



ICT Innovation Ecosystems for start-ups & scale-ups in Moldova: policy recommendations

Executive summary

Ecosystem for digital innovations is seen as the one formed by people, start-ups and companies as well as 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 through delivery of certain required services to them, embracing innovation support services – the provision of office space, data banks, libraries, market research, laboratories, quality labelling, testing and certification to develop more effective products, processes or services; and innovation advisory services – consultancy, assistance and training in the fields of knowledge transfer, acquisition, protection and exploitation of intangible assets, use of standards and regulations embedding them. 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.

The recommendations for the Republic of Moldova focus on networks, expert communities and services that influence the quality of links and quality of actors.

EU4Digital Facility has updated the list of digital innovation ecosystem actors in the Republic of Moldova: comparing to 153 mapped by ICT Innovation Study (2017), this list includes 168 actors in 2020. Further, EU4Digital Facility has updated the analysis of services provided by all 168 ecosystem actors in the Republic of Moldova to innovative start-ups and SMEs on various stages of development. Because one of the biggest gaps observed on Moldavian ecosystem is access of businesses to thematic expertise, EU4Digital Facility has further mapped the existing expert communities and the challenges to ecosystem development.

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 the Republic of Moldova (hereinafter – Moldova) 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. Maintain the mapping of the digital innovation ecosystem actors and expert communities

Gaps:	Core recommendations:	Potential actors in Moldova:	EU practices (mapping of local ecosystems via websites):
No single open web resource exists serving as one stop shop for digital ecosystem actors.	<ul style="list-style-type: none"> Maintain (enable regular update) the mapping of the ecosystem actors in the country and at EU networks and platforms, using the collected by EU4Digital Facility list of ecosystem actors plus the list of existing digital communities. Develop a web resource (digital platform) serving as a one stop shop for digital stakeholders and communities in the country, mapping the innovation ecosystem actors, to be accessible openly; determine its operator. Use innovation cluster support for implementation. 	<ul style="list-style-type: none"> Ministry of Economy and Infrastructure; Tekwill/ATIC; Moldova IT Park. 	<ul style="list-style-type: none"> EDCI - European Digital City Index; Startup Hubs; Startup Heatmap Europe; European Startups Initiative; Startup Europe Central and Eastern Europe Network; Startup Europe Western Balkans Network.

Why? Mapping makes ecosystem actors visible to each other and allow them to quickly identify relevant partners with minimal transaction costs. Mapping the existing thematic or sectoral expert communities is necessary for SMEs that want to use the opportunities of digital economy. Mapping is also used to provoke competition and reveal the market gaps.

2. Develop the platform functionality including maintaining the digital innovation ecosystem service landscape

Gaps:	Core recommendations:	EU practices:
There is no single open web resource mapping the innovation advisory and support services delivered by existing digital ecosystem actors, stakeholders and communities in the country in an easily searchable and comparable way.	<ul style="list-style-type: none"> Maintain (enable the regular update) the mapping of the landscape of services provided by ecosystem actors at one stop shop principle (marketplace of services). Foresee the functionality for innovation ecosystem organisations to register and independently update their profiles (the wider framework of ICT Innovation service landscape developed in the ICT Innovation Study (2018) can be used as a starting point for the mapping); display the aggregated landscape at the newly established platform. Consider the international partnerships and the possibility to exchange the profiles or registered actors via open API with the existing big-scale platforms, to ensure the national data ownership and international visibility. 	<ul style="list-style-type: none"> F6S, EuroQuity, Gust.

Why? Mapping of the landscape of services delivered by digital innovation ecosystem as well as equipping this map with proper functionality helps to improve the accessibility to the existing innovation ecosystem organisations for start-ups and innovative businesses; also, to incentivise 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 throughout the business lifecycle. Because of narrow domestic markets in Eastern partner countries (and hence the difficulty for an innovation ecosystem to provide a full scope of service at the world level), it is advisable that the national (regional) platform is equipped with the functionality of dynamic data exchange with the advanced international platforms.

