Digital DIY:
Rights and obligations in the middle of a paradigm shift

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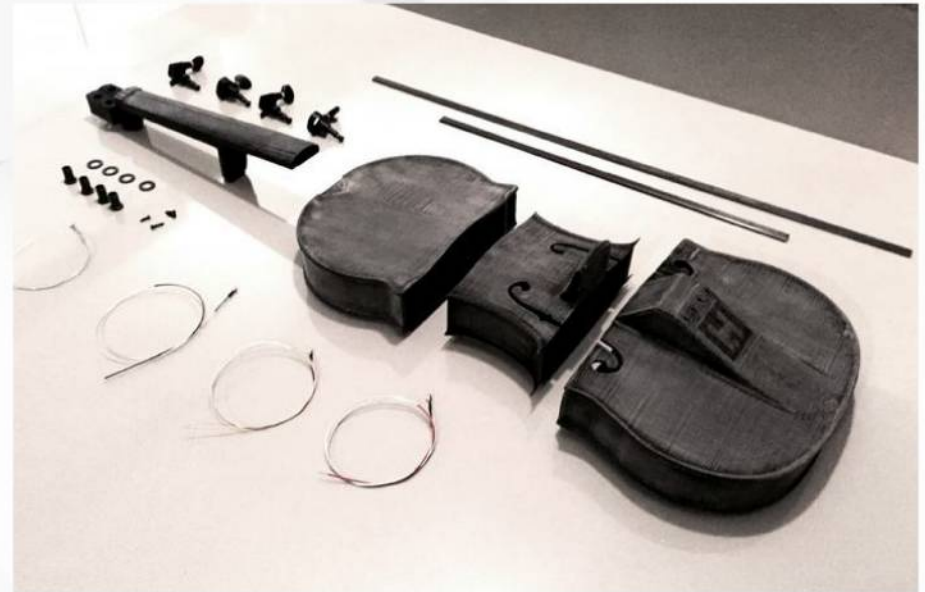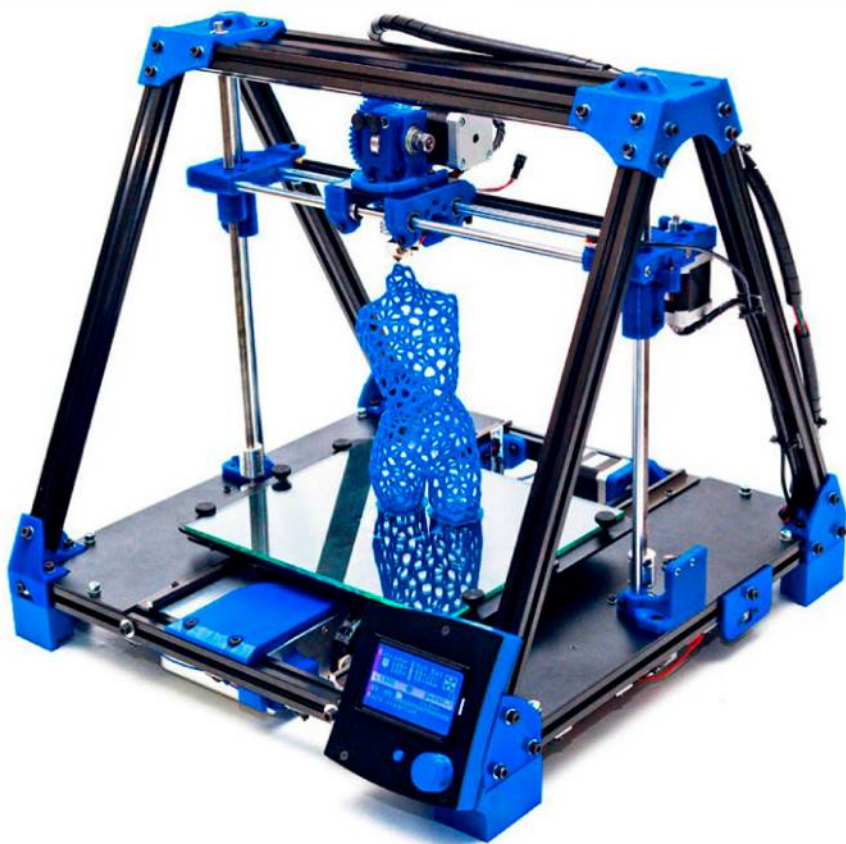
DiDIY
DIGITAL
DO IT YOURSELF

