



New organisational forms in support of ICT innovation: policy recommendations – Azerbaijan

Executive summary

Ecosystem for digital innovations is seen as the one formed by people, start-ups and companies at their various stages and various types of organisations interacting as a system to create and support digital innovations. The goal of the innovation ecosystem is to enable the high level of innovative companies' productivity in the ecosystem through delivery of certain required services. Policy towards innovation ecosystem development draws from the understanding that the main productivity sources of ecosystems are the quality of institutions (quality of regulation and framework conditions for innovations in the country), quality of the actors (through building competencies and skills of ecosystem actors) and the quality of links (through networking and developing relevant organisational forms) among them. Various organisational forms can support digital innovations beyond classical techno parks, business incubators and technology transfer offices.

New organisational forms are the logical step in the development of ecosystem via specialisation, because their structure and functions fit better to provide necessary services (fulfil necessary functions) in the innovation ecosystem. The logic of the gap analysis in this topic is to understand the current map and

restrictions for usage of contemporary organisational forms for digital innovation and bring advice on the improvement of conditions for these forms to be used broader and work efficiently. As the quality of work of these new actors is highly tied to the linkages they build with external ecosystem, with networks and expert communities they develop and maintain, we recommend viewing this topic in a complex with recommendations developed by EU4Digital Facility on the topic 'ICT Innovation Ecosystems for start-ups and scaleups' (country adaptation may be required).

This document outlines the main features of policy recommendations, that are elaborated in detail in a separate document, based on status and gap analysis comparing to relevant EU best practices, and validated with the EU4Digital ICT innovation Expert Network of Azerbaijan in April 2020. The actors suggested by EU4Digital Facility as potential actors in this document based on status analysis, have further considered their participation; the final list of potential stakeholders is indicated in the Action plan.

1. National framework policy related to new organisation forms in the innovation infrastructure

<p>Gaps:</p> <ul style="list-style-type: none"> There are no clear definitions in the national regulation of the terms related to innovation infrastructure and support. There is no focus on the specific policy framework or legislation that defines innovative cluster, accelerator, competence centre, and digital innovation hub. Innovation infrastructure organisations and organisations delivering the innovation advisory and support services are not subject to state aid for research and development (R&D) and innovation. 	<p>Core recommendations:</p> <ul style="list-style-type: none"> For the purposes of facilitating the development of ICT innovation ecosystem, it is recommended to fix the basic definitions in the national legislation (COM 2014/C 198/01, including: 'innovation infrastructure organisation', 'innovation support services', 'innovation advisory services'. Assign to innovation infrastructure organisations (organisations delivering the innovation advisory and support services) the right to be subject to special regulation on state aid for R&D and innovation. Consider issuing by the profile ministry of guidelines (recommendations) on the establishment of the new organisational forms for support of innovations, provision of their legal status, different models of their operation, including sample Code of Practice. Develop a policy document at the level of concept or strategy, defining the roles and responsibilities of ecosystem participants based on best practices in this area. Revise the setup of the innovation policy and implement good governance based on key principles of an efficient innovation policy governance 	<p>EU counterparts:</p> <ul style="list-style-type: none"> COM 2014/C 198/01 – Communication 'Framework for state aid for research and development and innovation including the new General Block Exemption Regulation (GBER)'. <p>Actors in Azerbaijan:</p> <ul style="list-style-type: none"> Ministry of Transport, Communications and High Technologies; Ministry of Taxes; Agency of the Republic of Azerbaijan for Developing SMEs; Innovation agency.
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Why? To enable a common understanding of what innovation support and advisory services are; to incentivise the organisations to deliver them (share their expertise) and to open the ground for further development of ecosystem organisations.

