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PILOT PLANS

D.T.2.1.3
Pilot Plans prepared by each Partner

Version 1
05 2017

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INDIVIDUAL PILOT PLAN

Deliverable D.T.2.1.3
Individual Pilot Plans prepared for each Partner - LP MUSE FabLab

Version 1
11 2017

Action Title	**Pilot action 1 - Connecting to Communities** **>> DIGITAL TRANSFORMATION CAMP**
Recipients of the Action	The recipients of the action are fablab users and young creative people.
Activity description	Pilot Action 1 is aimed at experimenting with a service format that is primarily capable of building a community of subjects in the development of technology-based decision-making projects in relation to local issues. The Pilot action 1 is constituted of a 7 days Digital Transformation Camp (mentoring program), dedicated to talents (selected through a Call for people) where there will be sessions on business model design, lectures, prototypes development, project development and prototyping, business design and a final pitch. This allows to: • Create a network of companies and talents around Pilot's stakeholders • Stimulate the definition of specific technological challenges highlighted by local production realities • Build a talents community Through a call for people • Apply the development of challenge resolutions as well as advanced training opportunities for talents • Open up the productive realities to the talent communities by demonstrating that through opening and sharing creates greater value
Expected results	Pilot 1 has three different results: 1. the construction of high-impact knowledge of innovation produced by the connection of businesses, institutions and communities 2. construction of a public / private network that also includes individuals who find in fablab initiatives opportunities for development, training, and activities that they can produce in the business perspective 3. co-designing and training figures able to mediate between business, design and technology to accompany digital transformation processes by leveraging a community-driven approach based on knowledge sharing
Good Practice (in the meaning of D.T1.3.1)	• **Generative Design Camp** was a free training and experimentation event promoted and hosted by the FabLab MUSE in collaboration with .bijouets. The purpose of the event was to rethink the design,

	production and customization and distribution processes associated with the fashion design accessory and to develop body jewelry that will be realized through 3D Printing Technologies at HSL Laboratories
Problems encountered	The complex part of the project is to let the various actors interact and converge their activities in a profitable direction (in terms of building values and knowledge).
Time frame	***From July 2017 to November 2017***

Action Title	**Pilot action 2 - Connecting to Business** **>> FROM FABLAB TO SMART MANUFACTURING - COACHING PROGRAM**
Recipients of the Action	Following a triple helix approach, the pilot action aims to pursue a program which benefits are addressed to all action stakeholders. We have three levels of stakeholders: 1. The local partners of MUSE FabLab (1- UNITN - University of Trento with Contamination Lab and HIT- Trentino Innovation Hub; 2- The CONFINDUSTRIA - General Confederation of Italian Industry through their Digital Innovation Hub Sfida 4.0) 2. The startups within Trentino and Lombardy region who will be participating in the coaching program (PILOT ACTION RECIPIENTS) 3. The coaching program knowledge providers (Sei Consulting for business development and smart manufacturing; and Ultrafab for design to manufacturability)
Activity description	The pilot action Connecting to Business, locally renamed "From FabLab to Smart Manufacturing - Coaching program" is constituted by 3 sets of actions: <u>1. THE NATIONAL CALL FOR PROTOTYPE</u> ● A transnational jury constitution >> **(Dec 2017)** ● A regional Call for Prototypes >> **(Jan 2018)** ● A selection of not more than 4 physical prototypes of service-products suitable for the coaching program >> **(Feb 2018)** <u>2. THE COACHING PROGRAM</u> ● A two months lasting coaching program made by 4 specific modules (in total: 8 full days of coaching + 8 days of projects support at the fablab + 1 launching event + 1 closing event) program modules topics: *- ENTREPRENEURSHIP* *- PRODUCT-MARKET FIT, PRICING AND BUSINESS MODELING* *- SMART MANUFACTURING AND LEAN STARTUP* *- DESIGN TO MANUFACTURABILITY* >> **(March + April 2018)** <u>3.THE FAB BUSINESS EVENTS AND THE MUNICH TECH FEST</u> ● Fab Business event preparation is organized remotely following a joint approach and the events structures and is locally hosted in the fablab. The projects teams, once concluded the coaching program, will prepare their pitch for one Fab Business event (in Bratislava or in Budapest according to the level of development of their prototypes). ● Munich TechFest application will be made by all projects teams who participated in local pilot action in order to present their work at the

	international event in front of investors and to participate to the tech Fest Hackathon **>> (first half of May 2018)** • Fab Business participation and pitch >> **(second half of May 2018)** • Participation to Munich TechFest for selected project teams. Pitch and hackathon. • **>> (15-18th of June 2018)**
Expected results	Results are expected on 4 areas: **<u>1- Local partnership with University</u>** We expect that UNITN within the Innovation Hub and the Contamination Lab will continue to work with MUSE FabLab for creative and experimental training formats involving entrepreneurship, manufacturing and prototyping and their students. We expect also to strengthen the relation between the technological transfer office of the University toward the MUSE FabLab. **<u>2- Prototypes and startup development.</u>** The projects selected to get the coaching program will meet a set of mentors which will support teams in the analysis and design of business strategies related to the manufacturing of their products. The expected results in this areas are a set of instructions and plans for each startup, ready to be presented to investors in order to push the begin of a manufacturing phase for the coached startups. **<u>3- International competition for local startups</u>** The startups participating in the program will head their effort first in the direction of being able to compete internationally first through the Fab Business, and the through the TechFest Munich, in front of real investors. We expect that this kind of challenge would push participants to produce more results and refine their strategies, in order to actual compete at an international level at the TechFest. **<u>4- Exploring and broadcasting relationships between fablabs and Digital Innovation Hubs in Italy</u>**. In the pilot 2 lays the possibility that - through the established collaboration for the coaching program - we can shed light and experiment on possible relationships and exchanges with Digital Innovation Hubs, which are brand new type of organizations which are meant to spread Industry 4.0 culture and practices within the italian industrial realm, through highly automated facility for smart manufacturing and the spread of lean startup approach.

