

How to Create Economic Value through Clustering

Best Practices of Ukrainian Clusters

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- Maritime Cluster of Ukraine (Public Union)
- Thermal Power Cluster of Ukraine
- Vinnytsia Instrumentation and Automation Cluster
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INTRODUCTION

The analysis and establishment of **best practices** is a hallmark of maturity and development in any professional field. After four years of systematic growth, Ukrainian clusters have also matured enough to define their own set of best practices. Within the **Clusters4Regions** initiative of the **UCORD** project, implemented by the **Ukrainian Cluster Alliance (UCA)**, 17 best practices have been identified across six categories of cluster activity.

Accordingly, this **Guide** is primarily aimed at coordinators of young clusters and cluster managers across all regions and economic sectors of the country. These leaders typically face numerous challenges during the initial development phase and are seeking more effective approaches and solutions for their organizations.

The second category of stakeholders includes **Regional Development Agencies (RDAs)** and **Regional Military Administrations (RMAs)** – specifically within the six pilot regions of the UCORD project (Vinnytsia, Volyn, Odesa, Sumy, Khmelnytskyi, and Ternopil). These entities act as curators of regional cluster development and implementers of existing regional cluster support programs. The Guide will serve as a reference for understanding what "real" clusters are, identifying project categories where clusters excel, and learning how to evaluate their performance. This is crucial for RDAs and RMAs to provide more effective support to emerging regional clusters, some of which are just beginning their growth journey.

For **donors and international partners**, this Guide provides clear evidence that investments in cluster infrastructure yield a significantly higher efficiency multiplier for the economic and sustainable development of territories compared to the fragmented distribution of grants to individual organizations.

It is also important to highlight the Guide's value for all clusters in the country, regardless of their maturity level. For years, there has been a degree of terminological and conceptual confusion in Ukraine regarding "what a real cluster is" (a cluster organization) versus models that are not clusters, even if they use the word in their name. This Guide provides numerous "live" examples from Ukrainian experience that illustrate these differences. A cluster is not an event agency, a project bureau, a business club, or a traditional industry association focused solely on lobbying. All our practices demonstrate the essence of a cluster as a **tool for creating economic value** within specific **value chains** through cooperation among participants and within broader industrial ecosystems. Consequently, these stories focus on how interaction and cooperation can strengthen regional and sectoral economies, reinforce ecosystems, foster innovation and resilience, and improve the competitiveness of businesses and all involved organizations.

In addition to describing the best practices, the document includes methodological explanations for all categories of readers, hence its title – "**Guide**".

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1. WHAT IS A CLUSTER REALLY? THE ROLES OF CLUSTERS

In cluster terminology, it is essential to distinguish between the terms "**cluster**," "**cluster initiative**," and "**cluster organization**". According to Michael Porter, a classic figure in cluster development, clusters do not need to be "created" – by definition, they already exist in the market as economic agglomerations and concentrations of specialized businesses within specific sectors, usually in a specific geographic area. In contrast, **cluster initiatives** and their evolved forms – **developed organizations** – are separate legal entities purposefully established to accelerate clustering in specific sectors. Thus, this conscious choice becomes an instrument of a state's economic policy (industrial, innovation, regional, etc.) when a particular sector shows potential or a need for growth. In this document, for the sake of simplicity, the term "**cluster**" refers specifically to **cluster organizations** created to accelerate clustering in a given economic sector.

A modern cluster takes on functions that are either impossible or prohibitively expensive for an individual business to perform. It acts as an **aggregator and consolidator**, turning scattered company needs (e.g., specific talent shortages or raw material deficits) into a powerful collective demand. It serves as a **neutral broker**, ensuring secure interaction between science, the state, and business. Ultimately, it can become an **operator and orchestrator** of the ecosystem, managing shared assets – from digital platforms to national export brands.

The economic value of a cluster arises primarily where market participants face **systemic failures**. First, these include areas of high **transaction costs** – for example, when it is too expensive for one enterprise to commission large-scale research or attend an international trade fair, the cluster does it collectively and more affordably. Second is the **absence of trust**. When competitors are hesitant to share information, the cluster creates a safe environment for cooperation. Third is the need for **complex coordination**, such as in circular economy projects that require the simultaneous involvement of garment factories, IT developers, and scientists.

Identifying the specific role of a cluster within an industrial ecosystem can be difficult during the initial phase. Different tasks require different management models, as illustrated by the practices in this Guide. Sometimes a cluster acts as a **broker** (e.g., the Vinnytsia Instrument-Making Cluster, which ensures IP protection when transferring blueprints to factories). In other cases, it acts as an **operator**, managing specific tools like the **U-Food** joint export brand. Some function as **platforms** for institutional integration (Maritime Cluster or Kharkiv IT), while the pinnacle of cluster management is the role of an **architect/orchestrator** of an ecosystem, where the cluster, much like **APPAU**, shapes the "rules of the game" for the entire sector.

To understand cluster practices more deeply, it is vital to identify those that distinguish real clusters from formal or purely declarative business associations.

To this end, the **Clusters4Regions** initiative developed a **checklist for assessing cluster "authenticity,"** which allows for:

- Identifying the presence of real value chains and interactions between participants;
- Evaluating the cluster's functionality as an economic development tool;
- Determining the maturity level and potential for support within regional programs.

The checklist can be applied at various stages – from cluster mapping to selection for support programs. This checklist also forms the basis for the proposed **National Cluster Registry**, which the Ukrainian Cluster Alliance is currently developing. A detailed description of this tool is provided in **Appendix 8.4**.

2. HOW TO READ PRACTICES THROUGH THE OPERATING MODEL OF A CLUSTER ORGANIZATION

The Best Practices Guide is not merely a collection of success stories. Its goal is to demonstrate **how the cluster model works in practice** and how specific practices reflect its core elements. For these practices to serve as both inspiration and a tool for action, they should be viewed through the lens of the **Cluster Operating Model** (see also the “*Cluster Organization Model*” *Playbook* and, for graduates of the School of Cluster Management, the relevant module materials).

2.1. Practices as a Reflection of Operating Model Elements

Each practice in the Guide demonstrates the implementation of a specific **cooperation mechanism**. Therefore, when analyzing a practice, it is important to ask not only “what was done?” but also:

- What problem does this solve?
- What interaction mechanism lies at the core?
- Why did it work in this specific configuration?

This approach allows one to move from simply copying solutions to understanding the logic behind their creation.

2.2. Four Dimensions of Practice Analysis

Each practice should be examined through four key blocks of the cluster operating model:

1. **Role of the Cluster (Core):** What role does the cluster perform in this practice?
 - **Facilitator** (organizes interaction);
 - **Broker** (connects supply and demand);
 - **Operator** (manages a service or platform);
 - **Architect** (shapes new rules or systemic solutions).

👉 *The same organization may perform different roles depending on the practice.*
2. **Mechanism and Mechanics of Interaction:** What type of interaction is implemented, and how?
 - **Mechanism** is the type of interaction (e.g., matchmaking, coordination, joint action);
 - **Mechanics** are the specific forms of implementation (e.g., regular site visits, exhibitions, digital platforms, roadmaps).

👉 *Mechanics show how conceptual approaches function in practice.*

3. **Capabilities:** What capabilities made the implementation of this practice possible?
 - **Human** (facilitation, project management, matchmaking);
 - **Institutional** (partnerships, coordination, alliances);



- **Financial** (funding model, co-investment);
- **Instrumental** (digital solutions, standards, platforms).

👉 *Capabilities answer the question: "How was this made possible?"*

4. **Results, Consequences, and Impact:** What changed as a result?

- **Outputs:** What was produced;
- **Outcomes:** Practical results for participants (contracts, products, new connections);
- **Impact:** Sustainable changes that occurred within the system.

👉 *It is crucial to distinguish activity from real change. A core tenet of the cluster model is that **activity does not equal impact**.*

A practice may include many events or projects but fail to create change if it lacks mechanisms leading to economic results, fails to establish stable relationships, or if results are not institutionalized into new rules or practices.

Therefore, when analyzing best practices, focus on the transition: **Activity** → **Deliverables** → **Outcomes** → **Impact**

In summary, practices are elements of a system. No practice exists in a vacuum; it is part of a broader framework and can reinforce other mechanisms, serve as a starting point for complex initiatives, or be scaled and replicated in other contexts.

👉 *The reader's task is to see not just the case itself, but its place within the overall architecture of the respective cluster.*

How to apply these practices? This Guide does not encourage direct copying. Instead, it suggests:

1. Identifying your own problem or goal.
2. Finding relevant practices.
3. Analyzing them through the operating model (**Role** → **Mechanism** → **Capabilities** → **Impact**).
4. Adapting the mechanics to your specific context.

👉 ***Adaptation, not copying, is the foundation of effective cluster development.***

In conclusion, the practices in this manual are tools for understanding how a cluster functions as a system. A cluster creates value not through isolated projects, but through its ability to systematically organize interaction that leads to sustainable change.

We hope you find this Guide useful.

3. 17 BEST PRACTICES - MAIN CATALOG

3.1. Talent systems (Human capital)

3.1.1. Kharkiv IT Cluster. Tech Education Ecosystem

Building a sustainable ecosystem of collaboration between business and universities for human capital development.



Kharkiv IT Cluster has transformed the tech industry's chronic struggle with talent shortages into a sustainable ecosystem. Here, **70+ educational institutions and hundreds of companies** operate as a single mechanism with one goal: ensuring that every **university graduate is a ready-to-work specialist** who understands the industry from the inside.

Kharkiv IT Cluster's educational projects attract over 30,000 participants annually. Learn how to

build a bridge between the university lecture hall and the tech company office.

1. Practice Passport

- **Practice Name:** Building a sustainable ecosystem of collaboration between business and universities for human capital development.
- **Cluster / Source Organization:** Kharkiv IT Cluster.
- **Region:** Kharkiv (scaled to 20+ regions of Ukraine).
- **Implementation Period:** Continuous practice since 2015, with gradual scaling.
- **Cluster Maturity Level:** Mature cluster with a developed project portfolio.
- **Thematic Blocks:** Human capital development, innovation, cooperation with Higher Education Institutions (HEIs), networking.
- **Target Audience:** Medium- and high-maturity clusters; individual elements can be adapted by cluster initiatives in early development stages.
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

A significant gap exists in the market between academic education and the needs of the technology business. University programs often struggled to adapt to rapid industry changes. Students frequently studied technologies that required updating to meet modern market requirements and had a limited understanding of corporate culture or **Agile/Scrum** methodologies.

As a result, companies required an additional 3 to 6 months to onboard and adapt graduates to actual work processes.

Previous initiatives in this area were mostly local and lacked coordination across the entire ecosystem. While individual IT companies developed their own educational initiatives or collaborated with specific university departments, this approach lacked the scale necessary for systemic changes at the regional level.

 *"People are not a resource; they are capital. But for them to become capital, you must invest in them starting from school age", – Olga Shapoval, Executive Director of Kharkiv IT Cluster.*

3. Operational Mechanics of the Practice

Building the Kharkiv IT Cluster ecosystem is not a series of isolated events, but a systematic, continuous activity synchronized with the academic cycle. The process is structured into several interconnected stages:

- **Needs Assessment and Alignment:** The cluster gathers requests from IT companies regarding essential skills (technologies, soft skills) and from universities regarding the update and improvement of educational programs. Experts from cluster member companies participate in reviewing and updating syllabi.
- **Active Student Phase (September–May):** This phase includes guest lectures, the integration of practical case studies, and practice-oriented formats such as **Boot Camps**, where interdisciplinary student teams work on projects under the mentorship of industry professionals.
- **Faculty Development:** Parallel teacher development programs (**Teachers2IT, Prof Club**) run throughout the year, providing educators with access to current industrial practices for integration into their teaching.



Roles are distributed among all partners: **Cluster Management** acts as a coordinator and facilitator, ensuring the alignment of business needs with educational institutions. The cluster also manages communication between parties to ensure effective integration of industry practices. **IT Companies** serve as expert partners, providing mentors and educational content. **Universities** integrate these approaches into the formal curriculum.

The **operational rhythm** of this practice is maintained through the systematic activities of the cluster's educational department, which oversees numerous parallel initiatives.

 *"The effectiveness of this model lies not in individual initiatives, but in their regularity and consistency. It is this rhythm that creates a predictable result for all ecosystem participants", – Olena Dudnik, Head of the Educational Department at Kharkiv IT Cluster.*

4. Results and Impact (Outcomes)



Short-term results reflect the massive scale of engagement: the ecosystem covers over **70 educational institutions** across **20 regions** of Ukraine. More than **1,500 events** have been held, involving over **30,000 participants** annually. For instance, more than **600 students and career switchers** register for the practical Boot Camp each year.

The primary value lies in medium-term effects and structural changes. For companies, **onboarding time is reduced** as students arrive with an understanding of development processes. Universities strengthen the practical component of their programs, increasing their appeal to prospective students.

A vital shift is the strengthened role of business as an active participant in education: companies now contribute to curriculum development, join supervisory boards, and help shape professional standards. In turn, educational institutions have expanded their interaction with the industry and adopted more flexible approaches to updating academic disciplines.



5. Lessons and Recommendations for Clusters4Regions

The Kharkiv IT Cluster ecosystem management model serves as a benchmark for business-education partnerships. Clusters in the early stages of development should implement elements of this model gradually, starting with simpler interaction formats, such as:

- Guest lectures by industry practitioners;
- Joint educational events for students and faculty;
- Establishing direct communication channels between business and educational institutions.

This phased approach allows for the gradual building of trust, creating a foundation for more complex collaborative formats.

