iPRODUCE event 26 November 2020

OPENNEXT - transforming collaborative product creation

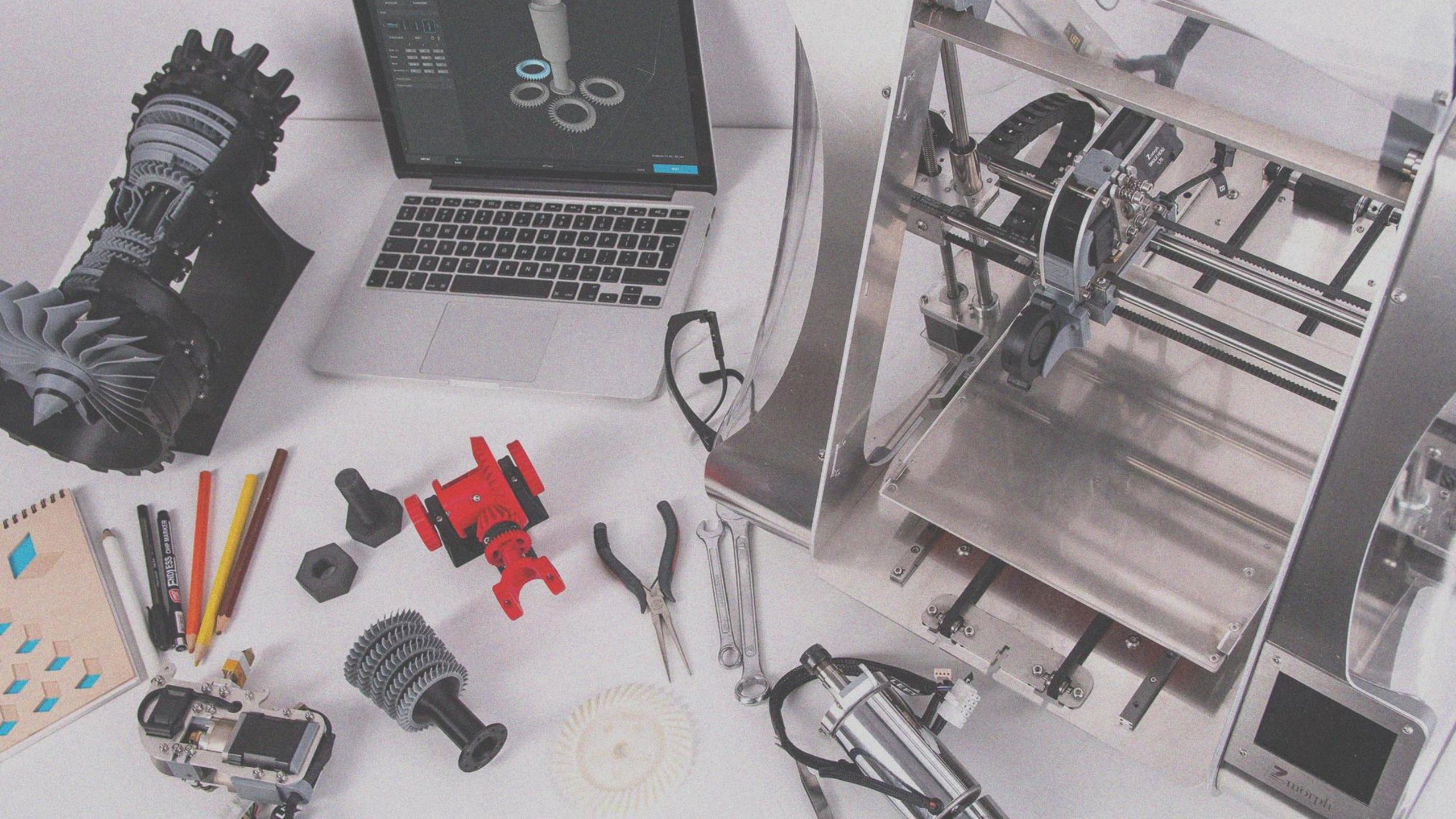
Robert Mies, Research Associate, Technische Universität Berlin, Germany

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 869984.



