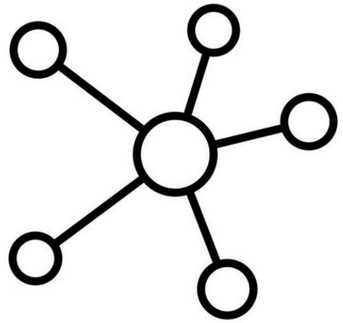
# What is a Fab Lab?

### Fab Lab

Fabrication Laboratory, short: Fab Lab

Initiated by MIT Center of Bits and Atoms

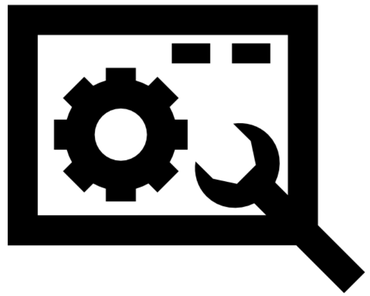
A prototyping platform that stimulates local entrepreneurship, education and innovation.



### Global Network / Common Tools

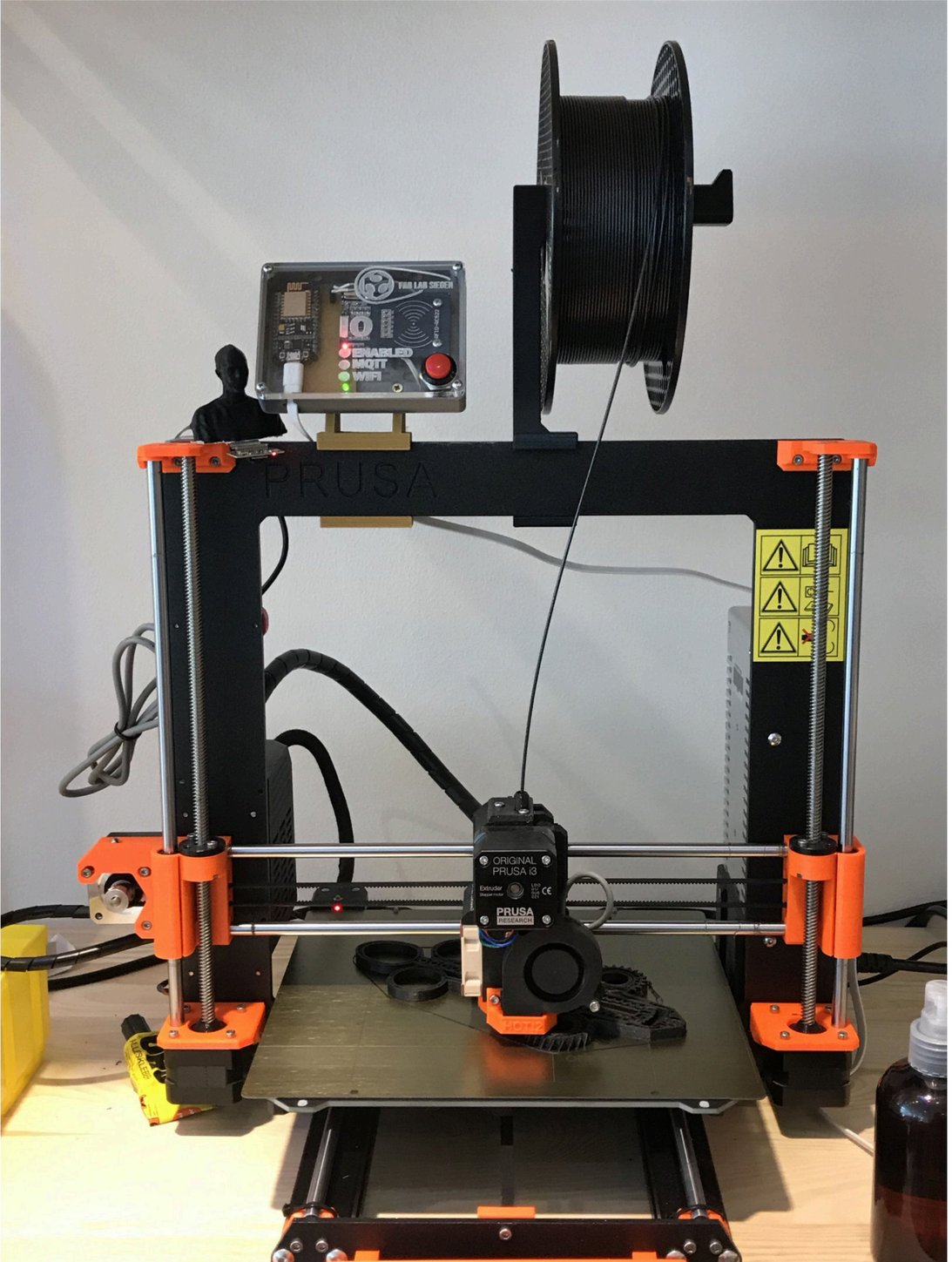
To be a Fab Lab means connecting to a global community of learners, educators, technologists, researchers, makers and innovators- -a knowledge sharing network.

