

D.T2.1.1/ Pilot Actions Concept

Joint Concept for Pilot Actions

Version 5.4
12 2017





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1. Prototyping new knowledge: The pilot actions Joint Concept

Summary table of the 3 types of Pilot and the related deliverables in the Application Form		
Pilot 1 (CZ, IT, PL, SI)	Pilot 2 (HU, HR, IT, SK, DE)	Pilot 3 (AT, CZ, HR, IT, PL, SI, SK)
DT 212 Compile Ecosystem Database		
DT213 Individual Pilot Plans - co-designed with stakeholders		
DT214 Memorandum of Understanding		
<ul style="list-style-type: none"> • DT221 Concept for Mentoring program, selection of mentors and the call • DT222&DC43 Launch the Call for Applicants (selection criteria, application form) and the communication campaign DT222 Select Participants/People • DT325 Written notification for undertakings • DT223&DT224 Implement mentoring programme and practice prototyping DT251 Pilot cross-visit in Trento (10/2017) • DT225 Select prototypes (12/2017), which feed into Pilot 2 • DT253 PP level Pilot Report to feed in 	<ul style="list-style-type: none"> • DT231 Transnational Jury established, Rules of Operation elaborated • DT232&DC43 Launch the call (application form and selection criteria) and the communication campaign • DT232 Selection of Prototypes (12/2017) • DT325 Written notification for undertakings • DT233 Develop Plans for minimum 10 prototypes • DT234 Fab Business events organised (04 - 05/2018) • DT251 Pilot cross-visit to Ljubljana (TBC, 09/2018) • DT253 PP level Pilot Report 	<ul style="list-style-type: none"> • DT241 A joint digital catalogue of training programmes DT242 A portfolio of educational / digital activities (structuring catalogue of trainings by thematic areas and target groups and knowledge levels) • DT243&DC43 Launch the call for testing and communication campaign (10/2017) • DT2347 PPs Testing selected training activities locally • DT251 Pilot cross-visit in Vienna • DT253 Evaluation of the training activities with standardized questionnaire for participants and partners (05/2018)
DT252 9 Partner level Pilot Reports		
DT 253 Joint Evaluation Report		
DT332 Revised MoUs		
DT332-334 Roll-out Strategies		



2. Joint Concept for the harmonised delivery of partner level pilot programmes

1. One of the main objectives of implementing the three types of pilot is to validate those newly developed FabLab services ie mentoring programme, business coaching programme and a modular training portfolio, which are based on project partners' individual Innovation Potential and Specialization Strategies. Partner FabLabs long-term and result oriented strategies took into consideration higher level (regional and/or national) smart specialization strategies (S3) and defined for themselves which innovation potentials to build on in order to further specialize in line with priorities set for local economies.
2. The other aim of the delivery of pilots is to extend the reputation and the capacities of Project Partners (PPs) fab labs in and for their local innovation ecosystem. Fab labs (fabrication laboratory) are workshops offering (personal) digital fabrication and are open to anyone and everyone who has an interest in making things. In the framework of the 3 types of pilots, PPs fab lab's services supporting access to digital fabrication/transformation is going to be tested. Pilots aim at the 3 main target groups of PPs fab labs:
 - a. community / people (meaning everyone in the community: pupils from elementary schools to university students, amateur makers, professionals trying to solve a problem related to their job (like shepherds in Norway have used their FabLab to create a system for tracking sheep using their mobile phones), etc)
 - b. businesses (from entrepreneurs to established businesses)
 - c. formal education (from primary schools to universities and lifelong trainings)
3. The implementation of the pilots focuses both on the process (defining the mentors, coaches, launch the call and the campaign, organise selection of participants, selection of courses, etc.) and the content (mentoring and coaching programme, portfolio of the educational activities).
4. Project partners implementing the different pilots agreed to cooperating in the design and involving also all the relevant stakeholders, primarily the ones they signed the Memorandum of Understanding with.
5. Links will be created between the 3 pilots: promising prototypes from pilot1 will be considered in pilot2, some modules of both the mentoring programme and the coaching programme could be made part of the customized modular training portfolio, i.e. pilot3
6. To provide quality service for the participants of the Pilots (who later turn to be users/customers of the fab labs) state of the art equipment is going to be purchased by some of the PPs.



