



German
Economic
Team

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POLICY STUDY
ARMENIA

Technology transfer structures in Armenia: gaps, opportunities and reform options

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Executive summary (1/3)

The technology transfer potential in Armenia remains underutilised due to structural gaps and challenges with respect to:

» **Strategic and legal framework**

- Technology transfer is addressed in several strategies but lacks a clear anchor
- Roles and mandates across ministries are not clearly delineated
- Legal and regulatory conditions for IP ownership and commercialisation remain partly unclear

» **Institutional structures and capacities**

- The technology transfer landscape is fragmented and lacks critical mass
- Capacities vary widely across institutions – only one fully institutionalised and operational TTO
- No national coordination platform or shared service structure exists

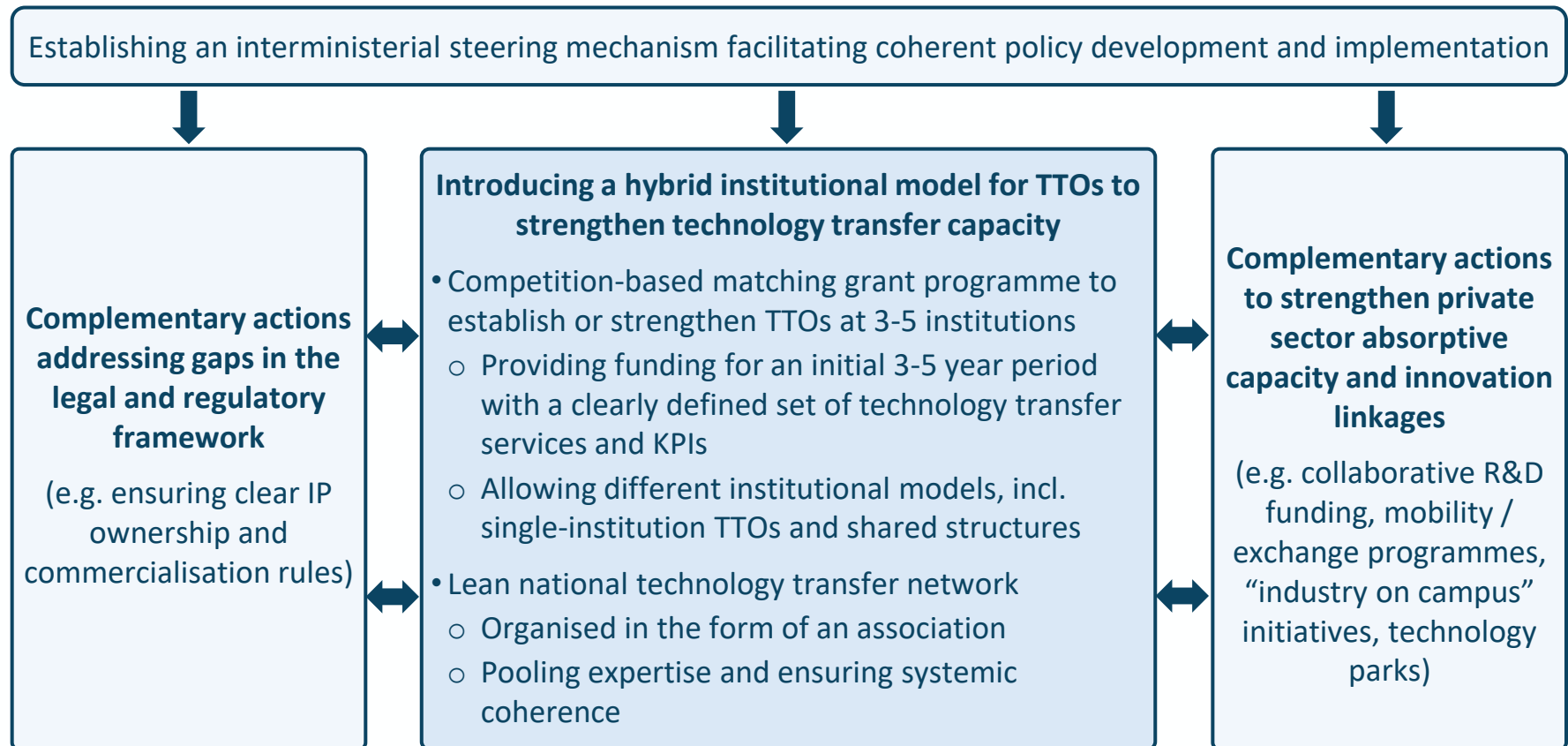
» **Demand and absorptive capacity**

- Limited private sector absorptive capacity constrains demand for technology transfer services
- Innovation linkages between academia and industry and corresponding ecosystem structures remain underdeveloped

