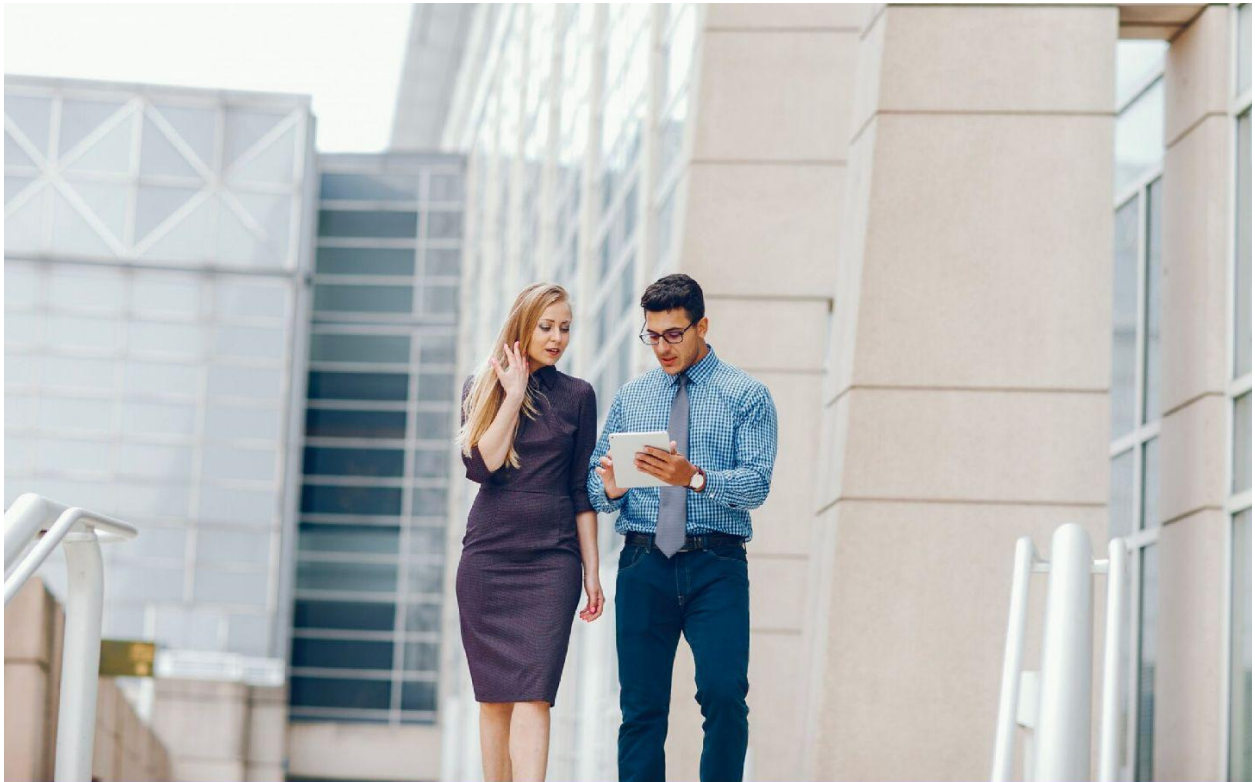




UCA PROPOSALS PROGRAMS TO SUPPORT AND DEVELOP INNOVATIVE ECOSYSTEMS

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**UKRAINIAN
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Content

Executive Summary.....	3
About the Ukrainian Cluster Alliance	5
Key positions of UCA in the field of twin transition in various market sectors	7
1. The potential state and key challenges of domestic innovation ecosystems in the field of industrial and deep-tech developments.....	7
2. Directions of integration into European chains and innovation ecosystems.....	8
3. Adaptation to European strategies, policies, and programs in the realities of Ukraine..	9
4. Roles of business associations and clusters as institutions.....	11
5. Priorities and key tools for the development of innovative ecosystems	12
Challenges in working with international organizations	13
Proposals and areas of cooperation	16
Using the opportunities of UCA, as one of the leaders in innovative development of the country	20

Executive Summary

Support and development of innovative ecosystems in Ukraine are among the most relevant and painful issues of the last decade for most industry business associations. While still having sufficient scientific and educational potential, a robust and rapidly growing IT industry, and thousands of startups, Ukraine still needs to turn industry and regional innovation ecosystems into a solid foundation for a competitive domestic economy. Regarding innovative development, Ukraine ranks [last among the EU countries](#), and this situation has stayed the same over the years. Russia's war against Ukraine significantly worsened innovative ecosystems, and degradation trends intensified in numerous sectors. Expert [surveys](#) indicate a sharp decline in demand for innovative solutions in most regions and industries. Therefore, this situation is a big challenge for most innovative development actors because it concerns new human capital losses, scientific schools, and the best developers.

At the same time, new opportunities have opened up for Ukraine. From the first days of the war, the European Union and other democratic countries began to provide Ukraine with assistance on an unprecedented scale, which also applies to the actors of innovative ecosystems. According to the Ukrainian Cluster Alliance (UCA) experts, these new opportunities are to be considered as ways to reformat and reboot innovative ecosystems completely.