Commons Collaborative Economies
12 March 2016
by Wouter Tebbens

disclaimer

In no way should this be considered as legal advice; the author doesn't take any responsibility for others using (or not) the presented information nor does he author claim to be a legal scholar.
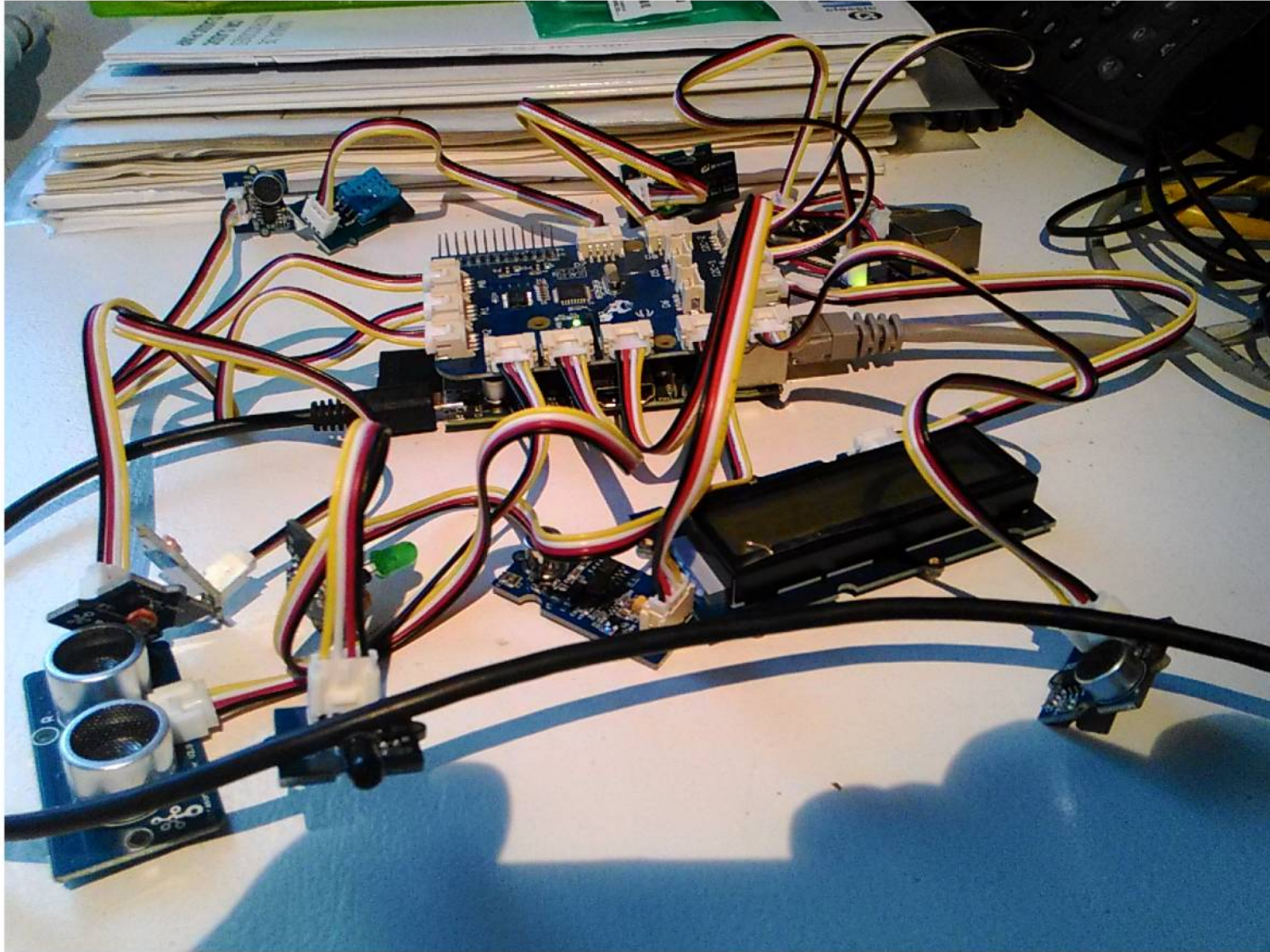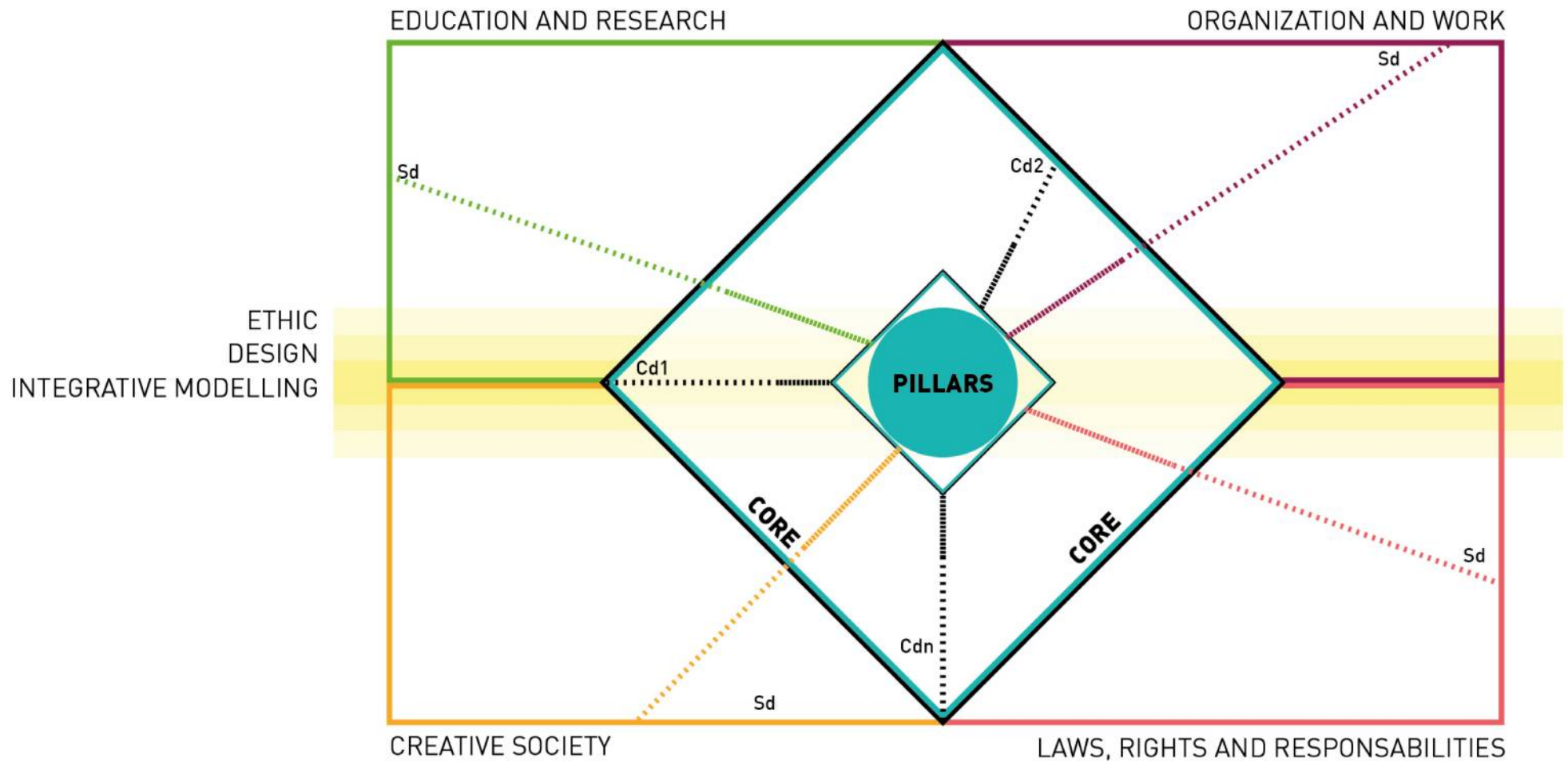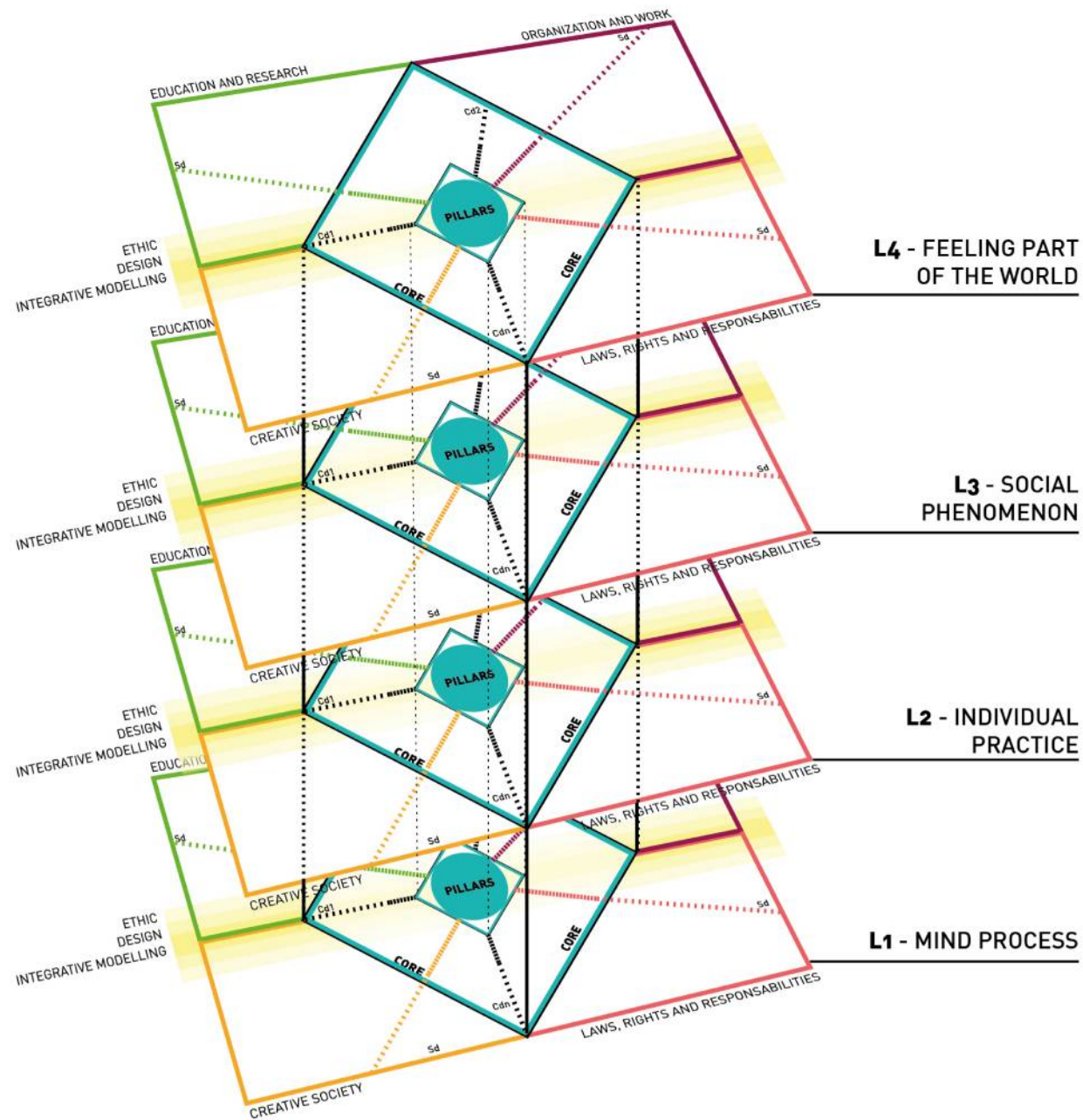
Digital Fabrication