Executive summary (2/3)

As a first step, a national technology transfer action plan should be developed aligned with existing and forthcoming strategies to ensure a coherent approach – with the establishment of a hybrid institutional model for TTOs as a flagship initiative

Main elements of the proposed national technology transfer action plan:

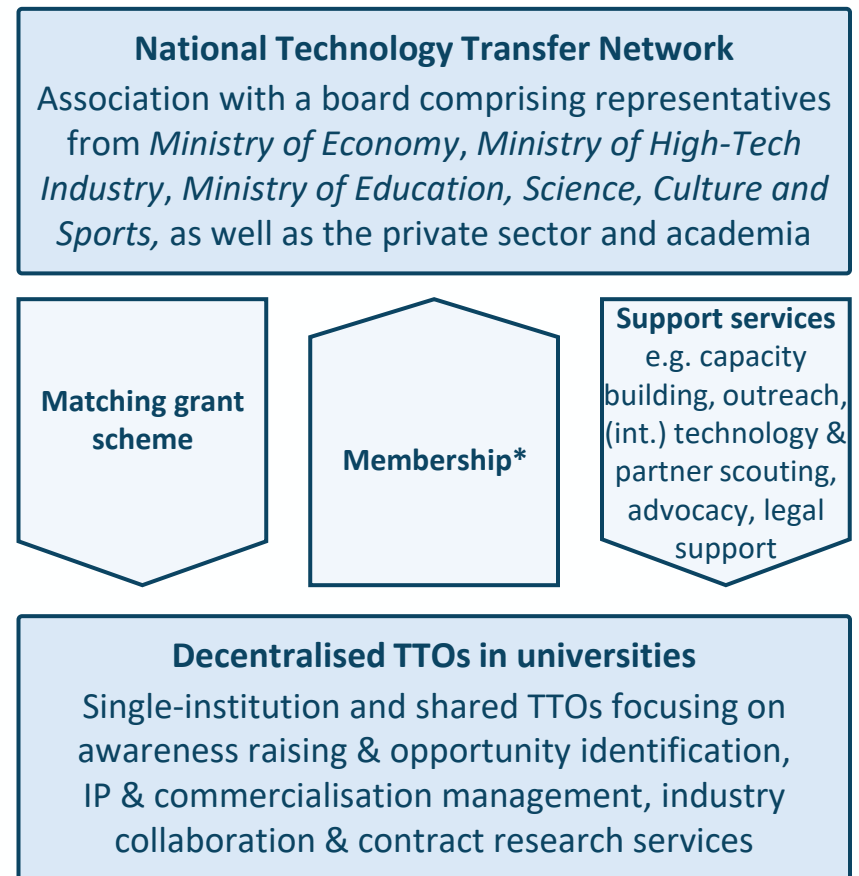


Executive summary (3/3)

It could be considered contracting a specialised service provider or consortium to design the hybrid model and provide technical assistance in the initial phase, focusing on:

- » Designing the matching grant scheme (e.g. defining the application and selection process, eligible TTOs, activities, and costs)
- » Organising the first call and managing the scheme for the initial phase (incl. mentoring support for the selected beneficiaries)
- » Developing the conceptual design for the national network (e.g. governance structure, service portfolio, membership model)
- » Preparing an implementation roadmap for the national network
- » Supporting pilot deployment (incl. building capacities and ensuring a sustainable handover)

Proposed hybrid institutional model:



* Membership should be mandatory for beneficiaries of the matching grant scheme. Further technology transfer stakeholders should be invited to join the association

Outline

1. Introduction
2. Assessment of the technology transfer structures
 - A. Strategic & legal framework
 - B. Institutional structures & capacities
 - C. Demand and absorptive capacities
3. Good practice analysis
 - A. BTU Brandenburg University of Technology Cottbus-Senftenberg
 - B. RWTH Innovation GmbH (RWTH Aachen University)
 - C. PROvendis GmbH (Federal State of North Rhine-Westphalia)
 - D. Summarising overview
4. Conclusions and recommendations

