result can provide value to a user, customer or society.

The Innovation Fund's Technology Transfer Program is a separate, project-level commercialization instrument. It is not a national technology transfer facility in an institutional sense. The program supports selected inventions that have reached at least TRL 4 and have regulated IP ownership, providing up to RSD 6 million for projects lasting up to 12 months. In addition to financing, beneficiaries receive mentoring in product definition, market assessment, IP strategy, licensing, business-model development and startup or spin-off formation. Its value lies in combining technical development with market and commercialization expertise. Its limitation is that capacity is developed primarily around selected projects and does not automatically remain embedded in the research organization after the project ends.

Several complementary instruments broaden the definition of societal impact beyond patenting and licensing. Innovation Vouchers stimulate demand for academic expertise by enabling SMEs to purchase testing, validation, prototyping and other R&D services from research organizations. GovTech starts with concrete challenges identified by public institutions and supports innovative solutions in areas such as healthcare, water management, accessibility, environmental protection and public administration. This is a particularly relevant model of societal impact because successful transfer is measured through adoption and improvement of public services, rather than only through licensing income. The Science Fund's Green Program for Cooperation between Science and Industry supports mission-oriented cooperation addressing environmental and climate-related challenges, while Open Science Platform 2.0 facilitates wider access to publicly funded publications, research data and other research outputs, subject to legitimate IP, contractual, ethical and security restrictions.

SAIGE represents a different, predominantly top-down approach to strengthening research organizations. The project is implemented through the Ministry and its Project Implementation Unit, with support from the World Bank and the European Union. Research institutes participate on an opt-in basis and contribute to their transformation plans, but the overall methodology—self-assessment, international external assessment, transformation planning, milestones, technical assistance and implementation financing—is designed and managed through the project structure. World Bank reporting records EUR 13.7 million, including EU IPA funds, for the RDI-reform subcomponent. Procurement documentation also shows that technology-transfer managers for individual institutes and subsequent RDI-level TT consultancy were financed from IBRD loan 90290. The intervention has helped selected institutes introduce or strengthen dedicated TT functions, internal procedures, staff skills and commercialization pipelines.

Nevertheless, SAIGE should not be treated as evidence that Serbia has established a sustainable or coordinated KTT system. Its coverage is limited to selected institutes, much of the specialist capacity is externally financed, and the continuation of positions and activities after project financing remains an open question. Establishing an institutional TT unit is only a first step; its real value depends on qualified staff, access to patent and development budgets, authority within the institution, a sufficiently strong project pipeline and the ability to conclude transactions with industry. Creating multiple institution-specific units without shared standards, referral mechanisms and specialist services may even add another layer of fragmentation.

From twenty years of practical experience, the strongest Serbian approaches are those that combine early technical validation, market discovery, specialist mentoring and engagement with potential adopters. The principal weakness is not the absence of individual programs, but the lack of continuity and coordination between them. Serbia now needs a model of coordinated decentralization: stable KTT positions and operating budgets within research organizations; clear delegation and service agreements among universities, faculties and institutes; shared legal, patenting, market-analysis and licensing expertise where individual institutions lack sufficient scale; and common procedures for disclosure, evaluation, IP protection, commercialization and conflict-of-interest management. Societal impact should be monitored for at least three to five years and should include not only patents and licensing income, but also technology adoption, research partnerships, follow-on investment, spin-offs, improvements in public services, environmental benefits, policy influence and quality-of-life outcomes.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Serbia does not yet have a nationally structured system for professionalizing knowledge and technology transfer professionals. There is no implemented national KTT competency framework, accredited qualification, occupational standard, professional association, defined career ladder or coordinated continuing-professional-development program. Universities, faculties, research institutes, science and technology parks and public agencies use different job titles and assign different responsibilities to KTT staff. In many institutions, technology transfer is not a clearly recognized profession but an additional responsibility given to researchers, legal officers, project managers or business-

development staff.

This distinction is important. Training researchers to understand intellectual property or helping a project team prepare a commercialization plan contributes to KTT capacity, but it is not the same as developing professionals who can independently manage invention portfolios, evaluate commercial potential, structure research collaborations, negotiate licences, support spin-offs and monitor long-term impact. Serbia has several practices that contribute to professional development, but they remain institutionally fragmented and are not connected into a coherent career system.

The most established recurring national resource is the Education and Information Centre of the Intellectual Property Office of the Republic of Serbia, which has operated since 2010. It provides lectures, seminars, workshops and webinars, specialized patent-search training, IP pre-diagnosis services, open consultations and education relating to intellectual property in technology transfer. Because these services are available repeatedly rather than through a single project, they provide an important foundation for building national IP capability. However, IP protection is only one part of KTT practice. A technology transfer professional also requires competence in market discovery, business models, contracting, valuation, licensing, spin-off development, financing, partnership management and societal-impact assessment.

A second practice is supervised learning through publicly funded commercialization projects. Under the Science Fund's Proof of Concept Program, each funded research team engages a business adviser who supports product definition, business-model development and planning beyond the proof-of-concept stage. The Innovation Fund's Technology Transfer Program combines project funding with mentoring on market assessment, IP strategy, licensing and spin-off development. Working on real technologies and engaging with experienced advisers is more valuable than isolated classroom training because participants learn through actual technical, commercial and institutional decisions. Nevertheless, these programs primarily develop the capabilities of selected researchers and project teams. They do not provide a structured progression, qualification or permanent career route for institutional KTT professionals.

The SAIGE institutional-transformation program is currently the closest example of longer-term organizational capacity building. Selected research institutes undergo institutional assessment, preparation and implementation of transformation plans, technical assistance, training, study visits and support from national and international consultants. Project procurement has financed technology-transfer managers for individual institutes and broader TT consultancy for research and development institutes. World Bank documentation also refers to tailored technical assistance, joint seminars and approximately 40 planned training sessions over an 18-month period addressing different institutional-development needs.

SAIGE therefore provides more continuity than a one-off seminar and can help participating institutes establish TT roles, procedures and internal teams. However, it should not be interpreted as a national KTT professionalization system. The training covers a wider institutional-reform agenda rather than a dedicated technology-transfer curriculum; participation is limited to selected institutes; consultants and positions are substantially project-financed; and there is no common assessment of individual KTT competence or

guaranteed institutional position after the project. Establishing an office or appointing a TT manager does not by itself create professional capacity unless the person has a mandate, a project portfolio, access to specialist support and a realistic career path.

International education and professional networks provide another route. Individual Serbian practitioners participate in programs and activities organized by WIPO, EPO, ASTP, AUTM, the EU IP Helpdesk and Horizon Europe projects, as well as international study visits and peer exchanges. A small number pursue international professional recognition through the Registered Technology Transfer Professional—RTTP framework. These opportunities can be highly valuable, particularly when combined with responsibility for live transactions. Access, however, is generally based on individual initiative, international projects or temporary institutional funding rather than on an established Serbian professional-development policy.

From my experience, the main weakness is that KTT knowledge in Serbia is still concentrated in individuals rather than embedded in institutions. When an experienced person leaves a university, faculty, institute or project, much of the accumulated knowledge, partner relationships and transaction experience may leave with them. Small technology portfolios and understaffed offices also make it difficult for junior professionals to gain repeated experience across the full transfer cycle. The legally and organizationally fragmented structure of the research sector further limits staff mobility, shared case management and systematic mentoring across institutions.

The Ministry's July 2026 proposal for the Strategy for Science, Technological Development and Innovation 2026–2030 proposes an association of national technology-transfer experts and a continuous training program. These are relevant directions, but at the time of this report they remain proposed measures and should not be presented as implemented practice. The next step should be a distributed national KTT professionalization pathway rather than another series of unrelated workshops. A 12–18-month cohort-based program could combine a competency framework aligned with WIPO and ATTP/RTTP standards; modular education in IP, contracts, market validation, licensing, spin-offs, research partnerships, financing, ethics and impact; supervised responsibility for live cases; secondments among universities, faculties, institutes, industry, science parks, investors and public agencies; portfolio-based assessment; and mentoring by experienced national and international practitioners. Importantly, public funding should be conditional on institutions maintaining appropriate KTT positions after the program. Professionalization will become sustainable only when KTT is recognized as a career with defined competencies, progression, accountability and institutional authority—not as a temporary project function or an additional task assigned to researchers and administrators.

SLOVENIA

Urša Jerše

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

In Slovenia, efforts to maximize the societal impact of knowledge and technology transfer increasingly focus on strengthening the national knowledge transfer ecosystem rather than supporting individual institutions alone. A key priority has been building professional knowledge transfer capacities at universities and creating stronger links between academia, industry, public institutions, and society.

One of the most important initiatives is the Public Call for Supporting the Activities of Knowledge Transfer Offices (2024–2029), under which two national consortia have been established: UNIK@TT and KTO3. UNIK@TT brings together Slovenian universities, while KTO3 brings together public research institutes. Both initiatives focus on developing shared services, standards, and capacities for knowledge transfer. They support the professionalization of knowledge transfer offices and promote a more coordinated national approach to technology transfer, knowledge valorisation, and innovation support.

A key achievement of these initiatives has been the establishment of Knowledge Transfer Slovenia, a national platform that improves the visibility and accessibility of research expertise, technologies, intellectual property, and collaboration opportunities. By providing a single national entry point, the platform facilitates connections between researchers and external stakeholders and helps increase the reach and impact of knowledge transfer activities.

Another particularly valuable practice has been fostering collaboration among universities, research institutes, and knowledge transfer professionals at the national level. This shift from institution-based to ecosystem-based approaches enables the sharing of expertise, resources, and good practices, ultimately increasing the societal value created through knowledge and technology transfer.

The platform and collaboration activities are co-financed by the Republic of Slovenia, the Ministry of Higher Education, Science and Innovation, and the European Union through the European Regional Development Fund (ERDF) under the Public Call for Supporting the Activities of Knowledge Transfer Offices.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

While significant progress has been made, several important elements of professionalization are still under development. Knowledge and technology transfer is not yet widely recognized as a distinct profession with clearly defined career pathways, competency frameworks, or formal qualifications. Most professionals enter the field from diverse backgrounds, including research, law, business, or project management, and develop their expertise through practical experience and continuous learning.

Current initiatives such as UNIK@TT and KTO3 are helping address this gap through mentoring schemes, communities of practice, thematic working groups, joint training programmes, and the collaborative development of model agreements, guidelines, and other practical tools. These activities contribute not only to skills development, but also to the gradual establishment of common professional standards across institutions.

At the international level, active participation in networks such as ASTP and UIIN plays an important role in exposing Slovenian professionals to international best practices and professional development opportunities. International experts are regularly invited to Slovenia to deliver specialised training and share their experience with the national community.

Looking ahead, an important priority will be the development of more structured career pathways and competency-based professional recognition for knowledge transfer professionals. In this context, internationally recognised frameworks such as RTTP (Registered Technology Transfer Professional) may provide a valuable reference point for the further professionalisation of the field in Slovenia.