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3D Scanning

Internet of Things

EDUCATION AND RESEARCH

ORGANIZATION AND WORK

Sd

Sd

Cd2

ETHIC
DESIGN
INTEGRATIVE MODELLING

Cd1

PILLARS

CORE

CORE

Sd

Cdn

Sd

CREATIVE SOCIETY

LAWS, RIGHTS AND RESPONSABILITIES

L4 - FEELING PART OF THE WORLD
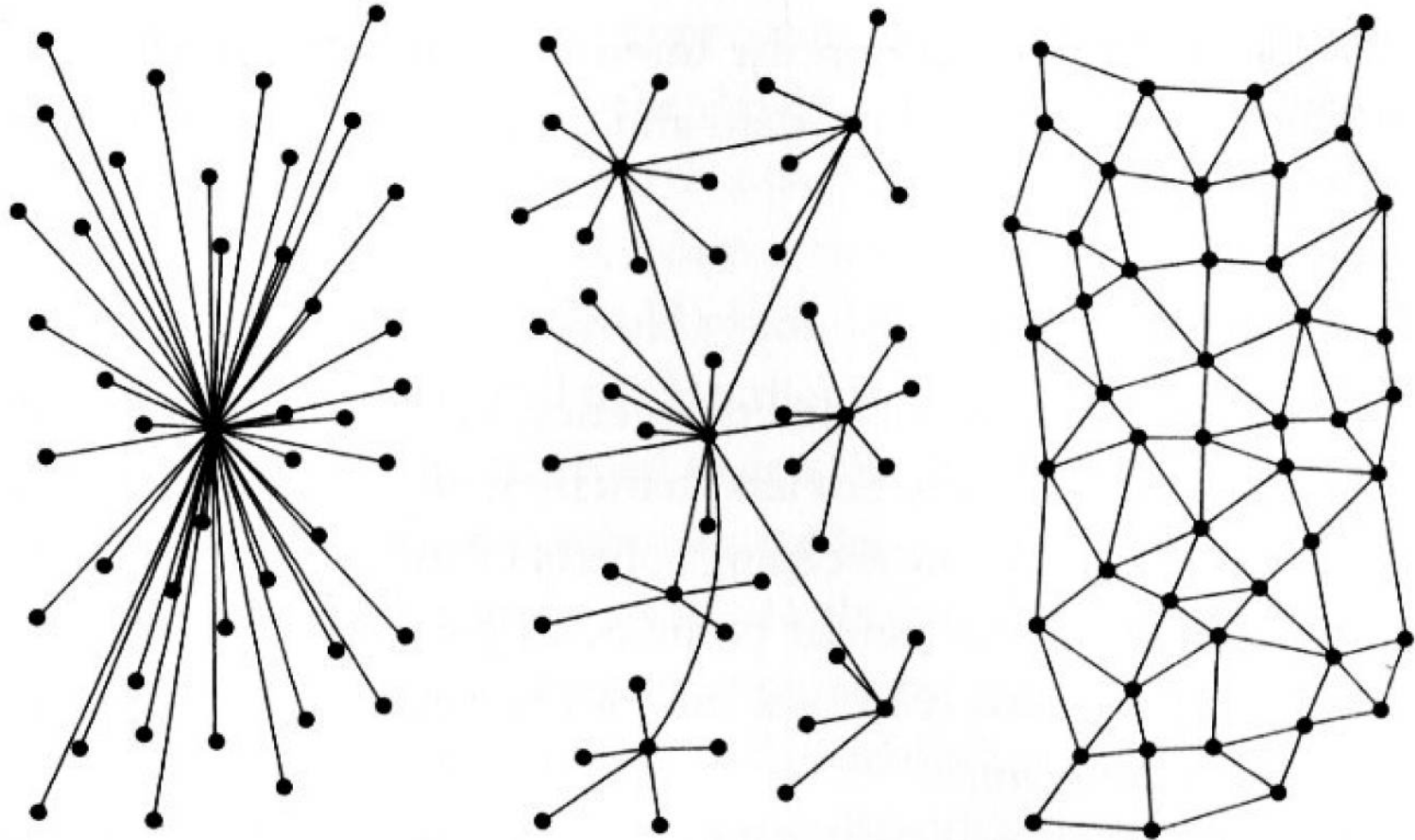
L3 - SOCIAL PHENOMENON