2. Specific organisational forms

Innovation clusters

<p>Gaps:</p> <ul style="list-style-type: none"> There is lack of definitions of an innovation cluster and cluster support organisation, cluster project or cluster initiative; there is a reduction of definitions of a cluster company and a start-up. Hence, wide economic effects from vertical and horizontal collaboration of SMEs with knowledge centres cannot be supported in a framework of current innovation policy; such cases are not promoted. Lack of horizontal and vertical synergy between actors of the ICT ecosystem. Existing organisations are not registered at any international ecosystem mapping tool. 	<p>Core recommendations:</p> <ul style="list-style-type: none"> Revise the vision of an innovative cluster composition, the role of cluster organisations and state aid to innovative clusters. Support innovative cluster organisations as innovation infrastructure organisations eligible for the state aid. For existing ecosystem actors to engage more in facilitating vertical and horizontal collaboration in the country, as the first step in identification and development of clusters. Register the mapped by EU4D Facility and emerging clusters in Azerbaijan at EU platforms and establish links with selected clusters organisations. 	<p>EU counterparts:</p> <ul style="list-style-type: none"> European Cluster Collaboration Platform (ECCP); The European Cluster Observatory; European Observatory for Clusters and Industrial Change; European Stress Test for Cluster Policy, European Strategic Cluster Partnerships; European Secretariat for Cluster Analysis (ESCA). <p>Actors in Azerbaijan:</p> <ul style="list-style-type: none"> Ministry of Economy and Industry; Ministry of Communications and High Technologies; Innovation Agency; Innovations Centre.
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Why? As the new types of such organisations are emerging dynamically (cluster organisation, accelerator, innovation hubs, competence centres, fablabs), there is no need to introduce the legal definition for each of them. Rather, the definitions of 'innovation support services' and 'innovation advisory services' can be used to distinguish activities of these organisations and other legal entities that can be covered by the state aid. Extending the vision of innovative clusters is important to take into account those 'constellations' (partnerships) of enterprises and knowledge organisations which organically emerge in the economic life of the country or have the potential to emerge and bring joint ventures. Only actual performance activities facilitating vertical and horizontal collaboration in the country will transform the existing organisations into genuine innovative cluster organisations – not an official (self-)naming. Mapping existing and emerging clusters in EU and establishing links with selected clusters organisations is necessary to enable the learning by cluster organisations on how to support innovative clusters as well as targeted matchmaking of businesses.

Accelerators

<p>Gaps:</p> <ul style="list-style-type: none"> Existing acceleration and incubation centres lack effective training programmes to guide start-ups through all stages from ideation to access-to-market. None of the mapped accelerators are registered at major international ecosystem mapping tools. The potential of linkages with venture capital is underexploited. 	<p>Core recommendations:</p> <ul style="list-style-type: none"> Consider accelerators as part of the innovation infrastructure and extend to them the action of the regulation on the relevant state aid. For policy-makers – negotiate joining the EIC Accelerator Pilot. Map existing and emerging accelerators in Azerbaijan on multiple EU and world platforms, where most of start-ups look for funding. Use these platforms as well as Accelerator Assembly to establish links with other accelerators and VC funds for experience exchange and being integrated into a global pipeline for innovations. Develop the "dual mentorship" programme for deeptech start-ups by twinning with leading accelerators, i.e. with EIT Digital Accelerator, to increase the chances of these start-ups integration in EU and globally. Building the capacity of individual mentors and business angels (training and networking) to increase the success rate of Azerbaijani accelerators. 	<p>EU counterparts:</p> <ul style="list-style-type: none"> Accelerator assembly; Unicorns forum; Investors forum; Startup Europe Nations Network; Accelerator at EIT Digital; List of EU platforms and training opportunities for business angels and accelerators identified by EU4D Facility. <p>Actors in Azerbaijan:</p> <ul style="list-style-type: none"> Baku Business Factory; SUP; INNOLAND; Barama innovation and entrepreneurship centre.
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Why? Accelerators can only be successful and lead their mentored companies to success if they are a part of the wide market saturated with funding opportunities at further stages of business development. In case of small domestic markets as in the Eastern Neighbourhood region, accelerators and their partner business angels need to be integrated with the wider networks of similar actors (to share experience and drive bigger projects up to revenues and exit) and venture capital funds (up to IPO). Support of accelerators by mentioning them in official policy documents and extension of the state aid for innovation infrastructure organisations to them is needed because they help to overcome the market failures, and hence need to be acknowledged as the equal actors of the innovation infrastructure, as more traditional forms like technoparks and incubators have once been acknowledged to be its members eligible for state support.