Good Practice (in the meaning of D.T1.3.1)	--
Problems encountered	--
Time frame	***From July 2017 - November 2017***

Action Title	**Pilot action 3 - Connecting to Education**
Recipients of the Action	young professionals (makers, university students), secondary schools, high schools, institutions and companies
Activity description	Development and implementation of 3 learning modules targeted to teenagers (10-15 y), intermediate (16-18) and professionals (>18). These learning modules will be based on fablab know-how on digital fabrication and the knowledge acquired and developed through Pilot 1 and 2. E.g. through the output of the Digital Transformation Camp (PA1), we can implement a design and prototyping school targeted to young minds. There will be a selection of pilot candidates/tester: -2 classrooms will be selected among the local institutes, in cooperation with the MUSE education department. 1 classroom of teenagers (10-15 y), 1 classroom of intermediate youngs (16-18). -young professionals will be selected among the FabLab members, and with a Call on social media -professionals of institution and companies will be selected by direct contacting the main development/research institutions (F. Mach, FBK, UNITN, CNR) and some relevant enterprises on the territory (Marangoni, Navarini...).
Expected results	Participants will learn basics or advanced skills of robotics, programming, automation, which can be usable for personal or institutional projects. Through these activities we will promote the role of FabLab as a facilitator for the adoption of new technologies (teens and intermediate activities), and as a trustable partner for the integration of new technologies in scientific lab, for helping in data acquisition, in laboratory automation, in prototyping processes.
Good Practice (in the meaning of D.T1.3.1)	There are 2 Good Practices we refer to: -the FEM-Musina project, a cooperation with the Agricultural high school for designing and implementing a device for the regulation of the amount of water provided to the crops. -The GENE project, where the FabLab helped in the creation of a portable genetic lab, providing an affordable, reliable, lightweight alternative to commercial products.
Problems encountered	

Time frame	***From November 2017 - May 2018***

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INDIVIDUAL PILOT PLAN

D.T2.1.3

PP2- AT

JUNE 2017

T2	**Demonstrating the role of FabLabs in the Central European innovation ecosystem**
A.T2.1	Preparation for Pilots
D.T2.1.3	Individual Pilot Plans prepared for each Partner

Action Title	Fab Lab Bootcamp
Recipients of the Action	The one-week workshop aims to reach people who want to learn the technical skills to use digital fabrication tools to realize their own ideas and projects. In line with a low threshold approach at Happylab we try to not only to fit the needs of people who are already familiar with the basics of digital fabrication, but also those who have little previous technical knowledge. We also try to address persons (entrepreneurs, makers or small and medium sized enterprises), who need the special combination of technologies for a special project, that we provide in the Fab Lab.
Activity description	In the"Fab Lab Bootcamp" participants acquire the basics of digital fabrication - starting with the construction of three-dimensional models on the computer right up to using 3D printer, Laser Cutter, CNC milling machine and Vinyl Cutter. "Fab Lab Bootcamp" therefore offers the perfect introduction into the world of digital fabrication.
Expected results	- raising more awareness for digital prototyping as a next generation technology - building public awareness for a changing work environment and future professions - we aim to provide a low threshold access for new target groups; people without specific previous knowledge should have the possibility to realize their ideas
Good Practice (in the meaning of D.T1.3.1)	We expect that the participants will become members and stay connected to the lab and our community. In this way they can learn more about the diverse possibilities a Fab Lab offers.
Problems encountered	Challenges might be: - will potential participants acknowledge the value of this comprehensive course beforehand - are they willing to pay the fee for the bootcamp - will enough people register - will we reach our target group

Time frame	planned for Spring 2018 Fab Lab Bootcamp last for a week and in structured in the following way: - intensive workshop: Friday 9-19 & Saturday 10-19 - Free project work supported by experts: Monday - Friday - Final project presentation and feedback: Friday 16-18

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INDIVIDUAL PILOT PLAN

Deliverable D.T.2.1.3
Individual Pilot Plans prepared for each Partner
PP3 HU

Version 2.
12. 2017

T2	**Demonstrating the role of FabLabs in the Central European innovation ecosystem**
A.T2.1	Preparation for Pilots
D.T2.1.3	Individual Pilot Plans prepared for each Partner

Version:	1
Due Date:	24/04/2017
Delivery Date:	12/12/2017
Nature:	Final
Dissemination Level:	External
Lead partner:	PP3-HU
Authors:	Peter VARGA, David PAP
Internal reviewers:	-

Action Title	Connecting 2 Business
Recipients of the Action	Our Pilot is open to individual entrepreneurs and early stage startup teams who already had developed a prototype, a MVP. We will focus on projects on high growth potential, scalable businesses who already have traction and have a team spirit. **Our aim is to accelerate projects which have an added value to the open innovation scene and the FabLab world.** Pilot No.1. targeting the next generation of digital innovators, creative and technologists. Advance level prototypes with the greatest potential can qualify to a second batch in the Pilot2. Other future opportunities include easy-access to accelerator programs in the Central Europe Region, finding investor funding and raising awareness to your project. We'll help you after the program to move forward and turn your idea to a long-lasting success.
Activity description	We are responsible PP for Pilot number 2. This Pilot supports mentoring and training of business development and entrepreneurship within the FabLab and the FabLab users as well by ll. By providing a supportive business environment to assist entrepreneurs to grow and develop small companies. One method of doing this is through expanding support for business incubation. These are the Pilot aims, providing access to facilities and resources and collaborating on events and initiatives with other business incubators. The overriding aim is to extend the network cooperation with local business incubator, companies, deliver an effective national capacity for digital manufacturing ensure shared best practice. The Pilot is deliberately flexible to reflect and build upon the varying local offers for business incubation What we offer: • a diverse business support offering, including business planning and strategy, IP protection and exploitation, financial management, marketing and market entry strategies; • strategic opportunities for investor presentations; • an individual coaching and mentoring opportunities; • an incubated project business matchmaking; • Experts participants can learn from • Infrastructure that participants are able to use to build and develop • Test and measurement environment • Workshop space where participants can use any equipment we have (3D printer, CNC router, soldering station, oscilloscope, multimeters and many others) • Dynamic workflow where sharing and helping is essential • International network that participants can reach out to • Inspiring community that participants can always ask from • Exhibition opportunity that participants can use to present their project