L2 - INDIVIDUAL PRACTICE

L1 - MIND PROCESS

Profound Cultural Change

Permission-based society
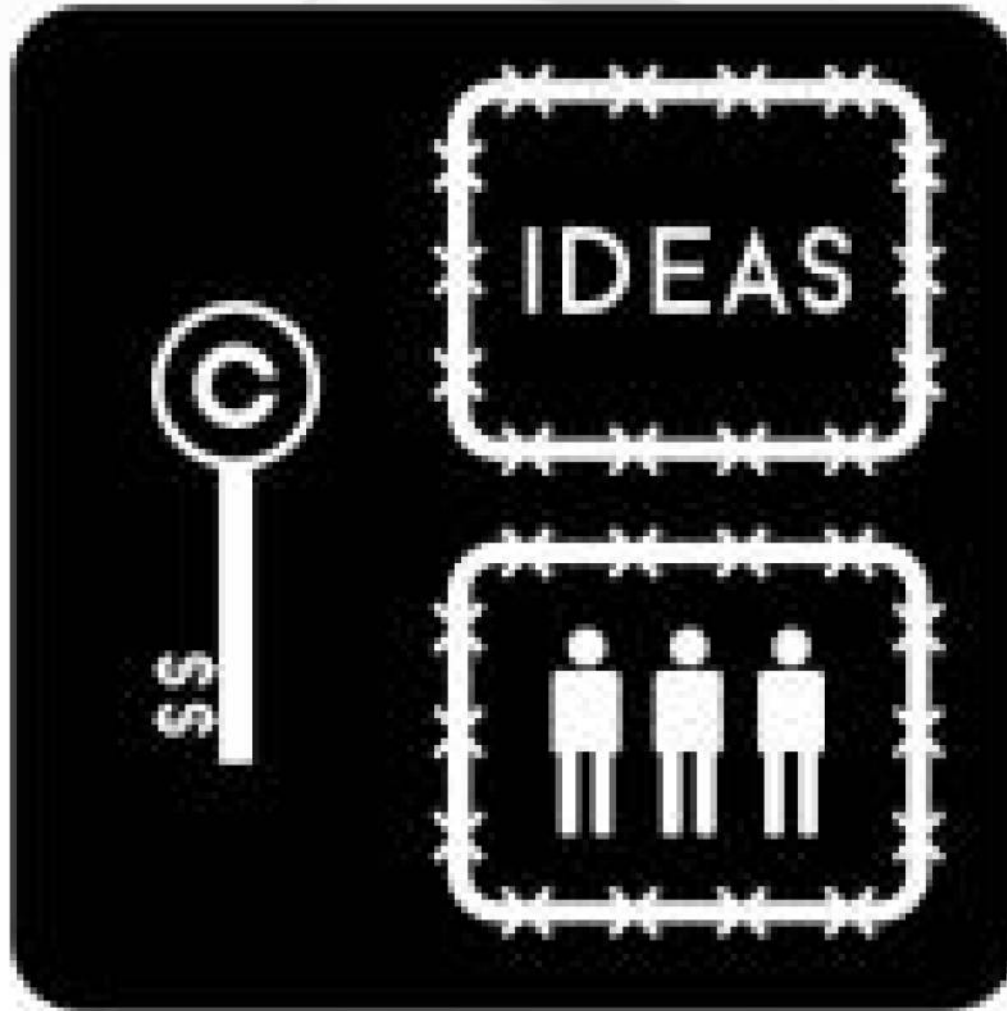
Inverse Infrastructures

planificació estrategica

i+d   financiació

producció

transport, distribució   marketing

venda

consum   deixalles

infraestructures comunes

admin publica   empreses

ciutadans usuaris

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Which IP rights?