A distributed laboratory for research and invention.



### It’s a type of Makerspace

“Fab Lab” is just a name for a very specific Makerspace.




# Outline

1 **What is a Fab Lab?**

Short Intro to what a “Fab Lab” is. There are specific rules to what can be “Fab Lab” and what can not.

**OPTIONAL: Conditions for Fab Lab Label**

**OPTIONAL: The Fab Charter**

2 **Core Equipment**

Machines, hammers, nuts & bolts.  “Fab Lab” must have these.

**OPTIONAL: Space**

3 **Personnel**

A Fab Lab needs personnel to run. In a place with machines and community, there is need of maintainance of both.

4 **Work Safety**

A Fab Lab must be able to reflect the needs of its host community. Each Fab Lab has to be different to a certain degree.

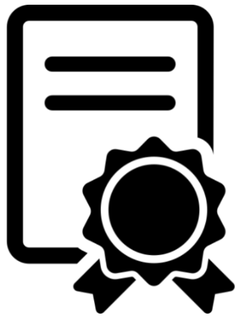
5 **Community Function**

A Fab Lab must be able to reflect the needs of its host community. Each Fab Lab has to be different to a certain degree.

# Conditions for Fab Lab Label?

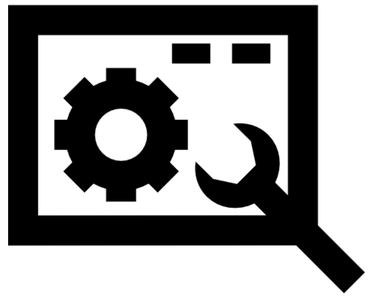
### Public Access

At least for a limited time per week.
For example “open lab day”.



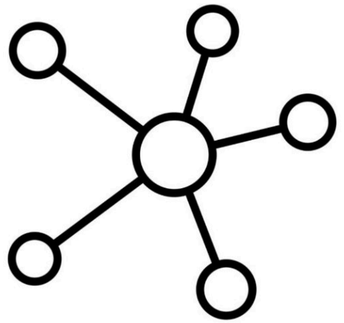
### Subscribe to the Fab Lab Charter

The Charter must be published somewhere, the Website.



### Common Set of Tools and Processes

If you start a project in London, you should be able to finish it in Palestine.



### Participate in the Fab Lab Network

Collaborate, partner up with other Labs from the network with challenges, workshops or projects. Attend (Video) conferences,  or contribute to the Fab Academy.

**If conditions are not met, the lab must strive to meet them.**

# The Fab Charter

1

***What is a fab lab?***

Fab labs are a global network of local labs, enabling invention by providing access to tools for digital fabrication

2

***What's in a fab lab?***

Fab labs share an evolving inventory of core capabilities to make (almost) anything, allowing people and projects to be shared.