Agenda

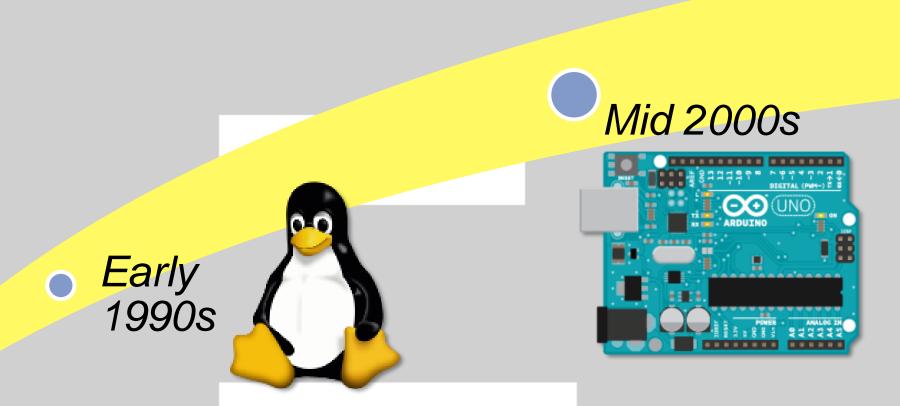
- > Background
- > Project goals
- > Two examples from our six pilots
- > Development of platform features
- > Outlook



Background - 1 of 2

Free and open source software (FOSS) gave rise to a billion-euro economy. Open Source Hardware (OSH) is a recent promising