This document sheds light on the positions of the UCA on several critical challenges related to supporting innovative ecosystems during the war and their subsequent transformation.

UCA draws attention to the need for a better focus on industrial and deep-tech startups, integration into EU industrial chains and ecosystems, better adaptation to new Euro programs, strengthening the role of business associations, and better cooperation with international organizations. The document details these growth zones by individual directions and spheres of activity.

As proposals for collaboration with international partners, UCA focuses on four key directions:

- **Joint creation of strategies and policies for developing innovative ecosystems by sectors and industries.** In the document, priority is given to those areas where the UCA already has consolidated support from its structural units.
- **Launch of separate targeted programs in Ukraine following Industry 4.0–5.0 priorities.** Here, UCA relies on the movement's leader, the APPAU association, which has been the consolidator and orchestrator of the national Industry 4.0 movement since 2018.
- **Cooperation on government programs of Resilience and Recovery**, where UCA is an active participant in relevant government programs and regularly provides its proposals.
- **Creation of bilateral and multilateral cooperation programs with EU countries, the USA, and Canada.** The alliance is launching several initiatives in this area, some already underway.

For Ukrainian and international partners, UCA offers different opportunities for cooperation, such as access to the database of innovative manufacturing SMEs and startups, as well as information and communication channels. Expert groups of policy-makers, a network of partners

from scientific research and higher education, and experts from technical standardization committees.

We will happily cooperate in developing innovative ecosystems with all partners: international organizations, state structures, industry business associations, and development agencies.

Oleksandr Yurchak, CEO of the Ukrainian Cluster Alliance.

About the Ukrainian Cluster Alliance

Ukrainian Cluster Alliance (UCA, <https://www.clusters.org.ua/>) is a national association of Ukrainian clusters. UCA's mission is to consolidate and develop the cluster movement in Ukraine, strengthening small and medium-sized enterprises (SMEs) and their rapid integration into European and global value chains.

UCA was created in the first weeks of the Russian invasion of Ukraine as a consolidated reaction of clusters to new threats and new economic challenges. Since March 2022, UCA has united more than 60 cluster organizations and cluster initiatives in all sectors and regions of Ukraine (3,000+ SMEs). Such rapid and dynamic growth became possible thanks to the previous consolidation of clusters on the Industry4Ukraine platform in 2019. In 2022, UCA gained international recognition, establishing international cooperation with more than 20 international organizations from the EU and the US. Such as the European Cluster Alliance (ECA), European Cluster Collaboration Platform, International Trade Council, several European national clusters and industry associations, etc.

Today, UCA conducts coordinated national clusters activities, covering most branches of the Ukrainian economy. This work has a transparent vector for the internationalization of Ukrainian clusters and the support of Ukraine's so-called “critical” industries during the war. UCA strategies and resources are aimed at supporting and promoting such initiatives as accelerated integration into European value chains, development of innovative ecosystems at the sectoral and regional levels, digitalization, green transition of SMEs, and regional smart specialization.

The Ukrainian Cluster Alliance plays a vital role in increasing the sustainability of Ukrainian SMEs and is also one of the active participants in the strategy development of the restoration of Ukraine for sustainable economic growth.

UCA's priorities are focused on five main strategic directions:

1. Institutionalizing the cluster movement at the state level and clustering of Ukraine's economy.
2. Development and growth of clusters through improved capability management clusters.
3. Intercluster cooperation and creation of new projects and programs.
4. Internationalization and increasing the export potential of clusters.
5. Twin digital and green transition of SMEs.

The development of innovative ecosystems in Ukraine and their effective integration with European ecosystems play a crucial role in achieving the priorities of the UCA. It will not only contribute to the strengthening of local innovation potential but also provide the necessary platform for the exchange of knowledge, technologies, and resources with

European partners. This, in turn, is a prerequisite for ensuring Ukrainian innovative SMEs' overall competitiveness and sustainability in conditions of growing global turbulence.

UCA provides its members solid value propositions and a wide range of services in the specified areas. For example, in the field of internationalization, UCA organizes business mission meetings between clusters, provides services of ECCP and EEN platforms, and manages two of its platforms for finding partners and innovative fundraising. UCA relies on the help and capabilities of many international partners.

UCA develops and constantly improves the project portfolio's quality for Ukraine's Resilience and Recovery. Today, it includes over 50 [projects](#) targeting industrial ecosystems and value chain development in various industries such as agri-food, healthcare, textile, engineering, industrial automation, IT, utilities, etc.

Structure of UCA is presented on Fig.1



Fig.1 Current composition of UCA clusters (Jan -2024).