SOUTH AFRICA

Doug Sanyahumbi and Andrew Bailey

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT? (SADC Region)

Across the sixteen Member States of the Southern African Development Community (SADC), knowledge and technology transfer (K/TT) is framed by a shared regional policy architecture. The SADC Protocol on Science, Technology and Innovation (2008) commits Member States to cooperate in developing and harmonising STI policies and to strengthen national systems of innovation as drivers of socio-economic development, poverty reduction and employment creation.[1]

This commitment is operationalised through the Regional Indicative Strategic Development Plan (RISDP) 2020–2030, whose Industrial Development and Market Integration pillar prioritises strengthening regional technological capability through STI,[2] and the SADC Industrialisation Strategy and Roadmap 2015–2063, which charts the region's transition from factor-driven towards knowledge- and innovation-driven economies through value addition, skills development and technological transformation.[3]

National implementation

The most mature national framework is South Africa's Intellectual Property Rights from Publicly Financed Research and Development Act, 2008 (IPR Act), which vests IP ownership in institutions, mandates Offices of Technology Transfer (OTTs) and guarantees IP creators a share of commercialisation revenues,[4] with the National Intellectual Property Management Office (NIPMO) providing both regulatory oversight and enabling support, including IP-cost rebates and OTT co-funding.[5] National surveys of IP and technology transfer, conducted with SARIMA, measure societal and economic impact well beyond licensing income.[15] Other Member States are following: institutional IP policies,

technology transfer committees and TTOs are being established at universities across the region, supported by national governments, WIPO and SARIMA.[7]

Best practices

Regional best practices include: legislation and institutional policies that frame commercialisation as a public-benefit obligation rather than an income objective; statutory benefit-sharing that incentivises researcher participation; impact-oriented measurement (products deployed, start-ups formed, jobs and health outcomes, not only revenue); and regional networking that enables emerging national systems to learn from more mature ones.

SARIMA's regional role

As the SADC-focused association for research and innovation management, SARIMA connects these national efforts, advocating for enabling policy, benchmarking practice through surveys and convenings, driving K/TT professionalisation, and building the institutional K/TT capacity on which societal impact across the region ultimately depends.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training? (SADC Region)

Across the SADC region, primarily through SARIMA, there is a deliberate and concerted effort to professionalise K/TT with defined competencies, structured professional development pathways and formal recognition designed to move beyond ad hoc, on-the-job or once-off training. Four mutually reinforcing practices stand out.

1. A regional Professional Competency Framework (PCF) for Research Management (RM)

Developed by SARIMA for the Southern African context and beyond, with support from the South African Department of Science and Technology, international RM experts, and the WHO TDR/ESSENCE programme, the PCF defines key competency areas and career levels (administrative, management and leadership) for research management and administration.[17] The Research Management Professional (RMP) designation is administered by an independent International Professional Recognition Council (IPRC). Research institutions use the PCF to design job profiles and learning pathways; practitioners use it for self-assessment and career planning.[9]

2. International Professional Recognition

SARIMA is a member of the Alliance of Technology Transfer Professionals (ATTP), through which practitioners across SADC attain the Registered Technology Transfer Professional (RTTP) designation, the adopted international standard of professional standing in K/TT, with a Candidate RTTP pathway for new entrants.[10] The growing regional RTTP cohort includes senior technology transfer leadership at SADC universities.

3. Accredited, points-bearing continuing professional development

SARIMA's online short courses, including Introduction to Intellectual Property, Technology Transfer and Commercialisation, are accessible across Member States and are reviewed and endorsed by the IPRC; completion earns training points recognised when applying for,

renewing or upgrading professional designations, embedding lifelong CPD rather than isolated workshops.[11]

4. Institutionalised, workplace-anchored development

Structured programmes, such as WIPO-supported on-the-job technology transfer training and mentorship, which has built TTO capacity, mentoring relationships and an emerging practitioner network at universities across SADC, complement SARIMA master classes, communities of practice and the annual conference, anchoring development in real institutional practice along a recognised career path.[12]

A regional model

This professionalisation journey, from competency framework to recognition, is documented in the peer-reviewed literature as a model for emerging regions,[13] SARIMA, through various partnerships, continues to extend it across all Member States, building a sustainable regional pipeline of professional K/TT talent.

[1]SADC Protocol on Science, Technology & Innovation (2008): https://www.sadc.int/document/protocol-science-technology-and-innovation-2008

[2]SADC Regional Indicative Strategic Development Plan (RISDP) 2020–2030, Industrial Development and Market Integration pillar: https://www.sadc.int/pillars/industrial-development-market-integration

[3]SADC Industrialisation Strategy and Roadmap 2015–2063: https://www.sadc.int/sites/default/files/2022-07/Repriting_Final_Strategy_for_translation_051015.pdf

[4]Republic of South Africa, Intellectual Property Rights from Publicly Financed Research and Development Act 51 of 2008: https://www.gov.za/documents/acts/intellectual-property-rights-publicly-financed-research-and-development-act-51-2008

[5]National Intellectual Property Management Office (NIPMO) — mandate, IP Fund and OTT support: https://www.nipmo.org.za/about

[6]WIPO case study, South Africa: IP Management and the Commercialization of Publicly Funded Research Outcomes (incl. the NIPMO–SARIMA national IP/TT surveys): https://www.wipo.int/edocs/pubdocs/en/wipo_casestudy_ip_comm_za.pdf

[7]WIPO, Technology Transfer in Action in Southern Africa — building TTO capacity across SADC universities: https://www.wipo.int/en/web/technology-transfer/w/stories/tech-transfer-southern-africa

[8]SARIMA, Professional Competency Framework for Research Managers and Administrators (2024 edition): https://www.sarima.co.za/wp-content/uploads/2024/05/Professional-Competency-Framework-2024-web.pdf

[9]SARIMA, Professionalisation — competency frameworks and professional recognition pathways: https://www.sarima.co.za/professionalisation/

[10]Alliance of Technology Transfer Professionals (ATTP), RTTP Program: https://attp.global/rttp-program/

[11]SARIMA Online Short Courses, endorsed by the IPRC: https://www.sarima.co.za/sarima-on-

line-short-courses/

[12]WIPO, Technology Transfer in Action in Southern Africa — on-the-job training and mentoring for SADC technology transfer practitioners: https://www.wipo.int/en/web/technology-transfer/w/stories/tech-transfer-southern-africa

[13]Professionalisation of Research Management and Administration in Southern Africa — A Case Study (Emerald, 2023): https://www.emerald.com/insight/content/doi/10.1108/978-1-80382-701-820231026/full/html

SOUTH KOREA

John Shim

See Appendix C.

SPAIN

Helena Montiel and Carme Verdaguer

In recent years, European Knowledge and Technology Transfer (KTT) policies have increasingly shifted from a predominantly commercial perspective towards a broader concept of knowledge valorisation and societal impact. The EU Guiding Principles for Knowledge Valorisation encourage the transformation of research and innovation results into solutions that generate social, economic and environmental value. This approach is also embedded in Horizon Europe, where "Impact" is a core evaluation criterion and applicants are expected to demonstrate credible pathways from project results to expected outcomes and wider societal impacts.

In Spain, this orientation has been reinforced by the 2022 reform of the Law on Science, Technology and Innovation, which explicitly recognises knowledge transfer as a multidimensional and bidirectional process and requires consideration of its economic, social, health and environmental impacts. The Spanish Science, Technology and Innovation Strategy 2021–2027 similarly promotes science and innovation as tools for addressing societal needs and strategic challenges, while strengthening public-private collaboration and knowledge transfer.

The Knowledge Transfer and Collaboration Plan further seeks to strengthen links between the public and private sectors and increase the socioeconomic impact of public investment in R&I. These objectives are consistent with the OECD Roadmap recommendations for Spain, which call for stronger incentives, institutional capacities and science-business connections, under a renewed relationship between science and society focused on concrete social benefits.

In practice, most competitive research, valorisation and proof-of-concept calls at European, national and regional level now include societal impact as an important evaluation component. In addition, challenge-oriented programmes promote collaboration among quadruple-helix actors. Examples include Catalonia's Regions of

Knowledge programme, which addresses territorial social, environmental and economic challenges, and Spain's CDTI Innovation Ecosystems, which support collaborative ecosystems involving knowledge institutions, companies, public administrations and civil society.

Beyond public programmes, many universities and research organisations have incorporated societal impact considerations into their institutional knowledge transfer strategies. This includes the development of challenge-oriented projects, stronger engagement with public administrations and social organisations, and the gradual introduction of impact-oriented indicators that complement traditional transfer metrics such as patents, licences and spin-offs.

Finally, universities and research centres increasingly communicate KTT success stories by highlighting their societal benefits. A relevant example is CRUE's "Transferencia e Impacto Social" initiative, created to showcase the contribution of Spanish universities' knowledge-transfer activities to societal transformation.

Useful Resources

- Spanish Ministry of Science, Innovation and Universities: Knowledge Transfer and Collaboration Plan https://www.ciencia.gob.es
- Science, Technology and Innovation Act (2022) https://www.ciencia.gob.es
- RedOTRI (Conference of Rectors of Spanish Universities) https://redotriuniversidades.net
- OECD Report: Improving Knowledge Transfer and Collaboration between Science and Business in Spain (2021) https://www.oecd.org

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

Spain has traditionally developed knowledge and technology transfer professionals through experiential learning within universities, public research organisations and technology centres. However, there is now broad recognition that effective knowledge transfer requires specialised competencies, professional standards and clearer career-development pathways. This shift is reflected in the national Knowledge Transfer and Collaboration Plan, which identifies professionalisation and capacity building as strategic priorities for strengthening the knowledge-transfer ecosystem.

Structured training has become an increasingly important component of professional development. In Spain, RedTransfer, the national association of knowledge transfer and innovation management professionals, plays a leading role through a comprehensive training programme covering the main areas of knowledge and technology transfer. Complementing these efforts, organisations such as AUTM and ASTP provide additional opportunities for specialised learning, professional exchange and international networking.

Professional certification is also gaining relevance. Through its ATTP-recognised training activities, RedTransfer provides a pathway for professionals seeking the internationally

recognised Registered Technology Transfer Professional (RTTP) credential, contributing to the international recognition of competencies and professional standards in the field.

Professional communities have become a key mechanism for capacity building, enabling peer learning, knowledge exchange and the dissemination of good practices across institutions. These communities help strengthen professional identity and promote continuous development beyond formal training activities.

A significant recent development has been the creation of CORMES (Coordination of Spanish Research Managers), a collaborative initiative that brings together the main national associations and professional networks involved in research management and knowledge transfer. Established within the framework of the European Research Area policy agenda and supported by FECYT, CORMES provides a platform for coordination among the different professional communities and contributes to ongoing discussions on competency frameworks, professional recognition, skills development and career progression.

The profession is also evolving rapidly in response to technological, economic and societal change. This evolution is driving demand for new profiles and competencies in areas such as artificial intelligence, data management, entrepreneurship, venture capital, innovation ecosystems, impact assessment and stakeholder engagement. As a result, professional development increasingly extends beyond traditional knowledge transfer training and incorporates cross-disciplinary learning, mentoring, communities of practice and collaboration with external experts and professional networks. These efforts aim to equip professionals with the broader capabilities needed to operate effectively in increasingly complex innovation environments.

Many institutions are also facing a significant generational transition, making talent attraction, retention and succession planning increasingly important. These challenges have reinforced the need to create sustainable professional careers capable of attracting and retaining highly qualified talent within the knowledge-transfer ecosystem.

