

# PILOT ACTION EVALUATION

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DT252 - PP2 - Partner Report on Pilot 3 All  
Female Maker Bootcamp 16.03.-23.03.2018

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## 1. Short overview of the Pilot Action

**Summary: All Female Makers Bootcamp - Digital Fabrication from A-Z in 7 days**

3D printer, Laser Cutter, CNC milling machine and Cutting Plotter - with the right machines and tools everybody can produce and manufacture great things. In only seven days "Fab Lab Bootcamp" offers an ideal introduction into the world of digital fabrication.

The one-week workshops starts with an intensive workshop (Fri. & Sat.), in which we illustrate the basic principles of digital fabrication. With the help of software packages Autodesk Fusion 360, 123D Make, Sculpttris, Vectric Vcarve pro we will create 2D and 3D models on the computer. We will also show you how to operate 3D printer, Laser Cutter, CNC milling machine and Cutting plotter step by step.

### **Event structure/ schedule for attendees:**

Intensive training

Friday 16.03.2018

- Time: 09:00-19:30
- o Lunch break: 12:00-13:00
- o Coffee break: 16:15-16:30
- o Coffee break: 18:30-18:45

Saturday 17.03.2018

- Time: 10:00-19:30
- o Lunch break: 13:30-14:30
- o Coffee break: 17:15-17:30

Sunday

Conceptional free project work. Planning which kind of projects you want to make in the upcoming week.

With Monday the free project work time starts. You have 24h access to the Fab Lab and to all the machines including some reservation hours. In the following times the trainers will be attending and can help you with issues and problems and answer follow up questions. During this time we can also provide you with some materials you want to test or special machines and tools you might need.

#### Monday-Thursday

- Trainers: 17:00-20:00
- Free work time: 00:00-24:00

#### Friday

- Trainers: 13:00-15:30
- Free work time: 00:00-15:30

#### Final presentation 23.03.2018

- Dauer: 16:00-18:00

At the end of the week there will be a presentation in which all participants can share their experiences, present their work and projects they have done during the week and share knowledge.













## 2. Lessons learnt

Generally we got a good feedback on the developed cours structure, the material we provided for the attendees and especially on the concept to provide participants with a basic knowledge in digital fabrication within a few days.

One issue was that some of the participants were used to work with specific software program that we didn't provided in the lab, since we try to work mainly with open source. This was criticized by them. They have to get used to new software and could not always use the one that they have experience with or need to work with both.

### Stop Doing

- Trying to adjust the training for a gender groupe. Maybe there is no need to offer separate courses for female and male participants since it was never brought up during the training and was also not reflected in the feedbacks. So maybe there is no benefit in doing that.

### Keep doing

- Providing individual time for the attendees with the trainers
- Developed course structure and content is well organized
- 24h access to the machines and the possibility to work without any limitations
- Demonstrating materials and use of the machines
- Powerpoints were helpful

### Start doing

- Help the attendees with time management
- Reserve more time on project planning in the conception phase and guide the attendees more on what is realistic and what can be done in that time
- Add more electronics skills

### PROS:

- Possibility to have some dedicated intensive time to work on one project
- Good structure of the materials and logical structures of the content
- Good balance between common training times and individual experiences and practices

### CONS:

- It's not to easy for people who have no specific idea from the beginning what they want to do, to organize and manage projects immediately after the intensive days. Some wished for more time between the intensive training programs and the guided trainers days with free work for evaluat for themselves what they want to work on.

### 3. Outcomes

We had a joined feedback workshop and final presentation at the end of the week in which the participants presented their projects and reflected on their experiences besides the feedback that forms they filled out. During this final presentation we got the feedback that the course structure and concept worked pretty well for them - especially working from 2D to 3D step by step and trying out one machine after the other with a similar file.

For most of the participants the main focus was to learn new skills, but also the ability to prepare files for digital fabrication and use machines like CNC, laser cutter or 3D printer. They learned new tools and software programs. They are now more independent in their work, means they are able to produce e.g. their own tools and adjust them to their individual needs - become more efficient and have a competitive advantage.

The participants told us that they had many “First times” during the week and tried to fit as many different tools, machines, software and materials as possible and really exploit the wide possibilities of digital fabrication for themselves and their individual projects. The different backgrounds of the attendees and the fact that the group is staying together for a week was also experienced very positively.

### 4. Sustainability

We plan to offer the pilot again, but like mentioned above, not for a specific gender group. The bootcamp will be again offered in the second half of this year 2018. The cost will be 345€ for the two days intensive training, trainer hours during the week and 7 days 24h access to the lab. Some reservation hours will be also included in the price for the participants.

We are also trying to get some fundings for future courses, this way we would be able to offer the bootcamp at a lower cost through the funding. This might also be a possibility to attract new target groups for this training program.

In our opinion the training program can be easily implemented and transferred to other Fab Labs in different regions, since it is mainly connected to the machines that are in every lab. The main goal is to provide the participants with a skill set for digital fabrication. The projects that will be realized by the participants are individual and linked to them and not to a region or a lab. If the lab is providing the basic machines of digital fabrication like CNC, laser cutter, vinyl cutter and 3D printer this format can be implemented.