Key positions of UCA in the field of twin transition in various market sectors

UCA is a cluster institution representing the views and interests of dozens of clusters and cluster-type associations and, therefore, thousands of SMEs. Together with experts from partner organizations, UCA policymakers develop proposals reflected in numerous strategies, analytical reports, and position papers in areas of activity. These include The National Strategy of Industry 4.0–5.0, the National Program of Cluster Development, Industrial Policy Instruments, proposals for the National Strategy of Export and Internationalization of SMEs, development of the network of Industry 4.0 Centers and Digital Innovation Hubs, etc.

In a consolidated form, the positions of the UCA on the critical issues of innovative development and the twin transition of industrial SMEs look as follows.

1. The potential state and key challenges of domestic innovation ecosystems in the field of industrial and deep-tech developments

The main challenges of ecosystems lie in 3 main categories:

- 1) **Immaturity of the majority technological ecosystems** — imbalance, weak structuring, lack of accounting for innovations and innovators, structural elements of ecosystems, primarily related to R&D infrastructure.
- 2) **Focus on “quick money”**– most investors, venture funds, and ecosystem leaders have created a high demand for fast, highly-scaled startups for global markets without considering the needs of other industrial sectors. As a result, the fate of deep-tech and industrial startups in the general ecosystem of startups is less than 10% today.
- 3) **Low level of integration into European chains and ecosystems**, especially considering the numerous opportunities provided by the new EU programs.

Since 2018, APPAU, the national leader of Industry 4.0 is looking for partnership and support in works on professional analysis and monitoring of each sectors, presented on Fig.2. Such analysis are yet to be done in most of them. APPAU made it only in its [sector of Industry 4.0](#)

Review [here](#) for more about the potential and condition of industrial and deep-tech ecosystems and possible development solutions. UCA invites international partners to implement software solutions for the specified challenges jointly.

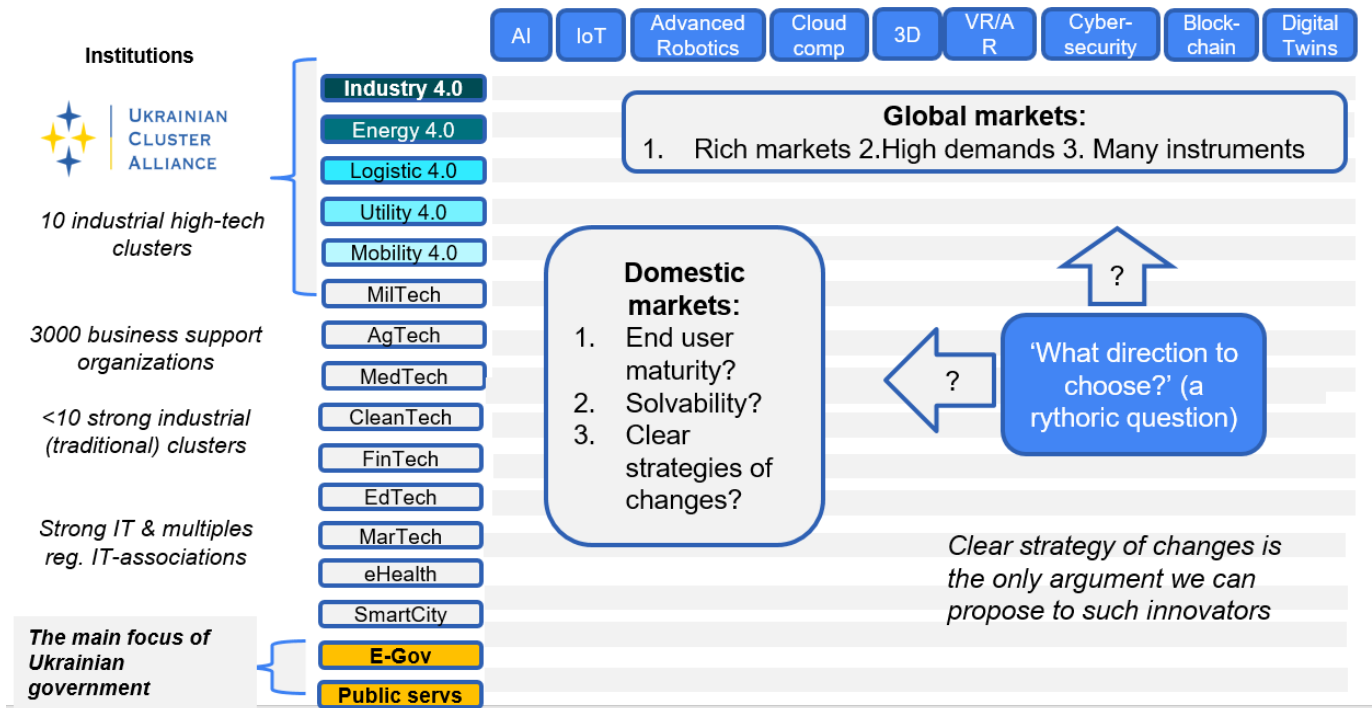


Fig 2. The segmentation of Ukrainian digital sectors.