Full version of the practice description here 



3.1.2. Kharkiv IT Cluster: Boot Camp

Incubation program for gaining practical experience



How can we help young people – our future engineers and entrepreneurs – find their way amidst rapid change, economic challenges, and uncertainty? The **Kharkiv IT Cluster Boot Camp** has long evolved beyond a standard training course into a large-scale incubation platform. Here, aspiring specialists unite to create their first **Minimum Viable Products (MVPs)** under the mentorship of leading IT companies. In this way, the cluster has become a launchpad for new startups and a driver for

the employment of program graduates.

*"Boot Camp is about systematically bridging the gap between education and employment. We essentially recreate a product development environment so that participants understand its requirements and learn how to operate within them before their first job", – **Olga Shapoval**, Executive Director of Kharkiv IT Cluster.*

1. Practice Passport

- **Practice Name:** Boot Camp (Incubation program for creating digital solutions).
- **Cluster / Source Organization:** Kharkiv IT Cluster.
- **Region:** Kharkiv (with national coverage via online format).
- **Implementation Period:** Continuous (over 5 years, from pilot to scaling).
- **Cluster Maturity Level:** Mature cluster with a developed project portfolio.
- **Thematic Blocks:** Education, innovation, R&D collaboration, networking.
- **Target Audience:** Medium- and high-maturity clusters with an established network of partner employer companies.
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

The IT labor market has long faced a structural mismatch between employer expectations and the skills of entry-level candidates. Companies prefer candidates with practical commercial experience, yet opportunities for beginners to gain such experience are limited.

Traditional university training often focuses on individual tasks and does not fully replicate real-world development conditions: team interaction, strict deadlines, role distribution, and accountability for the final result. Consequently, companies must invest additional resources to adapt young specialists to modern software development processes.

Seeking effective training formats, the cluster experimented with various approaches, including short-term hackathons. While excellent for ideation and engagement, hackathons have limited efficacy for

systemic learning: the short timeframe makes it difficult to cover the full development cycle, including testing and sustained teamwork.

This led to a demand for longer, practice-oriented training formats that allow participants to navigate the full product creation cycle. This is how the **Boot Camp** format was born.

"Boot Camp showed that real development isn't about grades or individual tasks – it's about teamwork. Your result must 'merge' with the design, backend, and testing; only then does everything function as a product. This experience is truly invaluable", – Boot Camp 2025 Participant.

3. Operational Mechanics of the Practice

The Boot Camp is a cyclical, intensive program lasting over two months, centered on continuous teamwork. The process logic simulates the environment of a real IT product company.



The process begins with a rigorous selection: only about a quarter of the initial applicants are chosen. The cluster and its mentors then form **cross-functional teams**, each including a **PM (Project Manager)**, designer, developers, and a tester. Each team receives an idea to implement and begins working on an **MVP**.

Throughout the cycle, participants are guided by mentors – practicing **Senior specialists** from the cluster's member companies. Instead of traditional lectures, the program focuses on weekly code reviews, error analysis, and constructive feedback. The program culminates in a public defense of the MVP before an expert jury of business and industry representatives.

Role distribution is critical:

- **Cluster Management** coordinates the process, including team formation, facilitation, and operational support.
- **IT Companies** provide mentors and judges, allowing them to scout for new talent.
- **The Cluster Board** sets the strategic direction of the program.
- **Participants** gain hands-on experience in teamwork and result-oriented development.



"Technical skills are only part of the preparation. The biggest challenge for participants is learning to work together: negotiating, taking responsibility, and delivering tasks even when things don't go as planned ", – Taras, mentor for three Boot Camp seasons.

4. Results and Impact (Outcomes)

Over the past five years, the project has demonstrated consistent results: over **2,000 applications**, approximately **500 participants**, **20 IT companies** acting as mentors, and **28 prototypes/digital**

products created. The program's effectiveness was further recognized by winning the national **Ukrainian Enterprise Promotion Awards 2024**.

Significant medium-term effects include:

- Approximately **35% of graduates** secure their first IT job within three months of completion.
- The practice fosters **entrepreneurship**: several teams have continued developing their products. Notably, one team evolved into its own LLC, secured investment, and launched its product on **Google Play** and the **App Store**.



As a result, member companies are increasingly involved as co-creators of educational processes rather than just event partners. This has facilitated a shift from isolated initiatives to a systemic approach to talent development.

5. Lessons and Recommendations for Clusters4Regions

The key takeaway from the Kharkiv IT Cluster case is the transition from theoretical formats to practice-oriented training through real product creation. Clusters should engage small and medium-sized businesses as active participants and co-creators in the educational process. This approach fosters a more systemic interaction between education and business in talent preparation.

For regional coordinators and emerging clusters, the Boot Camp serves as a blueprint for gradual implementation, particularly regarding process documentation and establishing synergy between ecosystem participants.

"The resilience of today's IT sector is determined not only by technology but by the quality of the people within it. Formats like Boot Camp allow for the systemic preparation of specialists who can immediately contribute to and strengthen a business", – Olga Shapoval, CEO of Kharkiv IT Cluster.

Full version of the practice description here 



3.1.3. Kharkiv IT Cluster: Veterans2Tech

Comprehensive educational and career initiative for veterans



How can we turn the challenge of veteran reintegration into an opportunity for the technology sector? **Veterans2Tech** is not merely a reskilling program; it is about building a robust bridge between military experience and the digital economy. It is the story of creating an ecosystem where veterans find a new calling, and tech companies learn to foster a culture of genuine inclusion.

"Veteran experience is defined by resilience, responsibility, and teamwork – qualities that are highly valued in the tech industry. We help them see a new perspective and make it achievable. Veterans2Tech provides a clear roadmap into the profession: we use simple language to explain the roles within the tech sector, what is needed to start, how to learn, and where to find support", – Olga Shapoval, Executive Director of Kharkiv IT Cluster.

1. Practice Passport

- **Practice Name:** Veterans2Tech (Comprehensive educational and career initiative for veterans).
- **Cluster / Source Organization:** Kharkiv IT Cluster.
- **Region:** Kharkiv (with national scaling via online formats).
- **Implementation Period:** Active phase since 2024 (from pilot to scaling).
- **Cluster Maturity Level:** Mature cluster.
- **Thematic Blocks:** Crisis adaptation, human capital development, social integration, networking.
- **Target Audience:** Clusters with the capacity to work with sensitive audiences and the readiness to mediate between business, the state, and NGOs.
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

In the face of full-scale war, Ukraine confronts an unprecedented challenge: the need for large-scale, high-quality reintegration of veterans into civilian life. Simultaneously, despite current challenges, the IT market continues to require motivated talent with strong soft skills.

Currently, the market is only beginning to form systemic approaches to integrating veterans post-service. Veterans often perceive the IT sector as having a high entry barrier, while companies frequently lack the expertise to interview individuals with combat experience, adapt workplaces, or integrate veterans into civilian teams without risk of re-traumatization.

What didn't work previously? Isolated educational initiatives focused primarily on technical training, failing to cover the full cycle of professional integration. Specifically, insufficient attention was paid to

psychological adaptation and career support post-graduation, which limited the long-term impact of such programs.

"We don't see veterans as 'former military'; we see them as future colleagues who already possess decision-making experience, the ability to perform under pressure, and a result-oriented mindset. This is a powerful foundation for the technology environment", – KnubiSoft company representatives.

3. Operational Mechanics of the Practice

The mechanics of Veterans2Tech are unique because they don't just reskill veterans for the existing job market; they refine their skills while simultaneously adapting the market to new realities where veterans feel a sense of belonging.

The process logic is divided into three parallel tracks:

- **For Veterans:** A journey from career orientation (introduction to the industry and its opportunities) to intensive technical training with partner educational organizations, followed by ongoing career support.
- **For Business:** An educational track for HR professionals and recruiters focused on developing onboarding skills, effective communication, and internal strategies for creating an inclusive, veteran-friendly environment.
- **Matchmaking:** A space for direct interaction where the cluster organizes webinars, meetings, and workshops. These allow veterans and tech business representatives to build professional connections in a safe, moderated environment.



Roles are distributed to ensure effective interaction:

- **Cluster Management** designs inclusive programs and coordinates cooperation between business, the state, NGOs, veteran organizations, and educational platforms.
- **IT Companies** serve as mentors and potential employers.
- **Partner Organizations** provide psychological support and access to the target audience. The practice is implemented through regular events; during the four-month pilot in 2025, five large-scale events were successfully conducted.



4. Results and Impact (Outcomes)

In its first four months, the initiative demonstrated a dynamic start: over **300 participants** at events, more than **100 business representatives** engaged, and a network of **30+ partner veteran organizations**.

Qualitative changes are equally significant. Veterans are beginning to trust the technology sector more as they see tangible success stories. Cluster member companies are gradually shifting from isolated initiatives to a systemic approach to engaging veterans as promising candidates. The cluster, in turn, is strengthening its role as a key player in restoring the country's human capital by developing a comprehensive response to social challenges.

5. Lessons and Recommendations for Clusters4Regions



A key lesson from Veterans2Tech is that **developing an inclusive environment must precede technical training**. Preparing companies for interaction with veterans is the foundation; without it, educational initiatives fail to deliver sustainable results.

Regional coordinators and clusters should adopt a **portfolio approach**: rather than creating one massive course, they should build a network of partnerships and diverse interaction formats.

For clusters in the early stages of development, this practice may be complex to implement fully. It is recommended they begin with small-scale awareness events for the HR community in their respective regions.

"This is inspiring. It pulls you out of depression and gives you a second wind. But if this stage isn't followed by an opportunity for self-realization, it becomes a second blow", – Yuriy Korsunov, veteran of the Russian-Ukrainian war and Chairman of the Council of the "Union of Veterans of the Defense Forces of Ukraine".

Full version of the practice description here 



3.1.4. Ukrainian Association of Furniture Makers (UAM): Furniture Maker School

A talent foundry for the industry



How can the furniture industry overcome a crippling labor shortage when there is a queue of customers but no one to operate modern machinery? The **Ukrainian Association of Furniture Makers (UAM)** turned this challenge into a strategic opportunity by launching the "**Furniture Maker School**" (**Shkola Meblevyka**). This is not just a series of courses, but a comprehensive ecosystem that integrates digital education via the state platform **Diya.Education**, practical internships at leading factories, and the establishment of modern training hubs. Discover how a single pilot year generated 800 applications and began shaping a new generation of industry professionals.

"The future of the furniture industry is determined not by the number of machines purchased, but by the people behind them. Their ability to think, optimize processes, and extract maximum value from technology creates world-class products. The 'Furniture Maker School' is our investment in those who will not just operate equipment but will define a new standard of Ukrainian manufacturing and global competitiveness", – Volodymyr Patis, President of the Ukrainian Association of Furniture Makers.

1. Practice Passport

- **Practice Name:** Furniture Maker School: Systematic talent development through dual education and industrial hubs.
- **Cluster / Source Organization:** Ukrainian Association of Furniture Makers (UAM).
- **Region:** National level (hubs in Kyiv and Kharkiv).
- **Implementation Period:** Pilot in 2024; active scaling in 2025–2026.
- **Cluster Maturity Level:** Mature cluster with an extensive project portfolio.
- **Membership:** The association unites 352 enterprises.
- **Thematic Blocks:** Talent development, internships, quality standards, project management.
- **Target Audience:** Industry associations and clusters facing skilled labor shortages and seeking to bridge the gap between specialized education and real-world production.
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

For years, the Ukrainian furniture industry has suffered from a significant talent gap. Traditional educational institutions often provide outdated theoretical knowledge, while modern businesses require specialists proficient in **CNC (Computer Numerical Control) machinery**, advanced design software, and contemporary materials.

What didn't work previously? Isolated attempts by individual companies to train staff were expensive and lacked efficiency. This fragmented approach meant young people did not view "furniture maker" as a prestigious career, and businesses lacked a reliable pipeline of "fresh blood". A mechanism was needed to make training fast, practical, and directly aligned with the needs of the factory floor.

3. Operational Mechanics of the Practice

UAM adopted a holistic approach, bifurcating the process into digital preparation and physical practice.

Key Elements:



- **Digital Entry Point:** In partnership with the **Diia.Osvita (Education)** platform, UAM created educational series (mini-courses) focusing on "Machine Operator" and "Furniture Designer" roles. This allowed for massive outreach and provided candidates with a foundational understanding of the profession.

- **Dual Education Model:** Collaboration with the **National University of Life and Environmental Sciences of Ukraine (NUBiP)** enabled the integration of academic standards with hands-on practice at UAM member enterprises. Students don't

just attend lectures; they undergo immersive internships in real production environments.

- **Technological Training Hubs:** In 2025, the focus shifted to infrastructure. The opening of two advanced technological hubs in **Kyiv and Kharkiv** (December 2025) provides a permanent venue for training on state-of-the-art equipment.
- **2026 Professional Tracks:** The program is expanding to cover four critical industry roles: Machine Operator, Designer, Assembler, and Project Manager.

4. Results and Impact (Outcomes)

- **Massive Engagement:** The pilot launch received approximately **800 applications**, signaling a huge demand for quality vocational education.
- **Certified Talent:** **136 participants** successfully completed training and testing, demonstrating immediate readiness for employment.
- **Infrastructure Breakthrough:** Two physical hubs established as centers of excellence for the professional community.



Qualitative Shifts:



- **Enhanced Prestige:** The project has repositioned the furniture maker profession as a modern, digital, and high-potential career path.
- **New Generation:** A community of young professionals is forming, deeply aligned with the association's values.
- **Industry Capacity:** Businesses are gaining "ready-to-work" specialists equipped with **LEAN manufacturing** skills and an efficiency-driven mindset.

5. Lessons and Recommendations for Clusters4Regions

The UAM case demonstrates that a cluster can and should function as an **"educational operator"** when the state system lags behind business needs.