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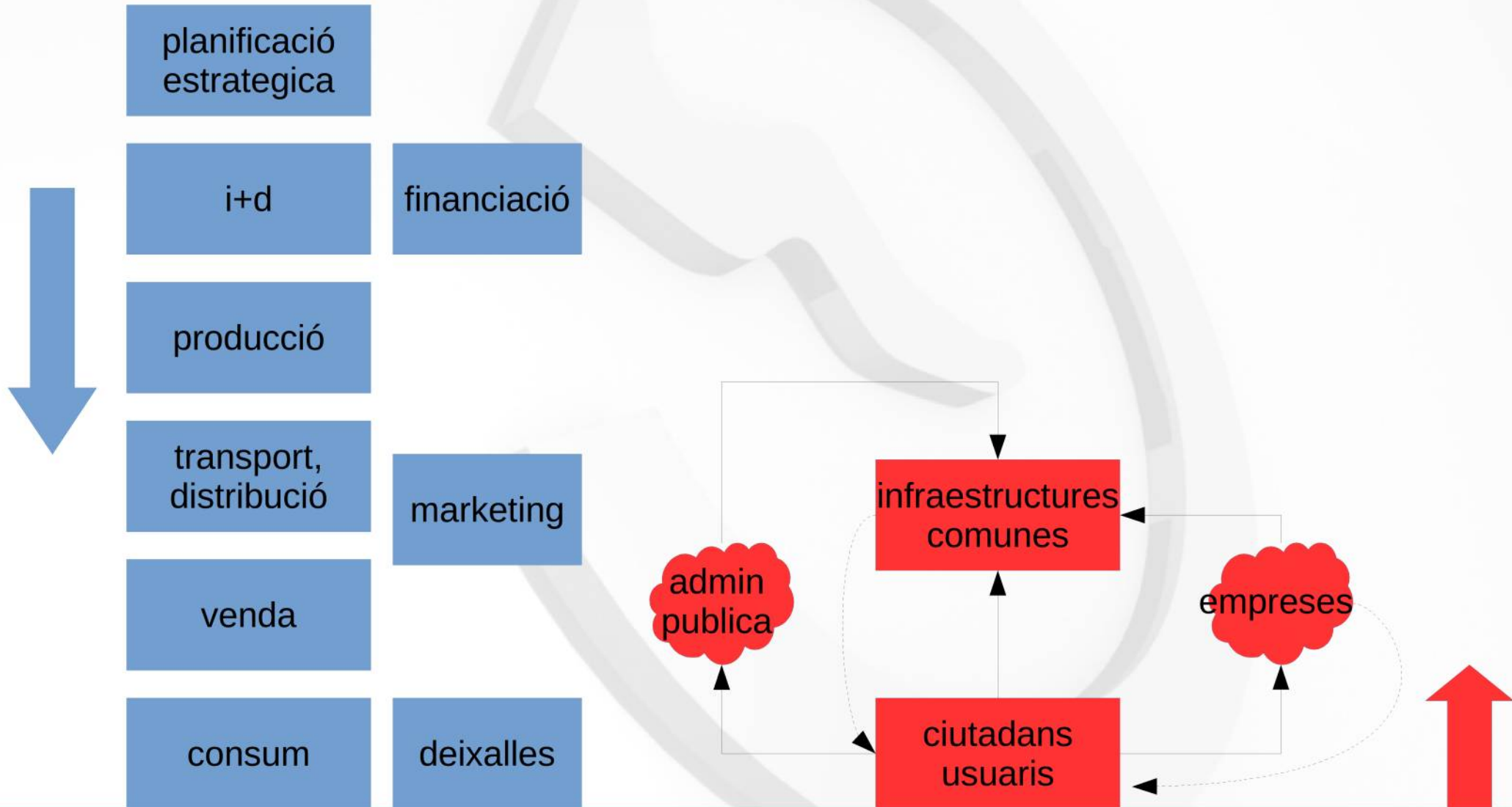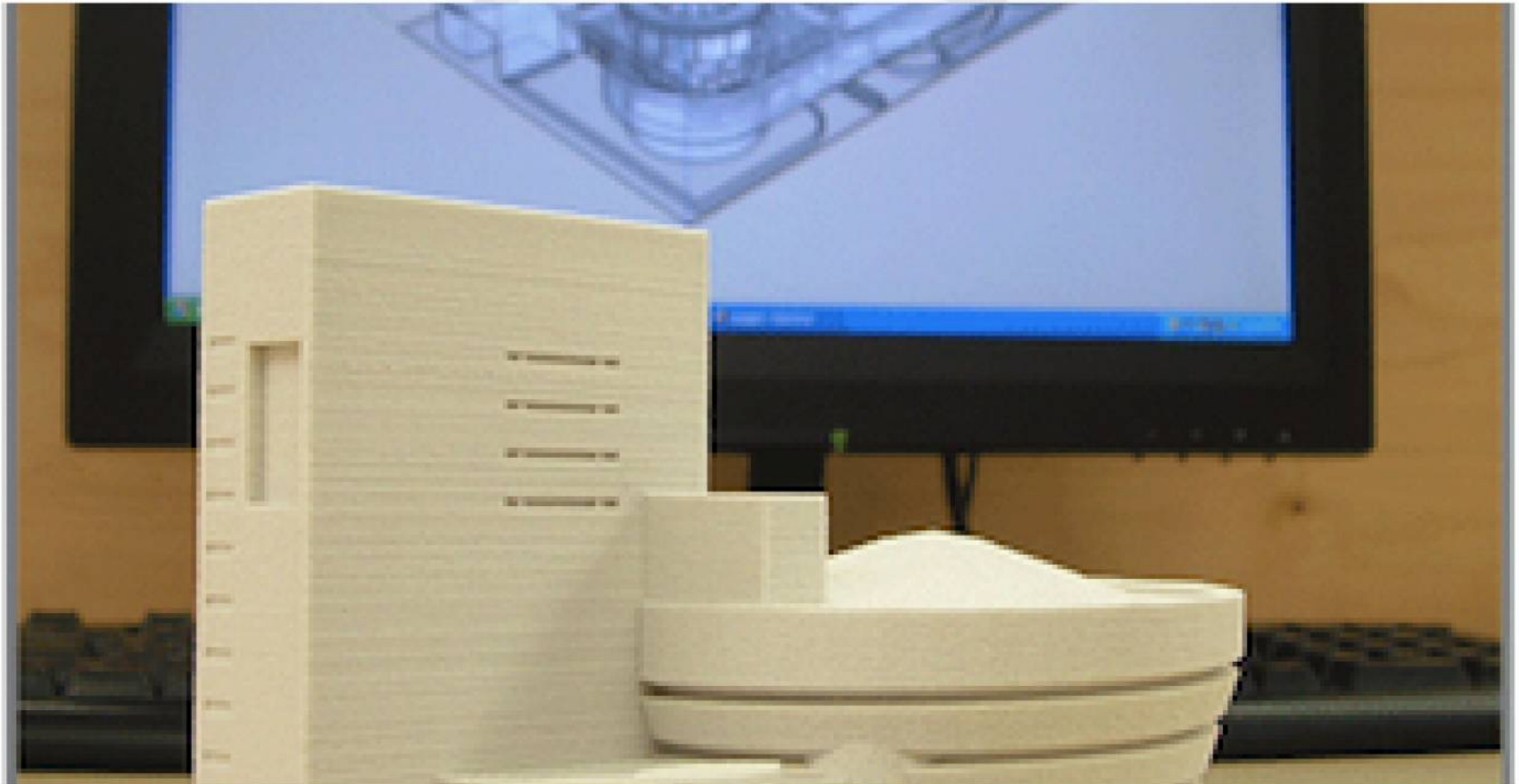
3D Printing Parts for Self-Repair