2. Directions of integration into European chains and innovation ecosystems

Integration into European industrial ecosystems is a strategic direction of UCA development. Since its creation in March 2022, UCA has actively exchanged with European clusters and other structures. The main directions of this integration are:

- 1) Significant expansion and involvement of Ukrainian innovators in existing programs supporting EU innovations.
- 2) Better integration into the components of the existing programs of the Eastern Partnership (EU4xxx).
- 3) Integration in new (for Ukraine) innovation support programs, such as Digital Europe, EIT, Interreg Europe, LIFE, EU4Health, etc., and strengthening integration into other European programs (COSME, Eureka, etc.).
- 4) Significant expansion of the Ukrainian Digital Innovation Hubs (DIH) network and their focus on supporting industrial SMEs.
- 5) Creating special EU support programs for Ukrainian researchers and innovators in industrial sectors and other relevant areas.

Several concrete steps and action plans in this area are reflected in the program of internationalization of the Ukrainian Cluster Alliance for 2023-24.



Fig.3 Three business missions in Czech Republic, organized by CzechInno in 2023 became a benchmark of the development of international relationship in UCA. The participants of these missions were 40+ Ukrainian developers, startups and universities. Photo is from Prague, forum Smart.City, april 2023.

3. Adaptation to European strategies, policies, and programs in the realities of Ukraine

More and more European programs are opening for Ukrainian scientists, developers, and startups, and we see various new opportunities. At the same time, it is worth considering the country's specific features and state when it comes to strengthening innovative industrial ecosystems. The UCA's position is that, in some cases, these programs should be well-tailored, and 2 key factors should be considered:

1) The lower level of maturity of domestic ecosystems.

In many segments, Ukrainian ecosystems are of lower maturity than European ones, primarily, this concerns industry. There are also specific challenges, such as large gaps between science and business and the unreformed higher education system. Therefore, many new programs require balanced and well-adapted approaches. For example, starting a new eDIHs program in the EU countries in 2020 relied on the already developed network of 600 DIHs and 6 years of experience in implementing this model. Consolidating and improving

digital hubs as service provision centers for SMEs (from DIHs to eDIH) was a long-term evolutionary path. Ukraine has not gone through a similar path; our experience is minimal, and in Ukraine today, there are practically no DIHs that would act in full roles and functions (see the position paper for more details, [Development of DIHs in Ukraine](#)). Therefore, the proposal to establish several eDIHs in Ukraine at once in 2024-25 can only be welcomed, but it is obvious that such a strategy has significant risks that must be carefully calculated.

2) Relevance concerning the main challenges of survival in war conditions.



Today, Ukraine also faces particular challenges related to the war. Therefore, priority areas for innovative ecosystems are related to strengthening the country's defense capabilities and supporting critical industries capable of ensuring the country's survival. We are talking about individual industrial sectors, dual-use technologies, energy, infrastructure, and industries providing essential goods.

Therefore, Ukrainian ecosystems can and should support European programs that, for example, relate to climate change. However, the focus and priorities should be shifted towards security challenges.

The position of the UCA on how to carry out this adaptation still needs to be sufficiently clear and consolidated. Some experts are inclined to believe that adaptation is an exclusively Ukrainian issue. The EU has opened its programs (which were previously closed), and this is quite enough.

Another part claims that most of the programs go through State structures, which could not demonstrate their effectiveness in previous years, so counting on their ability to adapt programs in their deployment in Ukrainian realities is an illusion. It would be better to offer adapted solutions immediately, such as Business Bridge, the latest European Commission programs specifically for Ukraine. By consensus, the position of better cooperation of the government, business communities, and the public, together with European partners in introducing new programs and monitoring their implementation, may appear.

One way or another, the position of the UCA is unified in that adaptation is needed, and at least at the level of conducting targeted thematic competitions within the framework of current EU programs, focused on the challenges and problems offered by Ukraine.

4. Roles of business associations and clusters as institutions

According to the policy paper of the Industry4Ukraine platform (where the UCA came from) on the development of innovative industrial hi-tech ecosystems from 2019, institutional actors manage and shape the rules of the game in any ecosystem, not only by general policies or strategies at the level of the entire economy but also by specific technological or industrial sectors. The real state of many industrial sectors indicates their significant degradation caused by the weakness of state institutions and the lack of appropriate policies. This slide towards a commodity economy has been going on for more than a decade — the share of manufacturing in GDP is only 10%, twice as low as neighboring Eastern European countries. The consequences are numerous negative phenomena in innovative ecosystems, such as the outflow of the best personnel and developers in IT and abroad, the destruction of many research institutes, etc. Therefore, with the strengthening of the role of the State, the role of industry associations and clusters, regional development agencies, special agencies for innovative development, and other non-governmental institutions should also grow significantly. As the experience of some of them shows — IT-Ukraine, APPAU, Ukrainian Furniture Association, and today also UCA — **these organizations are the main actors in the development of innovations in their market sectors.**

UCA is also in solidarity with the positions of the European Cluster Alliance and the European

Commission (DG GROW), according to which clusters should play a much more significant or even key role in areas such as:

- Development of innovative ecosystems, where clusters have the most balanced position in coordination between business, science and education, government, and expert environment.