Key Recommendations:

- **Leverage State Platforms:** Partnering with national projects like **Diia.Osvita** provides massive reach and builds immediate trust with the audience.
- **Prioritize "Hands-on" Practice:** Theory is ineffective without the opportunity to operate actual machinery in a cluster member's workshop.
- **Hubs as Networking Centers:** A training space should be more than a classroom; it should be a community center that builds loyalty around the cluster.
- **Ensure Business Co-ownership:** Companies should not merely "host interns" but actively influence the curriculum, standards, and selection process to ensure they get the talent they need.
- **Invest in Matchmaking:** Dedicated efforts to "stitch" students to employers (through mentorship and onboarding support) are critical for long-term retention.
- **Rebrand the Profession:** High-quality communication, success stories, and modern visual branding are as important as the curriculum itself.
- **Treat Education as a Product:** An educational program should be constantly updated, tested, and scaled with clear metrics for success (employment rates, retention, and graduate productivity).



Full version of the practice description here 



3.2. Trust building

3.2.1. Rivne Interregional Medical Cluster: One Day's Earnings for the AFU

Systematic fundraising by medical institutions



How can you turn emotional and sporadic donations into a systematic tool that generates millions of hryvnias without grants or external funds? The **Rivne Interregional Medical Cluster** has proven that with absolute transparency and trust in leadership, entire teams are willing to contribute a portion of their salaries for years to support the victory. This is a story of how the **"One Day's Earnings"** initiative helped purchase 8 vehicles, supported local drone production, and united a young

cluster more effectively than any business training.

"When doctors see an actual vehicle on the front line, purchased with their own money, they understand the power of a cluster community built on trust and shared values", – Tetiana Vorontsova, President of the Rivne Interregional Medical Cluster.

1. Practice Passport

- **Practice Name:** One Day's Earnings for the AFU (Systematic fundraising by medical institutions).
- **Cluster / Source Organization:** Rivne Interregional Medical Cluster, via its co-founder, the NGO "Rivne-takmed".
- **Region:** Rivne region.
- **Implementation Period:** Since February 2022 – ongoing.
- **Cluster Maturity Level:** Mature cluster with international projects.
- **Thematic Blocks:** Crisis/war adaptation, fundraising, networking, trust building.
- **Target Audience:** Emerging clusters and initiatives in any industry looking to build foundational trust and unite members around a major common goal.
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

Following the full-scale invasion, every medical professional sought to help the front, but individual efforts were fragmented. While doctors or nurses might donate 200–500 UAH to various causes, these "emotional" micro-donations were insufficient to meet large-scale needs, such as purchasing SUVs for casualty evacuation.

What didn't work? Sporadic fundraising quickly led to psychological burnout. Furthermore, individual departments searching for reliable vehicles or verifying drone manufacturers was inefficient: medics spent working hours on non-core logistics and risked falling victim to scams. A single "procurement

center" was needed to handle supplier verification and logistics, allowing medics to focus on their core work while knowing their funds were being utilized with maximum efficiency.

3. Operational Mechanics of the Practice



The practice transforms a one-time act of charity into a sustainable business process under the cluster's umbrella.

The Process Logic: The staff of a medical institution (e.g., a maternity hospital) makes a collective, voluntary decision to provide regular support. Typically, this takes the form of "one day's earnings" or a fixed percentage (e.g., 3%) of their monthly salary.

Roles and Tools:

- **The Cluster (Rivne Interregional Medical Cluster):** Acts as the primary unifier and coordinator. It provides a platform for communication between institution heads, motivates teams, and offers informational support.
- **NGO "Rivne-takmed" (Cluster Co-founder):** Serves as the operational and logistics hub. With 10 years of experience working directly with the military, the NGO ensures professional equipment selection, handles financial procedures, sources vehicles abroad, interacts with drone developers, conducts technical inspections, and manages legal documentation before delivering assets to the units.
- **Medical Facility Accounting:** Manages the technical side – accumulating funds based on voluntary employee applications and transferring them to the official designated account.



- **Reporting (The "Safety Valve"):** The cluster and NGO provide detailed reports to every team (receipts, transfer acts, and photo/video confirmation from the soldiers). This transparency, backed by a decade of reputation, eliminates any doubt regarding the use of funds.

The practice operates on a **monthly rhythm**, ensuring predictability. The cluster knows in advance the expected budget for the following month, allowing them to reserve equipment or order drone components ahead of time.

4. Results and Impact (Outcomes)

Short-term results are highly tangible: in 2025 alone, approximately **2 million UAH** was raised, and **8 vehicles** were purchased and delivered to the front line.

However, the medium-term effects are even more significant. The cluster has stimulated the **local economy**: rather than purchasing off-the-shelf solutions, funds are directed to local drone manufacturers, creating a micro-value chain within the region.

Structural Changes:

- **Cohesion:** Shared volunteer activity has "bonded" hospital staff more effectively than any corporate retreat.
- **Culture of Cooperation:** For example, the Rivne Maternity Hospital has consistently donated part of its salary for three consecutive years, making it a core part of their institutional identity.
- **Business Readiness:** The trust built through volunteering has enabled the cluster to transition toward ambitious plans for regional medical development, as members have demonstrated their ability to manage large resources collectively and effectively.



5. Lessons and Recommendations for Clusters4Regions

This case is ideal for **emerging clusters and initiatives**. Collaborative volunteering is the best way to build foundational trust ("**Social Glue**") among participants who may otherwise view each other as competitors.

Key Recommendations:

- **Lead with Values:** Do not wait for large commercial contracts to unite people. Shared support for the AFU is the strongest foundation for cooperation in the current Ukrainian reality.
- **Support Local:** The model where a cluster procures drones from local manufacturers is a perfect example of cluster logic – supporting the front while stimulating the regional economy.
- **Prioritize Accountability:** Use this case to demonstrate how radical transparency converts into significant resources.

Full version of the practice description here 



3.2.2. International Agrotourism Cluster "Dniester 1362". Craft Rise UA

Scaling craftsmanship and business competencies in the Dniester River Region



How can you transform the local crafts of the Dniester region – from honey and cheese to embroidery and ceramics – into a successful, systemic business ready for grants and international recognition? The **International Agrotourism Cluster "Dniester 1362"** found a winning formula in the **Craft Rise UA** project. This is the story of how a combination of mentorship, real-world business modeling, and practical grant writing helped 32 micro-enterprises shift from chaotic management to strategic thinking, resulting in their

first 20 funding applications.

"A crafter doesn't need vapid motivational speeches about 'success.' They need the hand of a mentor to help translate their passion into the language of a business plan. When a beekeeper or a potter sees the first funds raised, their trust in the cluster becomes the bedrock for the entire region's development", – Natalia Maslo, Head of IAC "Dniester 1362".

1. Practice Passport

- **Practice Name:** Craft Rise UA: Competency development for crafters in the Dniester River Region.
- **Cluster / Source Organization:** International Agrotourism Cluster "Dniester 1362".
- **Region:** Podnistria / Dniester River Region (64 communities across 7 regions of Ukraine and Moldova).
- **Implementation Period:** Pilot (January – March 2026) → scaling phase.
- **Cluster Maturity Level:** Formalized cluster in the early growth phase.
- **Thematic Blocks:** Networking, fundraising, micro-business services, strategic modeling.
- **Target Audience:** Emerging interregional clusters (agrotourism, creative industries) seeking to structure the activities of micro-producers.
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

The Dniester region is rich in unique local producers, yet most have existed as "talented amateurs" for years. Before the project, the situation was characterized by total fragmentation: a beekeeper might not even know the cheesemaker in the neighboring district, despite both being part of the same potential tourist route.

What didn't work previously? Traditional "general profile" workshops often exhausted producers – they provided abstract knowledge without tangible results. Grants were perceived as an unattainable "lottery" or a bureaucratic trap. Consequently, while crafters had excellent products, they completely lacked an understanding of market chains and business processes. Instead of systemic growth, they focused on sporadic sales to acquaintances, making their businesses fragile and unscalable.

3. Operational Mechanics of the Practice

The **Craft Rise UA** project was designed not as an educational course, but as a **production pipeline for business solutions**. The core engine is the **Craft Academy** – a platform where every step of training is aimed at producing a specific business document.

Key Elements and Logic: The practice is based on intensive immersion: 12 modules (3.5 hours each) covering the journey from **Business Model Canvas** to detailed financial planning. However, the "heart" of the process is **individual mentorship**. Participants didn't just listen to lectures; they sat down with mentors to fill out grant applications for their specific needs (e.g., purchasing a drying chamber or developing branding).



Roles and Rhythm:

- **Cluster Management:** Acts as the curator and "filter," selecting the most motivated participants (with a focus on women, IDPs, and veterans).
- **Partners (Business People Club Ukraine):** Provide the methodological framework and professional training support, engaging both cluster experts and external specialists.
- **Participants:** Transform from passive learners into project managers of their own businesses.
- **Rhythm:** The practice is cyclical. An intensive 2-month active phase is followed by a period where participants are integrated into the cluster's **"Green Routes"** and joint cataloging processes.

4. Results and Impact (Outcomes)



The primary short-term result: **32 trained specialists** and **20 grant applications** submitted within the February–March 2026 period alone. This represents a direct conversion of training into potential investment.

Medium-term and Structural Changes:

- **Behavioral Shift:** Producers have moved away from a "loner" mindset. Initiatives for joint products have emerged (e.g., "cheese + honey + wine" gift sets), increasing the average transaction value for everyone involved.
- **Critical Mass:** An active entrepreneurial community has formed across 30% of the region's communities. They now speak a unified business language and are ready for collective marketing under the cluster's umbrella brand.
- **Community Leadership:** The **Staroushytsia community** emerged as a leader, contributing the highest number of participating crafters to the program.

5. Lessons and Recommendations for Clusters4Regions

Main Lesson: Don't sell training – sell the result (the completed grant application). This is the most powerful incentive for micro-businesses.

Recommendations by Level:

- **Initiatives and Emerging Clusters:** Start by "mapping" the crafters in your communities. Use established methodologies like the Business Model Canvas; don't reinvent the wheel.
- **Regional Coordinators:** Focus on creating "**Green Routes**". Education should be seen as the tool to populate these routes with high-quality, local products.
- **What NOT to Scale (Pitfalls):** Do not attempt to cover 60+ communities simultaneously without a robust network of local representatives. Start with one district and see it through to a tangible financial result first.

Full version of the practice description here 



3.2.3. Heat Energy Cluster of Ukraine. Company Visit

Regular visits to member production facilities



How can you encourage members of a young cluster to trust each other enough to exchange specialists and orders? The secret of the **Thermal Energy Cluster of Ukraine** is remarkably practical: take off the ties and head to the shop floor! Their "**Company Visit**" practice has transformed standard factory tours into a high-octane B2B matchmaking tool. Discover how a structured production visit converts into real contracts and why a sincere conversation at the

assembly line outweighs any formal boardroom meeting.

"A live visit to a production site provides more insight than any presentation – you immediately grasp who you can work with and how to scale that cooperation", – Tetiana Toropova, CEO of Mario.

1. Practice Passport

- **Practice Name:** Company Visit (Regular visits to member production facilities).
- **Cluster / Source Organization:** Thermal Energy Cluster of Ukraine.
- **Region:** Kyiv.
- **Implementation Period:** Ongoing since 2023.
- **Cluster Maturity Level:** Formalized cluster in the early maturity phase.
- **Membership:** 27 members.
- **Thematic Blocks:** Networking, Matchmaking (B2B, Cluster2Cluster), Cluster Communications, and PR.
- **Target Audience:** Young manufacturing clusters looking to overcome the fear of competition.
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

Established in 2023, the Thermal Energy Cluster of Ukraine faced a common growing pain: a lack of horizontal trust. Entrepreneurs knew each other only through business cards or website bios. Consequently, no one truly understood the actual capacities of their partners, the availability of idle machinery, or unique technological capabilities.

What didn't work? Standard online meetings and formal board sessions remained superficial. Entrepreneurs were accustomed to keeping their processes hidden from potential "competitor-spies". This lack of systematic, "live" interaction stalled the creation of joint projects and internal value chains. Members continued to seek external contractors despite having the necessary resources right inside the cluster.

3. Operational Mechanics of the Practice

The practice occurs monthly and follows a strict structure that elevates a "factory walk" into a strategic business session.

Key Elements of the Cycle:



- **CEO Presentation (The Mandatory Pitch):** The owner or director of the host company "reveals their cards" – sharing their success story, real scale (metrics), product range, idle capacities, and future plans. This sets a foundation of transparency.
- **Gemba (The Shop Floor Experience):** The heart of the practice. Participants go directly into the workshops. For instance, a visit to the **Mario** plant allowed partners to witness the full production cycle of designer towel rails – from raw materials to packaging. This is where the real questions emerge: *"How did you solve this technical bottleneck?"* or *"Could you manufacture this specific part for me?"*

- **Reflection and Matchmaking:** Following the tour, an informal session is held to exchange insights and formalize agreements regarding orders or resource sharing.



Stakeholder Roles:

- **Cluster Management:** Acts as the moderator, maintaining the schedule and capturing "B2B sparks" (preliminary agreements) for further follow-up.
- **The Host Company:** Demonstrates openness and sets the "no secrets" standard for others.
- **Guests (Other Members):** Actively seek points of synergy for mutual benefit.

4. Results and Impact (Outcomes)



Within a short timeframe, the practice has yielded tangible results: **18 SMEs** have participated in visits, resulting in **4 direct B2B cooperation agreements** signed immediately following the tours.

Qualitative Shifts:

- **Radical Trust Building:** Empathy among owners surged as they recognized shared production challenges and goals.
- **Talent Sharing:** The cluster launched a practice of "temporary rental" of scarce specialists between enterprises.
- **"Open Door" Culture:** Members stopped viewing each other as threats and began seeing each other as resources. The mindset shifted from "I'll do it alone" to "Let's fill your idle machine with my order".

5. Lessons and Recommendations for Clusters4Regions

Main Lesson: Gemba (going to the place where value is created) is the bedrock of cluster logic. Until CEOs look each other in the eye on the factory floor, no smart specialization strategy will truly take root.