	• Media exposure that they can use to make their work viral • Access to partners and investors
Expected results	Pilot 2 is considered as an acceleration program to scale up new products to market. We expect 10 fully developed business plans with advance staged product development. Mature plans then will be presented at Fab Business Events in Budapest & Bratislava.
Good Practice (in the meaning of D.T1.3.1)	NA
Problems encountered	Obvious problem could be low number or low quality of applicants. To avoid this we will try to communicate proactively and bellow the line, and create threshold based application system
Time frame	***From December 2017 – June** 2018*

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INDIVIDUAL PILOT PLAN

Deliverable D.T.2.1.3
Individual Pilot Plans prepared for each Partner
PP5 CZ

VERSION 1
08 2017

T2	**Demonstrating the role of FabLabs in the Central European innovation ecosystem**
A.T2.1	Preparation for Pilots
D.T2.1.3	Individual Pilot Plans prepared for each Partner

Version:	1
Due Date:	24/04/2017
Delivery Date:	30/08/2017
Nature:	Version 1
Dissemination Level:	Internal
Lead partner:	PP5-CZ
Authors:	Daniel Koutny, David Palousek
Internal reviewers:	Marek Rozehnal

The template of Individual Pilot Plan

Action Title	Pilot Action 1 –Student's Communities Support
Recipients of the Action	*The Pilot Action Connecting to communities is aimed to start new or strengthen already existing cooperation between the StrojLab and student communities e.g., competitor teams who has limited access to Hi-tech technologies.* *Before the beginning of the action, we have addressed several student teams that have already presented some results in the past. The activity was also discussed with project partners.* *With the responding teams and partners, we signed a Memorandum of Understanding.* - *Pneumobil Racing Team Brno* - *Formula Student Team – TU Brno Racing* - *Aircraft Builders Team* - *Solidify 3D*
Activity description	*The aim was to attract the interest in StrojLab through this action that would lead to stable participation of the team members. We offered to each team, free participation in StrojLab for given period to solve particular project of their choice. The other benefit for the participants was free participation in the basic courses and free consultations of their project with the FabLab mentors. As the mentors were chosen experts for individual technologies available in StrojLab. Participating teams were then discussing the topics and issues of their projects with mentors.* *The skills gained by participants are on the basic level after the courses; however, they were strengthened by mentoring and practical experience during the Pilot action.*
Expected results	*The expected results were closer connection with student communities at the University, especially with the teams of active students who has strong interest in making new things. It is expected, that after the students get more familiar with the StrojLab equipment and possibilities, they would like to continue working in StrojLab on other projects. In addition, it is expected, that the results of the Pilot projects could be used for further promotion of the Strojlab between other students at the faculty, project partners and stakeholders.*
Good Practice (in the meaning of D.T1.3.1)	*The action could be a good practice, if the recipients would like to continue participation in StrojLab based on this experience. In addition, the spreading of the positive attitude around the University due to the activity could happen. Similar activity then could replicable in every other place.*
Problems encountered	*Low interest of student's organizations* *Low interest of foreign students* *Lack of interest of the university.*

Time frame	*From second half of September to the end of December 2017*

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INDIVIDUAL PILOT PLAN

Deliverable D.T.2.1.3

Individual Pilot Plans prepared for each Partner 06 2017

PP5 CZ

T2	**Demonstrating the role of FabLabs in the Central European innovation ecosystem**
A.T2.1	Preparation for Pilots
D.T2.1.3	Individual Pilot Plans prepared for each Partner

The Pilot 3 - Individual plan

Action Title	**Pilot 3 - Connecting to education** **Implementation of selected activities from the portfolio** Fab Labs try to link their services to university education system and jointly establish a modular training portfolio for bachelors and masters degree program. Selected training activities will be tested in the pilot phase via consultations. After that, the training portfolio will be implemented to the project oriented subjects. The training portfolio should become a bottom up and continuously evolving catalogue of training modules based on following fundamentals: - Design - Fabrication - Software skills - Electronic
Recipients of the Action	Students of the Bachelor's degree program Students of the Master's degree program
Activity description	**Students of the Bachelor's degree program** - Support of 3D digital knowledge and "safe" technologies - Support of bachelor's thesis - Fablab tools included in lessons **Students of the Master's degree program (Engineering)** - Support and implementation to project base learning system, cooperation with Institute of Machine and Industrial Design - Support of students of Industrial design study branch - Support diploma theses - Fablab tools and courses included in faculty lessons
Methodology	1. Winter semester - Initial testing of training program in project lessons and individual student's training 2. Summer semester - Inclusion of the course and equipment of laboratories in the project oriented education. Particularly in subjects Team Project (ZKP) Mechanical design project (ZIP); Engineering project (ZKR and Bachelor's degree program
Expected results	- Engaging students in self-education system - Promotion of the fablab as a standard educational tool - Increasing creative freedom of students - Supprot of project-based learning - Support of team cooperation
Good Practice (in the meaning of D.T1.3.1)	Some tutorials could be suitable candidates for "Good Practicies"
Problems encountered	- Resistance of students to self-study and low self-motivation - Time managenemt of lessons
Time frame	**From September 2017 to May 2018:** **Winter semester of academic year 2017/2018** **Summer semester of academic year 2017/2018**