extension of <u>open source practices</u> to the creation of <u>physical objects</u>.

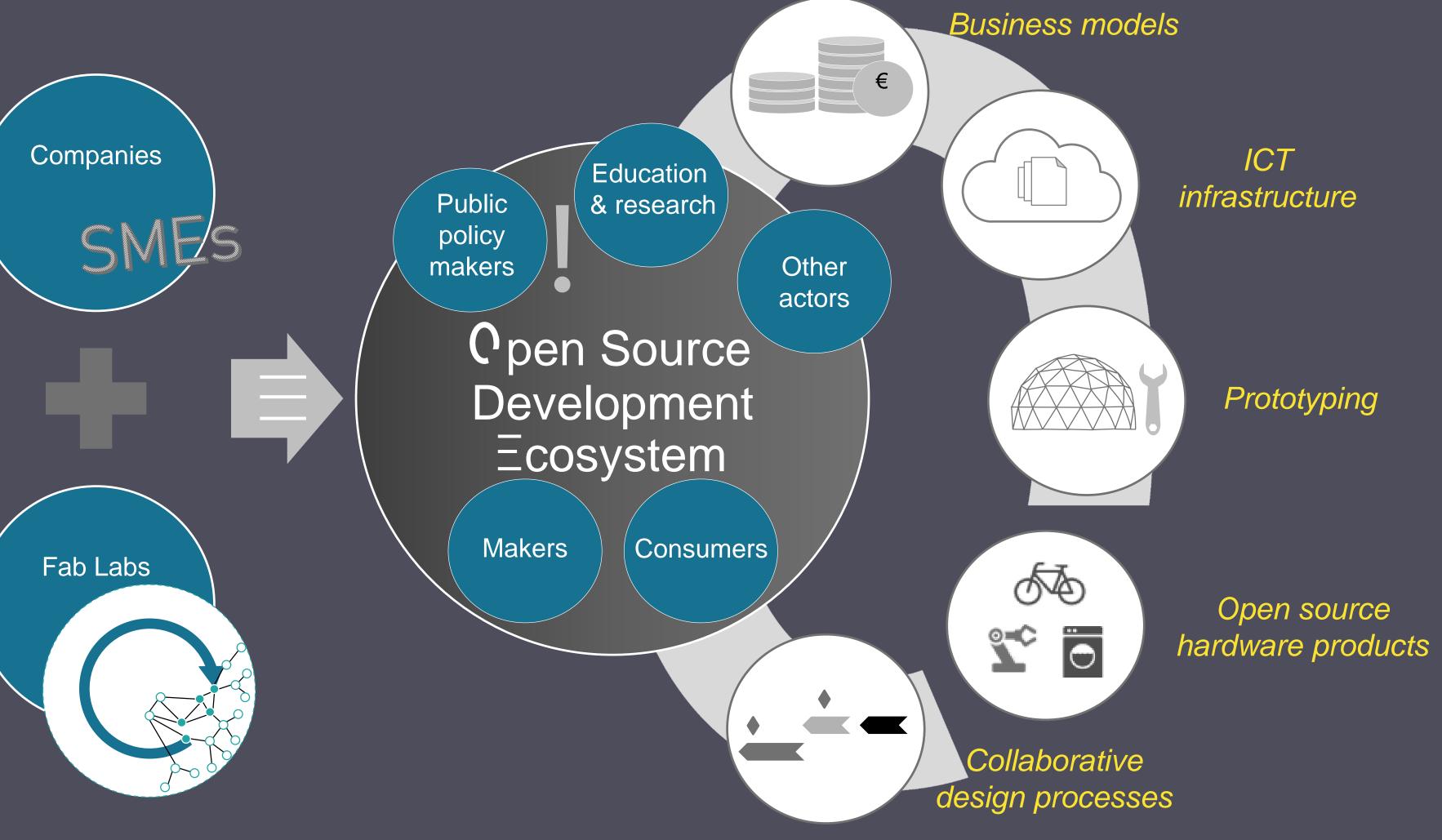
OSH is "hardware for which a free right of any use belongs to the general public and whose documentation is completely available and freely accessible on the Internet." DIN SPEC 3105-1