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7. Pilots are considered as tests, however with the ultimate aim of repeatability and adaptability, so that they contribute to the sustainability of fab labs, as part of the innovation ecosystem and at the same time make the CE_FabLab_Network stronger too.
 8. Lessons learnt from Pilots - including the experiences gained at the cross visits as well - will be utilized in improved services and the Roll-out Strategies.



3.PPs common understanding on the 3 types of pilots:

- The aim of Pilot 1 is to validate a new Fab Lab service, the mentoring programme targeting the local communities. In the pilot action 1 a mixed community of local participants, makers, young people and entrepreneurs-to-be will be called around the FabLab to explore and define local issues limiting or impeding innovation, by producing a set of prototypes through a mentoring program. The result of this pilot will be the activation of some members of the local innovation ecosystem that, by co-designing and co-developing a set of enhanced prototypes / technological solutions related to local issues, will demonstrate the networking and community creation capacity of the PPs FabLab.
- In the course of pilot 2, enhanced prototypes of Pilot 1 and others, applying through an open call for prototypes are going to be facilitated through a business coaching program, which aims at scaling up new products by developing feasible business, technology and manufacturing plans for the selected prototypes and enable them to compete on the Central European Market of makers through a bottom up development process organised by PPs FabLabs.
- During pilot 3, the foundations of the European School of Makers will be set by jointly compiling a modular training portfolio which will integrate and offer to a wide community of stakeholders (primary/secondary/vocational schools, universities and lifelong training institutions) a set of learning modules further developed and customized, based on fablab know-how on digital fabrication and the knowledge acquired and developed through pilot 1 and 2.



4. Pilot Action 1: FabLabs Connecting to Communities through the Mentoring Programme

Pilot Action 1 will begin with the design of the mentoring program, implemented with following 4 steps:

1. A call, co-designed by key stakeholders, launched to invite people for participating in the mentoring programme which is co-designed by PPs fab labs and selected mentors and those APs which signed the MoU's;
2. To select participants answering the call and to make an agreement with them about their involvement in the pilot and to provide them with the written notification about the service granted under the de minimis regime;
3. A mentoring program implemented based on selected participants' needs and skills to learn prototyping
4. A set of guidelines emerging from pilot action to schematize the format implemented in order to making it repeatable as a new service of PPs fab labs.

1. A co-designed call for people based on the mentoring programme and specific practical learning needs on prototyping

Building upon "S3 consultations" and "Mapping Local Ecosystem Challenges survey" findings, each project partner has produced a strategic paper able to highlight individual goals to be reached, among other measures, design new services such as the mentoring programme tested through the pilot action 1 implementation. Based on this locally-defined strategy, each project partner will co-design together with a selected amount of stakeholders a mentoring program targeted to community needs. The mentoring program will be carried out with a strong connection with both the Community and Industry needs, by using as a real case-study a set of challenges. These challenges will help the Community talents, selected via a call for people, to learn prototyping and to develop Ideas to prototypes for manufacturing. Fundamental topics for the Mentoring programs can be Prototype design and testing, Prototypes Technical matters (soldering, sewing, 3D modelling...), oriented to the prototype development with process Design and project Development.

A suitable approach for defining the main elements of the call for people is to set at a local level a co-design session together with the most suitable Pilot 1 stakeholders through which defining:

-**Digital Transformation Local Challenges** that can be faced through a FabLab-based mentoring program delivered to a community of makers (and subject of the call for people). The prototypes are oriented to solve the challenges.

- **Individual Memorandum of Understanding** to each pilot action 1 stakeholder (can be one of those of DT214) - Associated partner included - in which will be declared all specific commitments and involvements of each stakeholder within the pilot action 1.



Co-design of the call for participants and the mentoring programme. Selection of mentors.

- **Selection criteria for participants of the mentoring programme:** ideal profiles of call for people winners

2. Selection of participants for the mentoring programme

After the co-design session, the call for people will be completed and published online and advertised during the summer 2017 at a local and/or regional level. In the call the selection criteria and the terms of participation will be sufficiently detailed.