Tips for Emerging Initiatives:

- **Start with respected leaders:** Let the most influential members host the first visits to set the tone.
- **Keep it lean:** A 2–3 hour window is sufficient; don't overstretch the schedule.
- **Moderate the finale:** Ensure there is a dedicated time where participants must voice at least one specific proposal for cooperation.



The most valuable asset of your cluster isn't the management office – it's the production capacity of its members. Give people the chance to see it with their own eyes.

Full version of the practice description here 



3.3. Ecosystem orchestration

3.3.1. Lviv Medical Business Cluster. "Check-up Lviv"

A unified platform for medical preventive care



Imagine direct competitors becoming partners, co-creating a single product, and sharing patients. Impossible in the medical field? The **Lviv Medical Business Cluster** proved otherwise. With support from **GIZ**, they developed the **"Check-up Lviv"** web platform, uniting over 25 private clinics under the banner of preventive medicine. This is a story of transforming fragmented competition into a sustainable ecosystem of **coopetition**, attracting thousands of patients and positioning

an entire region as the medical hub of Eastern Europe.

"Competing for an existing patient is a limited-resource strategy that eventually leads to market stagnation. Real growth begins when we think in terms of shared value. Preventive medicine is a new market logic where we address causes rather than consequences. 'Check-up Lviv' shows how competitors can partner to create new demand instead of fighting over the old. This is the foundation for transitioning from a fragmented market to a strong, coordinated medical ecosystem", – Olesya Khaletska, Executive Director of the Lviv Medical Business Cluster.

1. Practice Passport

- **Practice Name:** "Check-up Lviv" Medical Platform.
- **Cluster / Source Organization:** Public Union "Lviv Medical Business Cluster".
- **Region:** Lviv and Lviv region.
- **Implementation Period:** Launched as a GIZ project; now operating as a permanent initiative.
- **Cluster Maturity Level:** Mature cluster with a diversified project portfolio.
- **Thematic Blocks:** SME services, value chain development, networking, international cooperation.
- **Target Audience:** Mature clusters in service industries (medicine, tourism, education, consulting) where high competition exists, but service standardization under a unified brand is required.
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

Before the platform's launch, Lviv's private medical sector functioned as a collection of "isolated islands". Every clinic – from massive medical centers to niche practices – promoted its services independently. This led to marketing budgets "cannibalizing" profits, while efficiency remained low because consumers (especially foreigners or IDPs) lacked a single point of entry or a reason to trust standardized quality.

The Stalemate: Lviv had massive potential as a medical hub, but no consolidated offer existed.

- **What didn't work?** Individual promotion of check-ups was too costly for single SMEs.
- **Confusion:** Patients were overwhelmed by varying definitions of a "check-up," as every clinic offered different sets of tests under the same name.
- **Fragmented efforts:** Cooperation was limited to "coffee breaks" at conferences. Without a digital tool and a unified product, the preventive medicine market remained underdeveloped.

3. Operational Mechanics of the Practice

"Check-up Lviv" is more than a website; it is a sophisticated organizational superstructure. The practice rests on three pillars: digital solution, product design, and collective trust.

Key Stages:

- **Collaborative Product Design:** Competitors negotiated unified standards for "Check-ups," agreeing on quality protocols, patient routes, and transparent pricing. This ensured a consistent service level regardless of the chosen clinic.
- **Digital Platform Development:** A centralized web portal was created to act as the primary sales channel for 25+ participating clinics. It serves as a "digital showcase" where patients can select a package and book a clinic in just a few clicks.
- **Collective Marketing:** The cluster assumed the role of a media hub. It promotes the *concept* of prevention under the "Check-up Lviv" brand rather than advertising specific hospitals. This allowed them to reach audiences – such as interregional patients and foreigners – that were previously inaccessible to individual players.



Stakeholder Roles:

- **Cluster Management:** Acts as the facilitator "stitching" together clinic interests and coordinating software development.
- **Business People Club Ukraine:** As a co-founder of the cluster and the platform's initiator, they served as the guarantor of implementation, providing practical coordination and fostering trust among participants.
- **Private Clinics (SMEs):** The service providers. They agreed to follow common rules and refer patients to one another if specific diagnostics (e.g., specialized MRI) were required elsewhere.
- **Donor (GIZ):** Provided the initial "fuel" for development and the marketing launch.

4. Results and Impact (Outcomes)

The initiative has delivered solid metrics: a unified market product, over **10,000 web platform visits**, and a steady stream of up to **10 check-up bookings per week** for participating clinics.

The approach received high-level recognition via the "**Business Recognition Award**" (Delegation of the EU to Ukraine) in the category "**From Competition to Partnership and Clustering**".



Structural Changes:

- **Behavioral Shift:** Clinics now share information and refer patients within the network rather than "losing" a client they cannot serve.
- **Culture of Coopetition:** Competitors learned to unite to promote Lviv as a "medical destination".
- **Institutional Strength:** The cluster evolved from a discussion club into the owner of a valuable digital asset that generates real leads for its members.

5. Lessons and Recommendations for Clusters4Regions

The "Check-up Lviv" case is a manual on creating "**Social Glue**" through a shared product.

- **For Emerging Clusters:** Don't start with complex IT systems. Agree on a single **MVP (Minimum Viable Product)** – one unified service package.
- **For Regional Coordinators:** Use this case to show business owners that a cluster doesn't just divide the existing "market pie" – it bakes a new, larger one.
- **Main Lesson:** Coopetition in services becomes viable only when the cluster creates an **additional market** (e.g., medical tourism) rather than forcing members to fight over local demand.

 *"The 'Check-up Lviv' platform demonstrates how a joint product can increase the accessibility of preventive medicine while forming a new market segment. Its value lies in transparency and a clear patient route. It is a prime example of transitioning from competition to coordinated interaction. As a user, I regularly use it for my family; I see how a digital solution can simplify access and fundamentally change the culture of health",* – **Mykola Savulyak**, Chairman of the Business People Club Ukraine.

Full version of the practice description here 



3.3.2. Odesa IT Family. IT Wave

The Annual Strategic Conference as an Ecosystem Catalyst



How can you transform an annual conference from just another networking event into a powerful tool for the strategic management of an entire region? **Odesa IT Family** proves that **IT Wave** is much more than just reports and coffee breaks. It is a unified platform where over 200 key stakeholders – business, education, government, and donors – synchronize their goals, develop war-adaptation solutions, and launch tangible joint initiatives. This is a story of building horizontal trust and turning an event

into a catalyst for a region's long-term development.

"The most critical agreements for regional development are signed not in official government offices, but on the sidelines of IT Wave. It's here, over coffee, that a university rector and the CEO of an international IT firm begin to speak the same language – because they recognize a shared challenge and a mutual benefit", – Kateryna Solovey, CEO of Odesa IT Family.

1. Practice Passport

- **Practice Name:** IT Wave Annual Strategic Conference.
- **Cluster / Source Organization:** Odesa IT Family.
- **Region:** Odesa and the Odesa region.
- **Implementation Period:** Permanent practice since 2020.
- **Cluster Maturity Level:** Mature cluster with a deep project portfolio.
- **Thematic Blocks:** Networking, matchmaking (C2G, C2C), communications, innovation, war adaptation.
- **Target Audience:** Mature clusters ready to take a leadership role and act as a unifying platform for the entire region (including academia and local authorities).
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

For a long time, Odesa's regional IT ecosystem resembled a collection of isolated islands. Businesses operated at their own pace, universities trained talent using outdated curricula, and authorities viewed IT solely as a tax source, failing to grasp the industry's specifics. A lack of trust and horizontal connections prevented the community from effectively advocating for its interests – a gap that became critical with the full-scale invasion as challenges like mobilization, energy independence, and talent retention intensified.

What didn't work previously? Most regional events followed a "listen and disperse" scenario. Once the conference ended, nothing remained but a stack of business cards. There was no mechanism to transform discussed ideas into concrete roadmaps. Without a unified strategic vision, the ecosystem remained fragmented and vulnerable to external crises.

3. Operational Mechanics of the Practice



IT Wave is not just an event; it is a **"future moderation" process**. The cluster acts as an architect, consciously constructing a space for interaction.

Key Elements and Logic: The conference logic is built on the transition from **"topics" to "actions"**. Instead of abstract presentations, the agenda focuses on the most pressing challenges: energy resilience, digital transformation of education, and professional safety. The conference is moderated to ensure that every panel discussion concludes with a specific call to action, such

as forming a working group or a new partnership.

Stakeholder Roles:

- **Odesa IT Family:** Acts as the **"honest broker"**. The cluster doesn't just rent the hall; it facilitates the dialogue, nudging stakeholders toward specific agreements right on the sidelines.
- **Practitioner-Speakers:** Set the tone by sharing real-world cases rather than theoretical frameworks.
- **Participants (Business, Education, Government):** Act as active co-creators of regional solutions.
- **Rhythm:** Held annually (with plans to scale to twice a year), though communication regarding the event's outcomes continues in cycles throughout the year as resulting projects are implemented.



4. Results and Impact (Outcomes)

The numbers – 200+ participants and 20+ member companies – are just the tip of the iceberg. The true value of IT Wave lies in its structural impact.

Short-term and Medium-term Effects: The most significant result is the **synchronization of efforts**. The ecosystem now shares a common agenda. Several key projects were born directly from the conference sidelines:

- **Educational Synergy:** Memorandums were signed between businesses (e.g., Luxoft) and universities, leading to internship programs at **Mechnikov National University**.
- **Development Projects:** The relaunch of the **IT Starts** career guidance program and the launch of **IT Talks to Teachers** (English courses for faculty).

- **Innovation Competitions:** Joint university-business competitions in computer vision (maze formats).

Structural Changes: The conference has successfully turned competitors into partners. A high level of horizontal trust allowed the ecosystem to respond rapidly to wartime challenges, coordinating energy security and support for relocated professionals.



5. Lessons and Recommendations for Clusters4Regions

IT Wave is a benchmark for how an event can serve as a management tool.

Key Recommendations:

- **Base Dialogue on Data:** Use in-depth market analytics to ensure conversations with authorities are evidence-based rather than emotional.
- **Document and "Case" Success:** Every memorandum or project born at the conference must be publicly recorded. This creates a "success story" loop that attracts new partners.
- **Move Beyond "Event Management":** Your job isn't to arrange seating; it's to facilitate decisions. The conference is the visible peak; the real cluster work happens in moderating what follows "after".

Full version of the practice description here 



3.4. Value Chains

3.4.1. Vinnytsia Instrumentation and Automation Cluster. Building Key Value Chains

Developing value chains in the instrument manufacturing industry



How do you turn innovative prototypes into real, mass-produced devices when developers are focused solely on R&D, and manufacturers have idle production lines? The **Vinnytsia Instrumentation and Automation Cluster** found the perfect mechanism: the cluster became a **"safe broker,"** uniting R&D organizations and manufacturers to build new Value Chains (VCs). Discover how the cluster facilitated licensing agreements, maximized enterprise capacity

utilization, and launched at least four new product lines under the strictest confidentiality and wartime adaptation.

"Through trust, we have reached a new level of interaction within the cluster – institutionalized Value Chains. The next step is joint R&D", – Yuriy Klymenko, Cluster Manager.

1. Practice Passport

- **Practice Name:** Development of Value Chains in the Instrument Manufacturing Industry.
- **Cluster / Source Organization:** Vinnytsia Instrumentation and Automation Cluster.
- **Region:** Vinnytsia and Zhytomyr regions.
- **Implementation Period:** From pilot to scaling phase (since 2021).
- **Cluster Maturity Level:** Mature cluster with a diversified project portfolio.
- **Membership:** 29 participants in total (at least 6 key players were involved in the initial phase of this specific practice).
- **Thematic Blocks:** Value chain development, matchmaking (B2B, R&D2Business), innovation, crisis/war adaptation.
- **Target Audience:** Industrial, deep-tech, instrument manufacturing, and defense-tech clusters that encompass both research institutes/bureaus and mass-production factories.
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

The region has historically boasted immense potential, housing both innovation-generating R&D organizations and robust manufacturing plants. However, due to economic crises and the ongoing war, many production facilities found themselves underutilized, while scientists lacked the resources to bring their developments to market independently.

What didn't work previously? There was a classic disconnect between science and business – the infamous **"Valley of Death of Innovation"**. Scientists were terrified of intellectual property theft, while

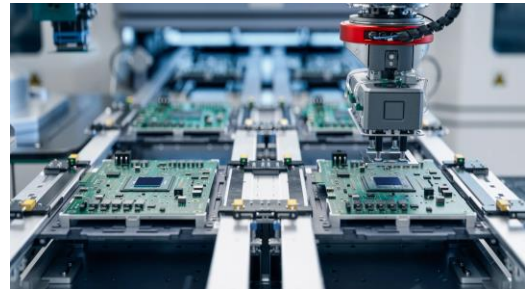
manufacturers were categorically unwilling to risk capital on "raw" prototypes. There was a complete absence of trust and no neutral platform with mutually acceptable rules for safe matchmaking.

3. Operational Mechanics of the Practice

The cluster assumed the role of an innovation facilitator and a guarantor of security (compliance).

Key Elements (Process Logic):

- **Opportunity Audit (Mapping):** The cluster conducted a deep analysis. On one side, they identified market-ready (or near-ready) R&D developments. On the other, they mapped underutilized yet technologically compatible factory production lines.
- **Focused Matchmaking:** The cluster organized closed, highly secure product presentations exclusively for targeted manufacturers.
- **Legalization of Partnerships:** The cluster guided the signing of licensing agreements between developers and factories, clearly defining IP rights and the distribution of future profits.
- **Creating the Value Chain (VC):** The physical launch of serial production, where different cluster members execute each stage – from initial idea to final assembly – within a unified chain.