Background - 2 of 2 v

OPENNEXT focuses on encouraging and supporting small medium enterprises (SMEs) to unleash OSH's potential through engagement in collaborative open design of products and services together with fab labs/makerspaces



Project goals v

1.

Wider

adoption of

Open Source

Hardware.

2.

Enable
fablabs to
support
companies.

3.

Provide IT
solutions for
OSH
development.

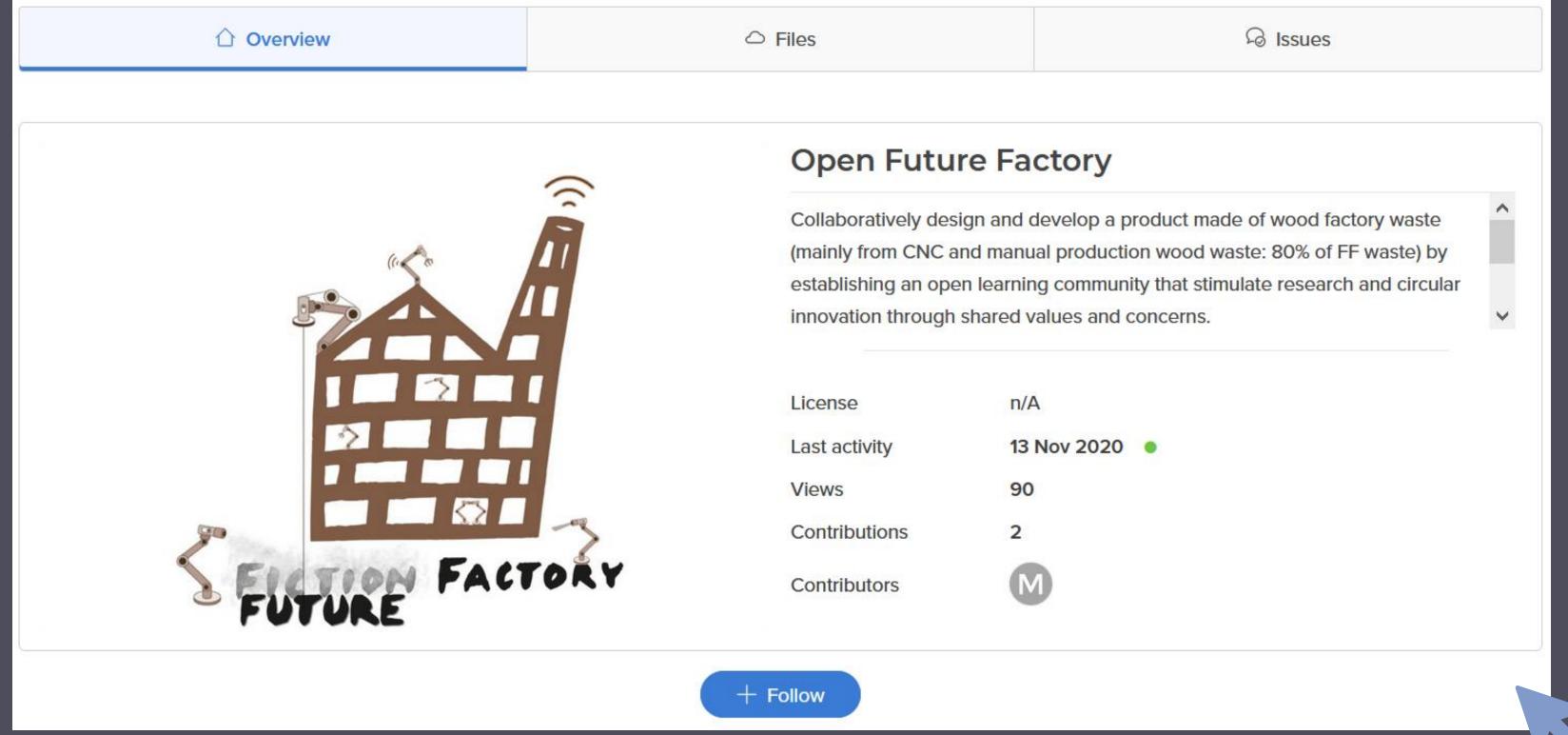
4.

Document OSH journeys of 18 SMEs.

Pilot example - 1 of 2 v

...start an open collaboration with Waag and Fiction Factory aka.