Useful Resources

- RedTransfer Position Paper: Human Resources in Knowledge Transfer (2018). Position statement on professional profiles, competencies, certification, career development, remuneration and ethics in knowledge transfer. https://www.redtransfer.org/publicaciones
- CORMES (Coordination of Spanish Research Managers) – National coordination initiative bringing together the main Spanish associations and professional networks involved in research management and knowledge transfer, within the framework of the European Research Area.
- https://regic.org/ya-somos-parte-de-cormes-coordinacion-de-research-managers-espanoles/
- European Research Area (ERA) Action 17: Enhance Public Research Institutions' Strategic Capacity – European initiative aimed at strengthening research management skills, professional recognition and networking.
- https://european-research-area.ec.europa.eu/sites/default/files/2024-01/EU%20Iv%20rep%20Action%2017.pdf

THAILAND

Orakanoke Phanraksa Ph.D., Chalermpol Tuchinda and Dr. Viriya Taecharungroj

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Orchestrated largely by the Ministry of Higher Education, Science, Research and Innovation (MHESI) and the Office of National Higher Education Science Research and Innovation Policy Council (NXPO), Thailand has shifted from basic financial support toward creating an inclusive, mission-driven innovation ecosystem.

The TRIUP Act (Thailand's Bayh-Dole like Act): In addition to removing previous legal ambiguities of the ownership of publicly funded IP, the Act further covers the Appropriate technology section promoting practical and accessible innovations meant to be widely adopted by farmers, local communities, social enterprises, and underprivileged groups to improve their production, services, and income.

Fast-Track and Quality-Focused IP: Thailand is developing mechanisms to accelerate IP protection while improving the quality and commercial relevance of university-generated IP. In addition to fast-track registration for priority technologies, emerging initiatives introduce pre-filing screening based on technical quality and evidence of potential use. Coordination between universities, TTOs, and the Department of Intellectual Property is intended to shorten processing times, strengthen the quality of applications, and prioritize IP with stronger prospects for commercialization and innovation.

Venture Building & Co-Investment: Thailand is increasingly complementing conventional technology licensing with venture-building and co-investment mechanisms that support the creation and growth of university spin-outs and research-based startups. Through the growing collaboration among MHESI, the University Holding Company network, the National Innovation Agency (NIA), and the Technology and Innovation in Life Sciences National Agency (TILSNA), universities are developing stronger pathways to transform research and intellectual property into investable ventures.

Institutional Best Practices & Localized Transfer Models: At the National Science and Technology Development Agency (NSTDA), the Institute of Agricultural Technology and Innovation Management (ATI) focuses on reforming the agricultural sector through technology and innovation, strengthening the agricultural sector and communities, reducing inequality, and creating linkages to the grassroots economy using local resources. The tasks include but not limited to (a) Area-based development aiming to create mechanisms and processes for driving area development in collaboration with internal and external networks (government, private sector, and community) to enhance efficiency; (b) learning Station (Training Hub), a source of technology and innovation learning in collaboration with local universities to upskill existing skills (upskill) and reskill new skills (reskill) for farmers and communities, enabling them to apply technology and innovation to create economic value. https://www.nstda.or.th/agritec/drives/

What are the practices in your country for professionalizing knowledge and technology

transfer talent beyond on-the-job or one-off training?

Thailand replaces ad-hoc training with institutionalized, career-track frameworks led by MHESI, NXPO, the TED Fund and AITP to build a permanent professional class of innovation intermediaries.

AITP Certification Tracks The Association of IP and Technology Transfer Professionals (AITP) establishes formal qualification standards through structured certifications covering beginner, intermediate, and advanced levels. These tracks feature distinct specializations in both IP management and IP commercialization, moving beyond casual skill-sharing to validate comprehensive practitioner competencies, AITP enforces a separate certification body (CB) and training entity approach while overseeing the training contents, allowing for transparency and objectively validating comprehensive practitioner competencies.

TED Fellow Mentorship Network Managed by the Technology and Innovation Development (TED) Fund, this initiative embeds certified intermediaries—inclusive of professionals from university incubators, Technology Licensing Offices (TLOs), and science parks—directly into a national support grid. These experts act as commercialization scouts and operational coaches, guiding early-stage ventures and market expansion stages using the standardized "3C" framework (Connect research to markets, Create viable business models, and Commercialize innovations).

Peer Mentorship & GOTT Thailand Initiative Since 2019, MHESI has run a structured mentoring pairing program connecting veteran TTOs with incoming TLOs totaling 8 University TTO mentors guiding 46 mentees nationwide. Simultaneously, MHESI and NXPO are scaling this foundation through GOTT Thailand—a centralized national platform modeled on the UK's Government Office for Technology Transfer to promote technology transfer for public research commercialization.

TÜRKİYE

Prof. Fazilet Vardar Sukan and Prof. Ahu Altinkut Uncuoglu

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

Türkiye's first concrete efforts to build institutional technology transfer capacity date back to the early 2000s, when pioneering universities began establishing dedicated structures to facilitate university–industry collaboration and the commercialization of research results. Since then, the ecosystem has progressively evolved through dedicated legislation, public support programs, Technology Transfer Offices (TTOs), Techno-parks / Technology Development Zones as well as commercialization incentives. Türkiye combines public funding, institutional technology transfer capacity, market transparency and case-based learning to move research results into industrial and societal use. Türkiye's IP legislation, including provisions on ownership and revenue sharing for university inventions, further encourages researchers and institutions to participate in commercialization.

While the system historically emphasized economic value creation and commercialization, national policy is increasingly moving toward impact-oriented research, strategic technologies, sustainability and broader societal value creation.

The key policy interventions and mechanisms that have enable capacity building in TT are briefly summarized below.

- **Public investment in institutional technology-transfer capacity:** Launched in 2012, TÜBİTAK 1513 – Technology Transfer Office Support Program23 represents a major national intervention in building institutional technology transfer capacity in Türkiye. The program's objective was not limited to generating licensing revenue; it sought to transform university-generated knowledge and technologies into economic, social and cultural value. Through long-term, performance-oriented support, the program contributed to the establishment, capacity building and professionalization of TTOs, covering university–industry collaboration, IP management and commercialization, research funding support, and entrepreneurship. Performance monitoring, professional TTO management, integration of technology transfer into university strategies, participation in national and international networks, and dissemination of good practices are important elements of this approach. The most mature TTO models increasingly seek to intervene throughout the entire knowledge-transfer continuum—from research results and intellectual property to validation, commercialization, adoption and measurable impact. Thus currently, at institutional level, effective practices include early engagement with potential users of research; systematic invention disclosure and technology assessment; proof-of-concept and prototype funding; industry-funded collaborative research; intellectual property protection and licensing; spin-off creation; incubation and acceleration; access to investors; and long-term strategic partnerships with companies, municipalities, public institutions and civil-society organizations.
- **Restructured legal and institutional framework enabling university knowledge transfer:** The Industrial Property Law No. 6769 (2017) established a major structural

change by regulating ownership and commercialization of inventions generated within higher education institutions. Universities may claim ownership of inventions generated through institutional research, while inventors are entitled to at least one-third of revenues generated from commercialization. This created stronger institutional incentives for universities to actively manage and commercialize intellectual assets.

- **Incentivizing demand-driven university–industry knowledge transfer:** Türkiye operates several instruments that has an objective of advancing research to market. TÜBİTAK 1505 University–Industry Collaboration Support Program24 supports joint projects in which universities/research organizations act as technology providers and companies as users of research results, explicitly targeting commercialization and national benefit. The TÜBITAK 2244 Industrial PhD Program25 further embeds knowledge exchange by jointly training doctoral researchers with industry and supporting their subsequent employment in companies. TÜBİTAK 1702 Patent-Based Technology Transfer Support Call26 provides an important downstream mechanism by supporting the licensing or assignment of patented technologies originating from universities, public research organizations and early-stage technology companies to industry. The mechanism supports licensing/assignment costs as well as technology valuation and related commercialization services, thereby reducing the risk associated with industry uptake of research-based technologies. It may also support activities such as proof-of-concept studies, prototyping, testing, technology valuation, and other services needed to implement the transferred technology. From an impact perspective, this is important because it links public support to an actual transfer transaction and subsequent implementation. It helps bridge the commercialization gap between a protected research result and a company willing to invest in market deployment. It also encourages valuation, contracting, proof-of-concept work, prototyping, testing and technical assistance as connected parts of the transfer process.

  Another incentive is a mechanism to channel corporate capital into technology-based start-ups. Under Law No. 7263, amending Law No. 4691 on Technology Development Zones, eligible taxpayers are required to allocate 3% of their tax-exempt earnings to investments in Venture Capital Investment Funds, Venture Capital Investment Companies, or eligible start-ups. This mechanism provides a strong policy lever for mobilizing private-sector capital for start-up financing, technology commercialization and economic impact27. In addition, the Tech-InvesTR Venture Capital Support Program, established by TÜBİTAK and the Ministry of Treasury and Finance, aims to strengthen Türkiye's venture capital ecosystem by encouraging investment in technology-based early-stage startups with high potential to contribute to the Turkish economy. Under the Tech-InvesTR 2018 Call, 23 university-affiliated entities were deemed eligible to participate in 10 venture capital funds. Following the evaluation process, the Ministry of Treasury and Finance approved the initiation of protocol processes for 5 funds, with the participation of 12 university-affiliated entities, comprising 3 Technology Transfer Offices and 9 Technology Parks28.

- **National Policy Framework:** A major element of the national policy framework is the statutory recognition and progressive strengthening of university Technology Transfer Offices under Additional Article 32 of Higher Education Law No. 2547. Originally

introduced in 2017, this provision authorized higher education institutions, subject to prior approval by the Council of Higher Education (YÖK), to establish TTOs as capital companies in order to cooperate with the public and private sectors in R&D and innovation, protect university-generated knowledge and inventions through intellectual property rights, and facilitate their transfer into practice.

The ***amendments adopted in 2026*** significantly expanded this framework and represent an important policy shift from the conventional administrative TTO model towards a more autonomous, professional and investment-oriented technology transfer structure. Under the revised legislation, universities may transfer ownership of employee inventions falling within the scope of the Industrial Property Law to their TTOs. A TTO can consequently assume the associated rights and responsibilities, manage the intellectual property in its own name, and directly conduct licensing and commercialization activities. The legislation also establishes a revenue-sharing mechanism under which at least one-third of commercialization income is allocated to the inventor, one-third to the university, and the remaining share to the TTO. This creates stronger and more transparent incentives for researchers, universities and transfer organizations to participate in commercialization.

- **Stronger University-University & University-Industry Collaborations:** The 2026 reform also allows several universities to establish a joint TTO, enabling institutions—particularly those without sufficient individual commercialization capacity—to pool expertise, infrastructure, intellectual property portfolios and professional resources. Furthermore, other legal entities considered capable of contributing to TTO activities may become shareholders by providing capital. From a policy perspective, this creates an institutional basis for stronger university–industry and inter-university technology transfer platforms rather than limiting TTOs to individual universities. Another important development is that TTOs are explicitly authorized to use their own capital and revenues to invest in the commercialization of university-generated knowledge and inventions and to establish partnerships with public- and private-sector companies. This provision substantially expands their role. Rather than acting solely as administrative intermediaries for patent applications or industry contracts, TTOs can increasingly function as active commercialization organizations capable of supporting proof-of-concept development, technology maturation, spin-off creation, co-investment and market entry.