Competence centres

Gaps:

The existing centres with deep industries-related expertise are not mapped and made visible to the start-ups wishing to launch a digital innovation product/service applicable in the traditional industries. This causes limited usage by digital start-ups of domestic expertise.

Core recommendations:

- The inventorisation of competence centres including the expertise available in the business sector across diverse thematic fields (a list of basic thematic areas on digital economy and the framework for data collection is suggested by EU4Digital Facility). Map such competence centres (their list/database can be published in an easily searchable way per keywords/thematic areas) for their better visibility for businesses searching for specific thematic expertise.
- Development of capacities for the existing competence centres and nurturing the new centres should be approached as a strategic task.
- The innovation vouchers scheme can be introduced to facilitate the transfer of knowledge (from basic consultations to the technological solution) from competence centres to innovation-friendly entrepreneurs.

EU counterparts:

Smart Specialisation Platform.

Actors in Azerbaijan:

Social Innovations Lab; Step IT Academy; Oxuyuruq.biz; Small and Medium Business Development Agency.

Why? Mapping of competence centres is necessary for innovative companies to understand where they can source the necessary thematic expertise. This is a prerequisite for the next stage of digital innovations ecosystem development – formation of digital innovation hubs.

Digital innovation hubs

Gaps:

There are no digital innovation hubs and no definition in Azerbaijan.

Core recommendations:

- The concept and practice of work of existing and emerging digital innovation hubs in EU is advised to be studied by existing most active regulators and accelerators (i.e. via [TAIEX](#) and [TWINNING](#) instruments).
- Pilot projects aimed at testing innovative solutions will be a most efficient tool facilitating networking of diverse stakeholders around specific selected topic of specialisation (core of the future digital innovation hub).
- With the development of partnership with EU, consider the possibility of establishing one of the outreach 'European Digital Innovation Hubs'.

EU counterparts:

[Digital Innovation hubs](#); [EIT Innovation Hubs](#); [EIT Digital Innovation Hub](#) in Italy.

Actors in Azerbaijan:

Ministry of Transport, Communications and High Technologies; Agency for Developing Small and Medium Enterprise; Innovation agency

Why? Development of multifold nodes of expertise needs to be linked with actual practical work. Innovation hubs cannot emerge following a Decree – they evolve from the actual collaboration and achievements. As experience of [EIT Innovation Hubs](#) shows, “the Innovation Hubs focus on developing innovative products, services and training in a specific area of their Innovation Community, taking targeted actions to help overcome key challenges in that field. Innovation Hubs build on the existing labs, offices or campuses of some of the Innovation Community’s core partners, which serve as clusters for a particular region, discipline or task”.

Private-Public Partnership-based projects (‘federated’ projects)

Gaps:

- Only the Build-Operate-Transfer (BOT) model is used.
- The PPP in improvement of ICT infrastructure and services is not practiced.
- Implementation of PPP in ICT sector tackles lack of ICT-specific legislation concerning the ICT risks, assets, tax regulations/reductions.
- Communication gap between the government and businesses.

Core recommendations:

- Study the mechanism of work of existing PPPs in digital markets in EU in-depth and consider their applicability, including Design-Build (DB) and Design-Build-Finance-Maintain-Operate (DBFMO) models, on digital markets, including via internships.
- Review and apply EU experience on PPP in the development of regulations for digital markets through consultations with consolidated business associations.
- Develop legal framework and implementation practices for institutionalised PPP for wider involvement of private sector already at the stage of designing of innovative projects in the area of digital markets. Develop legal framework for concessions, based on a contractual arrangement between the public and industry partners.

