



Action Plan of the ERUDITE Project: Slovenian National Reference Network of Creative Environments – FabLab Network Slovenia

Partner 5: University of Ljubljana

Partner 6: Ministry of Public Administration

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1. Executive Summary

The policy instrument we are influencing through ERUDITE in the Operational Programme for Slovenia 2014-2020. Using the SEROI+ process which was developed in the first phase of the ERUDITE project, we have created the national FabLab network. The national FabLab network was recognised by several managing bodies (Ministry of Public Administration, Ministry of Education, Science and Sport, Ministry of Economic Development and Technology, Ministry of Labour, Family, Social Affairs and Equal Opportunities, Ministry of Culture and Government Office for Development and European Cohesion Policy), responsible for the implementation of the OP, the policy instrument chosen by the Slovenian partners for the ERUDITE project, as a framework for promoting investment in product and service development, technology transfer, social & eco- innovation, public service applications, demand stimulation, networking, clusters and open innovation through smart specialisation. As a result, the University of Ljubljana has submitted a Proposal for the placement of the FabLab network in the implementation plan of the operational program for the implementation of the European cohesion policy for the programming period 2014-2020. The impact of the national Fablab Network will be monitored in the second phase of the ERUDITE project.



2. General information

- **Project: ERUDITE**
- **Partner organisations: University of Ljubljana**
- **Other partner organisations involved (if relevant): Ministry of Public Administration, Republic of Slovenia**
- **Country: Slovenia**
- **NUTS2 region: Zahodna Slovenija**
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3. Policy context

The Action Plan aims to impact:

- Investment for Growth and Jobs programme
- European Territorial Cooperation programme
- Other regional development policy instrument

Name and reference of the policy instrument addressed:

“Republic of Slovenia: Operational Programme for the Implementation of the EU Cohesion Policy in the Period 2014-2020”

Please detail the name and reference of all additional policy instruments addressed within the Action Plan

The action plan addresses the “Operational Programme” policy instrument. This document can be found on: “<http://www.eu-skladi.si/kohezija-do-2013/ostalo/op-final-en>”. It is predominantly focused on two priority axes:

- International competitiveness of research, innovation and technological development in line with smart specialisation for enhanced competitiveness and greening of the economy
- Enhancing access to, and use and quality of, information and communication technologies

During the first phase of Erudite project performance, we presented the service proposed on various occasions to the responsible policy bodies for both axes, namely Ministry of Public Administration and Government Office for Development and European Cohesion Policy, as well as to other policy making authorities (Ministry of Education, Science and Sports, Ministry of Economic Development and Technology and National Assembly representatives).

Moreover, the action plan addresses the DIGITAL SLOVENIA 2020 – DEVELOPMENT STRATEGY FOR THE INFORMATION SOCIETY UNTIL 2020. The DIGITAL SLOVENIA 2020 strategy is a commitment for a faster development of the digital society and the use of opportunities enabled by information and communication technologies and the internet for general economic and social benefits. Along with the strategies from its scope, it envisages measures to tackle the major development gaps in the field of digital society: faster development of digital entrepreneurship, increased competitiveness of the ICT industry, overall digitisation, development of digital infrastructure, construction of broadband infrastructure, strengthened cybersecurity and the development of an inclusive information society. It foresees priority investment in the digitisation of entrepreneurship, innovative data-driven economy and development, and the use of the internet and, in these frameworks, in the research and development of technologies of the internet of things, cloud computing, big data and mobile technologies.

4. Action/service

Using the SEROI+ process which was developed in the project, we have created the “Slovenian National Reference Network of Creative Environments” (short name: Fablab Network Slovenia, FNS). FNS aggregates important stakeholders that act as providers, enablers, supporters or potential users of creative environments across Slovenia. Creative environments are defined as any creative physical space with arbitrary equipment and personnel, providing innovation, design, prototyping and other services, eg. FabLabs, Makerspaces or Coworking spaces. FNS acts as a hub, that will provide different services to creative environments, such as sharing of the equipment or mentors (personnel, experts) to its members. It will also be one of the means to represent ideas, positions, proposals and remarks towards the policy makers and governmental bodies, influencing policies and regulatory framework. Finally, it is also a mechanism to develop national strategies and future actions related to domain described above.