3. Facilitate the development of lacking services in the digital ecosystem service landscape

Gaps:	Core recommendations:	Potential actors in Moldova:	EU practices:
The less serviced stages of digital innovation development are R&D and entering the market services at the start-up stage, consultancy in scoping up and business transformation, as well as access to thematic expertise.	<ul style="list-style-type: none"> Transfer from EU the incubation and acceleration programmes specialised by sectors of economy relevant to the country, and customise (localise) them. Provide assistance and support to local IT companies for selection and participation in international incubation and acceleration programmes. Facilitate the development of a network of digital innovation competence centres; Foresee at the platform mentioned in section 2 the functionality of assessment by businesses of the quality of the services received from existing organisations, to vote for existing and lacking services (express demand), which will foster competition among the service providers to increase the quality of services and mark the gaps where the consultancy is requested by SMEs. Develop for this platform an additional functionality enabling team-building for digital businesses and finding partners with complementary competencies (or enable this functionality to be provided externally in an interoperable mode with the platform). 	<ul style="list-style-type: none"> Ministry of Economy and Infrastructure; Tekwill/ATIC; Moldova IT Park; Accelerators. 	<ul style="list-style-type: none"> European Cluster Collaboration Platform offering a database searchable for particular sectors; a list of benchmarked innovation infrastructure organisations delivering services for digital innovations.

Why? At each stage of their lifecycle, innovative businesses have different needs, including the needs for resources, needs for competencies, needs for infrastructure and tools. If some stage is not covered, the country will face a brain drain, a business drain, a capital drain, or digital divide.



4. Facilitate the development of expert communities, their involvement and impact

Gaps: <ul style="list-style-type: none"> low access to thematic expertise (absent or not sufficiently known communities); low involvement of experts from private sector by public authorities due to low availability of expert communities that develop unbiased consolidated position; lack of funding and legal clarity to support the functioning of the 'administrative/communications office' (operating body/centre) for the community. 	Core recommendations: <ul style="list-style-type: none"> Involve the stakeholders and existing digital communities collected by the EU4Facility in the discussions on regulation and request for possible support (recommendation is applied for public authorities). Consider the building of digital communities at the crossroad of various sectors of economy (recommendation if applied for existing associations, public authorities, organisers of events). Develop and propose to start-ups and expert communities the guidelines on legal requirements that apply to ICT innovation communities and start-ups and on possible organisational forms of cooperation (see Italian Startup Act). Use the innovation vouchers tool and Startup Canada Communities scheme to support organisations willing to drive the development of thematic communities. 	EU practices: <ul style="list-style-type: none"> The Knowledge and Innovation Communities (EIT – European Institute of Innovation and Technology); EIC Community Platform; ScaleUp EU; Startup Canada Communities (non-EU practice). Potential actors in Moldova: <ul style="list-style-type: none"> Ministry of Economy and Infrastructure; ATIC.
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Why? Networking is a tool enabling the stakeholders with diverse expertise and needs find each other with a strategic goal to establish collaborative partnerships. Networking is useful both in the mature ecosystems with a big number of stakeholders, and in the early-stage ecosystems, where those interested in innovations need to be identified and brought together.

5. Training of ecosystem builders and ecosystem actors

Gaps: <p>Innovation infrastructure organisations lack staff with network development and management skills, as well as practical experience knowledge of problems faced by start-ups and scale-ups.</p>	Core recommendations: <ul style="list-style-type: none"> Join the specialised EU training programmes for the development of innovation ecosystem builders. Consider specialised decision-making tools for business angels, venture investors, such as the InnoRate project. Consider implementing pan-European qualification frameworks and training packages based on them (European Entrepreneurship Competence Framework; European e-Competence framework; DigiComp, etc.). Create a network of ICT entrepreneurship centres based on centres of excellence, business incubators and specialised educational institutions. 	EU practices: <ul style="list-style-type: none"> Soft-landing by StartupEurope; Training package of Startup Commons; European Data Portal; The Knowledge Bank; Potential actors in Moldova: <ul style="list-style-type: none"> Ministry of Economy and Infrastructure; ATIC/Tekwill/iHub; Generator Hub; DreamUps.
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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.