- e.g. Bugaboo

3D Printing Parts for Self-Repair

- Instructable

Image CC BY-SA by: dscott4

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3D Printing Parts for Self-Repair

Use case: for private, non-commercial use in the UK

	Copyright	RCD	UDR	Patent	Trademark
3D scan / reverse engineer	✅	✅	✅	✅	✅
Print	✅	✅	✅	✅	✅
Upload/copy	✅	✅	✅	❌	✅
Download	✅	✅	✅	✅	✅

Based on IPR exceptions as interpreted by Bradshaw, Bowyer, Haufe (2010). The Intellectual Property Implications of Low-Cost 3D-Printing.

REPAIR MANIFESTO

WE HOLD THESE TRUTHS TO BE SELF-EVIDENT

IF YOU CAN'T FIX IT, YOU DON'T OWN IT.

REPAIR IS BETTER THAN RECYCLING
Making our things last longer is both more efficient and more cost-effective than mining them for raw materials.

REPAIR SAVES YOU MONEY
Fixing things is often free, and usually cheaper than replacing them. Doing the repair yourself saves you money.

REPAIR TEACHES ENGINEERING
The best way to find out how something works is to take it apart.

REPAIR SAVES THE PLANET
Earth has limited resources. Eventually we will run out. The best way to be efficient is to reuse what we already have.

REPAIR **CONNECTS** PEOPLE AND THINGS | REPAIR IS WAR ON **ENTROPY** | REPAIR IS **SUSTAINABLE**

WE HAVE THE RIGHT:
TO DEVICES THAT CAN BE OPENED | **TO CHOOSE** OUR OWN REPAIR TECHNICIAN | TO NON-PROPRIETARY **FASTENERS**
TO REPAIR DOCUMENTATION FOR **EVERYTHING** | TO REMOVE 'DO NOT REMOVE' STICKERS
TO REPLACE **ANY & ALL** CONSUMABLES OURSELVES | TO TROUBLESHOOTING INSTRUCTIONS & **FLOWCHARTS**
TO REPAIR THINGS IN THE PRIVACY OF OUR OWN HOMES | TO ERROR CODES & WIRING DIAGRAMS | TO AVAILABLE, REASONABLY-PRICED SERVICE PARTS

BECAUSE **REPAIR** | IS INDEPENDENCE SAVES MONEY & RESOURCES | REQUIRES CREATIVITY | MAKES CONSUMERS INTO **CONTRIBUTORS** | **INSPIRES** PRIDE IN OWNERSHIP

❌ IFIXIT   JOIN THE REVOLUTION WITH IFIXIT.COM

DIGITAL RIGHT TO REPAIR

Fair Repair Legislation would give owners and independent repair shops …

– access to service information, schematics, and repair manuals

– fair market access to diagnostic tools

– spare parts for a fair price

– critical security updates

– rights to unencumbered resale

The Right to Repair

- Fits with Magna Carta: «rights of commoners to manage their own resources»

- In line with the need for a sustainable future

- Allows endusers to tinker, modify and extend the product life

- *Encourage (require?) manufacturers to publish <u>design files</u> of spare parts*

- *Allow <u>commercial</u> use by unlicensed repair centres*

- *Avoid «wars on filesharing»*

Protect the Hardware Commons

- E.g. Arduino: CC BY-SA + trademark

- Copyleft virality?