1. Introduction

Background

- » Armenia's transition towards an innovation-oriented development path requires efficient technology transfer structures to ensure that scientific knowledge is effectively transformed into economically and societally valuable applications
- » Efficient technology transfer mechanisms can broaden the country's innovation capacity, boost SME competitiveness and productivity, stimulate high-value entrepreneurship and industries, and help attract both domestic and foreign investment

Purpose of this Policy Study

- » As an analytical and conceptual basis for reform decisions, the policy study:
 - Assesses the effectiveness and coherence of Armenia's existing technology transfer structures focusing on technology transfer offices (TTOs)
 - Identifies gaps and opportunities for improvement
 - Provides actionable recommendations to enhance the capacities, coordination, performance and impact of the technology transfer structures
- » The assessment and recommendations adopt a balanced perspective that reflects both supply-side and demand-side dynamics in the innovation ecosystem

1. Introduction

The work programme combined an analysis of the local context with insights from international good practice to ensure that the conclusions and recommendations are both context-specific and internationally informed

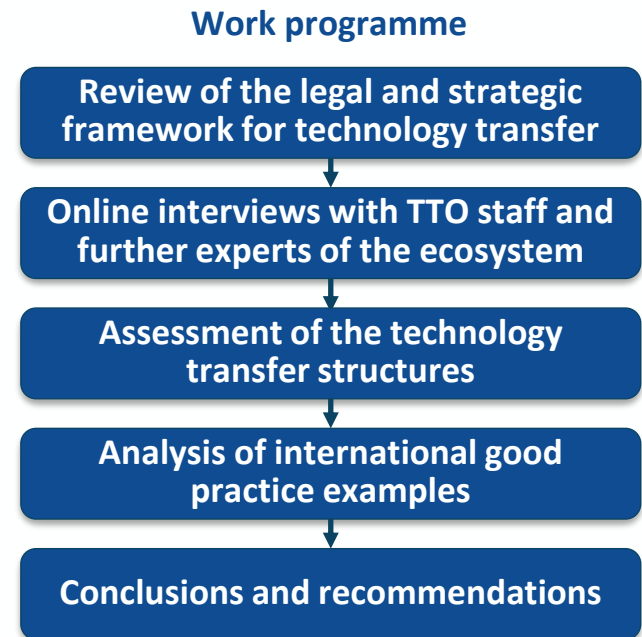
» The assessment of the technology transfer structures focused on the three dimensions:

- (1) Strategic & legal framework
- (2) Institutional structure & capacities
- (3) Demand & absorptive capacity

» It was based on:

- Interviews with TTO staff and further experts, incl. ministries, universities, Academic City, Armenian Innovation Foundation, EIF, international organisations
- Complementary desk research, e.g. review of the reports “Innovation for Sustainable Development” (UNECE, 2023), and “Technology Transfer in Armenia” (JRC, 2021)

» The selection of good practice examples was aligned with the key findings from the interviews and assessment



2. Assessment: strategic & legal framework

Armenia has a significant scientific potential and tradition, but technology transfer is operated without a coherent strategic and legal foundation

- » There is no dedicated strategy or law on technology transfer providing guidance and directions for the stakeholders
 - Existing and forthcoming strategies address only selected aspects and target groups (e.g. Science Development Strategy, draft High-Tech Strategy, planned IP Strategy)
 - In addition, the interviews carried out indicate remaining gaps and ambiguities in the legal and regulatory framework for IP ownership and commercialisation
- » The policy roles and mandates for technology transfer are not clearly delineated between the Ministry of Economy, the Ministry of High-Tech Industry, and the Ministry of Education, Science, Culture and Sports
- » Against this backdrop, the design of policy tools and initiatives at the operational level of technology transfer is also weakly coordinated
- » Overall, innovation policy is heavily oriented towards high-tech industries and technology-oriented start-ups, only partially leveraging the broader commercialisation potential of research across disciplines and sectors

2. Assessment: institutional structure & capacities

Armenia has elements of a technology transfer system, but not yet a structured and coordinated technology transfer architecture