Stakeholder Roles:

- **Cluster Management:** Acts as the moderator, guarantor of trust, and architect of the organizational and legal framework.
- **R&D Organizations:** Serve as the generators of technology and intellectual property.
- **Manufacturing Companies:** Provide the infrastructure and equipment required to scale the product.

4. Results and Impact (Outcomes)

Given the deep-tech and defense-tech nature of the projects, quantitative metrics are depersonalized for security reasons:

- Successfully integrated a minimum of **6 key participants** into joint value chains.
- Signed **3 licensing agreements** between R&D developers and manufacturers.
- Launched **4 products / product lines** into mass production.

Qualitative Results and Structural Changes: The most significant outcome is the shift from declarative "paper-based" cooperation to real, economically viable value chains.

- **Economic Impact:** Ensured increased revenue for developers (via royalties) and optimized the workload for factories.
- **Scaling Through Trust:** The success of the initial prototypes established a powerful "precedent of trust". After witnessing tangible financial returns, niche manufacturers began proactively seeking integration into the cluster.

- **A New B2B Culture:** Signing licensing agreements at the very start of a project became the standard. Trust was built not on promises, but on shared responsibility for quality, volume, and deadlines.

💬 *"Conversations about innovation, ecosystems, and industry become crystal clear when a developer presents manufacturers with a real, working prototype ready for scaling", – Head of a participating manufacturing company.*

5. Lessons and Recommendations for Clusters4Regions

This practice serves as a textbook solution for overcoming the "isolation" of academia from the real economic sector.

Key Lessons:

- **Don't Wait for Perfect Conditions:** Instead of waiting years for foreign investments to build new R&D factories, the cluster efficiently leveraged existing infrastructure – combining one party's intellectual property with another's idle equipment.
- **The Licensing Agreement is the Foundation:** This is the ultimate "glue" for an innovation cluster. A legally sound licensing agreement solidifies trust, mitigates the fear of IP theft, and transforms yesterday's wary neighbors or competitors into joint business partners.

Full version of the practice description here 



3.4.2. Cluster initiative "Shchedre Opillya". Traceability and 50/50 system

Implementing an electronic traceability system from field to packaging



How do you convince a small-scale farmer to hand over their harvest for processing today and wait months for the payment? The answer from the Ternopil-based initiative **"Shchedre Opillya"** is absolute digital transparency. By implementing a "field-to-packaging" traceability system, the cluster not only automatically met the strict HACCP requirements for EU export but also launched a unique **"50/50" financial model**. This is a story of how data replaces paper receipts, and how small producers evolve into export partners, earning profits on finished goods rather than cheap raw materials.

"When a farmer can look into the system and see the exact yield of their specific batch after freezing, trust is no longer abstract", – Taras Andriychuk, Coordinator.

1. Practice Passport

- **Practice Name:** Creation of a digital harvest accounting system and transparent income distribution (50/50 model).
- **Cluster / Source Organization:** Cluster Initiative "Shchedre Opillya".
- **Region:** Ternopil region.
- **Implementation Period:** Pilot → scaling phase (since 2021).
- **Cluster Maturity Level:** Cluster initiative (active growth stage).
- **Membership:** Over 20 MSMEs (farms).
- **Thematic Blocks:** Twin transition (digitalization), value chain development, SME services.
- **Target Audience:** Agri-clusters aiming to transition from a raw-material model to deep processing and joint exports, requiring tools for transparent profit distribution.
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

The situation in the Ternopil region's berry sector was typical for many parts of Ukraine: hundreds of small farms grew high-quality raw materials but had zero access to added value. Lacking their own freezing facilities, farmers were forced to sell their harvests to middlemen at rock-bottom prices right off the field.

What didn't work previously? Attempts to form traditional cooperatives repeatedly hit a wall of mistrust. Farmers were terrified to pool their crops for joint processing, fearing their premium berries would be mixed with a neighbor's inferior batch, leading to an unfair distribution of profits. Furthermore, the lack of a documented paper trail for each batch made international HACCP certification impossible. Without a digital footprint, the produce remained in the "grey market," and the doors to premium EU markets stayed firmly shut.

3. Operational Mechanics of the Practice

The mechanics rely on combining a specialized IT solution with a unique financial cooperation model.

The Digital Traceability Chain: The cluster deployed specialized software integrated with hardware (scanners, label printers, industrial scales). The workflow operates as follows:

- **Registration "in the field":** Every farmer has a digital profile. Upon harvesting, their batch receives a unique QR code containing data about the producer, the time of harvest, and the berry variety.
- **Reception Point (Hub):** As boxes arrive at the freezing facility, each one is scanned. The system automatically records the weight and initial quality parameters. During peak season, the system processes data from up to 350 producers daily.
- **Processing Stage:** The produce goes through the shock-freezing line. The system tracks the yield of the finished product from each *specific* batch. This allows for an exact calculation of shrinkage or rejection rates for each farmer individually.
- **Warehousing and Packaging:** The finished frozen berries are labeled as a unified cluster product, but the digital passport of the batch retains the complete history of its origin.



The "50/50" Financial Model: This represents the ultimate level of trust, made possible entirely by digitalization. Farmers deliver their produce to the cluster without demanding immediate payment (essentially providing raw materials on credit). The cluster handles processing, storage, and securing an export contract. Once the finished product is sold at a premium (frozen berries in the EU command a vastly higher price

than fresh ones in a local field), the revenue is split between the farmer and the cluster. The system's transparent analytics eliminate any possibility of manipulation during final payouts.

Stakeholder Roles:

- **Cluster Management:** Acts as the system operator, logistician, export broker, and freezing facility manager.
- **MSMEs (Farmers):** Act as raw material suppliers and "shareholders" of the final profit.
- **IT Provider:** Developed the custom solution, adapting the software to withstand both field and warehouse conditions.

4. Results and Impact (Outcomes)

This practice transformed fragmented farms into a highly technical export chain.

Quantitative and Economic Indicators:

- **100% Traceability:** Every single batch from the 20+ MSMEs is logged in the system, automatically guaranteeing HACCP compliance.
- **Time Optimization:** Intake and accounting times were slashed by two-thirds compared to paper logs – a critical factor during hot harvests when freezing time is limited.



- **Increased Profit Margins:** By entering the EU market with a finished frozen product, members saw their incomes rise by **30–50%** compared to selling to local middlemen.

Structural Ecosystem Changes:

- **Internal Capital Market:** The 50/50 model effectively replaced the need for bank loans. The cluster learned to finance its operations leveraging the trust of its members.
- **Standardization:** Farmers began taking conscious care of their crop quality and varietal purity. The system clearly proved: higher-quality berries at intake equal a much bigger check at the payout.
- **Investment Attractiveness:** The cluster emerged as a reliable, transparent partner for international buyers who highly value the ability to trace the origin of a single pallet back to the exact field.

5. Lessons and Recommendations for Clusters4Regions

This case is a textbook example of how technology can dismantle mindset and behavioral barriers (like a lack of trust).

Key Lessons for Scaling:

- **Trust is Built on Data, Not Speeches:** A digital system is the only viable conflict-resolution tool in a cooperative model. When the numbers are fully transparent, the room for manipulation disappears.
- **The Cluster as a Financial Instrument:** The 50/50 program proves that a mature cluster can act as an internal financial intermediary, drastically reducing reliance on external credit.
- **Focus on a Shared Asset:** For agri-clusters, it is vital to have a shared point of added value (e.g., a cold storage facility, a packaging line, an export certificate). The digital system simply "stitches" this physical asset to the financial interests of the producers.

Full version of the practice description here 



3.5. Market Access (Export and Markets)

3.5.1. Ukrainian Association of Furniture Manufacturers (UAM): Furniture of Ukraine Business Expo

Global Export Expansion through Unified Branding



How do you sell Ukrainian furniture to 58 countries and secure \$15 million in contracts in just a few days? The **Ukrainian Association of Furniture Manufacturers (UAM)** proves that you don't have to wait for global buyers to stumble upon you online. First, the cluster brought the world to Kyiv for its own B2B exhibition, **FUBE 2021**. When the war made large-scale domestic events impossible, UAM transformed its project into a **"mobile export hub,"** deploying national stands from Milan to London. This is a story of how the unified brand **"Furniture of Ukraine"** maintains the country's position on the global industrial map.

"The Ukrainian furniture sector is one of the few industries demonstrating competitiveness across all global markets while steadily increasing its export potential. We offer international partners high-quality products and modern design at competitive prices", – Volodymyr Patis, President of the UAM.

1. Practice Passport

- **Practice Name:** Furniture of Ukraine Business Expo (FUBE) and organized joint export missions.
- **Cluster / Source Organization:** Ukrainian Association of Furniture Manufacturers (UAM).
- **Region:** National level (with expansion into EU and US markets).
- **Implementation Period:** Pilot (FUBE 2021) → scaling and adaptation (ongoing).
- **Cluster Maturity Level:** Mature cluster with an extensive project portfolio.
- **Membership:** The association unites 352 enterprises.
- **Thematic Blocks:** Marketing and brand promotion, B2B event organization, export expertise, crisis adaptation.
- **Target Audience:** Large manufacturing associations and mature clusters with the capacity to act as a unified front and form a consolidated national brand.
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

Prior to 2021, the Ukrainian furniture industry possessed massive production potential but suffered from an **"invisibility complex"**. Individual companies attempted to break into export markets alone,

which required enormous marketing budgets. Foreign buyers often overlooked Ukraine, preferring established players like Poland or China.

What didn't work? Isolated participation in European exhibitions was often lost in the noise of global giants. The market desperately needed a "home venue" to showcase the industry's true scale to international buyers. Post-2022, the challenge shifted: domestic events became impossible due to security risks. The cluster's new mission was to prove that Ukrainian business remained resilient, operational, and capable of fulfilling international contracts.

3. Operational Mechanics of the Practice

The practice evolved in two stages, showcasing remarkable management flexibility.

Stage 1: The Domestic Mega-Event (FUBE 2021) UAM initiated the **Furniture of Ukraine Business Expo** – Ukraine's first international B2B exhibition dedicated exclusively to furniture. Instead of traveling abroad, the cluster brought global buyers to Kyiv. The strategy focused on intensive matchmaking: buyers received manufacturer profiles in advance and attended specific B2B meetings and panel discussions.



Stage 2: The Mobile Export Hub (2022 – Present) When hosting FUBE became impossible, UAM "packaged" the exhibition into **national stands**. The cluster handles all organizational logistics: renting space at top-tier global trade shows (Cologne, Poznan, Milan, Copenhagen, London), designing and building the stands, managing sample logistics, and spearheading PR.

Stakeholder Roles:

- **UAM Management:** Acts as the general contractor, lead negotiator with international venues, and curator of the "Furniture of Ukraine" brand.
- **Participating Companies (SMEs):** Co-finance the participation, develop export-ready collections, staff the stands, and finalize contracts.

4. Results and Impact (Outcomes)



The project generated unprecedented economic results for the industry.

FUBE 2021 Results (Stage 1):

- **300+** participating Ukrainian furniture companies.
- **141** international buyers from **58** countries.
- **2,000+** negotiations and **250+** targeted B2B meetings.
- **\$15 million** in total export contracts signed.

National Stands Results (Stage 2 - Ongoing):

- **1,000 to 1,500** negotiations per international exhibition with buyers from Europe, the USA, and the Middle East.
- **\$1 million to \$8 million** in new contracts generated per exhibition.

Structural Changes: Ukrainian furniture manufacturers have successfully shifted from a "neighborly competition" mindset to a **"joint export" paradigm**. This has fostered deep institutional trust and the habit of operating under a single "umbrella brand" in international markets.



5. Lessons and Recommendations for Clusters4Regions

This case is a masterclass in building collective export marketing.

- **Create Industry Brands:** Buyers might not remember 50 individual SME names, but they will remember **"Furniture of Ukraine"**. An umbrella brand is the most cost-effective path to global recognition.
- **Adaptability is Survival:** If you cannot bring the clients to you, package your value proposition and take it to them as a unified front.
- **Export is a Team Game:** Compete at the product level, but consolidate marketing and logistics at the cluster coordination level. This maximizes conversion rates while minimizing individual costs.

Full version of the practice description here 



3.5.2. Maritime Cluster of Ukraine (MCU): Ukraine's Blue Economy & Maritime Sector Promotion

Representing maritime industry companies and advancing the Blue Economy concept.



How can we consolidate and systematically represent Ukraine's maritime companies in alignment with **Blue Economy** principles and EU standards to ensure their integration into the **Common European Maritime Information Space**?

The Maritime Cluster of Ukraine has demonstrated that through systematic communication, international project implementation, and active participation in specialized EU networks, the global

visibility of Ukrainian enterprises is significantly enhanced. This approach establishes sustainable access channels to European maritime networks and expands cooperation opportunities for all cluster members.

"The Ukrainian maritime industry faces challenges that require coordinated actions. We worked to make our Cluster stronger, more open to international cooperation, and more valuable to every member. Systematic, institutional work is the key to a deep understanding of European prospects and full readiness for EU integration", – Artem Vashchylenko, Chairman of the Supervisory Board of the Maritime Cluster of Ukraine.

1. Practice Passport

- **Practice Name:** Representation of maritime industry companies and promotion of Ukraine's Blue Economy concept.
- **Cluster / Source Organization:** Public Union "Maritime Cluster of Ukraine" (PU "MCU").
- **Region:** Ukraine.
- **Implementation Period:** Active international phase 2022–2025 (ongoing).
- **Cluster Maturity Level:** Mature cluster with a deep project portfolio.
- **Membership:** 39 member enterprises.
- **Thematic Blocks:** Internationalization, cluster communications and PR, SME services, international cooperation.
- **Target Audience:** Clusters in export-oriented, high-tech industries requiring **institutional integration** into European economic networks rather than just one-time lead generation.
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

The Ukrainian maritime industry unites shipbuilding, ship repair, engineering, RDI, service, and scientific companies with vast professional expertise. However, for years, its potential lacked a **coordinated and systematic international presence**, resulting in a fragmented view of the sector. Individual companies acted in isolation, failing to reflect the industry's true maturity. The MCU addressed this by providing an institutional, structured, and credible representation of the Ukrainian

maritime industry within the framework of the **Blue Economy** concept (the sustainable use of ocean resources for economic growth).