- **Flexibility in human resources:** The legislative framework also enables TTOs to employ professional personnel under private-sector employment conditions, including international staff, while academic personnel may work for TTOs either full-time or part-time under specified conditions. This flexibility is important since successful technology transfer requires specialized competences in intellectual property management, licensing, business development, valuation, investment, entrepreneurship and international commercialization which are not always readily available within traditional university administrative structures.

- **Emphasis on national priorities:** More recent policy directions also increasingly connect research and innovation with green and digital transformation, strategic technologies, regional development and societal challenges. The 2030 Industry and Technology Strategy29, together with funding programs supporting green

transformation, technology entrepreneurship, innovation networks and regional development, reflects a transition from isolated technology commercialization toward ecosystem-based innovation and national impact creation.

- **Monitoring of outputs:** A complementary best practice providing evidence and transparency is Türkiye's Patent Report[30], published by Patent Effect since 2019. The annual report consolidates and interprets the national patent landscape, including university-level licensing and assignment statistics. By making outcomes visible and comparable, it creates an evidence base for universities, TTOs, policymakers and industry, and shifts attention from patent counts alone to the conversion of patents into contracts, partnerships and economic value.

Taken together, these reforms indicate an important change in Türkiye's technology transfer policy- broadening the definition of research impact. The policy is moving from a model in which the university primarily administers intellectual property towards one in which professionally managed TTOs can own, develop, finance, commercialize and invest in intellectual assets. The possibility of joint TTOs and external shareholders also creates opportunities for greater scale, specialization and cross-institutional cooperation. In policy terms, this strengthens the institutional foundations of the "entrepreneurial university" and provides a potentially more sustainable mechanism for translating publicly funded research into economic and societal value

An important next step for Türkiye is moving from measuring primarily how much knowledge is transferred to assessing what measurable economic, environmental and societal value that transferred knowledge creates; complementing traditional technology-transfer indicators such as the number of patents, licenses, start-ups, industry contracts and commercialization revenues with more systematic societal-impact indicators. These may include technologies adopted by public institutions, environmental benefits, improvements in public services, contribution to regional development, highly qualified employment, policy influence, solutions benefiting disadvantaged groups, and measurable contributions to the Sustainable Development Goals.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

In parallel with the institutional development of Technology Transfer Offices (TTOs), the professionalization of knowledge and technology transfer (KE/TT) personnel has gradually evolved beyond informal on-the-job learning and isolated training activities towards a more structured system involving national occupational standards, competency-based certification, internationally recognized professional credentials, mentoring and dedicated public support specialized for technology transfer professionals.

- **The National Qualification for Technology Transfer Specialist:** An important step has been the formal recognition of Technology Transfer Specialist as a profession at Level 6 within Türkiye's national vocational qualifications system. The National Occupational Standard for Technology Transfer Specialists was officially adopted in 2018. This was followed by the National Qualification for Technology Transfer Specialist (Level 6), approved by the Vocational Qualifications Authority (MYK) in 2024 and mapped under ISCO 1223, Research and Development Managers31. The

qualification, reference 24UY0579-6, defines the knowledge, skills and competencies expected from technology transfer professionals and provides a basis for standardized assessment and certification. This is Türkiye's most significant recent step toward treating technology transfer as a defined and assessable profession rather than a role learned only through experience. It was led by ÜSİMP32, after consultation with relevant stakeholders, reviewed by the Vocational Qualifications Authority's Business and Management Sector Committee, and approved by the Authority's Executive Board. Certification bodies operating under this framework are required to meet accreditation requirements, including conformity with TS EN ISO/IEC 17024. This represents an important move from experience-based recruitment towards a competency-based professional model. The qualification defines five mandatory competency units:

- occupational health and safety, environmental protection, process compliance and continuing professional development;
- promotion and development of technology transfer services;
- use of support mechanisms and development of collaborations;
- management of technology portfolio commercialization activities; and
- management of company formation and entrepreneurship activities.

Candidates must pass both theoretical and performance-based assessments. The commercialization unit, for example, requires candidates to manage the invention disclosure, market research, evaluation, protection, contracting, commercialization action-planning and promotion process. Its performance assessment uses a case study in which the candidate analyses an invention's disclosure, protection and commercialization pathway and presents the proposed response to an assessment panel. A minimum score of 70% applies to the relevant examinations, together with successful completion of critical performance steps.

The certificate is valid for five years. Renewal requires evidence of relevant work activity during the validity period or completion of the prescribed practical examinations. This creates a route for periodic validation of competence rather than a permanent credential based on attendance. The qualification also sets demanding criteria for assessors, including advanced education or extensive training experience, substantial TTO leadership experience, and documented achievements in collaborative projects, licensing, commercialization, entrepreneurship or mentoring.

- **Structured continuing professional development and international recognition:** Another major component of professionalization has been the adoption of the Registered Technology Transfer Professional (RTTP) framework. ÜSİMP has been organizing professional technology transfer training, in collaboration with international organizations including AUTM since 2010. After becoming a member of the Alliance of Technology Transfer Professionals (ATTP), ÜSİMP started providing structured professional development pathways leading toward the internationally recognized RTTP designation. Since 2018, 25+ RTTP-oriented trainings have been delivered training 800+ participants. Türkiye currently has around 60 RTTP-certified professionals, placing it among the countries with a comparatively established

community of internationally recognized technology transfer practitioners. Continuous professional development is increasingly organized around specialized competency areas. This allows professionals to build increasingly specialized portfolios of expertise rather than receiving only generic introductory TTO training.

- **Development of a professional community and specialized expertise:** In parallel to the RTTP pathway, a small number of Turkish professionals have independently pursued advanced international professional qualifications in specialized areas of technology transfer. Türkiye currently has three Certified Licensing Professionals (CLP), according to the CLP public registry33, representing a small group of practitioners with internationally recognized advanced competency in licensing, intellectual asset management and commercialization. The presence of both RTTP and CLP-qualified practitioners reflects the gradual development of different specialization and career pathways within Türkiye's KE/TT profession.

  Alongside certification, universities, TTO networks, public institutions and specialized companies also provide modular trainings in IP management, patent strategy, technology valuation, licensing, university-industry collaboration, research funding, entrepreneurship and spin-off development. Professional expertise is also increasingly developing beyond university-based TTO structures. An emerging example is CATALYSADE Technology Transfer and Innovation Inc34, established in 2024 as a private technology transfer and commercialization company providing specialized services to universities and research institutions, startups, industry and public-sector organizations. Its model illustrates the gradual emergence of an independent professional services market for technology transfer and commercialization alongside institutional TTOs.

- **Public support specifically targeting Technology Transfer Professionals:** Türkiye has also begun shifting public support from primarily financing TTO structures toward investing directly in Technology Transfer Professionals (TTPs), directly supporting the development and retention of professional technology-transfer talent. TÜBİTAK 1613 Technology Transfer Professional Support Program35, recognizes qualified personnel as a critical component of TTO institutional capacity. The program supports the continuous, full-time employment of technology transfer professionals by TTOs and eligible research infrastructures, over a multi-year project period and allows dedicated budget for developing their existing competencies and acquiring new ones. The program explicitly identifies competencies including market opportunity awareness, IP strategy, business development and transformation of research results into economic value as important determinants of TTO performance. The competencies emphasized by TÜBİTAK include market-opportunity awareness, intellectual-property strategy, business development and the transformation of research results into economic value. This is significant because professional development is integrated with sustained employment and institutional capacity building rather than being treated merely as participation in individual training courses.

- **Added value of professional networks:** National and international professional networks also play an important role. At national level, ÜSİMP connects technology transfer professionals across universities, research institutions, techno-parks and industry, facilitating peer learning, mentoring, mobility of expertise and access

to international professional communities, TÜRKPATENT supports professional development through training and awareness activities related to intellectual property rights, patents, and commercialization. Participation in international networks and programs such as those associated with ATTP, AUTM, ASTP, EPO, WIPO provides additional routes for advanced specialization and exposure to international standards and practices.

Overall, Türkiye's approach is a layered professionalization system for a recognized KE/TT profession: a national occupational standard defines the role, the 2024 national qualification tests competence, the RTTP pathway supports international recognition and continuing development, and ecosystem organizations provide specialist training and peer learning, public policies providing support for retaining qualified professionals, and an emerging independent professional services market contributing towards mentoring, continuing education, specialized career positions. The next step is implementation at scale. Wider availability of accredited assessment, employer recognition of the qualification, clearer career ladders inside TTOs, and systematic collection of workforce and outcome data would help ensure that the new standard changes hiring, progression and service quality across the country.

[1]https://tubitak.gov.tr/en/funds/sanayi/ulusal-destek-programlari/1513-technology-transfer-office-support-program

[2]https://tubitak.gov.tr/en/funds/sanayi/ulusal-destek-programlari/1505-university-industry-collaboration-support-program

[3]https://tubitak.gov.tr/en/scholarships/lisansustu/egitim-burs-programlari/2244-industrial-phd-fellowship-program

[4]https://tubitak.gov.tr/tr/destekler/sanayi/ulusal-destek-programlari/1702-patent-tabanli-teknoloji-transferi-destekleme-cagrisi

[5]https://www.pkf.com.tr/download/teknopark-kazanc-istisnasinda-girisim-sermayesi.pdf

[6]https://tubitak.gov.tr/tr/duyuru/tech-investr-2018-cagrisi-kapsaminda-hazine-ve-maliye-bakanliginin-protokol-sureclerini-baslatacagi-fonlara-katilacak-kuruluslarin-yer-aldigi-projeler

[7]https://www.sanayi.gov.tr/plan-program-raporlar-ve-yayinlar/strateji-belgeleri/mu1606011622

[8]PatentRaporu.com

[9]Vocational Qualifications Authority, National Qualification 24UY0579-6

[10]https://www.usimp.org.tr/en/

[11]https://clp.certemy.com/public-registry/cf39e527-0cc3-4238-ae56-c2077f746aee

[12]https://www.catalysade.com/

[13]https://tubitak.gov.tr/en/funds/industrial/national-support-programs/1613-ttp-technology-transfer-professional-support-programme

UKRAINE

Olha Kronda

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

In Ukraine, a comprehensive policy is being developed to ensure that research results and technologies move from the laboratory to practical application, thereby creating both economic and societal value. The main instruments for implementing this policy include:

- **Institutional reform:**
  - As a result of the reform of the intellectual property system in 2022, the Ukrainian National Office for Intellectual Property and Innovations (UANIPIO) was established. Its mandate includes the development of the innovation ecosystem, the commercialization and effective use of intellectual property assets, and the development of technology transfer;
  - Establishment of the Applied Research Agency: in August 2026, its establishment was provided for in legislation as an instrument for science–business–government cooperation, with a focus on supporting applied R&D, identifying the technological needs of businesses, and developing technology transfer.
- **Strategic planning:** the «Strategy for the Development of Ukraine's Intellectual Property Sector until 2030» is expected to be approved. The draft Strategy sets out the key areas for enhancing the socio-economic impact of technology transfer through the effective use and commercialization of intellectual property as an integral component of economic growth.
- **Updating legislation in the fields of intellectual property, technology transfer and innovation:**
  - Draft Law of Ukraine «On Technology Transfer»: the draft law, which has undergone public consultation, provides for the creation of conditions for academic spin-offs, the development of technology transfer offices and digital infrastructure, as well as the expansion of state support through grants, innovation vouchers, patenting support and regulatory sandboxes.
  - Draft Law of Ukraine «On Support for and Development of Innovation Activity»: adopted at first reading by the Verkhovna Rada of Ukraine with the aim of creating favourable conditions for the promotion and development of innovation activity;
- **Implementation of the experimental project** for the competitive selection of joint applied research and development projects on business demand: the programme enhances the effectiveness of commercialization by providing researchers with access to infrastructure and reducing businesses' R&D costs through a state co-financing mechanism;
- **Alignment of Ukrainian legislation with the EU acquis:** as part of the European integration process, Ukraine continues to align its intellectual property legislation with