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INDIVIDUAL PILOT PLAN

Deliverable D.T.2.1.3
Individual Pilot Plans prepared for each Partner
PP6 PL

VERSION 1
08 2017

T2	**Demonstrating the role of FabLabs in the Central European innovation ecosystem**
A.T2.1	Preparation for Pilots
D.T2.1.3	Individual Pilot Plans prepared for each Partner

Version:	1
Due Date:	24/04/2017
Delivery Date:	30/08/2017
Nature:	Version 1
Dissemination Level:	Internal
Lead partner:	PP6-PL
Authors:	Patrycja Węgrzyn, Paulina Daczkowska
Internal reviewers:	-

The template of Individual Pilot Plan

Action Title	Pilot Action 1 – Connecting to Communities Mobile FabLab Workshops
Recipients of the Action	*The Pilot Action Community is dedicated to the people who don't have an everyday access to the modern technologies.* *Before the beginning of the action, we provided consultation with some of neighboring municipalities, that doesn't have technological centers. We gave them the offer of free workshops for their communities, that would take place in the places chosen by them in a given municipality.* *Regarding the call, there was a Porąbka municipality chosen. We signed a Memorandum of Understanding with local authorities.* *We wanted to spread the knowledge about the 3D modelling and rapid prototyping beyond the city of Bielsko-Biała.* *The main goal was to choose the stakeholders, that even though are talented, don't have a possibility to increase their skills.*
Activity description	*We organized a series of workshops in a Community House in Porąbka. It has lasted from the second half of July to the end of August.* *The workshops were open for everybody. Regarding the holiday time, we've expected mainly children and youth.* *Some of the participants has already some experience in 3D modeling, however most of them were beginners, so we had to customize our offer to the given level of skills.* *We took two of our 3D printers to the municipality, to show the participants how do they work. We also provide a training in 3D modeling using free software, so they can also practice at home.* *The skills that participants of the course have gained during the workshops were on the basic level, however some of them has already express an interest to came to our FabLab and increase their 3D modeling skills.*
Expected results	*The main goal of this pilot action was to enable an access for youth and children from smaller municipalities to the 3D modeling technology and to attract them with it.* *The expected results were also to find talents in the community and to create a network of new members beyond the city of Bielsko-Biała.* *We also wanted to raise the awerness of local stakeholders regarding the digital fabrication and reach new target groups.*
Good Practice (in the meaning of D.T1.3.1)	*The action can be considered as a good practice, because it can be replicable in every other place.*

Problems encountered	*The decreasing number of participants from workshop to workshop - mostly because of holiday time - many of the participants just went on their vacation and couldn't participate in all of the workshops.*
Time frame	***From second half of July to the end of August 2017***

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Deliverable D.T.2.1.3
Individual Pilot Plans prepared for each Partner
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VERSION 1
12 2017

T2	**Demonstrating the role of FabLabs in the Central European innovation ecosystem**
A.T2.1	Preparation for Pilots
D.T2.1.3	Individual Pilot Plans prepared for each Partner

Version:	1
Due Date:	24/04/2017
Delivery Date:	28/12/2017
Nature:	Version 1
Dissemination Level:	Internal
Lead partner:	PP6-PL
Authors:	Patrycja Węgrzyn, Paulina Daczkowska
Internal reviewers:	-

The template of Individual Pilot Plan

Action Title	Pilot Action 3 – Connecting to Formal Education Tailor made training 3D modelling and rapid prototyping program for students
Recipients of the Action	*Pilot Action Education will be implemented on the base of the terms of cooperation agreed in the Memorandum of Understanding signed by the Regional Development Agency and the University of Bielsko-Biała.* *The students of mentioned above university will be the recipients of the pilot action.* *All activities of the courses will be tailor made, depending on the faculty that students attend.*
Activity description	*We plan to organize a series of workshops in FabLab Bielsko-Biała and in the rooms of the University. It will last from the January till May 2018.* *The program of workshops will be tailor made for the students. It will be agreed in the process of negotiations between the trainer, students and FabLab Bielsko-Biała.* *The course will be provided for intermediates, it will be adjusted to the needs of students, professors and the teaching program of the university. We are planning to hire and expert to make the trainings.* *All the activities will be made on the FabLab Bielsko-Biała equipment.* *The main activities of the course will be related to the process of 3D modelling and rapid prototyping.* *We are going to test few types of trainings, to choose the most appropriate.* *All the activities foreseen for the course is uploaded to transnational digital catalogue.*
Expected results	*The main goal of this pilot action is to enable an access for students to the 3D modeling cutting-edge technology. In line with the students' classes we want to let them use the state-of-the-art equipment, attract them to the technology available in FabLab, and help to improve their skills and passions.* *The expected results is also to find talents and to create a network of new members beyond the city of Bielsko-Biała.* *We want to raise the awareness of local stakeholders regarding the digital fabrication and reach new target groups.*
Good Practice (in the meaning of D.T1.3.1)	*The action can be considered as a good practice, because it can be replicable in every other place.*

Problems encountered	*Longer than expected process of negotiations the terms of cooperation and detailed activities of the workshops*
Time frame	***From January till May 2018***

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INDIVIDUAL PILOT PLAN

Deliverable D.T.2.1.3
Individual Pilot Plans for PP7 (SI)
Pilot 1: connecting to communities