The national FabLab network was recognised by several managing bodies (Ministry of Public Administration, Ministry of Education, Science and Sport, Ministry of Economic Development and Technology, Ministry of Labour, Family, Social Affairs and Equal Opportunities, Ministry of Culture and Government Office for Development and European Cohesion Policy), responsible for the implementation of the OP, the policy instrument chosen by the Slovenian partners for the ERUDITE project, as a framework for promoting investment in product and service development, technology transfer, social & eco- innovation, public service applications, demand stimulation, networking, clusters and open innovation through smart specialisation. As a result, the University of Ljubljana has submitted a Proposal for the placement of the FabLab network in the implementation plan of the operational program for the implementation of the European cohesion policy for the programming period 2014-2020. The document, available in Slovene language is in the ANNEX.

4.1. Background

Republic of Slovenia is predominantly rural country. There are two larger urban areas, cities of Ljubljana and Maribor. Urban areas are relatively close and easily accessible, so there is a tendency of population migrations from rural areas towards urban areas.

Since the declaration of independence of Republic of Slovenia, 27 years ago, its economy changed to the great extent. Big companies and factories, employing thousands of citizens, previously scattered around the country, also in rural areas, were closing down and the focus moved towards smaller, privately or family owned, small enterprises. There are many SMEs across the country, some of them export oriented, however, most of them encounter challenges in terms of finding qualified human resources, financial assets for R&D and lack of time. This makes innovation, creation of new products or improvements in existing products and services very difficult. Remaining larger enterprises outside of urban areas also have difficulties to find well qualified human resources in the local environments.

Challenges described above lead to slow but steady decline of rural areas. As a consequence, elementary and secondary schools have less students and local economies gradually shrink. Infrastructural and other investments are becoming more and more dependent on the national and European funds and subsidies. On the other side, it has to be stated that due to historical reasons rural areas in Slovenia still have their specifics and experience in different economic domains (eg. woodenware in south east of the country).

Slovenian National Reference Network of Creative Environments (FNS) represents one of the possible mechanisms to overcome challenges and issues described above as well as to use the potential of

rural environments for the future development. Its aim is to empower rural economies in economic domains that were almost forgotten or in new domains with higher added value. This service was co-designed by existing initiatives and creative environments across Slovenia, local municipalities, local companies, educational institutions and national policy makers. It was coordinated by the Erudite project partner, university of Ljubljana.

Main challenges that FNS will address are:

- to foster new product and services development in rural communities
- to reduce migrations of young people from rural communities and to increase migrations into rural communities
- to support local economies of the rural communities
- to increase knowledge exchange and level of skills in rural communities, related to main domains of local economies

4.2. Knowledge applied from ERUDITE

Describe in this section how you are applying the knowledge acquired and lessons learnt from the exchange activities in ERUDITE, in the development of your action plan.

Partner experience and practice (please detail: service name, short description and location)	How this PEP has contributed to the services developed in your Action Plan (detail any transfers, full or partial of good practice)
<p>“Future Digital Service”, LORMES, France:</p> <p>Presentation of the existing FabLab in the rural environment in France reasonment behind and its services provided;</p>	<p>During our partnership meeting in France, we have visited a FabLab in a small village Lormes. Before the visit, in Slovenia, we only had FabLabs in Ljubljana, the capital city, and Maribor, the second largest city in the country. The partnership visit was an inspiration of establishing FabLabs in rural environments, as well. We really liked the idea of enabling people making their ideas into prototypes in their own local environment. That is why we started thinking about establishing FabLabs in rural areas around Slovenia, as well. What we have done further, is we connected those FabLabs in a network, because together with our regional stakeholders and the managing authority, we believe that because of the network, the activities can be coordinated and the impact will be higher.</p>
<p>Family Lab, Venice, Italy</p>	<p>During our partnership meeting in Italy, we have visited Family Lab. What we found interesting there is how the children were involved and taken care of in a co-working centre. We found this practice as a very useful one, as we believe that by introducing the concept of family lab in the FabLab network, we can inspire the children for STEAM, creativity and prototyping.</p>
<p>“CoLab - Innovation Hub in North West Ireland“, Letterkenny, Ireland:</p> <p>Coworking space for more then 20 SMEs, provision of all required services</p>	<p>In October we have visited the Aislann Center in Donegal. What we found very interesting is how such digital center helped the rural environment stay “a live” - by bringing new people and companies also from other countries living there. We learnt about the type of support needed from the companies from such center. The learnings were used to develop programs, that are going to be offered to companies in the FabLabs within the FabLab network.</p>

TEAK Centre, Finland	The TEAK Centre in Finland, we have visited during the partnership meeting, was inspiring for us, and our regional stakeholders as an efficient way how companies can skill new workforce or re-skill people for the needs of the company. Our education and training system is usually very long, and general in many senses. As a result, companies, cannot get workforce with the specific skills needed. However, by introducing focused and time effective trainings within the FabLab Network, we can help the companies get the workforce with the specific skills in a much shorter time.
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4.3. Action/service description

The Fablab Network Slovenia (FNS) is already being established. So far, all stakeholders across the country were not only contacted and informed, but also engaged. The FNS has 80 partners so far, covering different fields of interest, from policy makers, to local communities, regional development agencies, universities and most importantly already running creative hubs in both NUTS 2 regions of the country.