EU counterparts:

- Ongoing Partnerships: [Cybersecurity](#); [Photonics](#); [High Performance Computing](#); [Robotics](#); [Future internet \(5G\)](#); [ECSEL](#); [Factories of the Future](#); [Sustainable Process Industry](#); [Advanced 5G networks for the Future Internet](#).
- [COM\(2013\) 494](#) ‘Public-private partnerships in Horizon 2020: a powerful tool to deliver on innovation and growth in Europe’
- [COM\(2005\) 569 on Public-Private Partnerships and Community Law on Public Procurement and Concessions](#).
- [Communication 1291/2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation \(2014-2020\)](#).

Actors in Azerbaijan:

Small and Medium Business Development Agency; Public-Private Partnership Centre.

Why? Mechanism of PPPs provides legal structure to pool financial, human and infrastructure resources and to gather critical mass and scale of research and innovation “needed to address critical societal challenges and major EU policy objectives” [\[EC\]](#). While implementation of these distributed forms of partnership in projects involving both private and public stakeholders is a complex challenge in digital market, the first task to be done is to observe in practice how this is implemented in advanced markets (what the roles distribution, mechanism of implementation, communication and decision-making, incentives and KPI, etc. are), and compare with alternative implementation forms (i.e. clusters).

3. External framework for development of clusters, accelerators, digital innovation hubs

Mapping online of clusters, accelerators, innovation hubs and other types of actors for potential users to find them within the country

Gaps:

The identified web resources have limited functionality and are not acting as platforms. No database search and no B2B matching services are implemented on the websites.

Core recommendations:

- Mapping of Azerbaijani ecosystem, actors and start-ups on existing EU and world platforms.
- Considering the creation of a joint platform with functionality of linking the digital innovation ecosystem with most important partner markets.
- Propose to the ecosystem actors an easy tool for self-mapping on the online platform describing a range of basic functions that need to be performed in the innovation ecosystem (EU4D suggest a list of services to be used as a framework).
- Map the landscape of services provided by ecosystem actors (marketplace of services), to facilitate their search by start-ups and to foster competition among the suppliers of services.
- Consider the advanced functions of the similar EU platforms; the international partnerships of the platform and the possibility to exchange the data via open API with the existing big-scale platforms, to ensure both national data ownership and international visibility.

EU counterparts:

[Accelerator assembly](#); [Unicorns forum](#); [Startup Europe Universities Network](#); [EU Cluster Partnership Platform](#); [EU-wide network of Digital Innovation Hubs \(DIHs\)](#); [F6S](#), [EuroQuity](#), [Gust](#);

Actors in Azerbaijan:

Ministry of Transport, Communications and High Technologies; Agency of the Republic of Azerbaijan for Developing Small and Medium Enterprise; Innovation agency; Startup.az; Amea YTP; Startupazerbaijan.az.

Why? Mapping of digital innovation ecosystem service landscape and equipping the mapping platform with proper functionality helps in practice to improve the accessibility of the existing infrastructure organisations by start-ups and innovative businesses in Eastern partner countries and to improve the quality of services provided by ecosystem actors. It can serve “as a one stop shop website for start-ups to find a specific service through business lifecycle stages with functionalities for infrastructure organisations to register and independently update their information and for businesses to vote for existing and lacking services”.

Specific training and consultations about the organisational forms in support of ICT innovation

Gaps:

The trainings and consultations within the country about the organisational forms in support of ICT innovation (e.g. cluster management, PPP in innovative projects) are not available.

Core recommendations:

- training of management and staff of ecosystem builders and particular organisational form;
- organising TWINNING of accelerators;
- joining the specialised EU training programmes for development of cluster managers and innovation ecosystem builders.

EU counterparts:

[The Global Cluster Leadership Program](#); [StartupCommons Online certification Academy](#); [DIHELP – DIH Enhanced-Learning Programme](#).

Actors in Azerbaijan:

SME Development Centres of SME Agency; Innovation Agency.

Why? Development of an ecosystem for innovations requires special skills, approaches and tools, organised in a framework. Elaboration of common language (common understanding of terms, definitions, problems, tools) is helpful for ecosystem actors to lower the costs of interaction. For enabling a wide international stage for start-ups from small countries, national training programmes should be linked to diverse training programmes across the world. Besides, training opportunities should be provided through multiple channels, enabling the remote training.