EU law, including in the areas of trade secrets, trademarks, and copyright and related rights.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

In Ukraine, a system of continuous professional development for specialists in the field of knowledge and technology transfer is being developed, combining practical training, specialized programmes and various initiatives. A range of practices is used to enhance the professional skills of specialists in the field of knowledge and technology transfer:

- **Activities of the Technology and Innovation Support Centers (TISC) network:** the network, coordinated by the TISC Head Office at UANIPIO, comprises 48 regional centers, providing access to patent information, digital services and support in the commercialization of intellectual property assets;
- **Interactive Dashboard** provides up-to-date information on innovation infrastructure across the regions of Ukraine;
- **Annual organization of national acceleration programmes:** one example is Lab2Market, which is aimed at academics, researchers, inventors and technology transfer managers. The programme's objective is to minimise risks and reduce the time taken to bring developments from the laboratory to the market;
- **IP policies for higher education institutions and research organizations:** UANIPIO has developed methodological guidelines on intellectual property for higher education institutions and research organizations, aimed at ensuring legal certainty regarding the allocation of intellectual property rights in the technology transfer process and ensuring a fair and effective distribution of profits derived from the commercialization of intellectual property rights and technology transfer;
- **Development of professional capacity and support for participants in the innovation ecosystem:**
    - Establishment of the Ukrainian Technology Transfer Alliance: the creation of a professional community of specialists in the field of knowledge and technology transfer to work within a unified framework, seek partners, harmonise working approaches and integrate with European practices;
    - Integration of intellectual property into business support programmes: the state «Own Business 2.0»programme provides financial support for starting up and scaling up businesses. Grant funds may be used, in particular, for services relating to the registration of trade mark or industrial design rights, as well as for the services of a patent attorney.
    - Development of professional education through the IP Academy: in collaboration with the WIPO Academy, UANIPIO's IP Academy provides access to international training programmes and delivers its own educational activities and programmes in the field of intellectual property and its commercialization. In Ukraine, the WIPO DL-001 distance learning course has been adapted and launched in Ukrainian, and an annual Summer School on Intellectual Property is held for specialists,

researchers, business representatives and other participants in the innovation ecosystem;

- «Diia.Business»: the launch of online «Intellectual Property» consultations for SMEs and the publication of the «Intellectual Property and Business» course, which helps participants monetize the results of intellectual and creative activity.

UNITED KINGDOM

Stuart Wilkinson

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

The United Kingdom has developed a comprehensive national ecosystem to maximise the societal, economic and environmental impact of publicly funded research through knowledge exchange and technology transfer. Government policy increasingly emphasises impact, commercialisation and regional growth, supported by organisations including UK Research and Innovation (UKRI) (including Research England and innovate UK) alongside the devolved Governance through the Scottish Funding Council and MEDR in Wales

A significant recent development has been the Independent Review of University Spin-out Companies (2023), which provided recommendations to create more investor-friendly spin-out terms, improve transparency and increase the rate at which research is translated into societal and economic benefit. These recommendations have been further strengthened by the University Spin-Out Investment Terms (USIT) Guide, developed through the TenU network, which promotes standardised investment practices and equitable approaches to university equity participation.

The UK also employs several national frameworks to encourage excellence and transparency in knowledge exchange. The Knowledge Exchange Framework (KEF) provides benchmarking and public accountability for universities across a broad range of activities including commercialisation, public and community engagement, local growth and skills development. Complementing this, the Knowledge Exchange Concordat, supported by Knowledge Exchange UK (KEUK), provides a sector-led framework for continuous improvement, self-assessment and institutional strategy development.

Increasing attention is also being placed on strengthening innovation ecosystems through initiatives such as the UKRI-commissioned Deepening University-Investor Links Review, which seeks to improve connectivity between universities, investors and industry partners. Given the mix of large, medium and small institutions best practice is varied, but with increasingly characterised by collaboration and shared infrastructure rather than institutional competition. Examples include regional innovation clusters, shared technology transfer models and the UK's emerging Shared Technology Transfer Office (TTO) initiatives, designed to provide commercialisation expertise to institutions with limited internal capacity. Greater transparency has also been introduced through the publication of the national HESA Spin-out Register, enabling benchmarking and evidence-based policy development. Together, these policies and practices seek to ensure that research

outcomes are translated efficiently into products, services, companies, public policy and societal benefit.

Further information

- Independent Review of University Spin-out Companies: https://www.gov.uk/government/publications/independent-review-of-university-spin-out-companies
- University Spin-Out Investment Terms (USIT): https://www.ten-u.org/usit
- Knowledge Exchange Framework (KEF): https://kef.ac.uk
- KE Concordat: https://ke.org.uk/ke-concordat/
- Deepening University-Investor Links Review: https://www.ukri.org/publications/deepening-university-investor-links/
- HESA Spin-out Register: https://www.hesa.ac.uk/data-and-analysis/business-community/spin-out-register
- Shared TTO Pilot: https://ke.org.uk/news/shared-tto-pilot-demonstrates-appetite-for-innovation-through-collaboration/

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

The UK knowledge exchange and technology transfer profession has increasingly focused on professionalisation through structured competency frameworks, career pathways, accreditation programmes and community-led professional development. While experiential learning remains important, there is growing recognition that effective knowledge exchange requires a diverse and specialised skill set encompassing commercialisation, stakeholder engagement, entrepreneurship, investment, IP management, policy engagement and impact generation.

A major development has been the creation of the Professional Excellence Capability Framework, developed by Knowledge Exchange UK. The framework provides a common language for skills, behaviours and professional competencies across the knowledge exchange profession and supports workforce planning, recruitment, performance development and career progression. It is designed to recognise the breadth of knowledge exchange activities beyond traditional technology transfer and to establish more consistent professional standards across the sector.

Alongside this KEUK offers a range of National courses open to all organisations alongside in-house training specific to a single institution. This training covers the fundamentals of Tech Transfer, how to run a tech transfer office, practical licensing, spin-out creation, essentials of business development, developing strategic partnerships, an introduction to KE, Commercialisation in Healthcare, Leadership in KE. See https://ke.org.uk/cpd/ for more details

UNITED STATES OF AMERICA

Irene Abrams and Daniel Dardani

What are the policies and best practices implemented in your country to maximize the societal impact of knowledge and technology transfer?

In the United States, it all starts with the landmark bipartisan legislation commonly known as the Bayh-Dole Act. The Bayh-Dole law allows universities, nonprofit organizations, and small businesses to elect and retain title to inventions arising from federally supported research. It some respects, Bayh-Dole helped fulfill a decades old promise and vision for the U.S. federal government first laid forth in the 1945 report, Science – The Endless Frontier, which boldly called for large national investments in basic research and science mainly through universities and research labs which would eventually yield strong societal dividends and advance national health, security, technological prowess, and quality of life. Bayh-Dole provided the important legal and institutional mechanism for translating publicly supported research investments into societal benefit by giving research institutions a clear pathway to own, protect, develop, license, and commercialize federally funded inventions.

In addition, the United States Patent and Trademark Office (USPTO) generally predictable system of patent and intellectual property (IP) protection for inventions and products reinforced and amplified the drivers by which technology innovations are moved into the marketplace. Strong sensible IP laws and judicial rulings in the courts are integral to a functioning, robust and transparent innovation-based economic environment.

U.S. technology transfer practices also recognize that patents and inventions are only some of the pathways to have impact. Effective technology transfer includes room for other mechanisms too, including copyright, trade-secret protection, open-source dissemination, publication, basic research-tool and materials distribution, standards, new venture and startup formation. The objective is to maximize impact over licensing revenue, and promote adoption and practical use of research in ways that advance public health, economic opportunity, scientific progress, and societal well-being.

The United States further supports translation through programs that address the "valley of death" between discovery and application. NSF I-Corps provides researchers with structured customer-discovery and entrepreneurial training, while SBIR/STTR programs provide small businesses with funding to develop and commercialize federally supported research.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

While the Bayh-Dole Act solved the legal and structural framework surrounding ownership and control of technology transfer, it left untouched the processes or shared norms for how to effectively run and deliver tech transfer offices. Since the United States does not have a single national training curriculum for technology transfer professionals, that was left to the universities and practitioners to work out for themselves. Professionalization therefore

occurred instead through an ecosystem of mentoring, benchmarking, professional associations, structured continuing education, credentialing, and later professional career and vendor related development.

The Association of University Technology Managers (AUTM) has become a global leader for academic knowledge and technology transfer. AUTM provides foundational and advanced courses, AUTM University, webinars, an online learning center, annual and regional meetings, benchmarking surveys, communities of practice, and its Technology Transfer Practice Manual, which includes model policies, agreements, procedures, and operational guidance. AUTM also supports professional pathways leading to recognized credentials such as Registered Technology Transfer Professional (RTTP) and Certified Licensing Professional (CLP).

Other important elements include the Licensing Executives Society (LES) and technology transfer vendors like TechPipeline. Within university and research hospitals, professional development commonly includes structured onboarding, mentoring and shadowing, case reviews, specialized deal training in areas such as software, life sciences, clinical translation, data, and sponsored research. This combination of hiring people with advanced formal education degrees coupled with practical business development and deal experience, peer-to-peer learning, and professional association specialized trainings helps transform technology transfer employees from neophytes to seasoned staff members with specialized expertise and accountability for maximum societal impact.

UNITED STATES OF AMERICA - PUERTO RICO

David Gulley

What are the policies and best practices implemented in your country to maximize the societal impact of K/TT?

[1]U.S. Policies and Best Practices for Knowledge and Technology Transfer

Policy Framework

- **Regional Innovation Ecosystems Approach:** The federal government has shifted from supporting isolated institutions to investing in collaborative regional networks. Federal agencies are now investing in collaborative regional networks capable of translating research into new companies, industries, and jobs, with the intent not to make every region the next Silicon Valley, but to enable regions to compete by organizing around what they already do well.
- **NSF Regional Innovation Engines:** NSF created the Engines program to strengthen regional innovation capacity over the long term, with the goal to create self-sustaining innovation ecosystems capable of generating research breakthroughs, new companies, skilled workers, and regional economic growth. A critical feature is longevity: Engines receive phased support over as many as ten years, reflecting the understanding that growing successful innovation ecosystems requires long-term collaboration rather than short-term projects.

- **EDA Regional Technology and Innovation Hubs:** EDA's Tech Hubs program focuses more directly on commercialization, industrial competitiveness, and technology-based economic growth, authorized by the CHIPS and Science Act, seeking to help regions build industries around critical and emerging technologies. EDA places greater emphasis on moving technologies into the marketplace through startup formation, manufacturing scale-up, supply chain development, and infrastructure investments.