6. International cooperation of ecosystem builders

Gaps: <p>Insufficient development of collaboration with international networks.</p>	Core recommendations: <p>Connect with the diverse ecosystems in the different European regions via mapping and joining the special activities in the EU (recommendation is applied for existing communities and ecosystem builders).</p>	Potential actors in Moldova: <ul style="list-style-type: none"> Ministry of Economy and Infrastructure; Moldova IT Park; Tekwill. 	EU practices: <ul style="list-style-type: none"> Events: Startup Europe Week; Startup Europe Awards; European Maker Week, etc. Programmes empowering start-ups: SEC2SV; SEU-IN; SEC2LATAM; SEC2A. Connecting similar actors: StartupEurope Partnership (SEP) Investors Forum; European Digital Forum; Social Innovation Community portal; The European Trade Association for Business Angels, Seed Funds and Early Stage Market Players (EBAN); EU-wide network of Digital Innovation Hubs. Connecting certain types of ecosystem actors: Startup Europe Partnership (SEP); Erasmus for Young Entrepreneurs; StartupEurope Club, etc.
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Why? Making the national ecosystem actors and digital communities visible internationally and linking them with the international communities will enable the Europe-wide cross-border knowledge exchange, joint activities and projects, facilitating the attraction of the EU investors to the Eastern Neighbourhood market, and thereby extending the resource base for development of start-ups, scale-ups and SMEs in general. Networking with existing professional actors will allow to quickly learn about the progress and failures in regulation and business models.

7. Institutional capacity building

Gaps: <p>Lack of demand for innovation infrastructure organisation services from innovative companies because the existing services are not sufficiently targeting their needs.</p>	Core recommendations: <ul style="list-style-type: none"> Enhance the capacity of policymakers and implementers in the innovative digital ecosystem development by mastering REFIT and JRC toolbox, transfer of EU approaches to governance and collaboration with business and academia. Introduce institutional capacity building for digital business associations, to integrate them with the EU digital community and international associations. 	Potential actors in Moldova: <ul style="list-style-type: none"> Ministry of Economy and Infrastructure; ATIC/Tekwill/iHub; Generator Hub; DreamUps. 	EU counterparts: <ul style="list-style-type: none"> REFIT toolbox; 'Skills for evidence-informed policy making' (Joint Research Centre); European Digital SME Alliance; DIGITALEUROPE; Enterprise Europe Network; EIT Digital.
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Why? On the national level, development of expert communities is best facilitated by associations that perform targeted networking with the international community. Specialised institutional and individual capacity building programmes with targeted support to digital business associations is needed, to make them an integral part of the EU business community and international associations. This is a necessary precondition for the dissemination of good business ethics across the EaP region, as well as for intensive network-building.

8. Develop the framework for financial support of digital innovation ecosystem

Gaps: <ul style="list-style-type: none"> need for harmonisation of the legal framework related to Venture Capital, Seed Capital, Business Angels; lack of access to seed, venture funding and philanthropist investors. 	Core recommendations: <ul style="list-style-type: none"> Facilitate stakeholder consultations following the feasibility analysis. Contribute to design of the operational toolbox of a Fund for support of digital innovation and tech start-ups. Facilitate negotiations with potential co-investors into the Fund. Facilitate the development of venture and alternative financing mechanisms for innovation and business development projects based on ICT. 	EU counterparts: <ul style="list-style-type: none"> EIF; World Bank; EBRD; European Investment Bank. Potential actors in Moldova: <ul style="list-style-type: none"> Ministry of Economy and Infrastructure; National Bank of Moldova; financial organisations.
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Why? Innovation ecosystem development needs to be underpinned with financial package. The rules of providing state aid (grants, innovation vouchers) to innovations of start-ups and SMEs as well as to innovation support organisations; the general setting of financial incentives (taxation) and opportunities (loans, guarantees, equity investment opportunities) need to be developed in comparison with competing jurisdictions, but also with account of country budget size and international economic relations. Setting of a non-contradictory system of financial framework for innovations is a big separate task.