There are 27 FabLabs in the national network. Some of the FabLab were existing before ERUDITE, for example MakerLab, and RogLab, and some of them were established or are in the process of establishment because of ERUDITE, for example FabLabs in Ptuj, Koper, Ribnica, Krško, Žalec, Novo mesto,..etc. Although some of the FabLabs were existing they were not collaborating, and the effects were very limited. Because of ERUDITE, not only new FabLabs are already established or are going to be established, but they are all connected in a well structured and coordinated network with much bigger impact both on local, but also on national level because of the rural-rural and rural-urban collaboration.

There were several stakeholders FNS meetings already performed and practical workshops with partners already conducted. The topics of the workshops combined open innovation strategies with social and economic return on investment knowledge. Partners followed steps to identify and clarify their own rationales, challenges, stakeholders, indicators related to their role in this field.

Additionally, five working groups within FNS, consisting of partners' representatives, were established. Their fields of work include:

1. listing and describing available equipment and tools (including equipment of existing hubs and their industry partners) to be shared among FNS members
2. listing and describing available mentors, expertise and skills, to be reused among FNS members
3. identifying and specifying content domains in which creative hubs operate and will operate
4. identifying possible and viable business models for creative environments as well as for the sustainability of the FNS itself, after the initial 5 years period of public funding.

5. clarifying legal, IPR and other aspects related to the operation of creative hubs and other innovation environments.

FNS will provide following services to its members as well as to the wider public:

- Exchange of the available equipment and tools among members
- Exchange of mentors, expertise and skills among members
- Both above mentioned services will be performed on the Virtual FNS platform that will be implemented incrementally. The platform will consist of repository of well described equipment and tools (already under development) and database of mentors, their expertise and skills (also under development). It will also consist of the reservation system and an area where all creative hubs will have a possibility to present themselves, their projects and ideas. Finally, the platform will support multimedia collaboration environment, where all the members will be able to perform common projects, conferences, webinars and other collaborative activities.
- promoting innovative and creative environments in Slovenia
- engaging and influencing policy makers
- identifying alternative funding opportunities and common project applications (EU and national)
- cooperating with similar networks across Europe

The FNS will act as an ecosystem to support innovative and creative processes in rural environments and across different economic domains in Slovenia. It will further support connections between the industry, educational system and open minded, creative individuals across the country.

It is worth mentioning that one of the most important areas of FNS operation will be engagement of the third age population, people that although already retired have vast expertise and experience and could participate in the creative hubs as mentors and advisers.

Finally, it has to be stated that FNS has already started its operation due to high demand for its services across the country. The future funding is needed especially to optimise, systemise and professionalise its service in order for the network to become fully sustainable after five years of its operation.

Main objectives	Value brought by this action into the region	Players involved and role in the implementation and collaboration between them explanation of their involvement in service design (use relevant SEROI+ Template)
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Establishment and performance of the Fablab Network Slovenia	27 creative hubs around the country connected in a network will create new jobs in the rural communities, new SMEs and improve the operation of existing ones;	<ul style="list-style-type: none"> • existing creative hubs • local municipalities • regional development agencies • public universities
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Additional information can be included in an annex (i.e. specifications resulting from the service design process, etc.)

4.4. Timeframe and Funding

Include here the timeframe for the project funding application and set-up/implementation Process. Note: this chart will be key for the reporting procedure on the indicators given in the Application Form (Number of Projects and Investments relating to your PI and other Policy Instruments)

Project/Action Investment Line/Funding Source + Amount (please state each source of funding)	Submitted For Funding	Funding Decision	Project Start Date	Other key milestones
5.200.000,00 EUR from the Operational programme in February we have submitted a Proposal for the placement of the FabLab network in the implementation plan of the operational program for the implementation of the European cohesion policy for the programming period 2014-2020, and this proposal is now at the Managing Authority	Not yet	Unknown	1.1.2019 (Foreseen)	

waiting for an approval.				
210.000,00 EUR from LIVERUR project, EU Horizon 2020	YES	Positive	April 2018	
2.800.000,00 EUR from the Operational programme The amount 2.8M EUR was distributed to 5 FabLabs, which are part of the FabLab network. For this amount is very difficult to say what part was influenced by the project, as many activities related to enhancing creativity and prototyping were going in parallel in Slovenia in the last period. However, all 5 FabLabs are involved in the network and are following the concept developed within the ERUDITE project. Each FabLab obtained between 500 000 and 700 000 EUR.	YES	Positive	2016, 2017	