Key Best Practices

- **Multi-Stakeholder Collaboration:** Both NSF and EDA programs require broad regional coalitions. Tech Hubs require broad regional coalitions that include universities, industry, entrepreneurs, investors, workforce organizations, state and local governments, and nonprofit partners. Importantly, universities remain central participants, but they operate as members of larger regional partnerships rather than as independent research institutions.
- **Building on Existing Strengths:** NSF Engines are not intended to create innovation ecosystems where none exist, but instead to enhance existing regional assets and strengthen the relationships needed to translate research excellence into long-term economic growth. Similarly, Tech Hub implementation awards illustrate how the program amplifies existing regional assets rather than attempting to create entirely new industries.
- **Supply Chain and Manufacturing Integration:** Tech Hubs recognize that commercialization is rarely the work of a single company or university. Moving an idea from the laboratory to the marketplace requires manufacturing capacity, entrepreneurs, investors, skilled workers, suppliers, and public partners.
- **Workforce Development:** Both programs emphasize workforce development as a core component. Examples include the RuralSTAMINA Engine helping rural communities expand biomanufacturing by connecting universities, agricultural producers, manufacturers, and regional partners, and efforts to ensure supply chains include workforce systems.
- **Complementary Federal Investment:** Regions that have spent years building collaborative innovation ecosystems and have not yet reached the level of Silicon Valley or the NC Research Triangle are increasingly well-positioned to compete for multiple federal initiatives. The document illustrates this through examples like Louisiana's FUEL Engine and GLOE Tech Hub working together on clean energy.

Primary Source Citation

Coughter, Jerry and Conor Gowder. "Place-based innovation comes of age: Federal regional innovation programs are reshaping America's technology economy." SSTI (State Science & Technology Institute), August 5, 2026.

What are the practices in your country for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training?

U.S. Practices for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training

The U.S. system is characterized by **professionalization through association membership and continuing education credits** rather than formal degree requirements, creating flexible, practice-based pathways aligned with practitioner needs across academic, federal, and corporate settings.

Professional Credentialing Systems

- Registered Technology Transfer Professional (RTTP): The Alliance of Technology Transfer Professionals (ATTP) provides the globally recognized Registered Technology Transfer Professional (RTTP) accreditation, which distinguishes individuals who have demonstrated competence in the profession of Technology Management.
- Certified Licensing Professional (CLP): The Certified Licensing Professional (CLP) program recognizes professionals who have demonstrated their experience and proficiency in the licensing and commercialization of intellectual property. Recertification is required every three years to support ongoing professional development.

Association-Based Training Programs

- **AUTM:** AUTM operates multiple structured training pathways:
  - AUTM offers training and resources in the seven fundamental areas of successful technology transfer, including: Essentials of Academic Technology Transfer, Technology Operations and Organization, Licensing Skills (TOOLS), Start-up Business Development, Negotiation, Marketing, and Technology Valuation.
  - The AUTM Foundation facilitates the Technology Transfer Career Training Program (T3 Program), which offers early career professionals or those looking to transition into careers in technology transfer an opportunity that includes formal training, networking and practical experience in this field.

Licensing Executives Society (LES)

- LES Education Courses offers knowledge and deal-making skills for professionals at all levels of experience in all IP industry sectors.
- LESI (Licensing Executives Society International) and the European Patent Office offer the Advanced Commercialisation Course, "Succeeding at technology commercialisation and negotiation," a two-day program giving professionals a comprehensive and professional set of tools and techniques to profit from IP and put it at the heart of business strategy.

ATTP (Alliance of Technology Transfer Professionals) - Founded in 2010 by prominent national and international technology transfer associations, the Alliance of Technology Transfer Professionals (ATTP) is dedicated to advancing the professionalism of tech transfer practitioners worldwide, today supporting 16 like-minded member associations.

Federal Laboratory Consortium (FLC) - The Federal Laboratory Consortium for Technology Transfer was established to develop and administer techniques, training courses, and materials concerning technology transfer to increase the awareness of Federal laboratory employees regarding the commercial potential of laboratory technology and innovations.

Researcher-Focused Training - The Collaborative Institutional Training Initiative (CITI) Program's Technology Transfer module is designed for university faculty, researchers, post-doctoral fellows, graduate students, and staff members seeking to understand technology transfer and commercialization processes and how to work with their TTO to succeed in getting their discoveries into the market.

APPENDIX A

Policies and best practices in Hungary to maximize the societal impact of knowledge and technology transfer (KTT)

Hungary is increasingly building KTT thanks to some central government programs and grants (coordinated by the National Innovation Agency, NIÜ). The strongest emerging model connects early IP identification, rapid patentability assessment, proof-of-concept validation and professional commercialization through institution-owned Technology Transfer Companies (TTCs). Established among the very first ones in 2024, Obuda University's Initium Venture Lab Zrt. provides a useful example of how these instruments can operate as one pipeline.

Flagship national IP mechanism — SZTNH "Patent Fast Track" (*Szabadalmi Gyorsítósáv*)

- Available to RTOs that have a cooperation framework agreement with the Hungarian Intellectual Property Office (SZTNH/HIPO).
- A Hungarian patent application can be filed at an early stage without a fully drafted claim set, provided that the technical solution is described in sufficient detail for a novelty search. SZTNH provides an explained novelty-search report within two months after payment of the filing and search fee; consultation with the search examiner is available where needed.
- For first filings, the filing/search fee is reduced by 50%, with an additional 15% discount for electronic filing. The result supports a rapid go/no-go decision on patenting, foreign protection and continued R&D.
- The fast track reduces the time and cost required to test protectability before committing. It also helps researchers protect an invention before publication, after which scientific dissemination can proceed without destroying novelty. This aligns academic incentives with downstream utilization and allows scarce commercialization funding to be concentrated on technologies with stronger technical positions.

Obuda University as an integrated practice example

- The University Innovation Office provides invention disclosure and evaluation, prior-art and patent-search support, filing/protection strategy, coordination with patent attorneys, licensing and commercialization support, and IP mentoring.
- The University's digital IP SCAN portal allows lecturers, researchers and students to register and track intellectual creations, co-authorship and related procedures, and to link disclosure directly to protection and utilization options.
- The Minimum Viable Project (MVP) programme provides up to HUF 1 million, two months of professional/business mentoring, IP and legal advice, prototype support and business-development assistance for early validation.
- At the next stage, OU and Initium operate a Proof of Concept programme focused on deep-tech projects, with up to HUF 20 million per project and structured support for prototype, industrial and market validation (supported by a national grant).

National TTC programme

The 2026 TTC Network Development call provides HUF 6 billion to strengthen professional, operational and business capacity in university/research-organization TTCs. Its stated objectives include more effective economic and societal utilization of research, professionalization of technology-transfer processes, and sustainable market-oriented TTC operations. Eligible activities cover IP strategy, technology and market validation, licensing, spin-off management, investor and industry relations, Go2Market support and internationalization.

Practices in Hungary for professionalizing knowledge and technology transfer talent beyond on-the-job or one-off training

Hungary is moving from experience-based KTT staffing toward a layered professional-development model. Three elements are particularly important: formal IP qualifications delivered by SZTNH, structured university-level innovation/IP education and practice, and the 2026 extension of the 2024 TTC programme's explicit mandate to build a national training and professionalization infrastructure.

Theoretically, Hungary's strongest practice is the creation of a staged pipeline in which protectable knowledge is identified early, validated quickly, funded through MVP/PoC mechanisms and transferred by professional TTCs through licensing, industry collaboration, investment or spin-off formation.

1 | Formal, multi-level IP qualification through SZTNH

- SZTNH runs basic, intermediate and advanced industrial-property courses, completed with examinations and formal certificates rather than stand-alone attendance certificates.
- The advanced industrial-property course is the highest industrial-property qualification available through this system in Hungary: 270 teaching hours over three semesters, with module examinations, a thesis and defence.
- Technology-transfer professionals are an explicit target group. The curriculum covers the legal and economic foundations of IP, national and international protection systems, innovation management and practical database searching.
- The next advanced course is scheduled to begin in September 2026, demonstrating a recurring national training pathway rather than an ad hoc programme.

2 | Óbuda University: combining training with a real commercialization workflow

- The Innovation Office provides researchers and inventors with structured IP mentoring and access to professional EPO-accredited learning, including the EPO "Create – Protect – Innovate" programme.
- The IP SCAN portal turns IP management into a repeatable institutional process: users disclose creations, document co-authorship, follow legal/protection procedures and connect projects to utilization pathways. This gives researchers and staff practical experience within a standardized workflow rather than through informal case handling.
- Innovation education is embedded in formal university curricula. Óbuda University offers Innovation Management and Technology Transfer teaching, while its Innovation Management Doctoral School provides an eight-semester PhD pathway in Hungarian and English specifically aimed at training specialists capable of supporting the market introduction and success of innovations.
- Student-level IP professionalization is also supported through the SZTNH Ujvári János Diploma Award framework: applicants undertake structured IP training and repeated consultation while integrating IP analysis into their thesis work.

3 | TTCs as a national professionalization platform

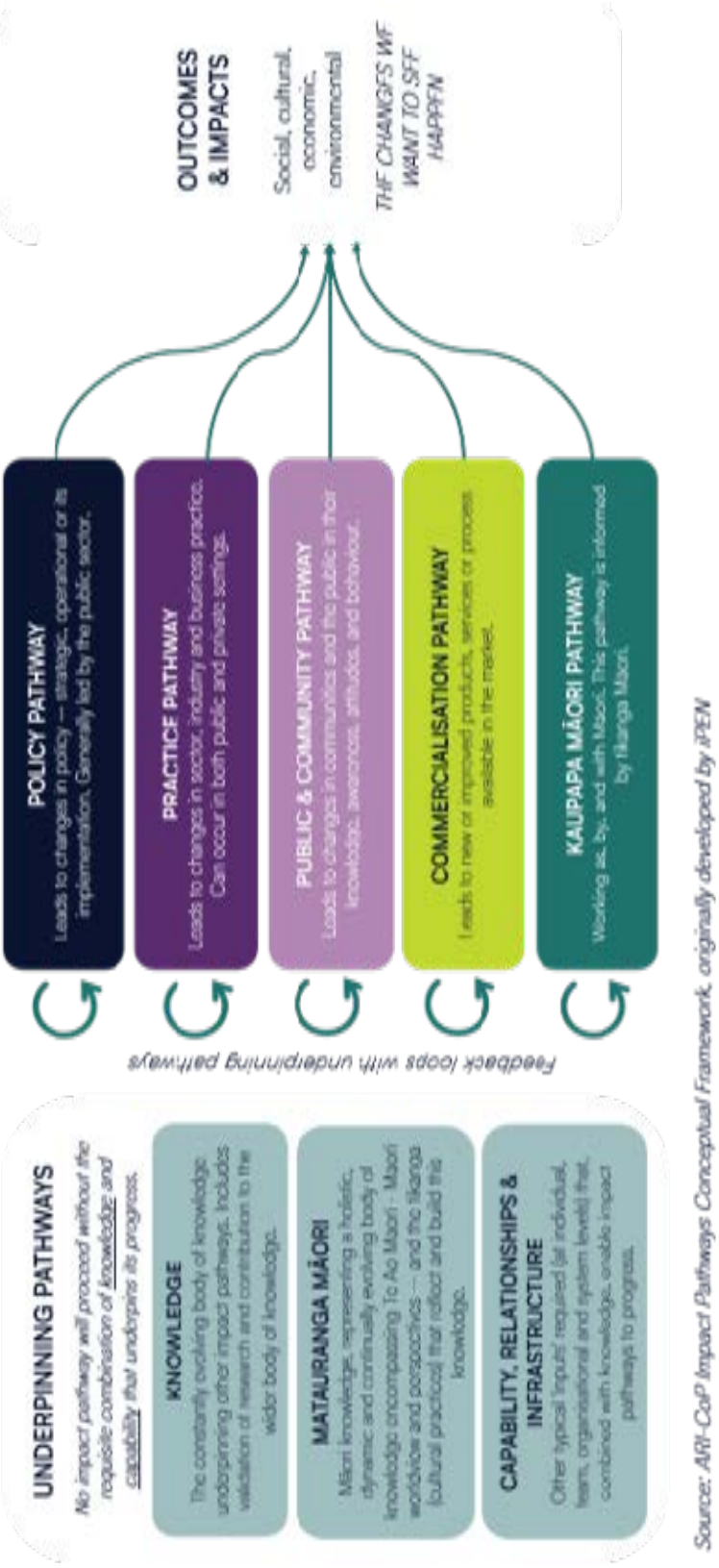
The 2026 TTC Network Development programme is especially significant because staff development is designed into the operating model. Human-resource development and professional training are eligible/core activities; more advanced TTCs are expected to bring international experts into their work and organize knowledge-sharing. At national hub level, the call requires the development of a national business-development training programme to create a new generation of innovation managers and business-development professionals. It also provides for the development of an accredited programme and a practical training infrastructure.