- Capacity development of SMEs in innovation, creation of new jobs, and internationalization.
- Accelerating the implementation of national policies and strategies is often held back by a lack of grassroots support and initiatives.
- Quick reaction to market situation changes is important for key policy-makers. Here, clusters can be better “market sensors,” providing quick feedback on market changes and better response mechanisms.

For its part, the UCA maximally stimulates the development of clusters of Ukraine in these areas. In 2023, such clusters appeared in the Photonics, Cybersecurity, and Advanced Materials segments.

5. Priorities and key tools for the development of innovative ecosystems

UCA has solid positions regarding the priority instruments for developing innovative ecosystems. These positions have been developed since 2018 (the first Industry 4.0 strategy), have passed the stages of developing proposals for the National Economic Strategy 2030, and today are reflected in the Manifesto and [Resolutions of Industry 5.0](#), which came out in July 2023. UCA considers the development of the following to be the most important eight elements:

1. Legislative changes to stimulate demand for innovation among industrial end users.
2. Targeted programs for reskilling-upskilling industrial SMEs.
3. Targeted programs for the development of innovation cluster networks.
4. A targeted program for the development of digital innovation hubs (DIHs).
5. Launch of a network of independent experts (according to the SIRI methodology).
6. Programs to improve the R&D infrastructure of our DIHs, universities, and National Academy of Sciences research institutes.
7. Creation of industry accelerators — especially for industrial and deep-tech startups.
8. Implementation of Industry 4.0 and 5.0 technical standards.

UCA seeks cooperation with all international organizations and actors who can support us in implementing the above instruments in Ukraine.

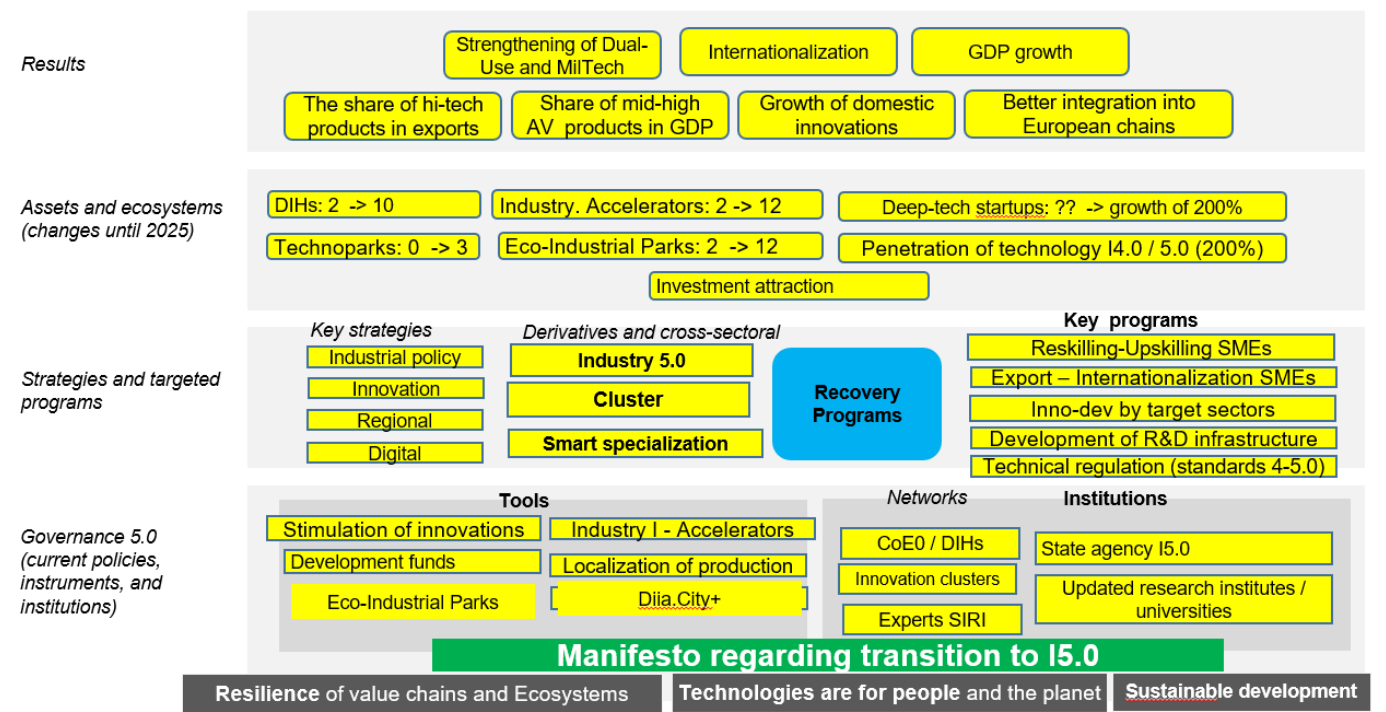


Fig.4 Policy Framework of Industry 5.0, proposed by UCA

Challenges in working with international organizations

In implementing its policies on developing domestic innovative ecosystems, UCA cooperates with several international organizations. These include international donors and organizations such as USAID, GIZ, UNDP, UNIDO, European and world structures — the European Commission, the European Cluster Alliance, the European Institute of Innovation and Technology (EIT Manufacturing), the International Trade Council, and many others.

