

# FAB FEST

## MakerSpace Experience Day

### Munich 13.09.2018 and 30.11.2018

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DT312 - Report on Fab Fest  
UnternehmerTUM MakerSpace, PP10

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## General information

**Engagement tool: Fab Fest**

**Location: Munich**

**Date: September 13<sup>th</sup>, 2018 and November 30<sup>th</sup>, 2018**

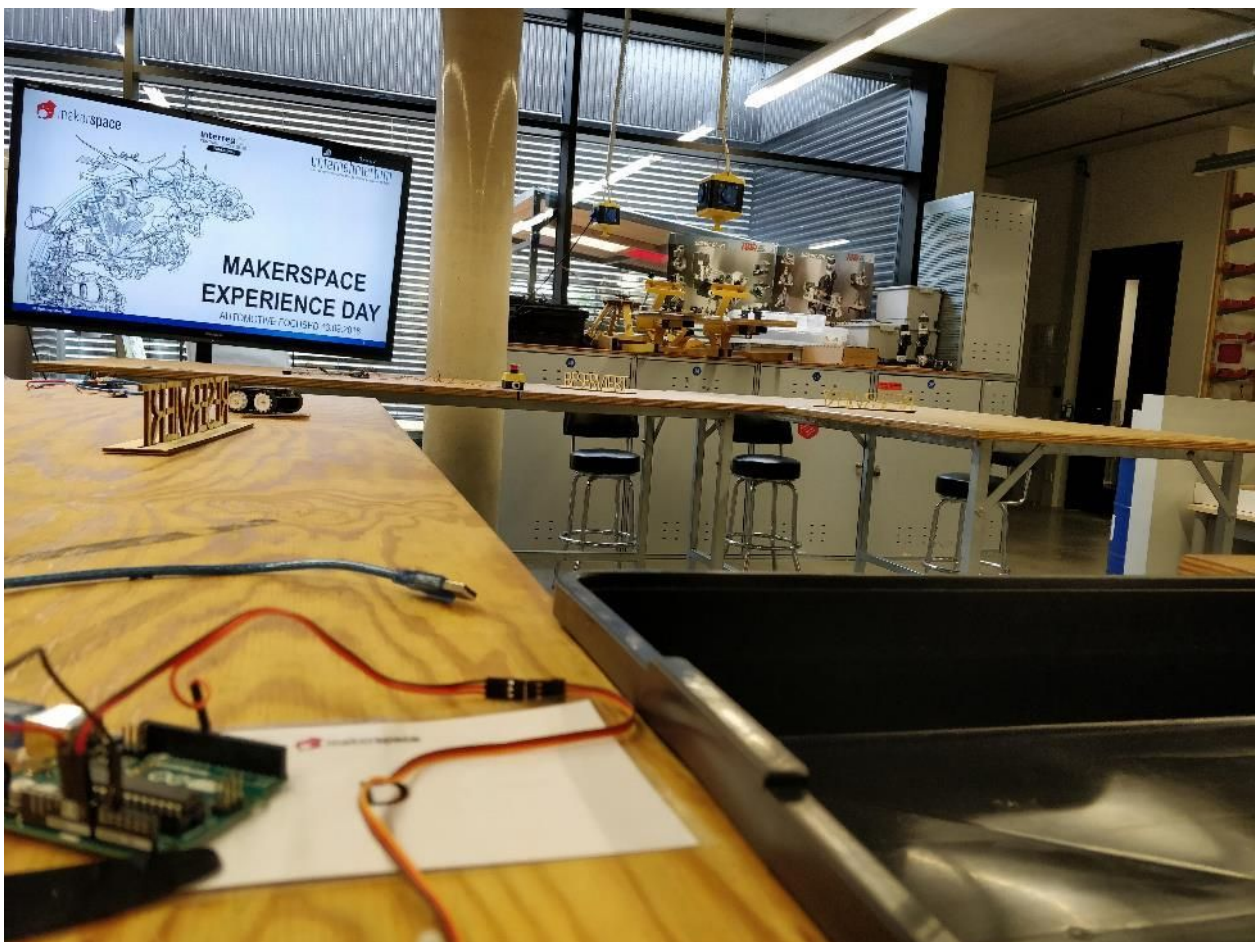
### 1. Concept of Fab Fest Munich

The UnternehmerTUM MakerSpace is a publicly accessible, 1500-square-meter, high-tech workshop that gives members access to machines, tools, software, and a creative community. It offers companies, Do-It-Yourself-Active and Start-Ups a place to realize ideas and innovations in the form of prototypes and small series. Industrial companies and start-up which develop physical and tangible products are the main user group. Based on those statements DT312 Fab Fest at UnternehmerTUM MakerSpace has the aim to connect current UnternehmerTUM MakerSpace members with new once and to excited individuals in general about the offered possibilities in Makerspaces and Fab Labs. To foster networking among the participates and current UnternehmerTUM MakerSpace Members the DT312 Fab Fest is limited to 30 participants. Target participants are employees if industrial companies, which any educational background and age group. Possible participants are invited based on personal contact mainly via phone and email. The duration of one UnternehmerTUM MakerSpace DT312 FabFest is set to half a working day.