What this changes

- KTT capability becomes organizational and transferable: common IP, project-portfolio, market-analysis, Go2Market, spin-off and investor-relations processes can be taught and benchmarked across TTCs.
- Professional development is connected to real portfolios, KPIs and transactions, reducing dependence on individual tacit knowledge.
- The national TTC network creates a community of practice in which specialists can learn across institutions, use shared methods and services, and develop increasingly specialized career profiles.

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APPENDIX B



Source: ARI-CoP Impact Pathways Conceptual Framework, originally developed by IPEW


2026. 10.
2026 Country Report
KT/TT industry in South Korea
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I

2026 WIPO/AUTM Leadership Summit

Legal Foundations of Technology Commercialization

Korea built its technology-transfer system **law first, organization second, market third**. Six decades of legislation moved ownership of publicly funded inventions to the performing institution, then mandated the offices to manage it.

PHASE 1 | BUILDING THE RIGHT TO OWN (1963 – 2001)

1963 **Industrial Education Promotion Act** MOE
First statutory basis for industry–academia cooperation.

1972 **Technology Development Promotion Act** MOST
Lets R&D performers hold title to government-funded inventions — Korea's earliest Bayh-Dole-equivalent rule (national universities excluded).

1986 **Support for SME Establishment Act** MSS
Incubation and start-up support infrastructure.

1989 **Korea Technology Guarantee Fund Act** MSS
Appraisal-based credit guarantees for new technology businesses.

1994 **Invention Promotion Act** KIPO
Successor to the 1977 Invention Encouragement Act; codifies fair compensation for employee inventions.

1997 **Act on Special Measures for the Promotion of Venture Businesses** MSS
Venture creation, spin-off and conversion regime.

2000 **Technology Transfer Promotion Act** MOTIE
Act No. 6229, in force Jan 2000 — **mandates TLOs** at public research institutions and establishes institutional IP ownership as national policy.

PHASE 2 | BUILDING THE CAPACITY TO SELL (2002 – 2026)

2002 **Patent Act amendment** KIPO
Extends title over in-service inventions to national and public universities — completing institutional ownership.

2003 **Industry–Academia–Research Cooperation Promotion Act** MOE
Full revision creating the **University Industry–Academia Cooperation Foundation (UIF)** — the legal person that made campus TLOs possible.

2005 **Special Act on Daedeok Innopolis R&D Zones** MSIT
Place-based commercialization clusters; extended to Gwangju and Daegu in 2011.

2006 **Technology Transfer and Commercialization Promotion Act** MOTIE
Act No. 8108 — renamed and fully revised; adds technology valuation and technology finance.

2007 **UIF Act amendment** MOE
Authorizes **university technology holding companies** and equity-based spin-offs.

2021 **National R&D Innovation Act** MSIT
In force 1 Jan 2021 — single umbrella law; reaffirms that R&D results are owned by the performing institution.

2024 **Income Tax Act amendment** MOEF
Tax-free ceiling on employee-invention compensation raised to KRW 7m per year.

Sources: Korea Law Information Center (law.go.kr); WIPO Lex; Korea Legislation Research Institute; LESI, *Technology Transfer Landscape since the Enactment of the Technology Transfer Promotion Act of 2000 in Korea* (2024). MOE Education · MOTIE Trade, Industry and Energy · MSIT Science and ICT · MSS SMEs and Startups · KIPO Korean Intellectual Property Office · MOEF Economy and Finance.

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II Governance: Five Ministries, One Campus

Korean university technology commercialization is **vertically well-funded but horizontally fragmented**. Every function has a ministry, a budget line and an on-campus organization — and each answers to a different evaluation regime.

NATIONAL LAYER — WHO FUNDS WHAT

MOE
Universities, UIF, LINC 3.0, BRIDGE 3.0 → **RISE** from 2026

MSIT
GRIs, lab-to-market start-ups, Korean I-Corps, TMC programme

MOTIE
Technology Transfer & Commercialization Act, KIAT, national TT survey, NTB

MSS
TIPS, venture funds, incubation, Fund of Funds (KVIC)

KIPO
IP-R&D, patent quality, employee-invention compensation

CAMPUS LAYER — FOUR SEPARATE LEGAL BODIES

UIF · TLO
UIF ACT 2003 · MOE

Owns the IP, signs the licence, books the royalty. Non-profit; cannot take risk capital.

Technology Holding Company
UIF ACT AMD. 2007 · MOE

For-profit subsidiary that converts IP into equity. **82 companies, 1,570 subsidiaries, KRW 245.2bn capital** (Q3 2023).

Start-up Support Centre
MOE / MSS PROGRAMMES

Entrepreneurship education, student venture support. Evaluated on head-count, not licence value.

Business Incubator
SME ESTABLISHMENT ACT 1986 · MSS

Space, facilities and tenancy. The oldest campus body — and the least connected to the IP portfolio.

FOUR DEFINING CHARACTERISTICS

01 **State-led and project-funded.** Capacity follows the competitive grant cycle, so it resets every programme generation rather than compounding.

02 **Ownership is institutional, revenue is not.** The UIF holds title, but the inventor's share and the holding company's equity sit in different books.

03 **Four bodies, four scoreboards.** UIF, holding company, start-up centre and incubator report to different ministries on non-comparable indicators.

04 **Regionalization is now the main variable.** From 2026 the RISE system devolves university funding to metropolitan and provincial governments, ending nationally-run BRIDGE 3.0.

Sources: NRF policy study, *A Study on Planning New Project to Establish an Innovative System for University Technology Commercialization*, SeoulTech, Jan 2026; KATH Technology Holding Company Operating Status Survey (Q3 2023); MOE RISE implementation plan. UIF = University Industry–Academia Cooperation Foundation.

II

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Campus Organizations: Four Generations of TLO

Korean TLOs are **young institutions carried by programme budgets**. Each generation was created by a government scheme — which is also why each transition has cost the system accumulated expertise.

GENERATION 1
before 2003

Individual officers

No dedicated legal entity. Technology transfer handled by **assigned staff** inside the research affairs office. The 2000 Technology Transfer Promotion Act mandated TLOs at public research institutions but universities had no vehicle to host one.

GENERATION 2
2003 – 2011

UIF & the in-house TLO

The 2003 full revision of the UIF Act created the **Industry–Academia Cooperation Foundation** as a separate legal person. The TLO becomes a standing campus department. 2007: technology holding companies authorized, adding an equity route.

GENERATION 3
2012 – 2025

Programme-built professionalism

LINC / LINC 3.0 and **BRIDGE → BRIDGE 3.0** (30 consortia) fund specialist commercialization units; MSIT's TMC and Korean I-Corps add lab-to-market capability. BRIDGE universities alone generate **68.1%** of all national university royalty income (2024).

GENERATION 4
2026 →

Regional devolution under RISE

National commercialization programmes are absorbed into the **Regional Innovation System & Education** framework, with budgets set by metropolitan and provincial governments. Seoul's 2025 pilot: **26 universities, KRW 47.8bn**. The open question is whether supra-regional TLO networks survive the transition.

CURRENT CAPACITY

67+
universities on the NRF-TCC commercialization platform

500+
registered university commercialization professionals

82
university technology holding companies · 1,570 subsidiaries

30
BRIDGE 3.0 consortia, holding 68.1% of university royalties

190
GRI TLO professionals in 2022
down from 231 in 2017

WHAT THE CHRONOLOGY SHOWS

Capacity is rented, not owned. Because every generation of professional capability was financed by a time-limited national programme, expertise disperses when the programme ends — the GRI figures show TLO staffing falling 18% between 2017 and 2022 even as transfer volumes rose. **The 2026 RISE transition is therefore the decisive governance event of this decade:** it changes not the level of funding but who decides it, and whether a licensing professional's career can outlast a single grant cycle.

Sources: NRF policy study, *A Study on Planning New Project to Establish an Innovative System for University Technology Commercialization*, SeoulTech, Jan 2026; KATH Operating Status Survey (Q3 2023); MOE RISE plan. NRF-TCC = National Research Foundation Technology Commercialization Center platform.

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III

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Technology Transfer Income, 2020 – 2024

Five years of flat revenue on a rising research base. Royalty income moves sideways in a KRW 250–340bn band while the **share of new technologies actually transferred has fallen by a quarter since the 2021 peak**.

Indicator	2020	2021	2022	2023	2024	Direction
Technology transfer income Universities + public research institutions, KRW bn	336.0	264.3	281.0	248.2	278.0	Flat / −17% vs 2020
Technology transfer rate % of newly developed technologies transferred	≈40%	40.9%	31.7%	30.2%	30.2%	−10.7 %p 10-year low
University royalty income All universities, KRW bn	—	—	126.1	—	107.4	−14.7% 2022 → 2024
Average royalty per transfer case Universities, KRW m	—	—	26.0	18.2	18.0	−31% quality erosion
Newly developed technologies Public research institutions, cases	7,495 cases in 2013 → rising throughout the period				39,930	×5.3 since 2013

WHAT THE NUMBERS SAY

01 **Supply grew five-fold; sales did not.** Newly developed technologies rose to 39,930 cases while income stayed in the same band — the bottleneck is downstream of invention, not upstream.

02 **2021 was the inflection, not the trend.** The 40.9% transfer rate was Korea's first crossing of 40%; the rate then fell for two straight years to a ten-year low.

03 **Deal quality is falling faster than deal volume.** Average university royalty per case fell 31% in two years, and sub-KRW 10m contracts now form the majority.

04 **Concentration is extreme.** The 30 BRIDGE 3.0 consortia account for 68.1% of all national university royalty income.

POLICY IMPLICATION

Korea has solved invention volume. It has not solved value capture.

Because institutions are evaluated on counts — disclosures, patents, transfer cases — the rational response is to license cheaply and often. The result is visible in one number: a technology that earned KRW 26m in 2022 earned KRW 18m in 2024.

The corrective is not more R&D. It is **fewer, better-prosecuted patents**, valuation capacity inside the TLO, and evaluation that rewards revenue and equity rather than activity.