The number of participants for each local mentoring program will be between 4 to 20 people, according to the complexity of the program and to the capacity and number of selected mentors. Some partners will perform the mentoring program using internal experts.

3. Mentoring program implemented based on selected participants' learning needs and skills on prototyping

From June to September 2017 the mentoring program and the mentors will be defined. In June each project partner will deliver a first draft concept for it. Following two additional meetings between LP and PPs involved (SI, PL, CZ) in pilot 1 issues, such as the type of mentors, as well as the mentoring program schedule, modules and details will be defined locally by the participating project partners together with the stakeholders involved. Local adaptation of the planned 4-months period for practicing prototyping and rapid prototyping can be done, in order to facilitate the participation of the Community.

4. A new service for Fab Labs developed

The aim of Pilot Action 1 is to test a specific approach to a new fab lab service as well as to test the cooperation between Fab Labs and Community members, stakeholders, local partnerships, associated partners, and others involved in the pilot1 implementation. The Pilot Action is a test bed for its future repetition and further improvement. For this reason, it will be crucial to be able to schematize the Mentoring Programme and its actions in order to make it repeatable not only for PPs but also for other FabLabs and other organizations devoted to innovation and digital transformation. Mentoring Programme as a tool will be integrated into PPs Roll-out strategies.

During pilot action1 reporting DT2.2.4 all schemes implemented by project partners will be collected by the Pilot Action leader IT and addressed toward a public online publications that could be provisionally be titled as "A transnational talent-nurturing-centered project-based mentoring program for digital transformation". This joint publication can lead to further replication of the service.

Expected results

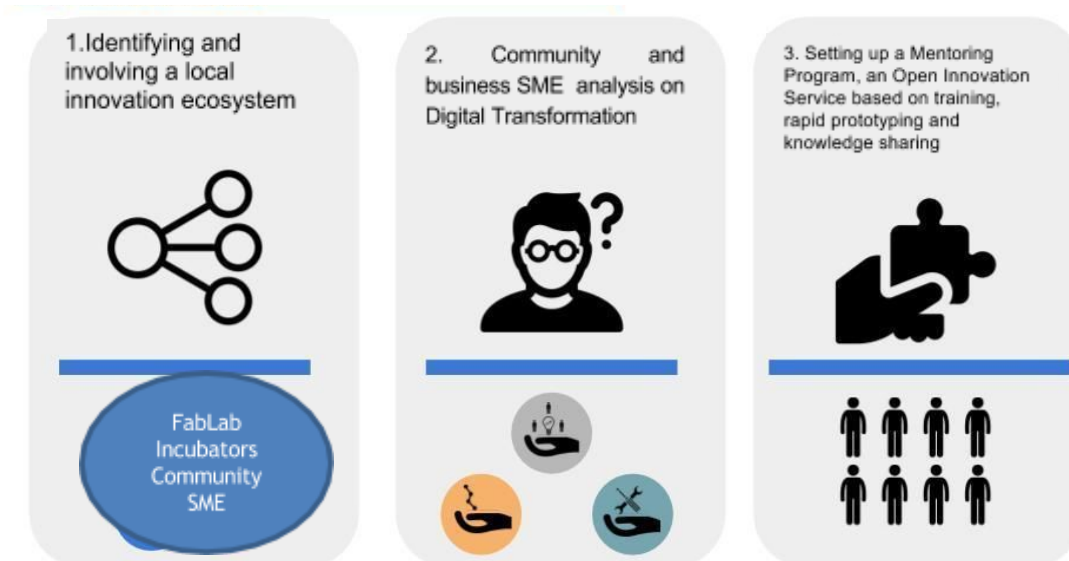
The expected results are an enhancement of the FabLab services targeted to Community capabilities in rapid prototyping and bringing ideas from the designing conceptual phase to real prototypes or business models. A selected pool of participants will benefit from the



mentoring programs, acting as the pioneer group for the future replica of the program, which is expected to engage yearly a wider audience. People from local communities will be in this way engaged in a making process as a source of grass-root innovation and a possible seed for the future business or start-up creation.