- » The technology transfer landscape is fragmented and lacks critical mass, with capacities varying widely across universities and research institutes
- » Only one fully institutionalised and operational TTO could be identified in the interviews
 - In 2024, the American University of Armenia established its “Office of Sponsored Programs and Technology Transfer”. In its first year, the TTO received five invention disclosure submissions, filed its first int. patent application, and submitted two trademark applications (CLDP, 2025)
 - At other institutions, responsibilities for technology transfer are often not clearly defined or assigned to individual staff members alongside other duties and with limited specialised capacity
- » For the Academic City, an ambitious technology transfer structure has been proposed by the TU Munich, including TTOs at the cluster level, but with a medium-term perspective
- » There is no national coordination platform or shared service structure. The new Innovation Foundation does not have the mandate as technology transfer intermediary
- » In addition, Armenia is lacking key supporting ecosystem structures such as science & technology parks or cluster management organisations

2. Assessment: demand & absorptive capacity

Low private-sector absorptive capacity constrains demand for technology transfer and innovation linkages are weakly developed

- » Recent studies indicate that in Armenia, most R&D is performed by foreign multinational companies (JRC, 2021)
- » Technology commercialisation takes place mainly in IT-related sectors, which are more integrated into the global economy and do not require large-scale investments (UNECE, 2023)
- » According to the interviews, SMEs show low R&D intensity and are often reluctant to engage in open innovation
- » Armenia ranks low in terms of innovation linkages and cluster development in the Global Innovation Index (WIPO, 2025)
- » Innovation linkages are also mainly driven by multinationals (JRC, 2021)
- » As confirmed by the interviews, there is still a lack of:
 - Technology transfer-specific funding instruments
 - Structured support to promote innovation linkages between the private sector and universities and research institutions

Global Innovation Index 2025 – selected indicators for Armenia

Indicator	Rank
University-industry R&D collaboration	116
University industry and international engagement	101
State of cluster development	91

Source: WIPO (2024)

3. Good practice analysis

TTO structures vary significantly across countries and regions. The following good practice examples from Germany demonstrate how TTO structures can be adapted to specific institutional and regional contexts, illustrating different combinations of:

» **Organisational models:**

- Internal TTOs embedded within a university
- External subsidiary structures owned by a university
- Shared service TTOs serving multiple universities or research institutes

» **Service portfolios:**

- Complementing core functions such as IP management with additional services such as specialised legal services, personnel transfer, and comprehensive support for start-ups
- Showing different approaches towards outreach and integration into regional innovation systems
- Varying in terms of the target group focus

» **Financing models – combining different sources incl. institutional funding, grant- and project-based funding and revenues from licensing and service fees**

3. Good practice analysis – BTU Cottbus-Senftenberg

The TTO of the BTU Brandenburg University of Technology constitutes a good practice example of an internal single-institution TTO with strong involvement in structural transformation and ecosystem development processes

- » The transfer strategy is aligned with the structural transformation of the region in the context of the phase-out of lignite mining
- » The TTO has initiated several projects supporting structural change, incl.:
 - Lausitz Science Park
 - CHESCO Center for Hybrid Electric Systems
 - iCampus Electronics and Microsensors
- » This approach allows the TTO to combine soft and hard transfer infrastructure (labs, testing facilities, prototyping environments)
- » The TTO's regional offices foster the regional outreach and ecosystem integration

Organisational model	<ul style="list-style-type: none"> • Internal single-institution TTO • 2 departments (technology & innovation and patents & licensing) and 2 regional offices • Team of 14 employees (no lawyers) • TTO cooperates with external patent lawyers • Vice-President of the university in charge of both research and technology transfer
Service portfolio	<ul style="list-style-type: none"> • Broad technology transfer portfolio, incl.: <ul style="list-style-type: none"> ○ IP management and commercialisation ○ Support for start-ups and personnel transfer (in collaboration with other units) ○ Assisting companies in applying for regional, national and EU programmes ○ Initiating structural change projects • Strong focus on areas (1) energy transition & decarbonisation, (2) health and life sciences, (3) AI & sensor technology, (4) global change & transformation processes • Range of promotion & outreach measures (e.g. transfer award, transfer database, transfer day, energy day, company visits)
Financing model	<ul style="list-style-type: none"> • Diversified model combining institutional funding, Federal State grants (incl. dedicated scheme for technology transfer structures), licensing income, project-based funding