The 5th Basic Plan target was **KRW 350bn** by 2027; the 6th Basic Plan restates it against a 2024 base of KRW 278bn — a required +26% in three years.

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Sources: MOTIE / KIAT Survey of Technology Transfer and Commercialization at Public Research Institutions (2021–2025 editions, 275 institutions surveyed); NRF policy study, SeoulTech, Jan 2026 (university royalty and per-case figures); 6th Science & Technology Basic Plan (2026–2030). Combined figures follow the KIAT definition: royalties plus equity-disposal income on contributed technology. Dashes indicate years not published on a comparable scope basis.

III

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Lab-to-Market Start-ups: The Bright Spot

Where licensing stalled, **equity-based spin-outs grew**. Korea's 3,850 surviving lab start-ups outperform the general start-up population on every growth metric — but their capital stops at the seed stage.

3,850
surviving lab start-ups founded 2015–2024

90.8%
in technology-based sectors vs 17.6% of Korean SMEs

9.6
average employees, 2024 vs 1.69 for all start-ups

4.53tn
KRW raised cumulatively by 878 funded companies

50.6%
have led a national R&D project, 2018–2024

PERFORMANCE TREND, AVERAGE PER COMPANY

Indicator	2019	2020	2021	2022	2023	2024	Change
Employees	6.9	7.7	8.7	9.3	9.4	9.6	+39%
Revenue KRW 100m	4.0	4.0	5.0	7.0	9.0	9.0	+125%
Total assets KRW 100m	8.9		steady expansion			22.2	+149%
R&D spending KRW 100m	0.4		steady expansion			1.9	+375%

Averages cover companies holding data that year, so the base widens over time (employment: 792 companies in 2019 → 2,014 in 2024). Aggregate revenue rose from KRW 389.8bn to KRW 1,932.4bn; employment from 5,491 to 19,249.

WHO FOUNDS THEM

Founder type	Companies	Share
Faculty	1,780	46.2%
Technology equity / transfer holding-company subsidiaries, research institute companies	1,292	33.6%
GRI researchers	434	11.3%
Graduate students	344	8.9%
Total	**3,850**	**100%**

WHY THIS MATTERS FOR TT POLICY

Equity, not royalty, is where Korean public research is actually capturing value.

A lab start-up is 9.3× more likely to be a high-growth firm than an ordinary active company (19.5% vs 2.1%) and 25.3× more likely to be a gazelle (12.9% vs 0.5%) — yet the licensing table records none of this.

Two structural blockers follow: TLOs are non-profit bodies that cannot hold risk capital, and until the 6th Basic Plan reform, GRI researchers **could not retain founder equity after returning from entrepreneurial leave.**

THE CONSTRAINT: STAGE AND PLACE

01 **88.4% are still at Seed, Pre-A or Series A.** Only 102 of 878 have reached Series B or beyond — early validation is financed, scale-up is not.

02 **Bio/medical takes 53.0%** of all capital raised (KRW 2.40tn of 4.53tn) — 2.3× its share of the wider venture market.

03 **Capital concentrates in the capital.** Seoul's region hosts 36.4% of companies but 58.0% of investment; Honam receives 2.4%.

Sources: MSIT / COMPA, *2025 Lab Start-up Survey Analysis Report* (COMPA Insight 2026-09) — full population of 3,850 companies founded 2015–2024 and surviving at December 2024; investment data matched to THE VC; comparators from MSS *Start-up Company Survey* (2023) and Statistics Korea *Business Demography* (2024 provisional). Undisclosed deal values are excluded.

IV

2026 WIPO/AUTM Leadership Summit

The Korea Paradox: World-Class Input, Stalled Output

The government's own diagnosis in the 6th Basic Plan is unusually blunt: Korea ranks near the top of the world in research capacity and near the bottom third in moving that research into industry. **The gap is institutional, not scientific.**

■ THE INPUT SIDE — AMONG THE WORLD'S BEST

5.13% of GDP spent on R&D — **2nd in the world**

2nd of 69 economies for **scientific infrastructure**
IMD World Competitiveness 2025

200tn KRW of government R&D committed for 2026–2030
= 5% of total government expenditure, every year

■ THE OUTPUT SIDE — BOTTOM THIRD

40th of 69 economies for **knowledge transfer between universities and companies**
Same index, same year, same country

30% of new public-sector technologies are transferred
39% (2015) → 36% (2019) → 30% (2023)

18m KRW average royalty per university transfer in 2024
down from KRW 26m in 2022 — most deals under KRW 10m

THE COMPARISON THAT FRAMED THE DEBATE

Every Korean university and public research institute combined earned **KRW 278bn** from technology transfer in 2024 — across **275 institutions**.

ONE US UNIVERSITY

The University of Pennsylvania alone reported **over USD 1bn** in gross licensing income in FY2022 — ranked 1st nationally by AUTM.

THE READING

A single American campus out-licenses an entire national research system several times over. **The constraint is the transfer machinery.**

> **"Largest in name only — the R&D paradox. New technologies pour out of the government budget, but the record of transferring them to industry and turning them into business is moving backwards."**
>
> Seoul Economic Daily, 10 June 2025, reporting the MOTIE survey of 275 public research institutions

A contested term. STEPI's 457th S&T Policy Forum (April 2024) publicly challenged the framing, finding "no inefficiency or underperformance in R&D outcomes that would warrant calling it a Korea R&D paradox." The disagreement is real and useful: it turns on whether one measures *scientific* productivity, where Korea performs well, or *commercialization* productivity, where it does not.

서울과학기술대학교

Sources: 6th Science & Technology Basic Plan (2026–2030) — R&D intensity, IMD ranks and KIAT transfer-rate series as cited in the Plan; MOTIE/KIAT public research institution survey; NRF policy study, SeoulTech, Jan 2026; Penn Center for Innovation FY2022 annual report and AUTM Licensing Activity Survey; STEPI Forum 457 (2024).

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Ⅳ Six Core Issues on Korea's Agenda

Korean policy debate has moved past diagnosing the paradox to naming its mechanisms. Six issues dominate the 2026 agenda — **four internal to the system, two imposed on it from outside**.

01

Counting activity instead of value

Institutions and researchers are assessed on filings, disclosures and transfer counts — indicators that are easy to measure and easy to inflate. The system therefore mass-produces narrow, unenforceable patents that are never licensed: what Korean policy documents call **"wardrobe patents."**

▸ **Average royalty per case: KRW 26m → 18m in two years**

02

Research and market never meet

Academics optimise for publication; firms need de-risked, demonstrated technology. With no shared demand signal, universities push what they have rather than develop what industry will buy. Scale-up R&D and technology validation are the missing middle.

▸ **Public technology transfer rate down to 30%, a ten-year low**

03

Capacity that cannot accumulate

Professional expertise is financed by time-limited programmes, so it disperses when they end. GRI licensing staff fell from **231 in 2017 to 190 in 2022** even as transfer volumes rose — and a licensing career still cannot outlast a grant cycle.

▸ **500+ university professionals, but no protected career track**

04

The scale-up cliff

Seed capital works; growth capital does not. **88.4%** of funded lab start-ups sit at Seed, Pre-A or Series A, and only 102 of 878 have crossed into Series B or beyond. Meanwhile TLOs are non-profit bodies structurally barred from holding risk capital.

▸ **Capital concentration: 58% of investment in the capital region**

05

Institutional discontinuity under RISE

From 2026, BRIDGE 3.0 and its sister programmes are absorbed into regionally governed budgets. The 30 consortia being dissolved currently generate **68.1% of all national university royalty income**. The risk is not less money but the break-up of supra-regional networks and specialist teams.

▸ **Seoul 2025 pilot: 26 universities, KRW 47.8bn**

06

Sovereignty of the IP itself

Because unlicensed university patents are cheap, foreign non-practising entities can accumulate Korean public-research IP at low cost — and later assert it against Korean industry. An IP portfolio priced as a cost centre becomes a strategic exposure.

▸ **Raised as a national security concern in the 2026 NRF study**

The common thread: none of these six issues is a shortage of science or of money. Each is a failure of **incentive design, organizational continuity or capital structure** — which is why the 6th Basic Plan attacks evaluation rules, staffing and equity law rather than research budgets.

Sources: NRF policy study, *A Study on Planning New Project to Establish an Innovative System for University Technology Commercialization*, SeoulTech, Jan 2026; 6th Science & Technology Basic Plan (2026–2030); MSIT/COMPA 2025 Lab Start-up Survey; MOTIE/KIAT public research institution survey.

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V

Policy Response: The 6th Basic Plan, 2026 – 2030

VISION

New growth shared by all, through S&T innovation and the AI transformation

KRW 200tn government R&D, 5 years

KRW 350bn TT income target, from 278bn

LEVER 1 · ISSUES 01 & 02

Pay for value, not for volume

- **Employee-invention compensation raised in real terms** — up to 70% of revenue may be pooled and distributed at institutional discretion; tax-free ceiling already lifted to KRW 7m.
- **Royalties payable in stock and equity stakes**, not only cash — aligning the inventor with the venture's upside rather than a one-off fee.
- **Performance-based block funding** for universities and abolition of the PBS project-based system at GRIs, shifting both to mission-based accountability.

LEVER 2 · ISSUES 02 & 06

Build the road from lab to market

- **A "performance diffusion expressway"** — stage-linked support so a technology moves from result to validation to licence without falling between programmes.
- **Upgraded national trading platforms** — APOLLO and the National Tech Bank consolidated into usable market infrastructure.
- **Comprehensive commercialization firms** cultivated as professional intermediaries — the missing private layer between TLO and industry.
- Read together, these address the IP-sovereignty exposure: portfolios that are actively valued and traded are not available for cheap accumulation.

LEVER 3 · ISSUES 03 & 04

Make founding a researcher's rational choice

- **The decisive fix:** GRI researchers may now **retain equity in their spin-out after returning from entrepreneurial leave**, with a conflict-of-interest exemption written for the purpose. Previously, going back to the lab meant giving up the company.
- **Lab Start-up Innovation Units** — at least one in every province and metropolitan city, 2026–2030.
- **Entrepreneurial discovery teams scaled to 270 university and 35 GRI teams by 2030**, extending the Korean I-Corps model; positions and concurrent appointments retained.

LEVER 4 · ISSUES 04 & 05

Finance the scale-up, place-by-place

- **First Deep Fund, KRW 20bn** and **Scale-up Fund, KRW 100bn** inside the R&D special zones — aimed squarely at the Series B cliff.
- **Re-challenge funds expanded to KRW 1tn by 2030**, making honest failure survivable for a deep-tech founder.
- **The four science & technology institutes' regions designated deep-tech startup hub cities** — a deliberate counter to the 58% capital-region concentration of investment.
- Regional capacity is the hedge against RISE fragmentation: devolved budgets need local investors to match them.

Assessment. The plan's strength is that it legislates against the incentives that produced the paradox — equity retention, equity-denominated royalties and block funding all change behaviour rather than budget lines. Its open risk is **timing**: RISE devolution dismantles national commercialization networks in the same year the new instruments are still being stood up.

Source: Government of the Republic of Korea, *6th Science & Technology Basic Plan (2026–2030)*; complemented by the NRF policy study, SeoulTech, Jan 2026. Baseline TT income of KRW 278bn (2024) and the KRW 350bn target are as stated in the Plan (KIAT basis).


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