4.5. Workplan

Include an outline of the Work-plan for each project. A suggestion could be to breakdown the Work-plan in work packages and tasks as below:

WP	Tasks
Fablab Network Slovenia (FNS) setup	T1.1 Organizational structure

	T1.2 Establishing partnership
	T1.3 Operation of the FNS
Virtual FNS implementation	T2.1 Specification of virtual platform functionalities
	T2.2 Implementation of collaborative platform
	T2.3 Implementation of FNS supportive information system (sharing of equipment, human resources, reservation system, promotion, presentation)
Knowledge transfer	T3.1 Knowledge transfer brokerage platform
	T3.2 Knowledge transfer events performance
Dissemination, promotion, engagement	T4.1 Dissemination planning and events
	T4.2 Web and social networks presence
	T4.3 Media presence
Management	T4.1 Administrative, Technical and Financial Coordination
	T4.2 Project meetings
	T4.3 Quality Impact and communication assessment

4.6. Budget breakdown for the service/project

Budget breakdown is prepared for the following five years.

It is envisaged that the service would include 10 collaborators (coordination and management, mentor coordination, equipment coordination, dissemination, technical experts to develop the virtual platform)

For each of the 27 creative hubs in Slovenia, 20.000,00 EUR is proposed as a cumulative sum for equipment; It is also envisaged that on some locations, essential "Building / renovation / refurbishment" activities will be co-financed by the FNS.

External expertise category will be used for advisory and knowledge transfer activities of experts.

Category of funding	Expenditure Amount
Salaries	2.680.000,00
Overheads (i.e. calculated at x % of staff costs)	670.000,00
Travel & Subsistence	150.000,00
External expertise	500.000,00
Building / renovation / refurbishment	180.000,00
Equipment	1.350.000,00
TOTAL	5.530.000,00

4.7. Viability and sustainability

The needs for operational delivery of the FNS services to identified target groups of users (namely, already existing creative hubs and the ones that are being setup) are imminent. Two services were identified as essential: providing different kinds of support to new creative hubs, during establishment process and exchanging mentorship and expertise among existing hubs. This means that all the necessary steps to establish the FNS will continue in parallel with establishment of the aforementioned services.

The amount 2.8M EUR was distributed to 5 FabLabs, which are part of the FabLab network. For this amount is very difficult to say what part was influenced by the project, as many activities related to enhancing creativity and prototyping were going in parallel in Slovenia in the last period. However, all 5 FabLabs are involved in the network and are following the concept developed within the ERUDITE project. Each FabLab obtained between 500 000 and 700 000 EUR.

Another smaller scale financing was already approved in the first quarter of 2018 within the LIVERUR Horizon 2020 project and will support essential steps to start provisioning of the services to the creative hubs. This will be sufficient to establish initial system of mentorship and expertise exchange among existing hubs and to provide initial consulting to new hubs.

It is expected that funding from the operational programme will start in 2019, enabling FNS to establish all envisaged services and to perform them. It is presumed that the funding will continue three years after the end of the second phase, with gradual annual decline. After the completion of the public funding, the FNS will start to collect member fees from its members, apart from 27 connected creative hubs, also other FNS partners, currently, the number is 80. The fees will differ, depending on the services provided to creative hubs or FNS partners.

The cash flows and projections are still under preparation, as stated in the previous section, by one of the working groups of the FNS.

4.8. Impact expected

The impacts envisaged, relate to different stakeholders that include wide target group of citizens and businesses across the country and are presented below. Most of the impacts will be a result of joint or connected operation of individual creative hubs, enabled by the existence of FNS.

First, it is presumed that **young people** will have more chances of **getting a quality and sustainable jobs in their environment**. The impact will be measured simply by calculating number of jobs created within FNS creative hubs members.

There are two impacts expected for the **SMEs**, First, it is expected that they will be **getting more qualified and well trained employees** and second, it is expected that there will be **more collaboration among SMEs**. Both impacts will be measured by number of people taking part in the training and other activities with creative hubs, being employed by the SMEs and number of joint projects being performed.