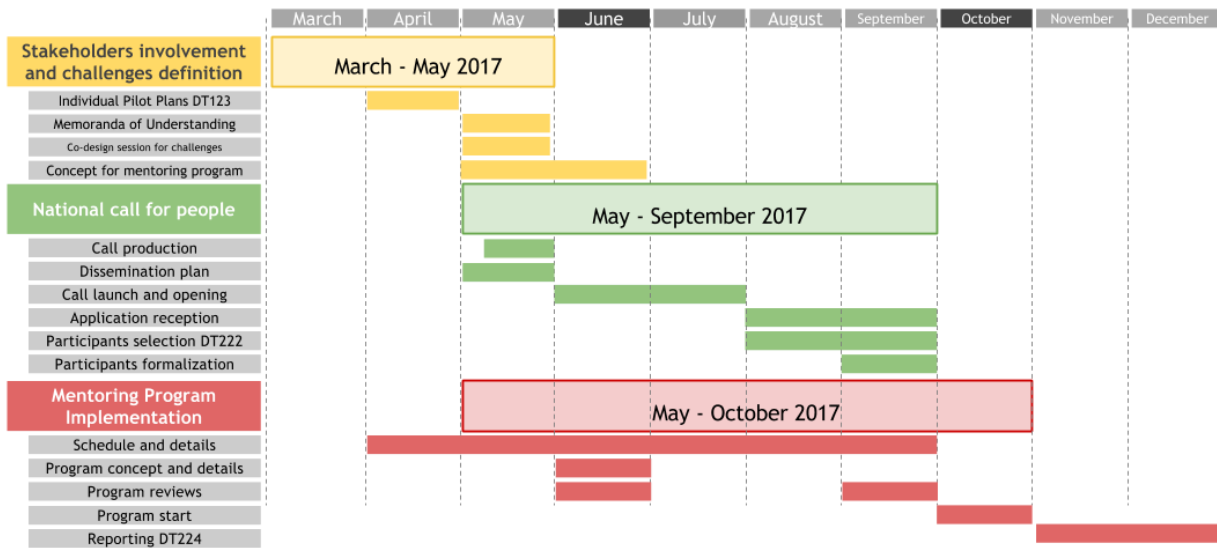
The promotion of the program itself through press and social media, as foreseen in the Communication Strategy, the personal stories of the talents involved in the Mentoring Program, the strong connection with the business, industrial and artisanal frameworks will enhance the integration of the FabLab as a key role for promoting innovation within the entire Society, acting Community.

Pilot Action 1 / Connecting to community / Schematic Diagrams





Preliminary GANTT





5. Pilot Action 2: Connecting to Business through the Business Coaching Programme

General description of the pilot

Application Form summary of WPT2 says: “In PILOT type 2, Connecting to Business (HU) projects collected through an open call will be selected by a transnational jury and will be coached by business advisors to grow them into viable Business, Technology or Manufacturing plans. Mature plans are then presented at Fab Business Events in Budapest & Bratislava. After final selection, 4 Plans will be delegated to Pioneers Festival 2017 (Vienna).”

Thematic areas and mission statement

During pilot 2, instead, prototypes from pilot 1 and others from the cities of the 5 Project Partners participating in Pilot 2 will be collected through a call for prototypes in order make already existing projects/prototypes being mentored through a program which goal is to bring technical solutions to be able to compete on the central European market through a bottom up development process.

The concept of the 4th Industrial Revolution has fundamentally changed our society and economy. Industries arose and replaced small-scale workshops and craft studios. Textile and pottery factories were the first to recognize the new dawn, and a new infrastructure of canals and railway lines enabled efficient distribution. It was the transition from industrious to industrial, and the start of a boom for both.

This Pilot provides mentoring and training in the specific field of business development and entrepreneurship within the FabLab and for the FabLab users as well. By providing a supportive business environment the Pilot assists entrepreneurs (start-ups, seeds) to grow and develop into small companies. One method of doing this is through expanding support for business development and incubation, via product and manufacturing plans development.