DT312 Fab Fest at UnternehmerTUM MakerSpaces focuses on product development because product development is seen as a commonality among the to be invited individuals. Speed and agility are also key in product development. Rapid prototyping can help to quickly build simple models that can be used to visualize, test, discuss, and evolve product ideas. The method can be widely used, and its charm is above all in its simplicity: anyone can use it. In the FabFest, UnternehmerTUM MakerSpace of UnternehmerTUM introduces the topic of rapid prototyping based on the offered possibilities of the facility and experienced coaches give guidance. The participants should also be involved - the focus is on practical teaching of the method, supplemented by best-practice impulses and central information on the methodology.

Agenda and topics covered in the UnternehmerTUM MakerSpace DT312 FabFest:

- Registration, coffee and welcome
- Intro of UnternehmerTUM MakerSpace and FabLabNet Project
- Two best Practices examples of current UnternehmerTUM MakerSpace Users
- Tour through out UnternehmerTUM MakerSpace and short explanation of offered tools and machines
- Break and refreshments
- Hands-on part: Participants have to build stations of a chain reaction machine
- Networking and finale words



Setting up the UnternehmerTUM MakerSpace for the DT312 FabFest, so-called MakerSpace Experience Day



Offerings of a MakerSpace or Fab Labs based on the example of UnternehmerTUM MakerSpace





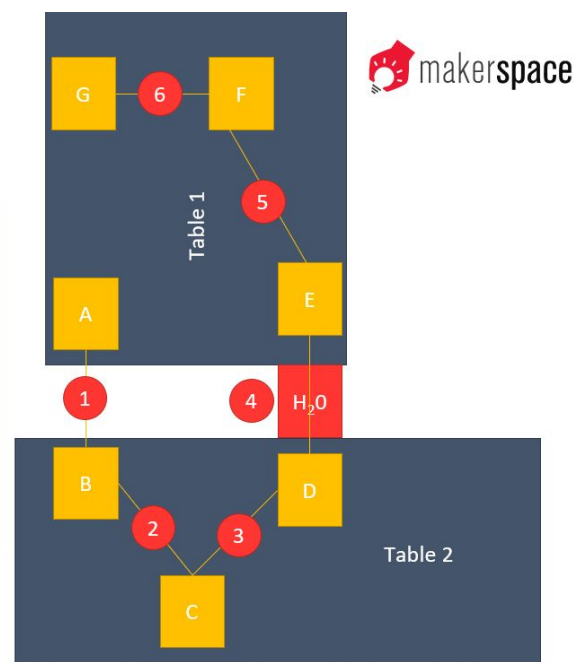
Tour throughout the UnternehmerTUM MakerSpace to discuss possibilities of the facility in general and specific machines and tools in detail. First hints for the hands-on parts are also given.



Best practice examples of current UnternehmerTUM MakerSpace user to inspire and excite participants.

## THE LAYOUT

Pos.	Challenge	Pos.	Transition
1	The Gap	A	Start (Notausschalter)
2	Linienroboter	B	RFID
3	Mindstorms	C	Sound (Klingel)
4	Wasser	D	Windturbine (Fön)
5	Linienroboter	E	Farbsensor
6	Eisenbahn	F	Temperatur (Feuerzeug)
		G	Ende



Description of the layout and challenges of hands-on part. Participants are divided in six team to work on their challenges. Each challenge has specific constrains and material to be used. Three UnternehmerTUM MakerSpace coaches/experts support the six team.



Assignment of participants to the teams.