3

***What does the fab lab network provide?***

Operational, educational, technical, nancial, and logistical assistance beyond what's available within one lab

4

***Who can use a fab lab?***

Fab labs are available as a community resource, o!ering open access for individuals as well as scheduled access for programs

5

***What are your responsibilities?***

***safety***:not hurting people or machines
***operations***:assisting with cleaning, maintaining, and improving the lab
***knowledge***:contributing to documentation and instruction

6

***Who owns fab lab inventions?***

Designs and processes developed in fab labs can be protected and sold however an inventor chooses, but should remain available for individuals to use and learn from

7

***How can businesses use a fab lab?***

Commercial activities can be prototyped and incubated in a fab lab, but they must not con%ictwith other uses, they should grow beyond rather than within the lab, and they are expected to bene t the inventors, labs, and networks that contribute to their success

# Core Equipment

## Computer Controlled Subtractive Machining

- Laser Cutter
- CNC Large Scale Wood Router or Soft Materials Mill
- Vinyl Cutter
- Precision Desktop Milling Machine

## Computer Controlled Additive Machining

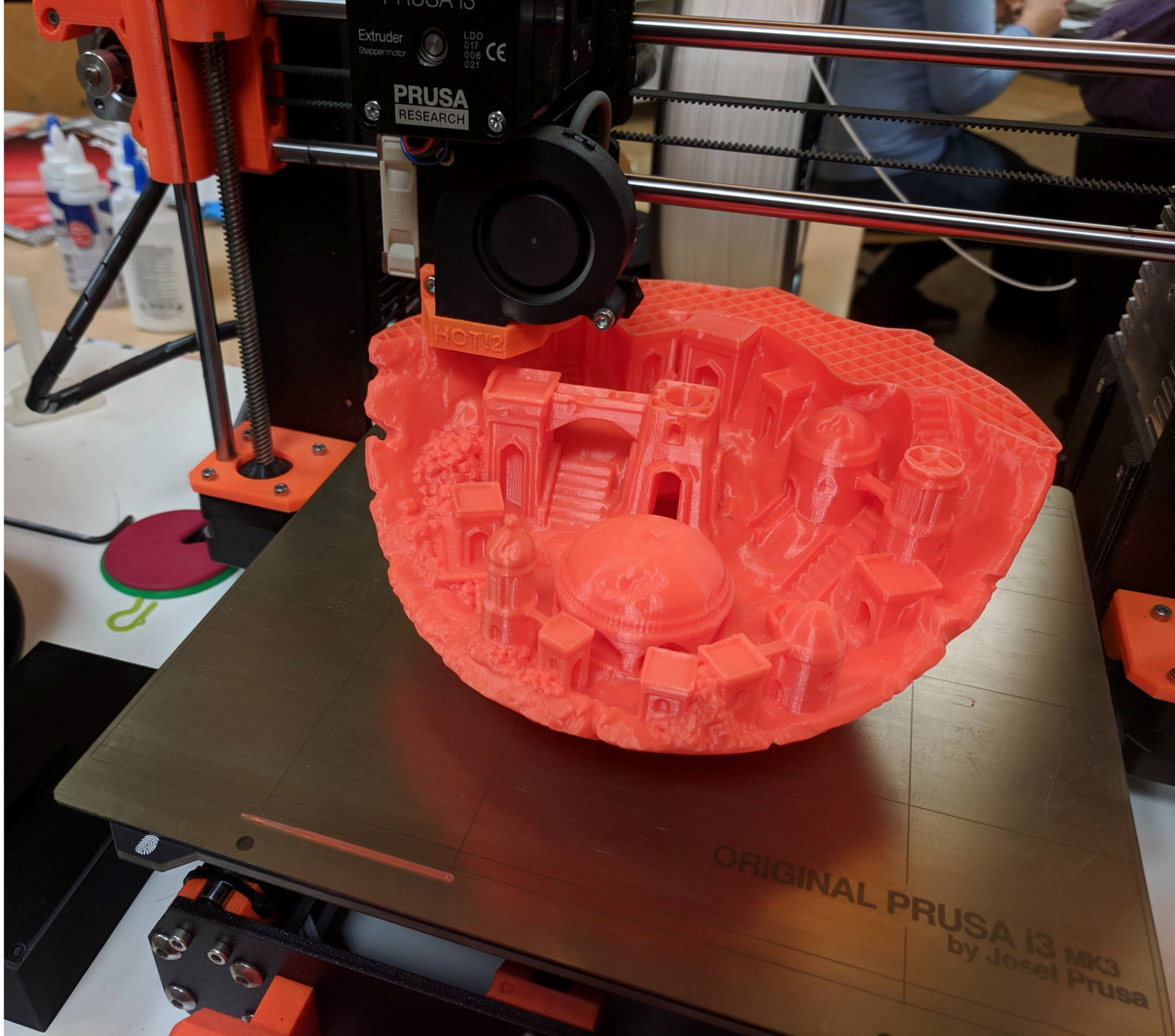
3D Printers

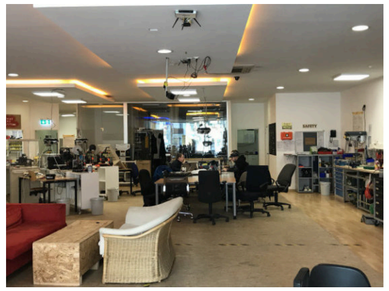
## Electronics

Fully equipped electronics workbench and supplies

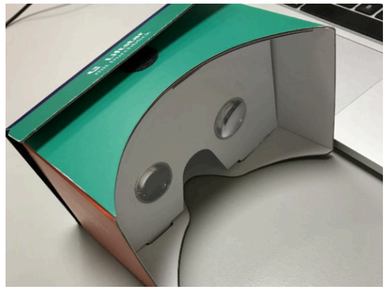
## Communications / Network

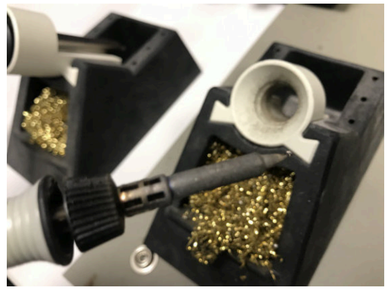
connection with Fab Lab Video Conference Server