This Pilot aims to provide access to facilities and resources and collaboration on events and initiatives with other business incubators and stakeholders. The overriding aim is to extend the network cooperation with local business incubator, companies, innovation labs and technology transfer offices, to grow an ecosystemic local and transnational capacity for digital manufacturing also via sharing best practices. The Pilot has a flexible framework to reflect and build upon the varying local offers for business incubation.



What is offered by the Pilot Action 2:

- a diverse business support including business planning and strategy, IP protection and exploitation, financial management, marketing and market entry strategies
- strategic opportunities for investor presentations
- individual coaching and mentoring opportunities
- 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

The Coaching Programme in this Pilot focuses on prototypes with business potential or tech projects with experimental approach. Scope of the prototypes is unrestricted, typically including robotics, healthcare, AR/VR and mixed reality technologies, IoT, DIY media, game design, AI, neural networks. The goal is to help prototypes to turn into products that can be pitched and showcased on Fab Business Event.

Suggested thematic areas are composed on S3 Strategies:

- IOT
- Robotics
- Wearable digitalia
- Architecture
- Renewable energy
- Smart City
- Jewellery design
- Furniture design
- Design
- Healthcare

Who should apply?

Pilot nr.2 is open those early stage startup teams and individual project owners/professionals who have a “promising prototype” to further development. Fab Labs



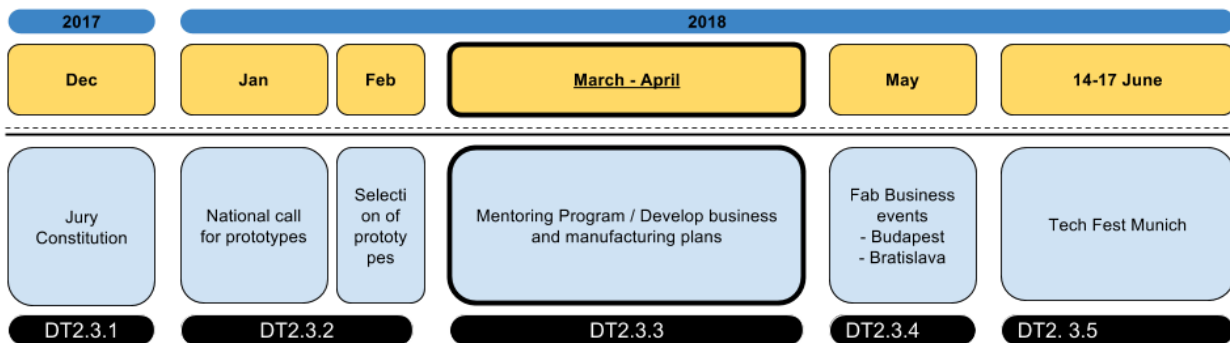
focus on high growth potential, scalable businesses which already have traction and team spirit.

Pilot No.1. focuses on the creation process and the next generation of digital innovators, creatives and technologists. Ideas with the greatest potential can qualify to a second batch in Pilot nr 2. 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.

Eligibility Criteria

Applicants should clearly indicate:

- individuals and teams;
- from Interreg Central program area
- no previous capitalization;
- what manufacturing/prototyping technology they require to implement their idea;
- how the funding will be used to help them to support their project;
- how the applicant will target market;
- level of support from local stakeholders;



Coaching Programme

The Coaching Programme consists of more parts:

- **Coaching on Design to Manufacturing** - how to improve fablab prototyping capacity including design to manufacturing competence in prototyping knowledge a training course on topics related to business development, design-to-manufacturing and prototyping with fablab machinery, manufacturing plans for start-up companies. 2.



The training will last for no more than two months. It aims to prepare participants for developing feasible business, (technology and manufacturing) plans.

- second phase will be delivered locally by the staff members of 5 Fab Labs (HU, DE, HR, IT, SK). Projects mentored during the coaching program will be addressed to the participation to 1 or 2 international events called Fab Business, both scheduled for May 2018 and respectively organized in Bratislava and Budapest in different moments.

All services provided by the Fab Labs are free for the participants of the Coaching Programme.

In Pilot Action 2 small companies, start-ups, inventors participate with a prototype which they, following the coaching programme developed for the FLN project, can turn into a more mature prototype or into a product ripe for external funding.