Source: Own representation based on Brandenburg University of Technology (BTU, 2025) and expert interviews

3. Good practice analysis – RWTH Innovation GmbH

RWTH Innovation GmbH illustrates the model of a technology transfer organisation established as a subsidiary of a research-intensive university with strong industry engagement

- » The subsidiary structure allows more flexibility and market-orientation, while remaining closely linked to the university
- » Those advantages of a corporate structure are of particular relevance in the context of:
 - Procurement procedures
 - Recruitment of specialised staff
 - Industry collaboration and contract management, enabling faster negotiation and implementation of complex projects
- » The subsidiary structure also enables more comprehensive start-up support
- » The model is increasingly used by German universities

Organisational model	<ul style="list-style-type: none"> • Subsidiary TTO (private limited company wholly owned by RWTH Aachen University and the RWTH University Hospital) • Structured into departments IP & technology transfer, industry relations, entrepreneurship, legal, and communications • Multidisciplinary team with approx. 40 employees (incl. specialised lawyers)
Service portfolio	<ul style="list-style-type: none"> • Comprehensive technology transfer and innovation support, incl.: <ul style="list-style-type: none"> ○ Evaluation of inventions and IP management ○ Industry collaboration and contract research services ○ Comprehensive support for research-based start-ups and spin-offs, incl. an in-house incubation programme ○ Management of innovation ecosystem programmes • Focus of services reflecting profile of different faculties (dedicated innovation managers for different faculties)
Financing model	<ul style="list-style-type: none"> • Combination of institutional funding, revenues from industry collaboration and contract research services, licensing income and project-based funding

Source: Own representation based on RWTH Aachen University (RWTH, 2025)

3. Good practice analysis – PROvendis GmbH

The PROvendis model illustrates how shared technology transfer services can strengthen commercialisation capacity across a fragmented research landscape

- » PROvendis complements the services of the TTOs of the universities in the Federal State
- » The centralised model allows to pool specialised expertise (e.g. for technology evaluations and licensing negotiations)
- » The model enables economies of scale and professionalisation of technology transfer, particularly benefiting smaller institutions
- » PROvendis also plays an important outreach and brokerage role, incl.:
 - Presenting the technology portfolios of partner universities at trade fairs and events
 - Identifying potential innovation partners for SMEs, including cases where cooperation does not initially involve IP protection

Organisational model	<ul style="list-style-type: none"> • Shared TTO • Joint subsidiary of 28 universities in the Federal State of North Rhine-Westphalia (legal status of a private limited company) • Team of 40 employees (incl. 4 specialised lawyers) • Sector teams supported by specialised units for IP protection, licensing and technology marketing, and training • Ministry of Economy is not represented in the ownership structure, while playing a strong policy and financing role
Service portfolio	<ul style="list-style-type: none"> • Narrow portfolio focusing on: <ul style="list-style-type: none"> ○ Technology evaluation and commercialisation strategies ○ IP protection ○ Licensing and industry collaboration ○ Support for grant applications ○ Training (IP Academy) • Strong focus on outreach and matchmaking • No dedicated programmes for start-ups
Financing model	<ul style="list-style-type: none"> • Main funding sources include institutional funding and grants from the Federal State (e.g. innovation2business.nrw) as well as service fees • Ministry of Economy as the main funder

Source: Own representation based on public information available from PROvendis GmbH (PROvendis, 2025) and expert interviews

3. Good practice analysis – summarising overview

The figure below provides a summarising overview of the good practice approaches identified:



4. Conclusions and recommendations

The fragmentation of the technology transfer system limits the commercialisation of research and its broader impact, requiring a coherent reform approach

- » The strategic, legal and governance framework is still evolving
 - Technology transfer is addressed in several strategies but lacks a clear anchor, while responsibilities across ministries and institutions are only weakly coordinated
 - Legal and regulatory conditions for IP ownership and commercialisation remain partly unclear
- » Institutional capacity and industry linkages are still limited
 - Technology transfer capacities vary widely across universities and research institutes
 - Structured linkages between academia and the private sector are underdeveloped and limited private sector absorptive capacity constrains demand for research-based innovation
- » Addressing these constraints requires a coherent and systemic reform approach
 - Strengthening the strategic, legal and governance framework for technology transfer
 - Building institutional capacity for commercialisation at leading universities and research institutions, while improving coordination and pooling scarce expertise at national level
 - Complementing supply-side reforms with measures that stimulate industry demand