3. Operational Mechanics of the Practice



The MCU unites maritime companies to present their competencies and services in a synchronized manner. The cluster maintains a unified database, facilitates participation in international projects, and creates a favorable environment for global integration.

EBI (European Boating Industry). Achieving associate or full member status in these organizations boosts the reputational capital of Ukrainian enterprises and grants them access to the unified European maritime information space.

- **Collective Brokerage and Exhibition Expansion:** Through international projects, the MCU ensured a unified presence via the **Ukrainian Pavilion** at premier industry events, including **Europort** in Rotterdam (2023) and **Baltexpo** in Gdansk (2025). It also organized specialized B2B meetings in Varna, Constanta, and Batumi under the **4BIZ project** (Boosting the Blue Economy in the Black Sea Region). The cluster coordinates participant activities, manages exhibition logistics, and facilitates high-level communication with the support of state institutions and diplomatic missions.
- **Domestic Platforms for Dialogue:** The MCU co-organizes events in Ukraine as part of the annual "**European Maritime Day**," providing a stable venue for professional dialogue between the Ukrainian industry and European stakeholders.



4. Results and Impact (Outcomes)

The practice has enabled a systematic international presentation of Ukrainian maritime potential and secured its presence in the European information space.

- **Quantitative Results:** Cluster membership in **3 influential European**



associations (SEA Europe, ENMC, EBI); implementation of co-funded grant projects (**4BIZ**, **EU4Business**); and **7 signed partnership agreements** with international and national organizations.



- **Strategic Impact (Status Change):** Participation in European networks has strengthened the MCU's institutional presence at the EU level, expanding opportunities for sectoral interaction and joint initiatives.
- **Structural Changes (SME Behavior):** Cluster members have become more proactive in international events, consistently updating data and materials for the European market. Joint participation has improved **communication coherence** and increased companies' readiness for international partnerships.

5. Lessons and Recommendations for Clusters4Regions

This case illustrates how a cluster can transform industry analytics into a powerful tool for **economic diplomacy**.

- **Analytics Create Markets:** European partners demand structured, transparent data. A cluster capable of generating high-quality analytical products (reports, mappings, catalogs) becomes an indispensable institutional player.
- **Network Integration is Paramount:** For export-oriented sectors, joining European cluster networks is a more critical step than a single trade show visit. **Membership provides long-term access** to European consortia.
- **Recommendation for Emerging Clusters:** Do not attempt to copy this model without an established pool of companies ready for international compliance. Start with a deep internal audit to ensure you have a viable "product" for the European showcase.

Full version of the practice description here 



3.5.3. Agrifood cluster Ukrainian Food Association (U-Food). U-Food 2Chains

Developing export chains through collective marketing and consulting



How did over 100 Ukrainian agricultural producers break into global markets and sign **803 export contracts** in the midst of a war? The answer from the Cherkasy-based **U-Food Association** lies in consolidating into product chains and competing under a single national brand. Through the "**U-Food 2Chains**" mechanism, comprehensive consulting on EU standards, and a high-impact presence at over 50 international exhibitions (such as Grüne Woche), the cluster slashed marketing costs for

SMEs and turned former competitors into reliable partners. For Ukrainian agrifood, cooperation has evolved from a mere strategy into a fundamental requirement for survival and growth.

"Today, the Ukrainian flag at international exhibitions is a symbol of quality and resilience. But to convert interest into real contracts, local producers must consolidate. Collective stands, joint export batches, and uniform quality standards are the only way for Ukrainian SMEs to conquer global markets", – Bohdan Shapoval, CEO of the Ukrainian Food Association.

1. Practice Passport

- **Practice Name:** Development of export chains through collective marketing and consulting (U-Food 2Chains).
- **Cluster / Source Organization:** Agrifood Cluster "Ukrainian Food Association" (U-Food).
- **Region:** Cherkasy region (scaled to the national level).
- **Implementation Period:** Ongoing (since 2020; active phase 2022–2025+).
- **Cluster Maturity Level:** Cluster initiative.
- **Membership:** 137 members (including 115 SMEs).
- **Thematic Blocks:** Value Chain Development (VCC), SME services, collective marketing, wartime adaptation.
- **Target Audience:** Large agrifood and manufacturing clusters uniting small producers of similar products. This is a solution for overcoming volume deficits and high marketing costs.
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

Small and medium-sized (SME) food producers in Ukraine often have excellent products but hit a "**glass ceiling**" when attempting to export independently. The barriers are daunting: complex EU certification, a lack of international marketing expertise, prohibitive costs for exhibition stands (tens of thousands of euros), and the physical inability of a single small firm to guarantee the large, stable volumes required by foreign retailers.

Prior to this practice, export attempts were isolated and frequently failed. Producers in the Cherkasy region viewed each other as rivals, which hindered cooperation even for basic tasks like consolidating

shipments. The 2022 invasion turned these challenges into a **survival crisis**: traditional logistics collapsed, and domestic demand plummeted. The choice was clear: consolidate for mass export or close down.

3. Operational Mechanics of the Practice



The U-Food cluster implemented an **ecosystem approach**, where individual interests are aligned with the success of the group.

Key Elements:

- **2Chains Program (Value Chain Development):** Enterprises are grouped by product (e.g., honey, berries, or preserves). This allows the cluster to **standardize quality** and form large, stable batches of goods that attract major international retail chains.
- **Export Consulting Center:** The cluster serves as a knowledge-sharing platform. Every participant receives hands-on support for **HACCP and GlobalGAP certification**, packaging adaptation, and tailoring marketing strategies to specific EU or global market requirements.
- **The "U-Food" Umbrella Brand:** This is the primary cost-saving tool. The cluster organizes **unified stands** at the world's largest exhibitions. For an SME, this is significantly cheaper than individual participation, yet they garner far more attention under the high-visibility U-Food brand.
- **The Management Role:** Cluster management acts as an **outsourced export department** for 137 companies – handling negotiations, identifying donors, managing sample logistics, and "conducting" joint production efforts.



4. Results and Impact (Outcomes)

The numbers demonstrate the program's success: **803 export agreements** signed during the war. The cluster has participated in 52 international events and organized approximately 50 domestic B2B sessions. At **Grüne Woche 2026** alone, the U-Food stand generated over 1,700 leads and conducted 18,000 product tastings.

Qualitative Changes:

- **Cultural Transformation:** Producers have finally shifted from "hostile competition" to **partnership cooperation**.

- **SME Behavior Shift:** Enterprises have become proactive – they now prepare production facilities in advance for EU requirements and invest in packaging design, knowing the cluster provides a reliable sales market.
- **Reputational Capital:** Ukraine has solidified its status as a reliable food supplier capable of fulfilling contracts even under extreme wartime conditions.



5. Lessons and Recommendations for Clusters4Regions

The fundamental lesson: **"One in the field is not an exporter"**. In modern agribusiness, success is driven by scale and brand recognition.

Advice for other regions:

- **Pivot from Theory to "Quick Orders":** Focus on joint sales. A unified product catalog, a joint visit to a retail chain, or a shared exhibition stand will generate contracts much faster than lengthy strategic sessions.
- **Donors Favor Integrated Value Chains:** When applying for grants (USAID, GIZ, etc.), bundle the raw material producer, the processor, and the packer. For example: a farmer grows berries → a local plant dries them → a brand sells the snacks. Donors are far more likely to fund projects where **3–5 companies benefit simultaneously**.
- **Ruthless Synchronization of Standards:** Before selling together, you must agree on a **single quality standard**. If you are shipping a joint batch, raw material requirements must be non-negotiable for all participants.

Full version of the practice description here 



3.6. System transformation

3.6.1. Public Union "Sumy Machine-Building Cluster". Cooperation with State Monopolies

A cluster model of interaction with the nuclear power sector based on a systemic partnership with JSC "NNEGC Energoatom".



How can regional manufacturers break through to secure orders from a state monopoly as massive as **Energoatom**? The Sumy Machine-Building Cluster of Power Equipment found the definitive answer: instead of dozens of chaotic attempts to knock on closed doors, a cluster must become a single, institutionally formalized **"entry window"**. This is the story of building a sustainable partnership model with a critical infrastructure operator, ensuring import substitution for nuclear power plants, and

transforming regional smart specialization into long-term contracts, scientific consortia, and investment.

"Regional recovery begins not with investments, but with competencies. In the field of nuclear energy, the Sumy region already possesses the foundations for building a new level of economy", – Vladyslav Kondus, Executive Director of the PU "Sumy Machine-Building Cluster of Power Equipment".

1. Practice Passport

- **Practice Name:** Cluster model of interaction with the nuclear energy sector based on a systemic partnership with JSC "NNEGC Energoatom".
- **Cluster / Source Organization:** Public Union "Sumy Machine-Building Cluster of Power Equipment".
- **Region:** Sumy region.
- **Implementation Period:** Permanent practice (active since 2021).
- **Cluster Maturity Level:** Mature cluster with an extensive project portfolio.
- **Membership:** 20 participants.
- **Thematic Blocks:** Government Relations (GR), Innovation (R&D), Value Chain Development (VCD).
- **Target Audience:** Mature industrial clusters with high engineering potential seeking to operate in critical infrastructure sectors with stringent regulatory requirements.
- **Full Description:** [UCA website](#)

2. Context and Problem Statement

Prior to this practice, interaction between regional machine builders and the national nuclear power plant (NPP) operator resembled "Brownian motion". Individual industrial SMEs had episodic, purely reactive contacts with Energoatom – usually attempting to bid only after a tender was announced.

What didn't work? There was a massive gap between the strategic needs of the nuclear industry (which desperately required **import substitution and modernization**) and the isolated production plans of small and medium-sized businesses. Individual enterprises lacked the scale and the deep understanding of complex regulatory environments required for a strategic dialogue with a monopoly. Furthermore, university research remained "shelved" because it wasn't integrated into production chains. The region lacked a unified coordination center to aggregate its engineering competencies.

3. Operational Mechanics of the Practice



The cluster moved beyond mere introductions to build a **systemic dialogue infrastructure** based on the "single window" principle, acting as a competency aggregator.

Key Elements and Logic:

- **Institutional Partnership:** Instead of lobbying for individual plants, the cluster initiated a formal partnership. The process begins with an **audit**: the cluster gathers requests from Energoatom's technical departments (e.g., life extension of power units or replacement of imported components) and synchronizes them with the capabilities of 10+ regional SMEs and universities.
- **Stakeholder Roles:**
 - **Cluster Management:** Acts as the negotiator, "translator" of energy security requirements into regional industrial capabilities, and architect of consortia.
 - **JSC "NNEG Energoatom":** Acts as the strategic customer and visionary of industry-wide needs.
 - **Industrial SMEs:** Provide manufacturing capacity and technical readiness.
 - **Universities & Research Institutes:** Conduct essential **R&D (Research and Development)**.
- **Rhythm:** This is a continuous cycle of industry roundtables, technical working meetings, and joint design phases rather than a one-off event.

4. Results and Impact (Outcomes)

This practice has transformed the region into a hub for energy innovation, yielding results far beyond simple equipment supply.

Quantitative and Strategic Results:

- **10+ machine-building enterprises** and key regional universities are now systematically integrated into Energoatom's workflow.
- **Framework memoranda and contracts** have been established.

- A portfolio of engineering solutions led to securing **3.6 million UAH** from the Ministry of Education for the development of next-generation energy system components.

Structural and Ecosystem Changes:

- **Consortium Building:** The cluster initiated the international consortium **SYNETRIUM** (involving institutes of the National Academy of Sciences of Ukraine, as well as partners from the Czech Republic and Latvia).
- **Shift to Deep Tech:** Joint preparation of the conceptual engineering framework for the **"MRIYA SMR"** (Small Modular Reactor). Regional universities have solidified their role as the core of the innovation ecosystem.
- **Business Behavior Shift:** Companies moved from "waiting for tenders" to proactive investment. They now commit time and resources to **collaborative R&D** at the earliest stages of the customer's needs assessment. This marks a shift from short-term contracts to **decades-long technology partnerships**.



5. Lessons and Recommendations for Clusters4Regions

This case is a benchmark for using a cluster as a tool for regional recovery and smart specialization.

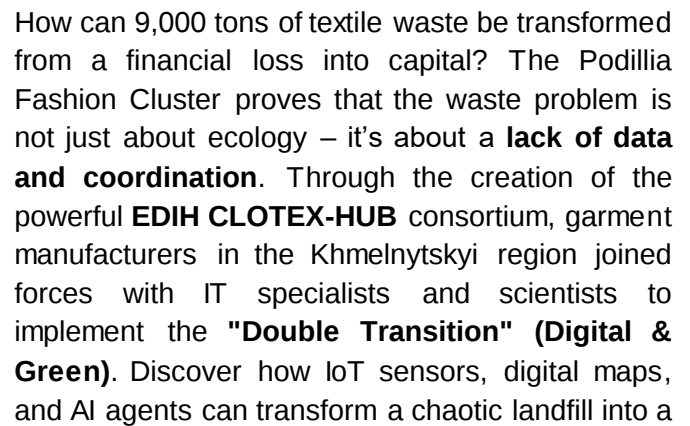
Key Lessons for Scaling:

- **Change the Sales Paradigm:** To work with monopolies and critical infrastructure, a cluster must first **"sell" its capacity to guarantee safety, quality, and coordination**, and only then promote the products of its members.
- **Science as an Equal Partner:** Integrating universities is not a formality. The ability of universities to conduct high-level R&D allows the cluster to offer innovative solutions (like SMRs) rather than just performing basic manufacturing.
- **Not for Beginners:** Young initiatives should **not** begin their journey by lobbying state giants. First, you must establish impeccable internal quality control and trust among your own members.