PP3 HU proposal is to offer 2 major events for each participant of Pilot nr 2 (HU, IT, SK, HR, DE). :

- a training on business development in English in the form of remote sessions (kind of distance learning) held by PP3 Budapest FabLab staff in order to prepare for the elaboration of individual business plans on local level
- a boot camp, organised on the premises of Makerspace (PP10, Munich) as preparation for the elaboration of individual Technology or Manufacturing Plans on local level

Details on Remote sessions:

The business development training consists of 11 modules. Each module will last be constituted by a 35 minute presentation followed by a 10 minutes questions and answers session. The language of the session is English and it will be carried out by PP3 HU staff members.

Details on Boot camp:

A two day program/boot camp aims at participants gaining practical knowledge on manufacturing. The methodology of the boot camp is developed by PP3 HU. The two day programme will be implemented by the staff of PP10 and PP3 in cooperation. The Munich based Makerspace was selected as a venue for two reasons:

- it has state of the art and diverse tools, equipment and machinery
- it has the biggest workshop area among FLN partner organisations

The idea is that each prototype owner, to be selected jointly by the transnational Jury, will travel to Munich and attend the two day boot camp. In partners WPT2/AT2 budget there are no funds earmarked for this purpose, therefore participants will have to pay for their travel,



using low cost bus companies, and accommodation (low cost, in the premises of the Makerspace).

Timetable of activities within DT233:

DT233	01.2018	02.2018	03.2018	04.2018	05.2018	06.2018
Remote sessions - online						
Boot Camp - Munich						
Elaboration of Plans – local coaching programme of individual FabLabs						

IP Protection

Protection of intellectual property rights (patents, trademarks, copyright, trade secrets, etc.) is the responsibility of the selected participants of the Coaching Programme. FabLabNET Connecting to Business Pilot does not require non-disclosure agreements or other obligations for confidentiality from anyone involved in the process.

Pilot Action Process





Remote Lecture process

Lecture No1: What We Now Know

- History of a Corporation
- Startups Are Not Smaller Versions of Large Companies
- Waterfall Development
- SCRUM and AGILE Development
- Customer vs. Product Development
- Entrepreneurial Education

Lecture No2: Business Models and Customer Development

- Value Proposition
- Customer Segments
- Revenue Streams
- Key Resources
- Customer Development Processes
- Minimum Viable Product
- Market Opportunity Analysis

Lecture No3: Value Proposition

- Value Proposition and the Minimum Viable Product
- Customer Archetype
- MVP Physical & Web/Mobile
- Common Mistakes With Value Proposition

Lecture No4.: Customer Segments

- Product Market Fit
- Rank and Day in the Life
- Multiple Customer Segments
- Market Types Introduction: Existing, Resegmented, New, Clone
- Consequences of Not Understanding a Market

Lecture No5.: Channels

- Distribution Channels Overview
- Web Distribution
- Physical Distribution
- Direct Channel Fit
- Indirect Channel Economics
- OEM Channel Economics



Lecture No6.: Customer Relationships

- Paid Demand Creation
- Earned Demand Creation
- Get Physical
- Viral Loop
- Web Customer Acquisition Costs

Lecture No7.: Revenue Models

- How Do You Make Money
- Revenue Streams and Price
- Direct and Ancillary Models
- Common Startup Mistakes
- Market Types and Pricing
- Single and Multiple Side Markets
- Revenue First Companies
- Market Size and Share

Lecture No8.: Partners

- Partner Definition
- Partner Resources
- Partner Types
- Greatest Strategic Alliance
- Joint Business Development

Lecture No9.: Resources, Activities and Costs

- Four Critical Resources
- Financial Resources
- Human Resources
- Qualified Employees and Culture
- **Intellectual Property Overview**

Lecture No10.: Crowdfunding

- What is Crowdfunding
- Crowdfunding platforms
- The risks and rewards of taking advantage of crowdfunding
- Choosing the right crowdfunding platform
- How to create and manage a crowdfunding campaign
- Communication in a crowdfunding campaign