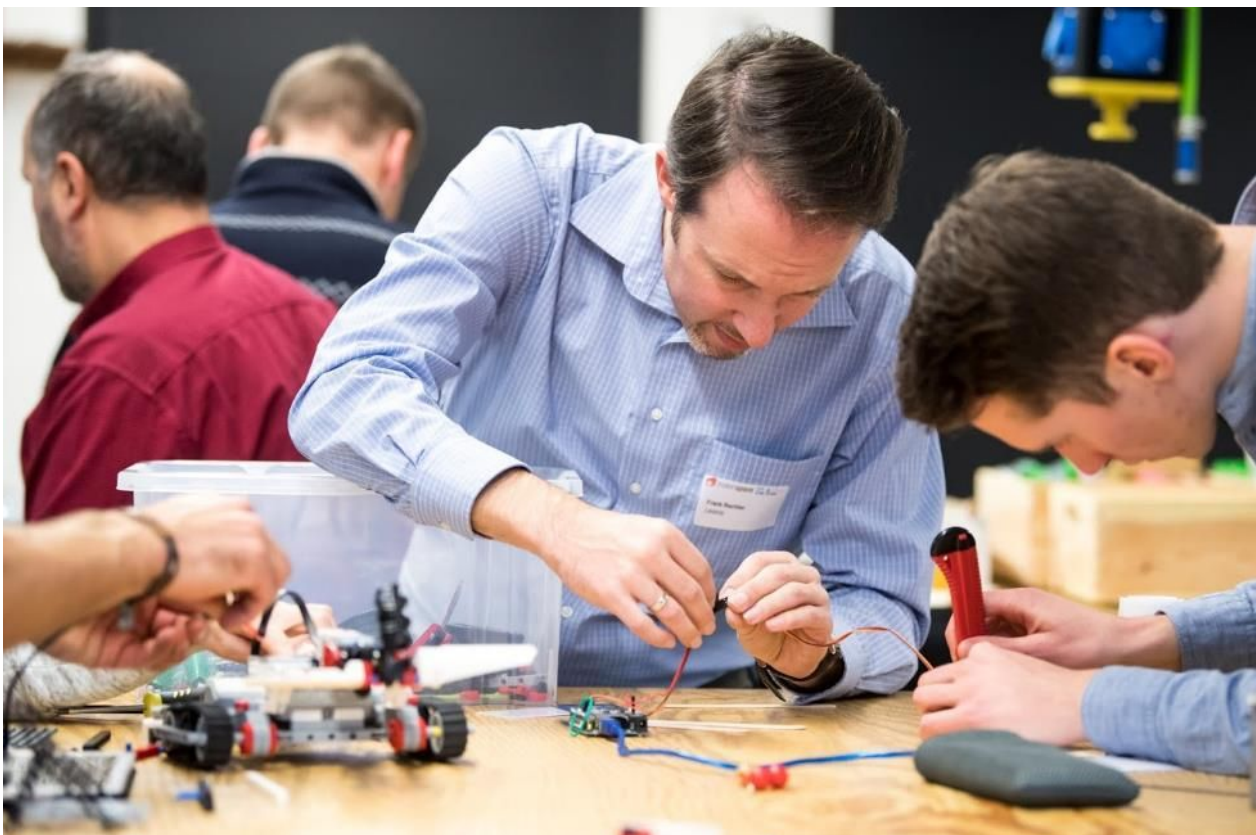


Team work on the chain reaction machine.





Various different materials and tools can be used to solve the challenges





Also, electronic components and Lego Mindstorms are used to solve the challenges





## 2. Lessons learnt

With experience in the organization or co-organization Maker events, in order to encourage individuals in the region to make stuff their own, FabFest within the FabLabNet project gives the opportunity to instrumentalize those learnings and host a new series of events. All in all, three UnternehmerTUM MakerSpace D312 FabFest should be hosted in Autumn 2018 and Spring 2019. Those are our lessons learnt after two FabFest events.

### Stop Doing

- Focus on a specific industry branch. Everyone can be a Maker.

### Keep doing

- Best practice examples and user stories of current UnternehmerTUM MakerSpace members
- Invite participants from different branches and backgrounds to increase networking
- Schedule the event in the afternoon.

### Start doing

- Increase difficulty of selected challenges, time, and range of offered tools and machines to solve the challenges.
- Invite more participants per event to avoid to small groups
- Events on Fridays tend to have lower participants than on other weekdays
- Engage participants to take more workshops after FabFest, e.g. by giveaway vouchers
- Make more media efforts to bring more people to the events

## 3. Outcomes

The participants get with the UnternehmerTUM MakerSpace D312 FabFest performed:

- Awareness of the importance of Makerspaces and Fab Labs for engineering through best practices
- Get to know and experience the Makerspaces and Fab Labs and its possibilities
- Practical introduction to new methods from the start-up environment such as "Rapid Prototyping", "Design Thinking" or "User Experience"
- Ability to turn abstract ideas into real prototypes and concrete solutions
- Getting to know the various iterative prototyping phases and directly implementing a hardware prototype in Makerspaces and Fab Labs
- Learn to understand product and society trends "Individualization" and "Do-it-yourself" in implementation: "Democratization of the means of production"
- Agile methods, product design and customer focus



- Education and training in a new guise, even for small businesses: Sharing knowledge, trying out, Generation Y and Z inspire
- New machine types: Additive Manufacturing and Laser as universal tools and for spare parts production.

## 4. Sustainability and Transferability

Initial investment costs and testing of the event concept are covered within the FabLabNet project which increases the possibilities to host similar events in the near future even though no additional funding exist. Costs per participants can be kept at a very low range. The event concept can also easily be transferred to pupils in school and kids in kindergartens because non-dangerous materials are used.

As described in Joint Methodology DT311 we used for UnternehmerTUM MakerSpace FabFest tools such as Makers Exhibition, Workshop, Talk, and Internal get together for potential Makers.

## 5. Benefits

The overall goal of the UnternehmerTUM MakerSpace FabFest is to excite participants of possibilities offered in Makerspaces and Fab Labs, which is achieved with the described event. All participants conform herein that they are interested in the MakerSpace and Fab Lab concept and would like to spend more time in such a facility. The challenges are always solved with perfection and the chain reaction is completed in the hands-on part of the event in very short time interval. This fact increases also the motivation towards Maker like projects of the participants. In survey we got the feedback that almost all participants were very satisfied or satisfied with the event in general.

Due to the fact that initial investment and learnings are made the UnternehmerTUM MakerSpace Fab Fest concept can be organized and run with minimum financial and personal effort and provides therefore an ideal set-up for other Makerspace and Fab Labs to motivate and excite their local community.