At the same time, in implementing individual, specific tasks of the development of Ukrainian innovative ecosystems, we encounter specific challenges, overcoming which is important for more effective cooperation. The five most significant ones relate to the following categories:

1. Insufficient understanding of the roles of business associations as influential actors in innovative ecosystems.

Many international organizations consider business support organizations (BSOs) to be essential intermediaries but underestimate their impact on SMEs and their opportunities.



In the white book, "[5 Roles of Clusters](#)" from 2022, UCA shows that clusters (as a separate category of BSO) play a key or one of the key roles in areas such as:

- improving the resilience of chains and ecosystems and their resistance to crisis phenomena — and this also applies to the rapid decline in innovation during wartime;
 - general consolidation and mobilization, partnership with the government and local authorities;
 - active participation in creating national, regional, and branch programs of Ukraine's Resilience and Recovery.
- UCA was among the first among BSOs to formulate the thesis for successfully implementing European innovation programs in Ukraine. It is necessary to significantly strengthen the influence and promotion not only on startups and developers but also on end users and SMEs. Not all international partners

understand this, they try to find direct access exclusively to innovative SMEs and startups, ignoring the role of BSO as consolidators of SMEs and industry institutions.

2. Lack of understanding of the real challenges of the development of Ukrainian SMEs and ecosystems and ways of implementation

The poll conducted among 30+ business associations in May-June 2023 shows several gaps between their expectations and the offers of external partners:

- The vast majority of BSOs, as non-profit organizations, expect much larger amounts of financial support, both from donors and from possible support from the state and other international partners. The main reasons for this state are a lack of understanding of the above roles of BO.
- Most of all, BSOs do not receive support in such areas as
 - Export-internationalization of BOs and SMEs,
 - Advocacy and lobbying of industry and sectoral policies
 - Support for innovative activities
 - Preparing new projects.

In developing innovative activities, international organizations often come into contact with government structures and bet on them. But in numerous instances, industry or sectoral expertise, strategic development, and understanding of the current state of the markets are not in the government but in the industry BOs. For example, in the field of Industry 4.0, the government cannot create appropriate management bodies or at least coordinate this development for more than 6 years, and the key expertise belongs to the APPAU association. Similarly, advanced reskilling programs in the IT industry are not created by state institutions but rather by the industry association IT-Ukraine.

One of the biggest mistakes of the innovation support programs of the past period was the exclusive "bet on startups" as the main tool for developing innovations in Ukraine. At the same time, other tools, such as stimulation/incentives of end-user markets, programs for reskilling-upskilling of SMEs, etc., were ignored. This led to numerous imbalances in the development of innovative ecosystems, which significantly deepened during the war due to a decline in the overall demand for innovation in most sectors of the country's economy.

3. Big fragmentation of programs and activities negatively impacts development in the context of a lack of proper coordination from the state or other institutions.

Starting from the middle of 2022, more and more international organizations and their innovation support programs are coming to Ukraine. These are new grant programs, new incubators or accelerators, and dozens of new measures. One cannot help but welcome these opportunities, many of which were generally unavailable to Ukrainian organizations. At the same time, increasing this number does not always automatically lead to better quality, and in some cases, it can lead to disappointment and a negative attitude of international partners toward Ukrainian stakeholders. Lack of proper coordination with key industry actors, lack of alignment and coordination of both European and Ukrainian strategic vectors of development in a number of cases means:

- difficulties in orientation and finding the best beneficiaries of programs, but also ecosystem partners in their development;
- ineffective promotional measures;
- lack of strategic orientation to the challenges of the domestic economy.

These obstacles are traditional when new actors enter any new, innovative ecosystems that are not sufficiently structured. And it is quite obvious that they are high, especially

with the high level of turbulence of the country in a state of war. However, ignoring these obstacles significantly reduces the effectiveness of targeted support programs and, therefore, carries many reputational risks for both parties and can ultimately even inhibit the development of ecosystems and industries.

4. Absence or low effectiveness of targeted support programs for non-state institutions. Insufficient volumes of this support.

If industry and regional BSOs are important actors in innovative and, in general, economic development, then according to this logic, they can claim special support programs from the state and international organizations, and even more so during wartime. In fact, and as already said, according to surveys, the amount of support remains minimal, and first, it concerns the so-called critical industries responsible for security challenges. In general, most donor programs for innovative development in Ukraine rarely address clusters as a target audience, and therefore, clusters need to fight for their place.