V01
06 2017

Action Title	***Preparation phase***
Recipients of the Action	*Local partners:* - ***Luka Mali**, professor at faculty of Electrotechnic and Manager of MakerLab attached to the Faculty* - ***Miha Čebulj**, assistant-professor at the faculty of Architecture* *Luka Mali actively participated to the networking meeting we organized in januraly (DT1.2.1). The activity of his FabLab, for being attached to the faculty of Electrotechnica, has high competencies in the fields of IoT, Electronics, Virtual reality, Programming and is thus very complementary with RogLab, which more traditionally focused on designers, makers and architects.* *Miha Čebulj is from the young generation from the faculty of Architecture. He is very much aware of the fablab movement and has a strong motivation to create links between new technologies and teaching architecture.* *Both Luka Mali and Miha Čebulj participated to a focus group we organized on 25.05.2017 to brainstorm our activities for the Pilot 3 (education). In the marge of this focus group, we proposed them to cooperate with us to write the specifications of the mentoring program, to help us to promote the call for participants. Our cooperation will constitue an extended network, which shall allow us to have access to a wider pool of mentors to better face the participants needs.*
Activity description	- *Joint preparation of the call for participants and of the specifications of the mentoring programme. This is will be done via e-mail exchange. The participation of Luka Mali and Miha Čebulj at the exchange visit to HappyLab (28-29.06) will be a great opportunity for us to brainstorm several ideas and visions about our common activities for this pilot.* - *Support on selectionning the participants* - *Support on providing adequate mentors suiting the needs of each participants* - *Support on setting up the workshops schedules*
Expected results	- *Defining domain of priorities, in line with S3 strategy and within the fileds of competences of this Slovene network.* - *Jointly write the call for participants* - *Jointly promoting the call for participants*
Good Practice (in the meaning of D.T1.3.1)	*We believe it is indeed a great -and replicable- way to engage a new local partners:* - *Choosing a specific person from another organization, for which we know there are common interests and motivations* - *Inviting them to a working meeting, where we express a challenge and each participant bring some ideas of solutions* - *Support on writing a common document which synthetize these solutions* - *Support on the implementation of the solution(s)*

-	*We rely on the good will and schedule of a few persons from other organizations.*
Time frame	*This preparation phase of the pilot will last from March 2017 until September 2017* *Call for participants: 15.07.2017* *Deadline for application: 15.09.2017* *Selection of participants: 20.09.2017* *Finding appropriate mentors: until 16.10.2015* *Starting Mentoring program:16.10.2017*

Action Title	***Implementation phase***
Recipients of the Action	***Local partners:*** *Same than on preparation phase + other partners to help us finding the most appropriate mentors* - *Kristjan Tkalec from RampaLab and BioTehna (other FabLabs in Ljubljana).* - *Karin Košak and Deja Muck from faculty from Applied science and Engineering* - *The company INTRI d.o.o., specialized in 3D modeling* - *Other organization or companies, or free-lancers according to the needs of the selected projects* ***Participants to the mentoring programs:*** *4 participants selected from the candidates to the call for participants.* ***A particular user or group of users of the prototype:*** *Each participant will apply to the call together with a user or group of user. The prototype should resolve a specific challenge of this particular user/group of users. The Target group for users is to be determined jointly with the local partners.*
Activity description	*Providing tailored workshops, according to the needs of the participants expressed in their application, which will enable them to complete their prototype. The frequency of the workshop is still to be determined. The idea is to have a weekly or a twice-a-week workshop for each participant. Between each workshop, each participant will have free access to any machine at Roglabs and at local partners.*

Expected results	- *Four finalized prototype, responding to a concrete challenge of a particular user or group of users.* - *Developing new technical skills for the 4 participants* - *Stepping stone toward a business model and/or a wider open source use of the prototype*
Good Practice (in the meaning of D.T1.3.1)	*We believe it is a great way to engage a new group of users* - *Organizing a long term mentoring program jointly with other local partners.* - *Participation is done by applying to an open call* - *Thematics and domain of priorities are jointly defined with the local partners and are in line with S3 Strategy.*
-	*All theses actions are easily replicable… unless the financed for the mentors!*
Time frame	*This implementation phase of the pilot will last from October 2017 until February 2017*

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INDIVIDUAL PILOT PLAN

Deliverable D.T.2.1.3
Individual Pilot Plans for PP7 (SI)
Pilot 3: connecting to Education

V01
06 2017

Action Title	***Anticipation phase***
Recipients of the Action	*Local partners:* - ***Nataša Bucik, Organisator of the the "Cultural Bazar" event at ministry of Education*** - ***Teachers of all Primary and Secondary schools in Slovenia***
Activity description	*RogLab participated to 2 events to outreach teachers and rpincipals of primary and secondary schools:* - *The annual meeting of principals of Slovene primary schools which took place 7.11.2016. This event was a unique opportunity to directly meet and outreach a great number of principals.* - *The annual "Cultural Bazar" which took place on 30.03.2017. This yearly event traditionally attracts most of primary schools and secondary schools teacher from all Slovenia.* *RogLab published an open call for projects intended to schools: "My school can be a fablab". The contact database build upon the 2 previous upon was very useful to promote it. Thanks to our participation to the annual conference of the Slovene principal, our call for proposals attracted the attention of the Ministry of Culture, which spread the news over their network covering all Slovene primary and secondary schools in Slovenia.*
Expected results	- *Outreaching a great number of teachers to the activity of FabLabNet* - *Sectioning 2 teachers, each of them with some concrete ideas of what could be done with the help and support of RogLab and FabLabNet. This ideas of project will be a motivation for pupils to attend the teaching modules of our Pilot 3.*
Good Practice (in the meaning of D.T1.3.1)	- *Organizing a call for project is indeed a great practice in order to engage new group.* - *Teaching to children via a group project, decided by the teacher himself.*
-	*Time and money consuming, with some random results. We depends on the availability of the target group.*
Time frame	*November 20169 - May 2017*

