TEMPLATE FOR THE GOOD PRACTICE

What is a good practice?

A good practice is not only a practice that is good, but a practice that has been proven to work well and produce good results, and is therefore recommended as a model. It is a successful experience, which has been tested and validated, in the broad sense, which has been repeated and deserves to be shared so that a greater number of people can adopt it.

Please follow the instructions included to fill in the template. You can replace the guiding questions for each element with your description.
Mandatory fields are defined by *

Element	Description
Title*	*What is the name that best describes the good practice?* FabLab B&H Innovation Center: Non-formal Centre of Vocational Excellence for Digital and Green Skills in Bosnia and Herzegovina
Name of the VET Provider	*Name* Association Digital Fabrication Laboratory - FabLab B&H, Sarajevo, Bosnia and Herzegovina
Thematic domain	What is the thematic domain covered by this good practice? More than one domain can be indicated **X Innovation** **X Digital** **X Green** **X Inclusion** **X Entrepreneurial** ☐ Career guidance **X Lifelong learning** **X Creating partnerships/skills ecosystems**
Introduction*	*What is the context (initial situation) and challenge being addressed? Provide a short description of the problem/challenge being addressed and specify the period during which the practice has been carried out.* *Bosnia and Herzegovina faces fragmented VET provision, limited access to modern equipment, and weak links between schools, higher education, businesses, and innovation actors. Young people, adults, and SMEs often lack flexible, practice-oriented opportunities to acquire advanced digital and green skills outside formal education.*

	In response, Association FabLab B&H represents an independent, non-profit, non-formal learning hub that functions as a Centre of Vocational Excellence (CoVE) for digital and green technologies. The centre integrates advanced laboratories (additive manufacturing/3D printing, collaborative robotics, AR/VR/XR, electronics/photonic, biotech and circular economy labs) with mentoring, project-based learning, and EU-level innovation networks. *Since 2020, FabLab has systematically developed modular, non-formal training paths, micro-credentials and hands-on programmes for youth, jobseekers, start-ups and SMEs, and has recently been recognised within the ETF ENE network as a CoVE for non-formal education in BiH. The practice is ongoing and continuously expanding through new labs, EU projects and partnerships.*
Stakeholders and Partners	*Who are the beneficiaries or the target group of the good practice? Who are the users of the good practice? Who are the institutions, partners, implementing agencies, and donors involved in the good practice, and what is the nature of their involvement?* *The primary beneficiaries are:* *Young people (school pupils, students, NEETs) seeking practical skills in digital fabrication, robotics, AR/VR, electronics and biotech.* *Adult learners, career changers and jobseekers needing upskilling and reskilling.* *Start-ups and SMEs, especially in manufacturing, ICT, creative industries and green/circular economy.* *VET schools, universities and training centres that use FabLab as an applied learning and demonstration environment.* *Key users of the good practice include trainers, mentors, industry experts, start-up coaches and policy stakeholders who rely on FabLab's infrastructure and know-how to implement programmes and pilots.* *Partners and implementing actors include:* - *Universities and VET institutions (e.g. Sarajevo School of Science and Technology, International University of Sarajevo, faculties of the University of Sarajevo) using the labs for internships, projects and joint curricula.*

- *Local and regional authorities and development agencies supporting entrepreneurship, employability and digital/green transition.*

- *European and international networks and programmes (Fab Foundation- network, Enterprise Europe Network, EIT KICs, EU projects such as Digital Innovation Hubs initiatives, UPRISE/virtual worlds, and others) which provide frameworks, funding and knowledge exchange.*

- *Business associations, chambers and individual companies that co-design challenges, host pilots, and offer real-life case studies.*

Donors and funding sources include EU programmes, international organisations and national/regional schemes supporting innovation, skills development and private-sector development.

Impact*

What has been the impact (positive or negative) of this good practice on the beneficiaries'? Has there been social impact? Has the CoVE impact environmentally, financially, and/or economically the region where it is based (and if applicable, become more resilient), and if yes how? What evidence does show this impact?

The CoVE has:

- *Improved employability and skills by enabling learners to acquire practical competencies in 3D printing, rapid prototyping, collaborative robotics, AR/VR, electronics, biotech and circular/green technologies through hands-on, project-based activities. Many participants proceed to internships, start their own ventures, or secure employment in tech-intensive roles.*

- *Strengthened SME innovation capacity by providing access to advanced equipment, prototyping support, digital transformation advice and IP/innovation services, helping companies test new products, improve processes and explore new business models.*

- *Enhanced entrepreneurial culture via mentoring, start-up support, Maker Faire events and community challenges that encourage idea development, prototyping and market validation.*

- *Social impact and inclusion, especially for youth and under-represented groups, by offering open days, community projects (e.g. Precious Plastic and recycling programmes), low-threshold workshops and outreach activities in cooperation with schools, NGOs and municipalities.*

- *Regional economic and environmental impact through support for green technologies, circular economy initiatives and resource-efficient solutions, contributing to a more resilient local innovation ecosystem aligned with EU green and digital agendas.*

- *Evidence of impact includes: participant feedback and satisfaction surveys; numbers of trained learners, events and SME collaborations; follow-up stories of start-ups; and references in EU-funded projects and international networks. Exact quantitative indicators can be inserted from your internal monitoring data.*

Innovation and Success Factors *

In what way has the good practice contributed to innovation? What are the conditions (institutional, economic, social, and environmental) that need to be in place for the good practice to be successfully replicated (in a similar context)?