4. Conclusions and recommendations

As a first step, a national technology transfer action plan should be developed aligned with the relevant strategic framework to ensure a coherent approach

- » The action plan should provide guidance, aligned with the existing Science Development Strategy, the forthcoming High-Tech Strategy, and the planned IP Strategy
- » The action plan should define operational priorities:
 - Promoting technology transfer across sectors, beyond high-tech industries
 - Addressing the needs of both academia and industry (combining science-push and industry-pull)
 - Establishing an interministerial steering mechanism facilitating coherent policy development and implementation
 - Addressing gaps in the legal and regulatory framework to ensure clear IP ownership and commercialisation rules
 - Introducing complementary measures to strengthen private sector absorptive capacity and innovation linkages (e.g. collaborative R&D funding, mobility / exchange programmes, supporting ecosystem structures such as technology parks or “industry on campus” initiatives)
 - **Launching a hybrid institutional model for TTOs as a flagship initiative to strengthen technology transfer capacity (see following slides)**

4. Conclusions and recommendations

As a main component of the hybrid model, a competition-based matching grant scheme should be established to build decentralised TTO capacity

- » Launching a competition-based matching grant scheme to establish or strengthen TTOs at 3-5 operational universities or research institutes
- » Requiring institutional co-financing (e.g. 30-50%) to ensure ownership and sustainability
- » Providing funding for an initial 3-5-year period with a clear focus and set of KPIs
 - The mandate of supported TTOs should be centred on awareness raising & opportunity identification, IP & commercialisation management, industry collaboration & contract research services
 - They should not operate incubators / accelerators but cooperate with existing ecosystem actors
- » Organising multiple calls to allow future structures (e.g. Academic City) to apply once operational
- » Allowing different institutional models, incl.:
 - Single-institution TTOs embedded in universities or research institutes
 - Shared / cluster-based structures (serving multiple institutions / thematic concentrations)

4. Conclusions and recommendations

A lean national technology transfer network should pool expertise and ensure systemic coherence

- » The network could be organised in the form of an association. The board could comprise representatives of the three ministries, as well as the private sector and universities
- » The network could draw on the expertise of its members. Core functions could include:
 - Managing the matching grant scheme to establish / strengthen decentralised TTOs
 - Capacity building (e.g. organising training programmes for scientists and peer learning)
 - Standard-setting (e.g. licensing templates) and facilitating transfer of experience among TTOs
 - Pooling scarce expertise (e.g. advanced IP legal support)
 - Joint outreach measures (e.g. trade fairs, industry matchmaking, international missions)
 - (International) technology & partner scouting
 - Advocacy (providing structured feedback into policy reforms)
- » Membership should be mandatory for beneficiaries of the matching grant scheme. Further technology transfer stakeholders should be invited to join the association

4. Conclusions and recommendations

It could be considered contracting a specialised service provider or consortium to design the hybrid model and provide technical assistance in the initial phase

- » The tasks should relate to both building decentralised TTO capacity in universities and establishing the national technology transfer network, incl.:
 - Designing the matching grant scheme (e.g. defining the application and selection mechanism, eligibility criteria and KPIs for TTOs, eligible activities and costs)
 - Organising the first call and managing the grant scheme for the initial phase (incl. mentoring support for the selected beneficiaries)
 - Developing the conceptual design for the national network (e.g. legal form, governance structure, service portfolio, membership, staffing, and funding model)
 - Preparing an implementation roadmap for the national network
 - Supporting pilot deployment (incl. building capacities and ensuring a sustainable handover)
- » By engaging an external service provider, the aim is to draw on additional expertise, ensure the efficient implementation of the hybrid model, and facilitate coordination between the ministries involved and further stakeholders
- » It could be considered mobilising donor funding to co-finance the hybrid model

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About the German Economic Team

Financed by the Federal Ministry for Economic Affairs and Energy, the German Economic Team (GET) advises the governments of Ukraine, Belarus*, Moldova, Kosovo, Armenia, Georgia* and Uzbekistan on economic policy matters. Berlin Economics has been commissioned with the implementation of the consultancy.

**Within the framework of project activities in Georgia, we are in contact solely with reform-oriented partners for the time being; in Belarus advisory activities are suspended*

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