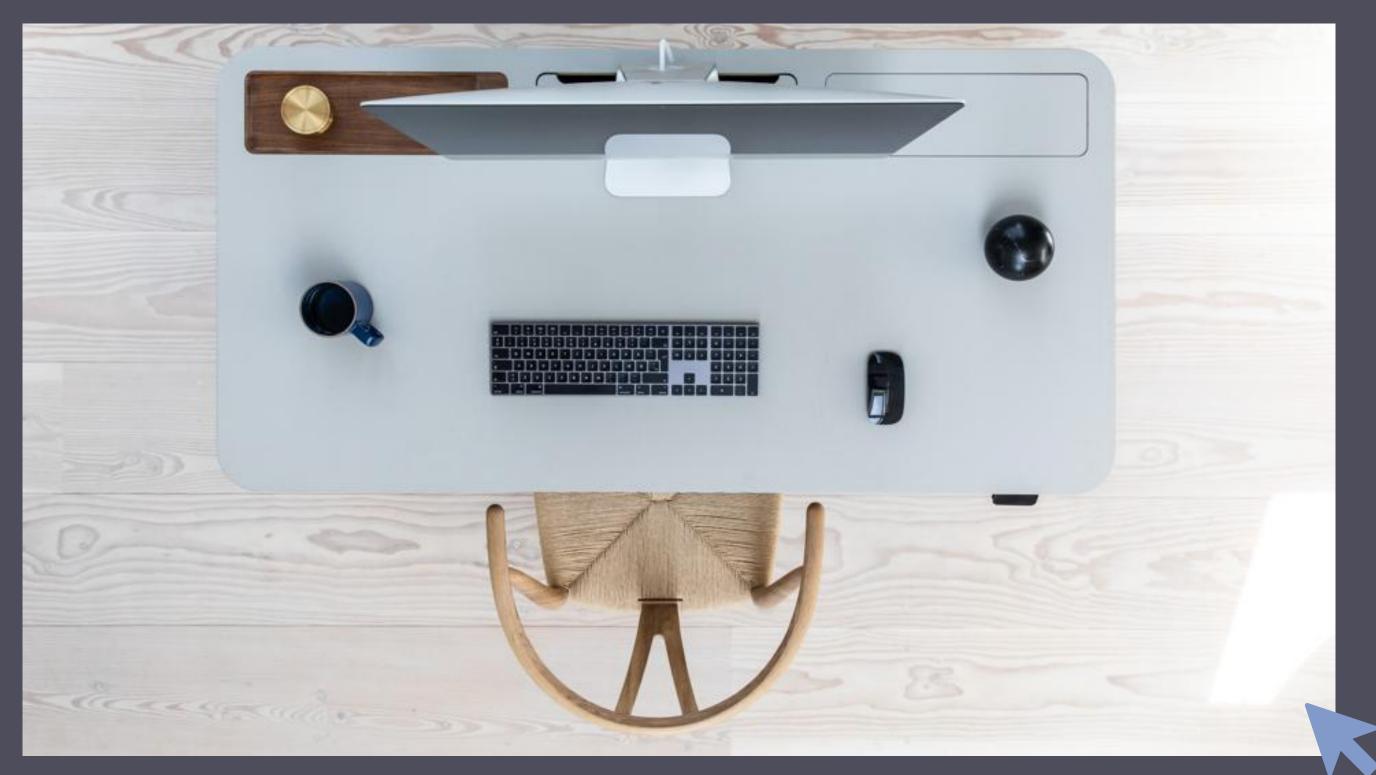
Open Future Factory in Amsterdam to make a product out of factory wood waste



- Open call in Oct. 2020 resulted in the hiring of a creative maker
- Formation of different teams: Community team, feedback team, business team, etc.
- Involvement of consumers, makers and clients

Pilot example - 2 of 2 v

...co-create modules for the "World's Coolest Sustainable And Open-Source Desk" with Stykka and Underbroen in Copenhagen



- Stykka's LastDesk is made from sustainable materials and designed to be upcycled
- Three "plugin" slots can hold a variety of desk accessories
- In open collaborations with designers and producers accessories will be created to fit the "plugin" slots

Development of platform features

...on social product development platform Wikifactory



Q1'20

User stories of collaborative engineering needs for OSH (Link)



now

Four categories of platform features under development:

- 1. Interoperability
- 3. Documentation & guidelines
- 2. Community management
- 4. Collaborative production engineering



Outlook

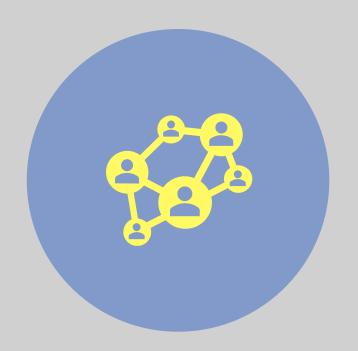
Current dynamics in our running six pilots in the Netherlands, Denmark, and Germany are promising

A graph database also in progress from Fraunhofer IPK together with Wikimedia Foundation that will connect OSH modules across different platforms

The role of makerspaces is still quite fluid and capabilities and approaches vary greatly









THANK YOU FOR YOUR ATTENTION!

Robert Mies

Research Associate
Technische Universität Berlin
Faculty Mechanical Engineering and Transport Systems
Institute for Machine Tools and Factory Management
Chair of Quality Science
Sekretariat PTZ 3, Pascalstr. 8-9, 10587 Berlin
+49 (30) 314-25930
robert.mies@tu-berlin.de

Learn more www.opennext.eu