Action Title	***Preparation phase***
Recipients of the Action	*Local partners:* - ***Majda Jurkovič**, Teacher at Primary school Tone Čufar (Associated Partner)* - ***Petja Krompe**, Teacher at Primary school OŠ Log Dragomer* - ***Bojan Hajdikovič**, Director of JZ Cene Štupar* - ***Luka Mali**, professor at faculty of Electrotechnic and Manager of MakerLab attached to the Faculty* - ***Miha Čebulj**, assistant-professor at the faculty of Architecture* *Mada Jurkovič and Petja Krompe are winner of the call for project " My schoo can be a FabLab".* *Luka Mali actively participated to the networking meeting we organized in january (DT1.2.1). The activity of his FabLab, for being attached to the faculty of Electrotechnic, has high competencies in the fields of IoT, Electronics, Virtual reality, Programming and is thus very complementary with RogLab, which more traditionally focused on designers, makers and architects.* *Miha Čebulj is from the young generation from the faculty of Architecture. He is very much aware of the fablab movement and has a strong motivation to create links between new technologies and teaching architecture.* *Both Luka Mali and Miha Čebulj participated to a focus group we organized on 25.05.2017 to brainstorm our activities for the Pilot 3 (education). In the marge of this focus group, we proposed them to cooperate with us to write the specifications of the mentoring program, to help us to promote the call for participants. Our cooperation will constitue an extended network, which shall allow us to have access to a wider pool of mentors to better face the participants needs.*
Activity description	*A working meeting took place on 25.05.2017 to present to all the stakeholders (cf Recipients) the aim of FabLabNet and especially of the Pilot 3. The role and expectation of each participant was discussed and the schedule was roughly set up. Will now follow some individual meetings (until September 2017) with each of them to go more deeply into the description of the activity to carry out with this stakeholder.*
Expected results	- *Specification of the role of each part* - *Specification of training content* - *Setting a precise schedule of workshop and working meetings*
Good Practice (in the meaning of D.T1.3.1)	*We believe it is indeed a great -and replicable- way to engage a new local partners:* - *Choosing a specific person from another organization, for which we know there are common interests and motivations* - *Inviting them to a working meeting, where we express a challenge and each participant bring some ideas of solutions* - *Support on writing a common document which synthetize these solutions* - *Support on the implementation of the solution(s)*

-	*We rely on the good will and schedule of a few persons from other organizations.*
Time frame	*This preparation phase of the pilot will last from March 2017 until September 2017* *Focus group meeting: 25.05.2017* *Fine tuning the activities: 31.09.2017* *Training of the teachers: 07.2017 – 12.2017* *Selection of external mentor and materials: 15.12.2017* ***Teaching program: 01.10.2017 - 01.06.2017***

Action Title	***Implementation phase***
Recipients of the Action	***Local partners:*** *Same than anticipation phase + other partners to help us finding the most appropriate mentors* - *Kristjan Tkalec from RampaLab and BioTehna (other FabLabs in Ljubljana).* - *Karin Košak and Deja Muck from faculty from Applied science and Engineering* - *The company INTRI d.o.o., specialized in 3D modeling* - *Other organization or companies, or free-lancers according to the needs of the selected projects* ***Pupils from two classrooms (10-14 years old):*** ***Adults selected by Cene Štupar***
Activity description	*For each of the three institutions involved (Primary school Cene Štupar, Primary School Log Dragomer, JZ Cene Štupar) RogLab will perfom up to 7 workshops concerning specific fabrication technologies. Between each workshop, teachers from these institutions, will continue the work started during the RogLab 's workshop.*
Expected results	- *Several finalized objects produced with the help of RogLab technologies and knowledges.* - *Developing new technical skills for all the pupils* - *Promoting RogLab activities among school teachers, teachers for adults, learning teacher and pupils.*
Good Practice (in the meaning of D.T1.3.1)	*We believe it is a great way to engage young pupils: learning by doing a project at school. The project is chosen by them or by their teacher.*
-	*We depend on school calendar and limitation in term of teaching hours. Such program has to be plan at least a year in advance.*
Time frame	*01.2018 - 06.2018*

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INDIVIDUAL PILOT PLAN

D.T.2.1.3 Version 1

Pilot Plans prepared by each Partner -
PP8 FABLAB BRATISLAVA 05 2017

T2	**Demonstrating the role of FabLabs in the Central European innovation ecosystem**
A.T2.1	Preparation for Pilots
D.T2.1.3	Individual Pilot Plans prepared for each Partner

Action Title	**Pilot 2 Connecting to business:** **Cycle of workshops to boost the business readiness of makers**
Recipients of the Action	• Makers who have early stage prototypes • Students who would like to get knowledge in how to bring their products to markets • Early stage business – start ups and spin off companies
Activity description	• The cycle of workshops is composed of 5 individual workshops, each workshops takes 2-3 hours and is organized once a week. • Each workshop will have a different topic which will focus on basic elements of bringing the product to the market. • The participants will be selected based on their applications where besides others, they will need to shortly describe the prototype they have already, or they want to develop with help of fablab. • Following the most promising prototypes will join the workshops which will also contain training elements • After the finalization of the workshop, participants can sign up for the international events in Bratislava and Budapest, based on previous assessment of their prototypes and business readiness by international project jury. Topic of workshops: 1st week: IPR 2nd week: How to develop a manufacturing plan for digital fabrication 3rd week: How to develop a business plan 4th week: Training of presentation and communication in front of an investor 5th week: How to develop a technology plan During the workshop cycle the participants can consult their prototypes and their development from digital fabrication point to fablab employees.