One of the most important impacts for **rural regions** is that the proposed service will **keep the region alive**. This will be possible by **keeping the young people in the region or returning to the region after completion of their studies**. This will be measured by calculating number of young people returning from studies to their home region or migrating to the rural regions, as well as through born/died ratio. There are other, just as important impacts that need to be considered. It is expected that healthy innovation ecosystem, supported by FNS will result in more **women** involved in creative hubs activities, thus providing more **thus providing more women in STEAM**.

Finally, engagement of retired, **third age population**, will result in **active ageing** through intergenerational cooperation with other stakeholders of the creative hubs FNS members.

4.9. Monitoring activities in Phase 2

Monitoring activities will be embedded into the FNS management procedures. The FNS will measure indicators (most important are described above) on the quarterly basis. It is expected that the indicators will start showing results in the third year of the FNS operation.

Also, the real funding versus anticipated funding opportunities will be closely monitored and assessed.

FNS will perform constant assessment and evaluation of the members' satisfaction with the services provided. This will be performed via interviews or common meetings with members. It is expected that since the members themselves participate in establishment as well as in the performance of services the level of satisfaction will be sufficient and possible actions to improve the services will be quickly identified and implemented.

Bojan Križ, Director of the Information Society Directorate within the Ministry of Public Administration agrees to implement the Action Plan of the ERUDITE Project:
Slovenian National Reference Network of Creative Environments – FabLab Network Slovenia

We agree, where appropriate, to promote and give assistance to the delivery and implementation of the projects and other activities as detailed in the Action Plan.

I confirm that I have the required authorisation of to do so and that the required authorisation process has been duly carried out.

On behalf of: Ministry of Public Administration

Signed:



P.P. 1004-84/2016/21
DAT. 20.9.2017

Name:

_____ Bojan Križ _____

Position in Organisation:

_____ Director of the Information Society Directorate _____

Date:

_____ 21.6.2018 _____



**Interreg
Europe**



European Union | European Regional Development Fund

ANNEXES

Annex 1 - List of main activities and meetings with the local stakeholders

Activity/meeting	Date	Stakeholders involved	SEROI+ Module addressed and main outcomes
First stakeholders meeting	12.4.2017	Municipalities, policy makers, existing creative environments initiatives;	Module 1, Module 2 Policy goals definition; Development of RSG;
Second stakeholders meeting	25.9.2017	FNS members, Municipalities, policy makers, existing creative environments initiatives;	Module 3 First draft of the service definition Further development of RSG
Third stakeholders meeting	7.12.2017	FNS members, policy makers, existing creative environments initiatives;	Module 4 Indicators and outcomes definition Further development of the service and sustainable business model
SEROI+ SNRNCE workshop	9.4.2018	FNS members	Module 1-4

Annex 2 – SEROI+ Impact/Value map

Service	Stakeholder	Impact	Indicator	Value
Fablab Network Slovenia	Young people	Getting a quality and sustainable job in their environment	Number of jobs created in the hub;	FTE created (€ could use average or actual) a) Through investment in hub b) through activity/employment generated by hub
		Decreased distance to travel to work - environmental impact	Reduction in car travel/CO2 Emissions	for economic: Using national standard cost of road transport e.g. €0.24c/km
	SME	Getting well trained employees /access to ICT skills	Number of people taking part in the DIH training employed by the SME	THE VALUE HERE CAN ONLY BE ESTIMATED BY THE BUSINESSES INVOLVED
		Collaboration with other businesses	Number of joint projects	
		Access to new markets	New businesses selling products online	
	Rural region	Keeping the region alive	Number of young people returning back to the region after studies;	Difficult to estimate

Service	Stakeholder	Impact	Indicator	Value
Fablab Network Slovenia	Women	Autonomous life	Number of women involved in the DIH/Fablab	self esteem to the value to the economy of increased self-confidence of unemployed women
	Retired people	Active ageing	Number of retired people involved in the DIH /Fablab Number of multigenerational projects: retired people working with young people	
	People - Community	More skilled workers (need benchmark and territorial area)	Number of workers on local sectors using acquired skills on technology	
		Digital upskilled people	Number of certificates issued/Numbers achieving Professional Vocation Qualification (undertaken part-time)	€6412 (adjusted from 2009 figures) per person per annum (slightly higher figure for over 50's)
		Personal development	Number of volunteers teaching others	Should be base on per person per day a) for trainers €150 - 200 per day b) for trainees – €3000 pp/pa self esteem to the value to the economy of increased self-confidence of unemployed young people