The good practice is innovative because it:

- *Positions a **non-formal, independent innovation centre** as a recognised CoVE, complementing formal VET and higher education instead of competing with them.*
- *FabLab Integrates **high-tech labs, DIH-type services, and EU project participation** into a single, coherent learning and innovation environment.*
- ***Uses real industry and community challenges** as the starting point for training and learning, ensuring immediate relevance and application.*
- *Embeds **IP protection, entrepreneurship and commercialization** support alongside technical skills, creating full value chains from idea to market.*
- *Promotes **circular and green technologies** through dedicated programmes (e.g. recycling and Precious Plastic, energy-efficient design, sustainable materials).*

Key success factors include:

- *Strong, trust-based partnerships with universities, VET schools, SMEs, municipalities and EU networks.*
- *Governance that combines flexibility (non-formal learning, rapid experimentation) with quality assurance and certification (e.g. ISO-related trainings, micro-credentials).*
- *Continuous investment in up-to-date equipment and staff expertise.*
- *Clear positioning as a **neutral, open innovation space** that all stakeholders can use.*

	For successful replication, similar institutional autonomy, access to technology, committed multi-stakeholder governance and alignment with regional smart specialisation priorities are essential.
Constraints*	*What are the challenges encountered in applying the good practice? How have they been addressed?* ***During implementation, the CoVE faced several challenges:*** ***Funding and sustainability:*** *Establishing and maintaining advanced labs and staff capacity required significant investment, while non-formal education is often not systematically funded. This has been addressed by diversifying income sources (projects, services to SMEs, training fees) and building long-term partnerships.* ***Recognition of non-formal learning:*** *Learners and employers initially viewed non-formal certificates as less visible than traditional diplomas. This was mitigated by co-branding training with reputable partners (universities, EU programmes, EIT), aligning learning outcomes with labour-market needs, and developing micro-credentials that are easily understood.* ***Awareness and outreach:*** *Many SMEs, schools and citizens were not familiar with FabLabs and CoVE concepts. FabLab responded through targeted communication, public events (such as Maker Faire), school visits and active participation in European networks.* ***Human resource constraints****: Recruiting and retaining staff with both pedagogical and high-tech expertise has been demanding. The centre addressed this by combining a core professional team with external experts, mentors, and project-based collaboration.*
Lessons learned *	*What are the key messages and lessons learned from the good practice experience?* *Key lessons include:* 1. *Ecosystem first, projects second lasting impact comes when FabLab is positioned as a permanent ecosystem actor (EIT Country representative, DIH, CoVE, innovation hub), not only as a project beneficiary.* 2. *Non-formal excellence is possible, with clear standards, strong partnerships and robust infrastructure, non-formal training can attain CoVE-level quality and recognition.* 3. *Hands-on learning drives motivation - learners of all ages engage more deeply when working on real prototypes, community challenges and business problems rather than only classroom-based activities.*

	4. *Combining digital and green agendas multiplies impact – linking digital technologies (AI, AR/VR, robotics) with circular economy and sustainability themes attracts funders, learners and SMEs, and aligns with EU priorities.* 5. *IP and entrepreneurship are critical – providing IP advisory services, business mentoring and access to networks ensures that skills development translates into innovation, start-ups and new products, not just technical know-how.* 6. *International networks matter – membership in Fab Foundation, EIT communities, EEN and other EU initiatives accelerates learning, benchmarking and visibility, and supports continuous improvement of the CoVE model.*
Replicability and/or up-scaling	*What are the possibilities of extending the good practice more widely? What are the conditions that should be met/respected to ensure that the good practice is replicated, but adapted to the new context? The aim is to go further than the section "Innovations / critical success factors" in specifying the requirements for replication of the practice on a larger scale (national, regional, international).* ***The practice is highly replicable within Bosnia and Herzegovina** and it can be scaled up in several directions:* • ***Geographical up-scaling** by establishing satellite labs, mobile labs and partnerships with local VET schools, universities and municipalities in other regions.* • ***Sectoral expansion** into additional thematic areas (e.g. more advanced biotech, AI/data spaces, smart manufacturing, urban mobility, health tech).* • ***Policy integration** by formalising cooperation with ministries, public employment services and agencies so that non-formal CoVE programmes become part of national skills strategies and active labour-market measures.* *For successful replication, several conditions are important:* • *Clear mapping of regional skills needs and smart specialisation priorities.* • *Strong lead organisation with technical, pedagogical and partnership-building capacity.* • *Multi-annual funding framework (mix of public, EU and private sources).* • *Governance model that includes key stakeholders (education, business, public sector, civil society) and ensures shared ownership.*

	• *Commitment to monitoring, evaluation and continuous improvement, including documentation of curricula, methods and impact indicators.*
Contact details	*What is the address of the people or the project to contact if more information on the good practice are needed?* *Association FabLab B&H* *Brace Begic 42, 71000 Sarajevo, Bosnia and Herzegovina* *E-mail: info@fablab.ba* *Phone: +387 61 899 387*
URL of the practice	*Can the good practice be found on the Internet?* *https://fablab.ba*
Related resources that have been developed	*What training manuals, guidelines, technical fact sheets, posters, pictures, video and audio documents, and/or Web sites have been created and developed as a result of identifying the good practice? How can them be accessed?* *As part of this good practice, FabLab has developed and/or contributed to:* • *Training programmes, syllabi and curricula for non-formal courses in 3D printing, collaborative robotics, AR/VR/XR, electronics, circular economy and entrepreneurship.* • *Workshop manuals, facilitator guides and technical fact sheets used in trainings and outreach events.* • *Visual materials, including photos and videos from FabLab activities, Maker Faire events, innovation challenges and lab demonstrations.* • *Online learning and ePlatform content developed within EU projects (e.g. for virtual worlds/AR-VR, digital skills and entrepreneurship).* *These resources are accessible via FabLab's website, project platforms, and for non-public, upon request from the FabLab B&H Innovation Center.*