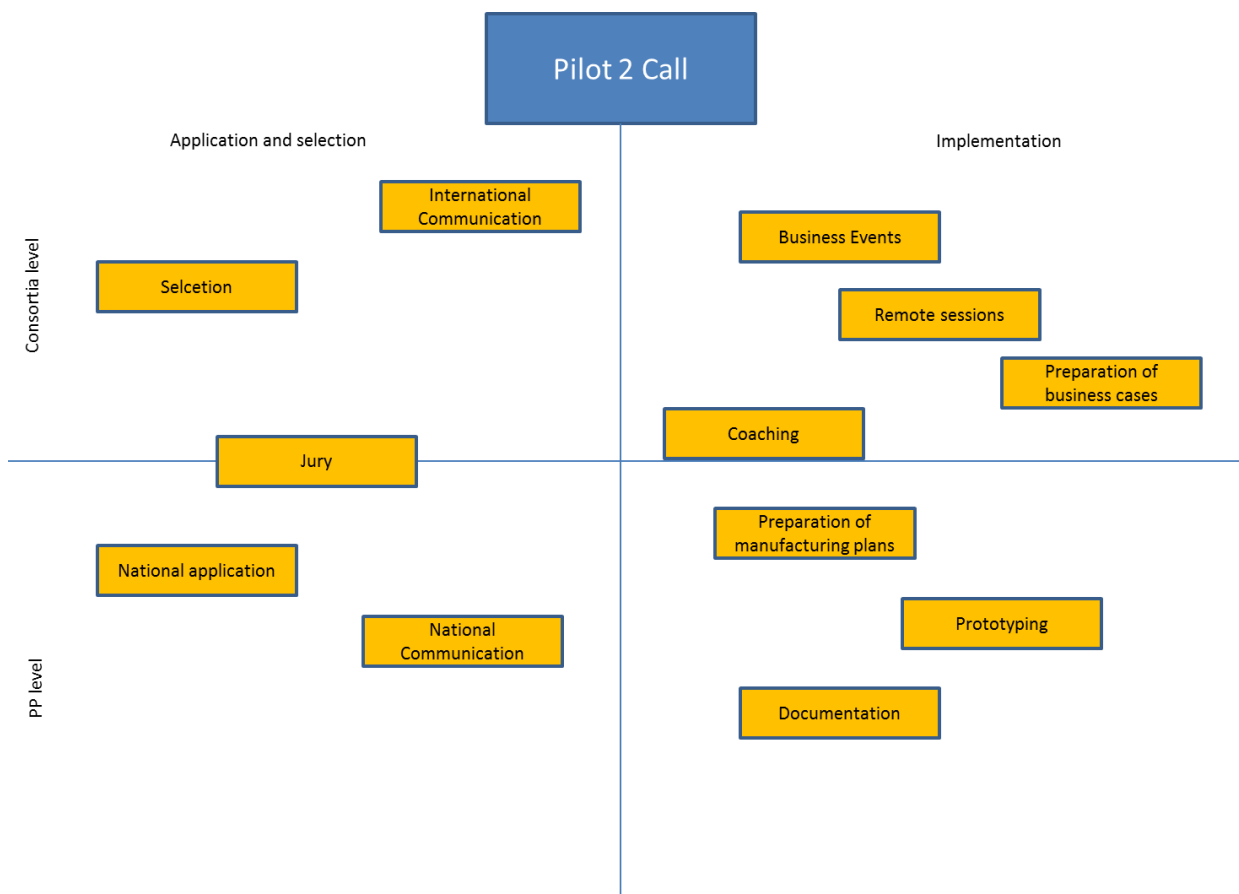
Lecture No11.: Branding



- Importance of branding
- What Should a Brand Do?
- Branding and Understanding Your Customer
- How to Evaluate Your Brand?
- Tools you need to know, need to use

Implementation Plan

Pilot Action 2 / Connecting to Business / Schematic Diagram





Preliminary GANTT

Task	2017.09	2017.10	2017.11	2017.12	2018.01	2018.02	2018.03	2018.04	2018.05	2018.06
Launch of Pilot2										
Call open for application										
National call announcement										
Joint selection of prototypes										
Communication of winners										
Start of remote sessions										
Bootcamp in Munich										
Preparation of business and manufacturing plans locally MENTORING										
Fab Business Event; Bratislava (training for pitching and presentation)										
Fab Business Event; Budapest< DEMO Day (presentation for business stakeholders)										