Expected results	The result of cycle of workshops is that the participants will get knowledge on basic elements needed to bring their products to the market from point of digital fabrication view. The importance and ways of IP protection will be explained, as well as the basic postulates of manufacturing and technology plans. During sessions devoted to business plan and communication participants will receive knowledge on how to develop the basic documents for their businesses, including topics such are definition of target market, receive knowledge on methodologies for key business documents such are business plan containing marketing plan, financial plan, etc., and whom to get in touch to for consultations to develop the business further. Based on knowledge gained the participants can join the international events in Bratislava or Budapest in case the transnational jury composed from project partners will recommend so, and win an place at international event.
Time frame	***From March 2018 to April 2018***

Action Title	**Course System Thinking in IT** prepared in cooperation with: doc. Ing. Tibor Krajčovič, PhD. Faculty of Informatics and Information Technologies STU in Bratislava , http://www.fiit.stuba.sk Ing. Roman Kazička, CSc, NGO Agnicoli , http://www.agnicoli.org
Recipients of the Action	Students of Faculty of Informatics and Information Technologies STU in Bratislava
Activity description	After this course the student should understand the terms: Enterprise Architecture, TOGAF, ITIL, Metadata Based Management systems, Basic of Project Management, Principles of team work based on Win/Win Strategy, IoT, Industry 4.0 and much more... All students will have the opportunity to work in FABLAB CVTI Area
Expected results	Graduates should understand the systems that include IT solutions at 3 basic levels - at the level of business processes, systems, and technology. Systematic approach to problem solving. Ability to consider the entire life cycle of solutions in terms of business and technical solutions. By passing the subject the student acquires basic knowledge about digital production technologies, how to generate computer code and change to physical objects. The development of digital production technologies is based on creating codes that are not only about describing things, but also about making them. Students will learn how to transform the idea, intention, prototype project, and document their ideas through practical experience with digital production tools. They learn about the different code formats and their conversion to physical objects. In addition to theoretical knowledge, students will also gain practical skills: how to use the rapid production prototyping of Fab Lab, how to use CAD modeling software, a vinyl cutter, laser cutter, 3D printer, 3D scan and print, CNC cutter, Manufacture of printed circuit boards.

Good Practice **(in the meaning of D.T1.3.1)**	The experience of this course can also be used in cooperation with other universities that are interested in
Time frame	Winter semester 2017 or summer semester 2018: *From September 2017 to January 2018 or from February 2018 to May 2018*

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INDIVIDUAL PILOT PLAN

D.T.2.1.3	Individual	Pilot	Plan	Version 1
PP9 HR				07 2017

T2	**Demonstrating the role of FabLabs in the Central European innovation ecosystem**
A.T2.1	Preparation for Pilots
D.T2.1.3	Individual Pilot Plans prepared for each Partner

Action Title	Pilot action 2 - Connecting to Business
Recipients of the Action	The recipients of the action are individual users and teams with developed idea and POC intended to be developed as a product for the market.
Activity description	Pilot 2 is open and early stage potential startup teams. We focus on high growth potential, scalable businesses with existing traction. Team spirit is desirable but not required. All topics in call should be in line with national S3 strategy. Pilot 2 targeting the next generation of innovators and creators using digital technologies, preferable digital fabrication as part of their product development. Pilot is organized with two stage selection process. Most promising and prototyped ides with the great potential can qualify to a second round of Pilot2. Other future opportunities include easy-access to accelerator programs in the Central Europe Region, finding investor funding and raising awareness to your project as part of FabLabNet project and within FabLab.hr promotional capabilities including Makers Fairs around Europe. We can help participants after Pilot 2 to move forward and turn your idea to a long-lasting success. Pilot 2 supports mentoring and training of business development and entrepreneurship within the FabLab and the FabLab community. By providing a supportive business environment to assist entrepreneurs to grow and develop small companies. One method of doing this is through expanding support for business incubation. We can enable participants access to business incubation institutions on national level. Business mentoring and support will be done with support of leading Pilot Partner FabLab Budapest and Mr. David Pap who has business background and great experience on European level, but also leading FabLab Budapest. Pilot aims are to provide access to facilities and resources and collaborating on events and initiatives with other business incubators. The overriding aim is to extend the network cooperation with local business incubator, companies, deliver an effective national capacity for digital manufacturing ensure shared best practice. What we offer: - Infrastructure that participants are able to use to build and develop - Space where participants can use any equipment we offer (3D

	printers, large scale laser cutter, CNC router and many others) - Dynamic workflow where sharing and helping is essential and support of our partners from our local ecosystem - Arrange use of equipment from other partners on project which is not available in our space - Test and measurement environment - International network that participants can reach out to - Community support for time consuming development task - Exhibition opportunity that participants can use to present their project - Use communication channels and events participation for promoting product developed - Help to create product business canvas with stakeholders involvement - *Diverse business support offering, including business planning and strategy, IP protection and exploitation, financial management, marketing and market entry strategies; strategic opportunities for investor presentations; an individual coaching and mentoring opportunities (with support of Pilot 2 leading partner) to demonstrate FabLabNet capabilities.*
Expected results	On national level, as part of Pilot 2, we expect at least 2 qualified application in second round of overall FabLabNet supported projects. This would mean two fully developed business plans with advanced staged product development. Mature plans then will be presented at Fab Business Events in Budapest & Bratislava, and best project would have opportunity to have pitch at TechFest Munich in June 2018.
Good Practice (in the meaning of D.T1.3.1)	There are 2 Good Practices we can refer to: - collaboration with young innovator Albert Gajšak, maker of **Makerbuino**, who established CircuitMess Ltd. in June 2017 after success Kickstarter campaign. - **HUB_S Innovative Spaces Design Concept for Urban Revitalisatio**n which is undergoing in collaboration with Faculty of Architecture University of Zagreb, but also similar spaces on national level based on FabLab philosophy and FabLab Charter, targeting entrepreneurship, but also education and local community.
Problems encountered	At this moment, potential problems might be low interest or high demands for applicants, or low quality of applications. To avoid this we will try to communicate proactively and engage potential participants to apply, and prepare high quality application. In case some of proposals are not in line with S3, they can be less validated by jury related to similar projects in line with S3.
Time frame	***From November 2017 to May 2018***