Full version of the practice description here 



Circular economy in light industry of the Khmelnytskyi community and region.



💬 "When we calculated that our pilot factories alone generate 9,000 tons of textiles per year, it became obvious: this is not just garbage, it is a lost resource. But no single factory, even the largest, can build a recycling plant alone. The cluster became the platform where competitors finally agreed: together, we are not just sewing shops, we are the foundation for a new circular industry", – **Lyudmila Bukhantsova**, PFC Expert on Waste Recycling.

- **Practice Name:** Circular economy in the light industry of the Khmelnytskyi community and region.
- **Cluster / Source Organization:** Public Union "Podillia Fashion Cluster" (PFC).
- **Region:** Khmelnytskyi region.
- **Implementation Period:** Ongoing (active since 2022).
- **Cluster Maturity Level:** Mature cluster with a portfolio of projects.
- **Thematic Blocks:** Double Transition (Green & Digital), Innovation, Governance.
- **Target Audience:** Medium and mature industrial clusters in any sector with significant volumes of industrial waste seeking to digitalize logistics.
- **Full Description:** [UCA website](#)

This practice emerged from a large-scale problem that was ignored for years. The light industry in the Khmelnytskyi region historically generates considerable waste. Pilot enterprises alone accumulated over 300 cubic meters of remnants monthly – roughly **9,000 tons of textiles annually**. For footwear manufacturers, this volume is even higher.



scientific potential of universities did not intersect with workshop needs. Previous local attempts failed due to a lack of analytical tools and the absence of a consolidated position, making it impossible to attract systemic investment. It became clear: without digital accounting and collective effort, the transition to a circular economy was impossible.

3. Operational Mechanics of the Practice

The practice is based on creating a full-fledged ecosystem – the **EDIH CLOTEX-HUB** consortium – which unites light industry, IT, sustainable development agencies, and academia to implement the **Double Transition**.

Process Logic:

- **Data Generation:** Instead of searching for new landfills, the cluster initiated a **digital map** of specialized containers near production sites, equipped with **IoT sensors** to optimize logistics.
- **Technological Trajectory:** Scientists and students classify collected textiles, while European consultants help develop business models for **deep processing**.
- **Ecosystem Roles:** The PFC acts as a constant moderator, removing barriers between competitors. Cluster members provide pilot sites; **Khmelnitskyi National University (KNU)** provides scientific expertise; the **Khmelnitskyi IT Cluster** develops software/sensors; and the **"ASTAR" Agency** together with the municipal office **"Smart Environment Khmelnytskyi"** develop new policies and educational programs.
- **The Rhythm of the Project:** Continuous, cycles of ideathons, hackathons, testing and strategic sessions.

💬 "This approach represents a synergy of different worlds, where programmers, scientists, and entrepreneurs create **Digital Product Passports**, preparing the region for EU standards", – **Oleg Demchuk**, Chairman of the Board of the Sustainable Development Agency "ASTAR".

4. Results and Impact (Outcomes)

The practice has successfully integrated 300+ cubic meters of monthly waste into a systemic solution framework.

- **Short-term results:** Development of digital maps and IoT sensors; launch of the first ideathons/hackathons on textile classification; organization of study tours to Norway; and a pilot project implementing an **AI agent** to reduce waste and energy consumption.



- **Structural and Behavioral Changes:** The mindset of SME owners has shifted – they now perceive waste as a **potential resource** rather than an expense.
- **Policy Impact:** Municipal decisions are no longer made without environmental and economic impact analysis. Preparation for **Digital Product Passports (DPP)** has become a regular strategic practice, ensuring regional businesses are ready for future EU regulatory requirements.

5. Lessons and Recommendations for Clusters4Regions

This case is a reference example for the "Double Transition".

Key Lessons:

- **No Green without Digital:** A green industrial transition is physically impossible without digital transformation (IoT, digital passports, data arrays, and AI agents).
- **Consortium First:** Immature clusters should not rush to build recycling lines. Instead, they should adopt the **cross-sectoral consortium model**.
- **Cluster as System Integrator:** Regional coordinators should use this case to prove that a cluster is not an event agency, but a **system integrator** capable of uniting diverse sectors to solve complex industrial problems.

Full version of the practice description here 



3.6.3. Association of Industrial Automation Enterprises of Ukraine. GDT Textile

Launching a Sectoral Mechanism for the Twin Transition



How can a four-month microgrant be transformed into a long-term strategy that generates contracts and new startups years after the funding ends? **APPAU** (Association of Industrial Automation Enterprises of Ukraine) broke the paradigm of low efficiency in short-term projects by launching the **GDT Textile** project for the light industry. With a budget of only **€43,000**, the cluster did not just draft another theoretical "paper" strategy; it created a living industry mechanism – the **Twin Transition Roadmap**. Discover how mass diagnostics of enterprises and the creation of an alliance led to real

B2B deals and secured new European grants for the industry.

"GDT Textile became the best project among our clusters by several indicators: inter-cluster cooperation (involving three UCA clusters, the UkrLegProm Association, and the CCI), cooperation between clusters and EDIHs (Khmelnyskyi and Kyiv), and sustainability (a series of new projects and agreements). This demonstrates the vital importance and potential of such cooperation – similar projects are needed across all critical industries. Ultimately, this project is about the essence of what only clusters can do well: driving innovation and the Twin Transition for SMEs at the sectoral level", – Oleksandr Yurchak, Executive Director of the UCA.

In 2026, the GDT Textile project became the basis for the new UCA methodology for implementing sustainable approaches (**ED-APM**) and serves as the foundation for related training materials.

1. Practice Passport

- **Practice Name:** Launching a Sectoral Mechanism for the Twin Transition (GDT Textile).
- **Source Organization:** APPAU (in partnership with Ukrlegprom, IF CCI, and associated partners: Podillia Fashion Cluster, Circular Economy Cluster, EDIH Clotex-HUB, and KyivHitech).
- **Region:** National / Interregional.
- **Maturity Level:** Mature (with a deep methodological base).
- **Number of Participants:** Over 150 SMEs (covered by diagnostics).
- **Thematic Blocks:** Sectoral governance, strategy, innovation, Twin Transition (Green + Digital transition).
- **Target Audience:** Mature clusters with the ambition of achieving systemic impact and building ecosystems.
- **Full Description:** [UCA website](#)
- **More Details:** [UCA website](#)

2. Context and Problem Statement

Ukraine's light industry faced a critical challenge: to maintain competitiveness in EU markets, a **Twin Transition** (simultaneous digitalization and greening of production) was essential.



The Market and Funding Problem: Work with SMEs was fragmented. Most grant projects in Ukraine last only 4–6 months. While they allow NGOs to survive, they rarely leave behind sustainable results (outcomes). Traditional industry "strategies" failed because they remained dead weight in officials' drawers – completely disconnected from real business cases and technology providers. A tool was needed to unite manufacturers, the IT sector, and European standards into a single, functional working mechanism.

3. Operational Mechanics of the Practice

APPAU used the short-term grant not for theoretical analysis, but to build a permanent **cooperation infrastructure**. The Roadmap (RM) was designed as a **"living artifact"** – a tool that is constantly updated.



Key Elements and Process Logic:

- **Mass Diagnostics (ADMA Methodology):** Instead of desk-based hypotheses, the cluster conducted digital and green maturity assessments of over 150 SMEs using the European **ADMA** method. This identified real, data-driven "pain points" within the industry.
- **Value Drivers:** Based on APPAU's adapted framework, **80 specific business initiatives** were identified (e.g., implementing Digital Lean, ERP/MES, and energy management systems).
- **Partnership Architecture:** The project's uniqueness lay in its driving force – **associated partners** (regional fashion clusters and Digital Innovation Hubs - EDIHs). These partners had a real, long-term commercial interest in implementing these solutions, while the official grantees acted as moderators.
- **Institutionalizing the TTT Alliance (Twin Transition in Textile):** A specialized platform was created to coordinate the actions of all participants long after the initial funding ended.



4. Results and Impact (Outcomes)

The success of the project is best measured by its results one year after the grant phase ended.

Direct Outcomes:

- **Commercial B2B Transactions:** A major contract was concluded between the **GIPANIS** sewing company (Khmelnitskyi) and the IT provider **IT-Enterprise** (Kyiv) for a complex ERP/MES management system.
- **Emergence of Innovative Players:** A new startup, **BRKS Labs**, was launched at the Kyiv Academic University (KAU).
- **Strategic Database:** The project established the country's largest database for assessing the digital maturity of the industry, which continues to be utilized by the **EDIH Kyiv Hitech** hub.



Ecosystem Impacts:

- **New Grant Generation:** Building on the Roadmap, the Podillia Fashion Cluster and EDIH Clotex-HUB secured new projects (e.g., **CIRC-SHOE** from WASABI for implementing AI in defect control).
- **International Integration:** The Circular Economy Cluster joined the **Future Proof Textiles** Eurocluster, granting Ukrainian SMEs access to support budgets (up to €50,000 per company).

5. Lessons and Recommendations for Clusters4Regions

This case provides five fundamental answers to the strategic challenges of the cluster movement:

- **Focus on Outcomes for Sustainability:** Evaluate a project a year or two after completion, not on the day it closes. Sustainability is achieved when a 4-month grant leads to million-dollar software deals and new European consortia.
- **Governance through Roadmaps:** Quality governance is built on a **shared Roadmap**, not just memoranda of intent. It serves as the "law" of the ecosystem, clearly defining responsibilities between business, EDIHs, and clusters.
- **Shift to a Service Model:** Move from one-off "events" to building **service infrastructure**. Mass maturity diagnostics (ADMA) is a foundational service that leads naturally to paid matchmaking with IT providers.
- **Scaling via Pain Points:** SMEs do not join "associations"; they join to solve their specific problems. An ecosystem with a clear plan to secure grants for enterprise needs is the ultimate magnet for new members.
- **Internationalization through Standardization:** An English-language industry Roadmap that aligns with EU standards (Twin Transition directives) makes a Ukrainian cluster a transparent and desirable partner for major European networks.

Full version of the practice description here 



4. 6 TYPES OF CLUSTER PRACTICES

The diverse activities of Ukrainian clusters can be synthesized into six fundamental mechanics designed to address specific business pain points.

1. **Human Capital (Talent Systems):** When an industry suffers from labor shortages and universities produce theorists, the cluster takes initiative rather than waiting for state intervention. Practices like the **Kharkiv IT Cluster's** Boot Camps or **UAM's** Furniture Maker's School prove that mature clusters can unite businesses to define new qualification standards and collaborate with educators to implement them.
2. **Value Added Chains (VCD):** The cluster acts as an "economic integrator," bridging gaps between market participants. For instance, the **Vinnitsia Cluster** connects developers and manufacturers via licensing; the "**Generous Opillya**" initiative creates a transparent chain from farm to packaging; and **U-Food** structures food chains to transform raw materials into high-margin exports.
3. **Export & Market Access:** Global market entry is fraught with barriers. Ukrainian clusters overcome these through collective branding and **institutional diplomacy**. The **Maritime Cluster** integrates businesses into exclusive European associations, while **UAM** and **U-Food** present dozens of companies under a single "umbrella" brand at world exhibitions, proving that a unified identity sells better than fragmented logos.
4. **Ecosystem Coordination:** To resolve regional chaos and a lack of shared vision, the cluster acts as a moderator. A prime example is the **Odesa IT Family's** "IT Wave" conference, which serves less as a networking event and more as a **strategic management tool** where government, education, and business synchronize actions based on real industry challenges.
5. **Trust Building:** Complex services cannot launch without horizontal trust. Clusters dismantle walls between competitors through practical steps: joint volunteer support for the front (**Rivne Medical Cluster**), candid "**Company Visits**" (**Thermal Energy Cluster**), or expert mentoring for local craftsmen ("**Dniester 1362**" **Agrotourism Cluster**).
6. **System Transformation:** The highest level of cluster maturity involves structural industry changes and the creation of **sectoral roadmaps**. This includes **APPAU's** Twin Transition mechanisms and **Podillia Fashion Cluster's** circular economy initiatives in Khmelnytskyi. Here, the cluster acts as an architect for the region's future.



5. HOW BEST PRACTICES WORK (OPERATIONAL MECHANICS)

Every successful practice follows a logical chain: identifying a critical problem the free market cannot solve, creating an intervention mechanism, organizing stakeholder interaction, achieving direct results, and ultimately generating a long-term systemic effect.

👉 **Process Logic:** Problem → Mechanism → Interaction → Result → Effect.

Typical Mechanics in Action

- **Facilitated Matchmaking (Vinnytsia):** Operates through closed sessions. To alleviate the fear of intellectual property theft, the cluster facilitates **NDAs** before meetings and provides legal support for licensing agreements following successful negotiations.
- **Integrated Educational Systems (Kharkiv):** Built on the "**University–Internship–Business**" triangle. The university provides the theoretical base, while the cluster organizes **Boot Camps** where business mentors guide students in building **MVPs**, directly leading to employment.
- **Collective Export Platforms (U-Food):** A collective sales mechanic. Hundreds of producers receive certification consulting, unify their products under a **common brand**, and exhibit at international trade shows via a single national pavilion managed by the cluster.
- **Diagnostics & Roadmaps (APPAU / Podillia Fashion Cluster):** A mechanic for systemic change. It begins with a deep **maturity audit** (e.g., ADMA methodology). Based on the data, the cluster drafts roadmaps and forms **high-tech alliances** to implement digital and green solutions.
- **Digital Trust Systems (Generous Opillya):** A financial-production mechanic. Farmer distrust is solved via **IT tracking**, where every kilogram of product receives a digital code. This total transparency enables **50/50 financial models**, where farmers credit the cluster with raw materials and share profits after export.