6. Pilot Action 3: Connecting to education The European School of Makers - Customized Modular Training Portfolio

After the baseline phase and the consultations with their stakeholders, the project partners gathered relevant knowledge about the local needs in their innovation ecosystem and started to establish new connections for future cooperation also regarding the 3 types pilot actions. In the third pilot the participating Fab Labs try to link their services to education and jointly establish a modular training portfolio - a bottom up digital catalogue of customized training modules that first will be tested in the pilot phase on a local level. The catalogue addresses needs of several target groups from schools, universities to professionals. The training portfolio should become a bottom up and continuously evolving catalogue of training modules based on following fundamentals

- Design
- Fabrication
- Business Management

The flexible and modular bottom up approach, that was chosen to follow for the third education pilot, ensures easy adaptability regarding the different local requirements of the seven project partners. All participating labs have their specific knowledge and skills within the community. The bottom up approach applied allows them to customize the modular training portfolio to their individual needs and provide their local knowledge to a much broader public.

Here I miss too points:

- will the lessons from the mentoring and the coaching programme channelled into this training programme?
- how partners will be able to use modules which were elaborated by the others?

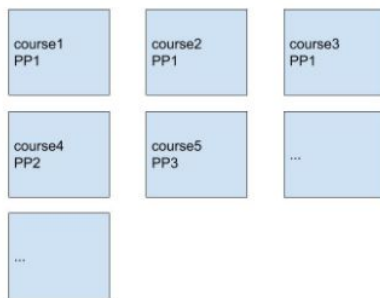


Pilot Action 3 / Connecting to Education / Schematic Diagrams

1. Step - Collecting

DT2.4.1 A joint digital catalogue of training programmes

Timeline May - Sep 2017



This will be the bases for the **joint digital catalogue** with all offered trainings by the project partners.

Informations to be gathered in the course template:

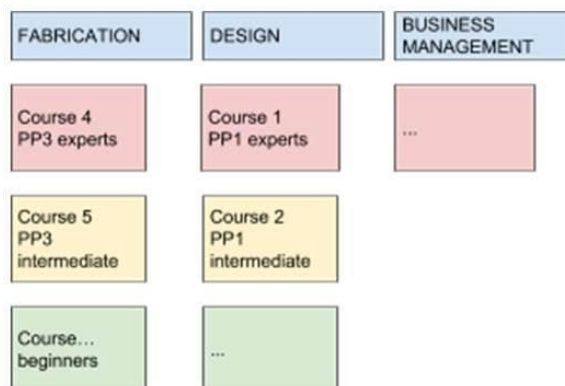
- ? Training contents, activities, description
- ? Target group (incl. age)
- ? Expected learning results
- ? Previous knowledge needed
- ? Training duration
- ? Language
- ? Course material and pictures
- ? On site or distance learning (or combination)
- ? Assessment mode (exam project, presentation, report)
- ? Frequency
- ? Price
- ? Infrastructure needed
- ? Min max attendees
- ? homework
- ? contact person
- ? status: tested / in development

2. Step – Structuring

DT2.4.2 A Portfolio of Digital activities

Timeline Sep – Nov 2017

Based on the digital catalogue the trainings will be structured and organized in a modular system, a training portfolio, e.g. by: thematic areas / target groups/ knowledge levels





3. Step - Testing and evaluating

DT2.4.3 Testing selected activities from portfolio

Timeline Oct 2017 - May 2018



- Testing of min one chosen courses on local level that project partners decided to offer to their target groupe
- Evaluation of the pilot actions with a standardized questionnaire for participants and partners

05/17	06/17	07/17	08/17	09/17
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DT2.4.1. A joint digital Catalogue of training programmes - collected with a template provided my PP2 in Mai

09/17	10/17	11/17
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DT2.4.2 A Portfolio of Educational Activities to be tested by PPs

11/17	12/17	01/18	02/18	03/18	04/18	05/18
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DT2.4.3 Testing selected activities from Portfolio (8 pilot education programme documentations)