Action Title	**Pilot action 3 - Connecting to Education**
Recipients of the Action	Pupils in primary schools (as part of Pilot), students and teachers from all education institutions, companies interested in digital fabrication processes, local communities and different interest groups (disabled, unemployed)
Activity description	Development and implementation of 3 learning modules targeted to teenagers (10-15 y) as part of Pilot 2, but also (intermediate (16-18) and professional (>18). These learning modules will be based on fablab existing experiences in schools, know-how on digital fabrication and the knowledge acquired and developed through project knowledge exchange visits and other exchange visits and meeting. Associated partner, primary school Borovje, would be main institution to perform and test developed learning modules. To compare pilot implementation, depending on interest, pilot activities would be performed also in primary school Lovro pl. Matačić (original associated partner). Independently from Pilot 3 activities, will be test learning modules with selected: - intermediate youngs (16-18) from secondary schools - young professionals will be selected among the FabLab members, and with a Call on social media
Expected results	Participants will learn basics or advanced skills of digital fabrication, but also robotics, programming, automation, which can be usable for personal or institutional projects. Through these activities we will promote the role of FabLab as a facilitator for the adoption of new technologies (teens and intermediate activities), and as a trustable partner for the integration of new technologies with other stakeholders.
Good Practice (in the meaning of D.T1.3.1)	There are 2 Good Practices we refer to: - the **Inclusive digital fabrication workshops**, a cooperation on curriculum development for kids with special needs, Slava Raškaj Educational Centre in Zagreb. - the 3D Printing Open Days, annual event to engage students, organized with Faculty of Architecture University of Zagreb.
Problems encountered	There are some challenges related to understanding or complexity of planned learning modules, but to overcome or suppress this, testing pilot activity was performed both with smaller kids in school, and also for teachers of technical courses in primary schools, to demonstrate, engage but also to get feedback and opinion from first hand.
Time frame	***From November 2017 – May 2018***

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INDIVIDUAL PILOT PLAN

Deliverable D.T.2.1.3
Individual Pilot Plans prepared for each Partner
PP10 DE

Version 1.0
11 2017

T2	**Demonstrating the role of FabLabs in the Central European innovation ecosystem**
A.T2.1	Preparation for Pilots
D.T2.1.3	Individual Pilot Plans prepared for each Partner

Action Title	**Pilot Action 2 - Connecting to Business**
Recipients of the Action	This Pilot Action will be made for early stage startup teams. The focus will be on teams which have already an idea of high growth potential, digital and scalable businesses.
Activity description	PP10-DE is in charge of Pilot Action 2 “Connecting to Business” as one of the participating project partners. The general plan for this Pilot is to find national startup teams (minimum 2), selected by an international jury with the aim to foster their businesses. Our personal plan is to set up a tailored menthoring program, the winning teams will absolve. Our program will contain a visit in Bratislava and/or Budapest and at Pioneer Festival/Vienna or TechFest/Munich, where teams will meet real investors. All efforts will be in line with national/bavarian S3 strategy “Bayern Digital II” **Menthoring program – focused on production enhancement:** While our mother company UnternehmerTUM (located in the same building like ours) has a strong focus on startup business fostering and developing and even other PPs want to support their Pilot-Action-2 teams by teaching business skills, we - as MakerSpace - want to set a special focus on the product development aspect of sellable products. The idea is to assist the startup teams, bringing their products from the prototyping level to a (mass-)production level. In our opinion this would have an enormous positive effect on enhancing the business opportunities of startups. On the other hand this could prove the rule FabLabs can play in the innovation process. What we offer: - An over 2 Million Euro of equipment Hi-Tech prototyping Studio with laser cutting, 3D printing and electronic areas as well as metal, wood and sewing workshops - Experts and experience in even both prototyping AND production - Inside the UnternehmerTUM network, participants will have access to experts from Europe’s biggest startup incubator. - strategic opportunities for investor presentations - Dynamic workflow where sharing and helping is essential - International network that participants can reach out to - Inspiring community that participants can always ask from - Exhibition opportunity that participants can use to present their project - Media exposure that they can use to make their work viral - Access to partners and investors

Expected results	Pilot 2 is considered as an acceleration program to scale up new products to market. We expect 10 fully developed business plans with advance staged product development. Mature plans then will be presented at Fab Business Events in Budapest & Bratislava.
Good Practice (in the meaning of D.T1.3.1)	It is our aim to set up especially the menthoring program to be a "Good Practice" in PP10-MakerSpace in future. In addition we strongly believe that the format and the menthoring program of this pilot action could become a shareable "Good Practice" and could be adopted by other FabLabs.
Problems encountered	Problems could rise by either a low number or low quality of applicants. We will avoid these problems by a proactive communication in the really strong Munich's Entrepreneurs network and the UnternehmerTUM network. Even our community partners will be helpful in finding suitable teams.
Time frame	***From November 2017 – June 2018***