

# FabLab Zurich – A Place to Create Things

ZENO KOLLER – CREATED THIS ARTICLE ALL BY HIMSELF

**I've been wanting to get a new case for my ebook reader for quite some time, as the old one was becoming shabby. The old one I've made myself using a sewing machine, cloth and some elbow grease. Why did I do this? First of all, most cases' looks makes me shudder, and secondly, I won't spend the same amount of money on a case as I paid for the device itself. For the new one, my goal was to do something nicer. So to step up my manufacturing game, it needed to be laser cut! Through a friend, I learned of Zurich's Fab Lab. A Fab Lab (fabrication laboratory) is a place which lets individuals produce almost anything—independently from large companies.**

## Emancipating Individuals

What exactly is a Fab Lab, though? Usually, it is a space to work, equipped with some selection of regular (electronic and woodworking) and more advanced tools (3D printers, CNC milling machines, ...) and the computers to drive them. Since rapid prototyping tools are often industry-grade machinery and thus very expensive, local foundations are set up to raise money. The first Fab Lab was started at Massachusetts Institute of Technology (MIT) in 2002. Since then, it's become a sort of a movement that has spread all over the world. This is also due to the Fab Foundation<sup>1</sup> which promotes the develop-

ment of the international Fab Lab network. Today, there are over 125 of them in 34 countries. The Fab Lab is not only a place for nerds who hack away at their projects. An important aspect is education: Zurich's Fab Lab, for example, regularly hosts workshops for students of the Zurich University of Arts. There are also workshops for individuals, for example an introductory course to the Raspberry Pi. Business is another point: Fab Labs enable people to materialize their ideas and iterate quickly, for example developing a prototype for a device they later mass-produce. And last but not least, consider how Fab Labs in developing countries can help solving local problems and improve people's quality of life. And this is only the beginning. Fab Labs today are to the production of things what personal computers were in the 1970 to information: at first, they empowered only a small group of people, but they paved the way for a large scale deployment. It should only be a matter of time until rapid prototyping production technology will be available to the broader public.



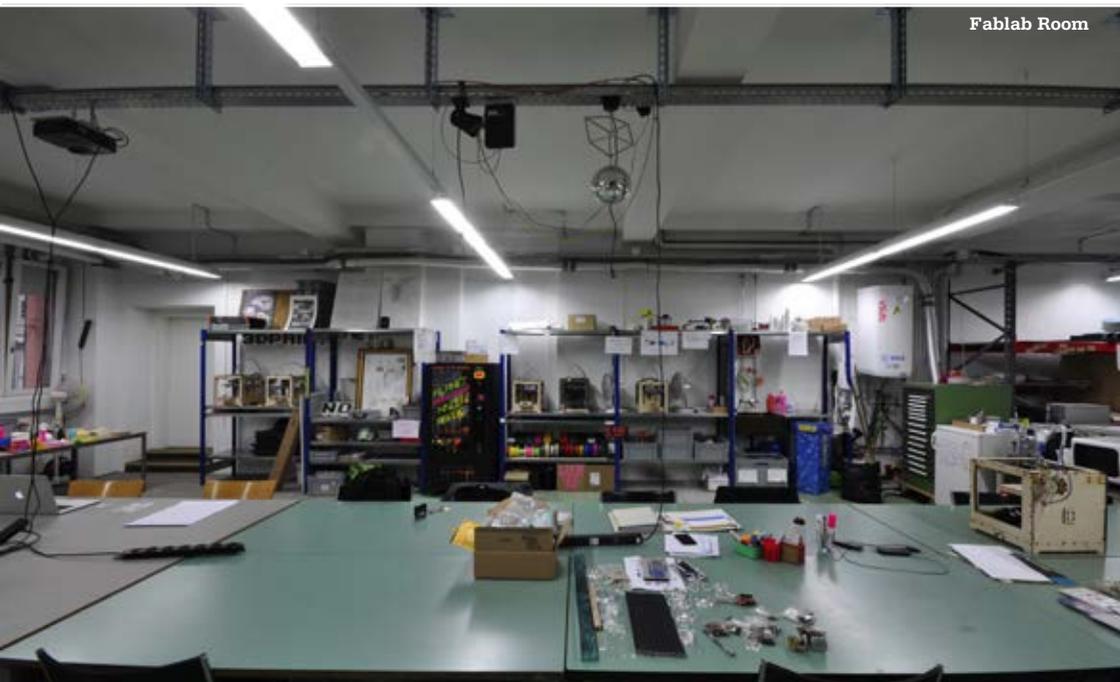
## Fab Lab Inventory

Zurich's Fab Lab is located near Hardbrücke in an old warehouse. If you walk in, you pass between its two biggest tools: The CNC milling machine and the laser cutting machine. Both are shielded from the rest of the room with large glass panels. In the middle of the room are tables to work at, the walls are lined with computers. Depending on your needs, you can grab a beer or a cup of coffee. Everything is neatly organized, yet you keep looking around, because all of it is interesting to look at: there's a shelf packed with 3D printer output—a collection of brightly coloured items you want to grab and inspect one by one. Next to it stands a refurbished vending machine, packed not only with (cheap) snacks but also fabbing wares like electrical tape. The most peculiar one may be the knitting machine—it converts binary images into knitted garment!



## Projects

Now that you know about all this gear, you may wonder: what can one actually produce with it? Browsing the Projects section on the Fab Lab website reveals some gems, like a nifty replacement for a broken water knob<sup>2</sup> or CNC-milled slalomboards with custom graphics<sup>3</sup>. It's christmas soon, so why not make some 3D-printed cookie cutters? →



Fablab Room



The finished product

## Making the Case

Another project is my e-reader case I was talking about in the beginning. Rummaging through the attic of my parent's house, I found an old leather bag of my father—an ideal material, as it's sturdy and looks awesome. The design was based on an iPhone case someone had made in this Fab Lab and posted on thingiverse.com—a website for sharing objects. With some help of the lab manager, I adapted this design to the size of the e-reader using Adobe Illustrator. The file consists of the paths for the outline and

the holes for sewing that had to be cut. I also let it engrave my name on one side. Next, I cut up the leather bag and glued felt on the insides—this would be the lining. Finally, I put the leather inside of the laser cutter, sent the file to the machine through a printing dialogue and watched the magic happen. (Better not to inhale the fumes, though.) The last step was sewing both sides of the case together—finished!

## Interested?

The Fab Lab is run by an association. If you're interested in using the Fab Lab's tools for a project or regularly, you can become a member! It's best to just go there and talk to the lab manager. If you're not sure if you're interested, just pay them a visit anyway. Location, opening

hours, a list of tools, machine rates, and the like are available on the web: <http://zurich.fablab.ch>. The site is updated regularly with projects and workshops. \*\*

## References

- [1] <http://www.fabfoundation.org/>
- [2] <http://zurich.fablab.ch/wasser-fancy-hahn>
- [3] <http://zurich.fablab.ch/medias-fraes-skateboards-longboards-slalomboards>
- [4] A yearly membership costs CHF 100.-, work with the more elaborate machines (3D-Printer, laser cutter and CNC milling machines) is billed hourly. Using the CNC machine requires an introductory course.

ANZEIGE

Gemeinsam  
täglich eine  
Meisterleistung.

Mit intelligenten Zugbillets das Reisen  
noch einfacher machen. [sbb.ch/jobs](http://sbb.ch/jobs)



SBB CFF FFS