For example, in 2022, the amount of donor support of the UCA, as a key institution of cluster development in Ukraine, amounted to only 35,000 euros, and in 2023, it will be at more or less the same level. Similar amounts of funding are typical for the vast majority of BSOs, even at the national level, and only a few of them operate with donor support budgets of more than 100,000 euros. At the same time, UCA performs work, the value of which, at market prices, is much higher than 300,000 euros. The total annual financing needs for developing the cluster movement in Ukraine are estimated at no less than 1.5-2 million euros. Thanks to organizations like GIZ, this situation has improved somewhat in 2023 but still needs improvement. Meanwhile, the government distributes programs of international technical assistance, the volumes of which are calculated in hundreds of millions of euros.



Fig. 5 Photo from brokerage event in Zaporizhzhia in the frame of UNDP-GIZ project Clusters FUNDRAISE. There were just 3 such events in Ukraine with cluster communities, and UCA argues that such events should be done on the regular basis in all regions.

5. There needs to be a higher level of communication, consolidation, and mutual understanding among participants of innovative ecosystems.

Lack of coordination, lack of consolidated strategies, and insufficient leadership from state or non-state institutions are critical factors for Ukraine's weak development of innovation ecosystems. This applies mainly to industry, where Industry 4.0 is a typical example. After the release of the national strategy of the Industry 4.0 project by order of the Cabinet of Ministers in 2018. The Association of Industrial Automation Enterprises (APPAU) worked for more than three years to achieve a consensus of key stakeholders on the critical priorities of the development of this sector. Several programs were included in various strategic documents of several ministries and are still [in the national economic strategy for 2030](#). But in reality, most of these documents are still at the 'paper level', and implementation actions have not been properly coordinated. Therefore, most of the key innovative actors of this sector — universities and scientific research institutes, clusters, developers and start-ups, and large enterprises — act at their discretion and vision and not within the framework of common development strategies. But if APPAU did develop a strategy and at least partially consolidated several hundred market participants and clusters, and today also offers a clear course on Industry 5.0 (already within the framework of UCA), the situation in other market segments looks much worse.

This challenge in working with international organizations is the need for better coordination and integration of their efforts into Ukrainian innovation ecosystems. This allows attracting international experience, funding, and networks to support Ukrainian SMEs, ensuring efficient resource use and sustainability.

Competition between numerous groups and organizations, lack of recognized leaders, the lack of strategies and coordination are common challenges in most Tech and 4.0 sectors.

It is also a challenge for international partners because it is very difficult to understand "who is who" in Ukraine.

Proposals and areas of cooperation

Thus, with all its structural units and clusters, partners, and other actors of innovative ecosystems, UCA is open to collaborating with governmental and international structures to solve the challenges mentioned above and accelerate the development of innovative industrial ecosystems.

The key areas of cooperation are the following:

- **Joint creation of strategies and policies for developing innovative ecosystems by sectors and industries.**

At the time of publication of this document, the most developed sectors in which UCA is ready to cooperate in the development of innovative policies and strategies are the following

- Agri-food industry (coordination is provided by the “Agri-food” Resource Center (RC)).
- Textile industry (ASTAR agency and Podillya fashion cluster).
- Medical industry (Resource Center “Medical Clusters”).
- Engineering and Mechanical Engineering (Resource Center EAM).
- Maritime industry (Maritime Cluster of Ukraine (MCU)).
- Aerospace industry (United Innovative Space Clusters).
- City infrastructure and transport (Resource Center Smart.City / Smart.Regions).
- Cross-industry sectors:
 - Industry 4.0-5.0 (TWINS Committee)
 - Dual-use technologies (Resource Center Dual-use)

Proposals for these sectors' development programs, policies, and projects are regularly submitted to the central-level executive authorities.

- **Launch of separate target programs in Ukraine in accordance with Industry 4.0 - 5.0 priorities:**

UCA (including leading members like APPAU) has experience in implementing Industry 4.0 in Ukraine since 2018. Today, UCA has developed a comprehensive framework and roadmap for implementing Industry 5.0 in Ukraine. For full synchronization with the European exchange rate, UCA offers the following three vectors of changes:



- **Firstly, strengthen industry institutions 4.0-5.0 by creating the State Agency of Industry 5.0 and strengthening the profile clusters and associations responsible for this direction.** The previous experience of digitalizing Ukraine's economy clearly showed that advanced strategies (such as [NES-2030](#)) can not survive without strong institutions. Instead, where institutions appear, there is immediate significant progress (for example, the Ministry of Digital transformation in e-government and public services).

- **Accelerated development of**

Support Instruments for the twin transition of SMEs in real sectors of the economy. Today, many instruments are unavailable or without proper coordination — agreements with BSOs.

- Key actors in developing innovative ecosystems of critical industries must **consolidate priorities** on quick and necessary steps to support them and the general strategy for developing Industry 5.0 in Ukraine.