Stakeholder Roles

In this ecosystem, responsibilities are clearly defined:

- **The Cluster:** Acts exclusively as the **operator or facilitator**. It does not conduct business on behalf of companies but builds the infrastructure for them to succeed.
- **Business:** Acts as the **co-creator**, investing time, expertise, and capital.
- **The State:** Provides the **regulatory framework**.
- **Donors:** Act as the **catalyst**, de-risking the launch phase of innovative projects.

6. ALIGNMENT WITH THE CLUSTER DEVELOPMENT STAGE

The development of a cluster resembles the evolution of a living organism: utilizing inappropriate tools during the early stages often leads to failure. This necessary alignment between operational tools and the cluster's maturity level is clearly visible in the recorded best practices.

It all begins with the **Cluster Initiative** stage, where the primary focus is building basic trust through joint visits or volunteering. Once trust is established, the **Development** phase begins. Here, the organization focuses on more complex interaction mechanisms, some of which may evolve into core services like training, consulting, or grant assistance. Over time, the organization grows into a **Mature Cluster**, where the economic dimension becomes paramount: joint sales, exports, and the structuring of value-added chains. Finally, at the pinnacle of its evolution is the **Systemic Cluster**, capable of transforming policies, implementing national roadmaps, and forming international cross-sectoral consortia. *Framework of the life cycle of a cluster organization used in the UCA, , see [reference](#).*

The 4 Stages of Cluster Maturity

1. Cluster Initiative

- **Focus:** Establishing trust. Businesses (often competitors) are merely observing one another; therefore, overcoming high barriers of mistrust is essential.
- **Typical Practices:** Joint visits to the manufacturing facilities of cluster members and other forms of regular networking (roundtables, site visits, etc.).

2. Development (Young Cluster)

- **Focus:** Launching interaction mechanisms. At this stage, it is critical to initiate deeper engagement among members through matchmaking, coordination, and the creation of joint assets and projects.
- **Examples:** Informal enterprise visits transition into an organized service where participants identify common problems and draft solutions (Thermal Energy Cluster); roundtables generate unified agendas; joint business missions abroad naturally evolve into conscious export strategies; joint training, mentoring, and shared "green routes" stimulate micro-business development ("Dniester 1362").

3. Maturity (Mature Cluster)

- **Focus:** Advanced services and economic results. The cluster becomes a full-fledged economic development tool for its sector.
- **Examples:** The cluster involves members in creating shared educational standards (Kharkiv IT, UAM); export programs become standard service portfolios (U-Food); joint product and production projects emerge (Vinnytsia Instrument-Building, Ukrainian Industrial); grant-writing mentorship is integrated as a regular service (Podillia Fashion Cluster, APPAU, UAM, Kharkiv IT).

4. Transformation (Systemic Cluster)



- **Focus:** Policy and model transformation. The cluster influences the "rules of the game" at the national or EU level.
- **Examples:** National or regional roadmaps (APPAU and Podillia Fashion Cluster).

Typical Mistakes by Stage

- **At the Cluster Initiative Stage:** Attempting to invest in a joint factory or other infrastructure assets when internal trust and "common rules of the game" have not yet been established. Because financial issues are highly sensitive, the risk of conflict is immense and can lead to the organization's collapse.
- **At the Young Cluster Stage:** Providing free services (e.g., training) without establishing financial obligations (membership dues) or requiring active participation. Interaction mechanisms must precede advanced services, and those services must ultimately integrate into the cluster's financial model.
- **At the Mature Cluster Stage:** Remaining entirely dependent on donor grants without implementing a sustainable commercial model (e.g., taking a percentage from joint sales).

7. KEY LESSONS FROM SUCCESSFUL PRACTICES

The documented practices offer invaluable conclusions for all stakeholders in the national cluster movement. In this first edition (2026), ten fundamental lessons clearly emerge:

1. **The strongest practices are economic.** Success must be measured by signed contracts, cost reductions, entry into new markets, and large-scale projects that tangibly impact the economy. Crucially, economic effects are achieved not just through individual transactions, but by altering how market participants interact (reducing transaction costs, increasing transparency, and developing Value-Added Chains). Clusters must focus on specific, economy-driven KPIs.
2. **Clusters are tools for profound systemic impact.** Categorizing activities into six core mechanics (talent management, market access, VCD optimization, Twin Transition, etc.) perfectly illustrates the unique roles clusters play within industrial ecosystems. These roles – often mirroring EU and global trends – are vital for policymakers designing support programs, as they address challenges the free market cannot solve alone.
3. **Most current practices are at an early maturity phase.** A critical look at the aggregated all-Ukrainian data reveals gaps. Do we have enough advanced Value-Added Chain (VCD) practices? Why do only a few mature clusters possess strong talent management systems? The national movement is young. To transition to the next phases, focus must shift from isolated initiatives to systemic solutions: scaling services, VCD, and international integration.
4. **Sustainability is driven by internal economics, not grants.** A practice's sustainability depends on its organicity, integrity, and systemic interaction mechanics. A reliable internal economic model that benefits all participants and integrates into their daily operations is essential. This reflects the core operating model detailed in the UCA's new Playbook.
5. **A cluster's role adapts to its maturity and the given challenge.** Best practices showcase clusters acting as brokers, sectoral coordinators, shared-service operators, and ecosystem

orchestrators. Once a shared market problem is identified, the cluster defines its role based on its current capacity. Clusters must realistically assess what they can execute now versus what they need to "grow into".

6. **Significant ecosystem changes require long-term project funding.** Mature clusters prove that true market transformation takes years. Complex challenges (workforce deficits, Twin Transitions, internationalization) cannot be solved by 6-month, €20,000 microgrants. Sustained support is vital. The **Clusters4Regions** project (18 months) is a prime example: its long-term funding allows institutional changes – like trust, cooperation, and VCD transformation – the time they need to consolidate.
7. **Documenting typical mistakes (and worst practices) is crucial.** While showcasing success is inspiring, studying failures is often more instructive. UCA statistics show that 1 in 4 Ukrainian clusters freezes or fails by its second year, largely due to coordinator errors. Systematizing these mistakes (as done in the UCA School of Cluster Management) is critical for preventing ineffective models and shaping mature policy.
8. **Standardized criteria for "best practices" are essential.** While it is easy to draft a "success story" (especially with AI), earning the expert community's trust requires rigorous, unified criteria: 1) a clear understanding of a systemic market challenge, 2) an adequate cluster intervention role, and 3) proven results with clear cause-and-effect mechanics. Unified evaluation builds trust with the state, donors, and international partners.
9. **Professionalization accelerates development.** Continuous training, experience exchange, and standardization accelerate cluster maturation. Knowing "how to do it right" is not intuitive for young clusters. This manual is part of the UCA's integrated approach to establishing cluster management as a highly professional, distinct competency.
10. **Institutionalization is the necessary next step.** We are only at the beginning of the journey. Compared to neighboring Poland – where a state agency has conducted annual analyses since 2012 as part of national policy – Ukraine still lacks a central government body responsible for cluster support. However, with active government partners in six regions, we are hopeful that the Clusters4Regions project will spur sustainable policies at both the regional and national levels.

The Ukrainian Cluster Alliance extends its deepest gratitude to the Clusters4Regions UCORD project for its support, as well as to all participating clusters and experts.

We invite all stakeholders to continue collaborating on the development of Ukraine's clusters.



8. APPENDIX

8.1. Practice Description Template

A Unified Form for Recording New Cases

This template is designed to transform any cluster activity into a structured asset that can be scaled, analyzed, or presented to donors and partners.

Section	Content Description (Hint)
Practice Passport	Name of the practice, implementing organization, region, and timeframe.
Problem Statement ("The Pain")	What specific market failure or bottleneck are you addressing? Why can't businesses solve this individually?
Role of the Cluster	What is your role here: Broker (connector), Operator (service manager), or Architect (ecosystem designer)?
Operational Mechanics	Step-by-step description: Who does what and when? Which digital, legal, or financial tools are involved?
Results (3 Levels)	1. Direct Output: What was physically done/created? 2. Economic Outcome: Financial gains, savings, or new contracts. 3. Systemic Impact: Long-term changes in the industry or region.
Sustainability	How will this continue after grant funding ends? Describe the internal economic model.
Risks & Limitations	Potential pitfalls: Lack of trust, security concerns, or legal nuances.
Advice to Colleagues	The single most important insight gained from this experience.



8.2. Practice Quality Checklist

A Self-Diagnostic Tool for Cluster Coordinators

Before launching a new initiative, evaluate it against these 7 questions. If you have fewer than 5 "Yes" answers, the concept requires further refinement.

1. ☐ **Does it solve a real business pain?** (Are company owners willing to commit their own time, rather than just sending a representative for a networking coffee?)
2. ☐ **Is there "joint action"?** (Is this something the cluster does *with* its members, rather than *for* them?)
3. ☐ **Does it create new economic value?** (Does it help members sell more, enter new markets, or reduce production costs?)
4. ☐ **Are multiple types of stakeholders involved?** (Does it bridge the gap between Business + Education or Business + Government?)
5. ☐ **Is there "ownership" from the business side?** (Are members investing their own resources – money, equipment, or facilities?)
6. ☐ **Does it build trust?** (Will participants feel closer and more collaborative after this process?)
7. ☐ **Is it measurable?** (Can you track the number of contracts, students trained, or tons of raw materials saved?)



8.3. Matrix of Practice Types vs. Development Stages

Aligning Tools with Cluster Maturity

Stage / Type of Practice	Cluster Initiative	Young Cluster	Mature Cluster	Systemic Cluster
Trust Building	☐ Primary Focus	☐ Support Visits	☐ Background Process	☐ Cultural Code
Talent Systems	☐ Guest Lectures	☐ Univ. Agreements	☐ Boot Camps / Dual Ed.	☐ Policy Influence
Market Access	☐ Identifying Gaps	☐ Member Catalogs	☐ Shared Brands/Offices	☐ EU Integration
Value/Supply Chains	☐ Partner Search	☐ Matchmaking	☐ Co-production Licensing /	☐ Cross-sectoral VCD
Coordination	☐ Basic Networking	☐ Regular Brokerage	☐ Market Analytics	☐ Ecosystem Management
Transformation	☐ Premature	☐ Pilot Cases	☐ Transformation Roadmaps	☐ Creating New Markets

Legend: ☐ – Priority Tool; ☐ – Auxiliary/Optional; ☐ – Usually premature or secondary.

8.4 Cluster Authenticity Checklist

Compliance with Genuine Cluster Organization Criteria

Level 1 – BASIC IDENTIFICATION An organization is **NOT** a cluster if it does not meet **ALL** of the following criteria:

1. **Presence of a critical mass of business (cluster core):** At least 10–15 companies where business interests dominate.
2. **Clear sectoral focus:** A specific sector, sub-sector, or value chain is visible (not "everything for everyone").
3. **Primary interaction between participants:** Regular contacts or activities exist; participants know each other and have B2B relationships.
4. **Existence of a coordinating structure:** A formalized management structure that coordinates and involves cluster participants.
5. **Clearly articulated collective value:** Defined not as a list of services, but as a solution to problems or opportunities that businesses cannot address alone.
6. **Defined role as an orchestrator:** Acts as a coordinator of collective action in the ecosystem (the organization is NOT a service agency or project office).
7. **Reproducible interaction mechanisms:** Formalized and regular processes (networking, matchmaking, joint projects) with proven repetition.

Level 2 – FOR CLUSTERS WITH HIGHER MATURITY LEVELS

8. **Evolution into advanced services:** Interaction mechanisms transition into services that enhance, rather than replace, the underlying cooperation.
9. **Independent interaction:** Participants interact and form partnerships directly, thanks to established trust, regardless of the cluster directorate's involvement.
10. **Formalized governance structure:** At minimum, a general meeting (at least once a year) and a Board that performs a strategic function.
11. **Active Board and Executive Team:** The Board is genuinely involved in developing partnerships, while the executive team manages operational strategy.
12. **Recorded "Rules of the Game":** Provisions governing membership levels, contributions, and transparent decision-making that account for all categories of members.
13. **Balanced stakeholder representation:** A mix of business (VCD actors), education/science (innovation actors), and government or policy-making bodies.
14. **Human capabilities:** A management team sufficiently staffed and skilled to perform key roles appropriate to the cluster's maturity stage.

15. **Diversified financial model:** A balanced revenue stream from grants, membership dues, target contributions, service sales, and joint projects.
 16. **Partner integration:** Operates within open ecosystems and builds its own partner network based on mutual benefit and transparency.
 17. **Resilience over time:** The proven ability to maintain interaction mechanisms regardless of external factors or specific grant cycles.
 18. **Direct joint projects:** Existence of collaborative projects initiated between participants (not just "director-led" projects).
 19. **Economic or market effect:** Tangible results in the form of new products, expanded markets, or increased exports (not just events).
 20. **Behavioral changes:** Demonstrable shifts in participant behavior toward deeper cooperation, joint investments, and collaboration.
 21. **Final Impact:** Clusters demonstrate a significant impact on improving the innovativeness and resilience of value chains and ecosystems, as well as the dual transition (Green & Digital) of SMEs.
-

Cluster or Not a Cluster? (Final Summary)

Definition:

A **Cluster (Cluster Organization)** is an entity that creates and maintains mechanisms for **collective business action** within Value Chains, acting as an **ecosystem orchestrator** to generate collective economic value.

What is DEFINITELY NOT a cluster:

- Any association where members do not interact with each other.
 - A temporary consortium of companies working on a single project.
 - An event agency whose primary activity is organizing one-off conferences.
 - An organization focused exclusively on executing grant projects.
 - A networking group that ignores the specifics of Value Chains.
 - A service agency focused solely on the monetization of its own consulting services.
-