# Infrastructure, cf. Excel List





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# Space

## How much space is available

It is important to know, how much space is available. What is the room structure?

## Furnitute?

Shelves, tables, chairs, workbenches etc.

## Structure?

Where are air vents? Power outlets? Etc.

## Room divion / dirty work / clean work / fumes

Different work stations should be divided. When sanding  dust will go to other tools. Some materials will  produce fumes that might be harmful.

c't Hacks
Make:
Make:
Anfangen mit ARM
Make:
Make:
Anfangen mit ARM
Make:
FPV-Racecopter

THIS IS PALESTINE

# VR Area

# Mobile Furniture

# Repurpose Room

# 3D Printers

# Large CNC

# Electronics

Your Great Subtitle Here

# Personnel

### Such a lab needs Personnel

### At least one technician

Machines, tools,  cpace need to be tidy and clean. There has to be one person taking care of that. This person can also function as a mentor.

### Champion

Personnel must be trained in work safety.

### Community Function

Your Great Subtitle Here

# Work Safety

### Such a lab needs Personnel

### At least one technician

Hardware, software, equipment, space. A “Fab Lab” must have these.

### Safety

A Fab Lab needs personnel to run. In a place with machines and community, there is need of maintaince of both.

### Community Function

A Fab Lab must be able to reflect the needs of its host community. Each Fab Lab has to be different to a certain degree.

Your Great Subtitle Here

# Community Function

### What is a Fab Lab?

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