Among these urgent steps, which consider the interests of clusters and SMEs, the UCA sees among the priorities the launch of targeted, medium-term (3-5 years) programs, by directions

- 1) **Reskilling — Upskilling of SMEs** in critical industries: today, there is no large-scale program that covers Ukrainian SMEs according to agreed priorities, and this challenge is becoming greater as Ukrainian manufacturers lag in the field of twin transition.
- 2) **Development of innovative industrial clusters** as key actors supporting SME innovation
- 3) **Development of the DIH network in Ukraine** — The appropriate position paper of the UCA argues why Ukrainian ecosystems need not 1-2 super hubs (e-DIHs), or not only them but also network 5-7 DIHs. With a well-defined industry specialization and according to the priorities of critical industries.
- 4) **Creation of industry accelerators** by priority segments of critical industries, including defense industry and mechanical engineering.
- 5) **Creation of a network of certified Industry 4.0-5.0 experts**, whose main roles are enterprise diagnostics and consulting in creating digital and green transformation plans.

See the [Resolution of the Industry 5.0](#) conference for more on this topic.

- **Cooperation on government programs of Resilience and Recovery**

UCA is an active participant in the government's Resilience and Recovery programs. The Alliance submitted its proposals to the government programs developed in May-June 2022 and today to the programs being prepared for the European Commission package of 50 billion euros.

Among the key proposals of the UCA:

1. Government support for the cross-industry Working Group (WG) on Smart Industries (Smart Industries including Industry, Energy, Infrastructure and Construction). The goal of the Working Group is the maximum integration of the tools and proposals of the double transition into the sectoral programs under which the government works.
2. Individual sector proposals, 21 for cross-sectoral development projects and 17 for investment projects — provided to the government according to the portfolio [projects](#) prepared in UCA during 2023.
3. Improving cooperation with European clusters and other partners in Recovery projects which are proposed on both sides.

Individual UCA projects, such as creating digital product passports, have already been included in the government's final proposals.

- **Creation of bi-multilateral cooperation programs with EU countries, USA and Canada**

When searching for the most effective cooperation mechanisms with EU and US partners, UCA uses various tools, methods, and practices, including those suggested by the partners. Among them are B2B and C2C (Cluster-2-Cluster) meetings and exchanges, joint forums and conferences, stage tours, enterprise visits, participation in joint projects, etc.

Program [Professionals4Ukraine](#), created at UCA in 2022, today integrates these



different formats of cooperation and coordinates the work of more than 20 of our ambassadors.

The UCA considers the creation and development of bilateral development programs for specific market segments to be one of the most effective cooperation mechanisms. Such programs will be launched in 2023 for Industry 4.0-5.0 with partners from Poland and the Czech Republic and on a wider list of segments

with Romania. The main features of these programs are regular accounting and monitoring of all bilateral cooperation projects between countries and setting appropriate priorities for the necessary assistance. UCA plans to increase the number of countries involved in similar development programs in 2024.

Using the opportunities of UCA, as one of the leaders in innovative development of the country

Innovative development of clusters and their participants, SMEs, universities, and startups is one of UCA's key strategies. Therefore, all our partners can count on partnership and cooperation. To establish relations and mechanisms of cooperation, it is worth understanding what opportunities and resources UCA can provide you:

1) Access to the best innovative SMEs and startups

Together with partners, UCA provides access to a large base of innovative companies — technological SMEs, engineering companies, developers, and startups. The total base of such companies includes more than 500 organizations.

Many of them are accounted for and included in the marketplace [Land4Developers](#).

2) Information and communication partner

UCA includes a service team providing marketing and information services, including digital campaigns, web development, and content creation.

3) Participation in policymaking processes

There are four committees as part of the structural units of the UCA, the main task of which is to develop their policies and positions in different areas of UCA's activities.

Including previous developments from Industry4Ukraine, UCA provides access to almost 20 position and policy papers, analytical reports, and development strategies today.

4) Participation in developing educational programs

UCA experts from universities create training programs based on market requirements.

Most of these programs are created for students' education, but several programs are created for the enlightenment and education of SMEs. About ten universities participate in similar developments. New projects aimed at developing professional and technical education are worth noting. In particular, a similar project started in Khmelnytskyi, where a school for textile industry training workers was created under the regional cluster "Podillya fashion cluster."

5) Participation in harmonizing technical standards

Various clusters and associations of UCA have experience in projects to harmonize technical standards. In particular, APPAU includes Technical Committee 185 "Industrial Automation" and implemented many projects to bring Ukrainian technical standards to European ones. Similarly, another member of the UCA, the Kyiv hi-tech cluster, closely cooperates with the Ukrainian Federation of the Security Industry in harmonizing security standards.

The use of the opportunities and resources of the UCA in the indicated directions can significantly accelerate the implementation of innovative development programs in numerous

sectors of the country's economy. It contributes to better integration of Ukraine into the European and world space.



Fig 6. Signers of Manifesto Industry 5.0, July-23, Kyiv.

**We invite international partners and government organizations
to cooperate.**

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