- Patents? → prior art

- Comparing Design Sharing Platforms: FKI Wiki

Source: FKI Hardware Wiki: Intro to Hardware Licensing

OSHW Licensing Best Practices

- Files: Description, Photos, Original Design Files

- BoM

- Software and firmware

- Instructions

- License, e.g. CC BY-SA, GPL, TAPR OHL, CERN OHL, MIT, CC BY, ...

- Attribution

Source: http://www.oshwa.org/sharing-best-practices/
Book: *Building Open Source Hardware* by Alicia Gibb (2015)

Gun control?

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pathogens?

http://mix.bio/

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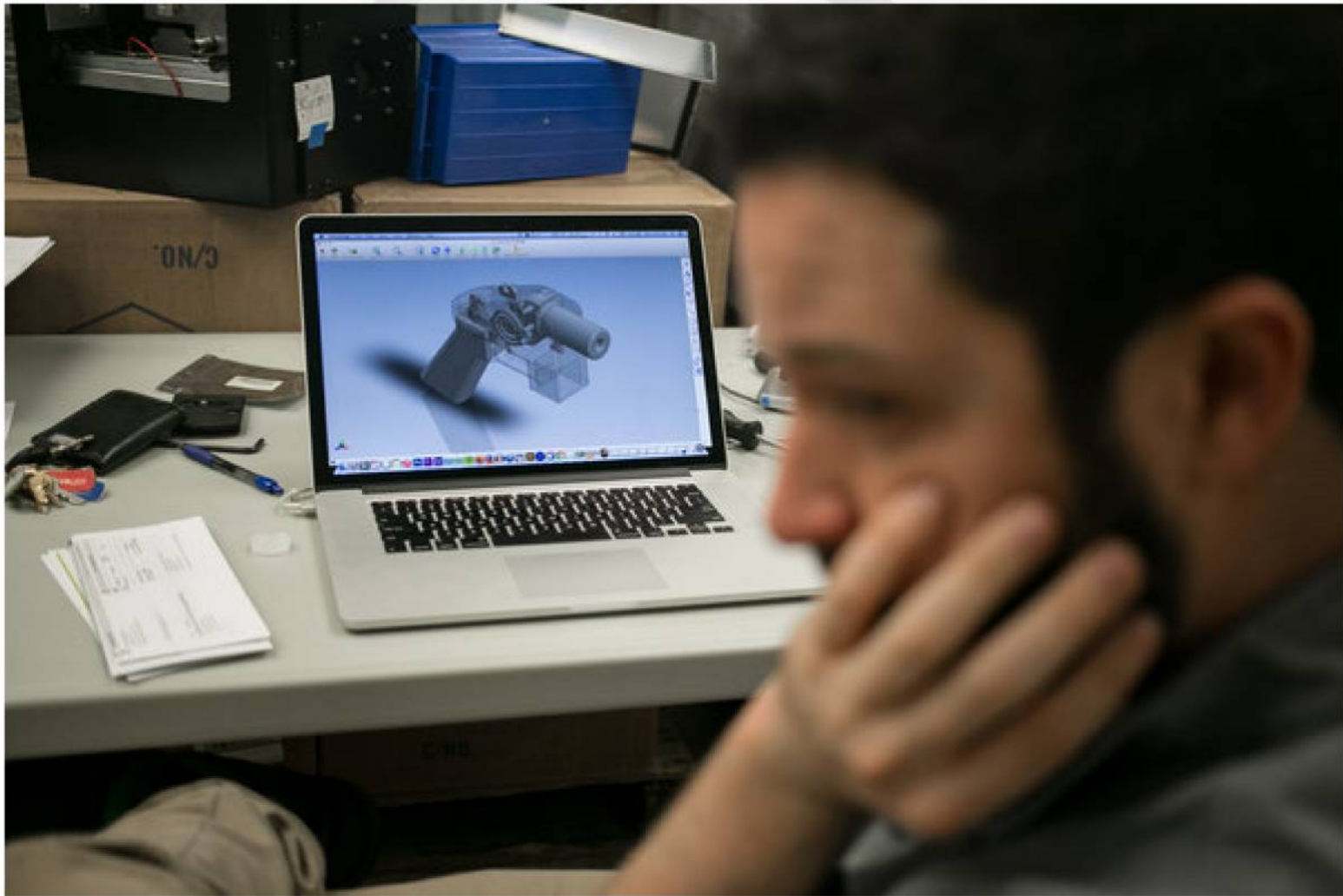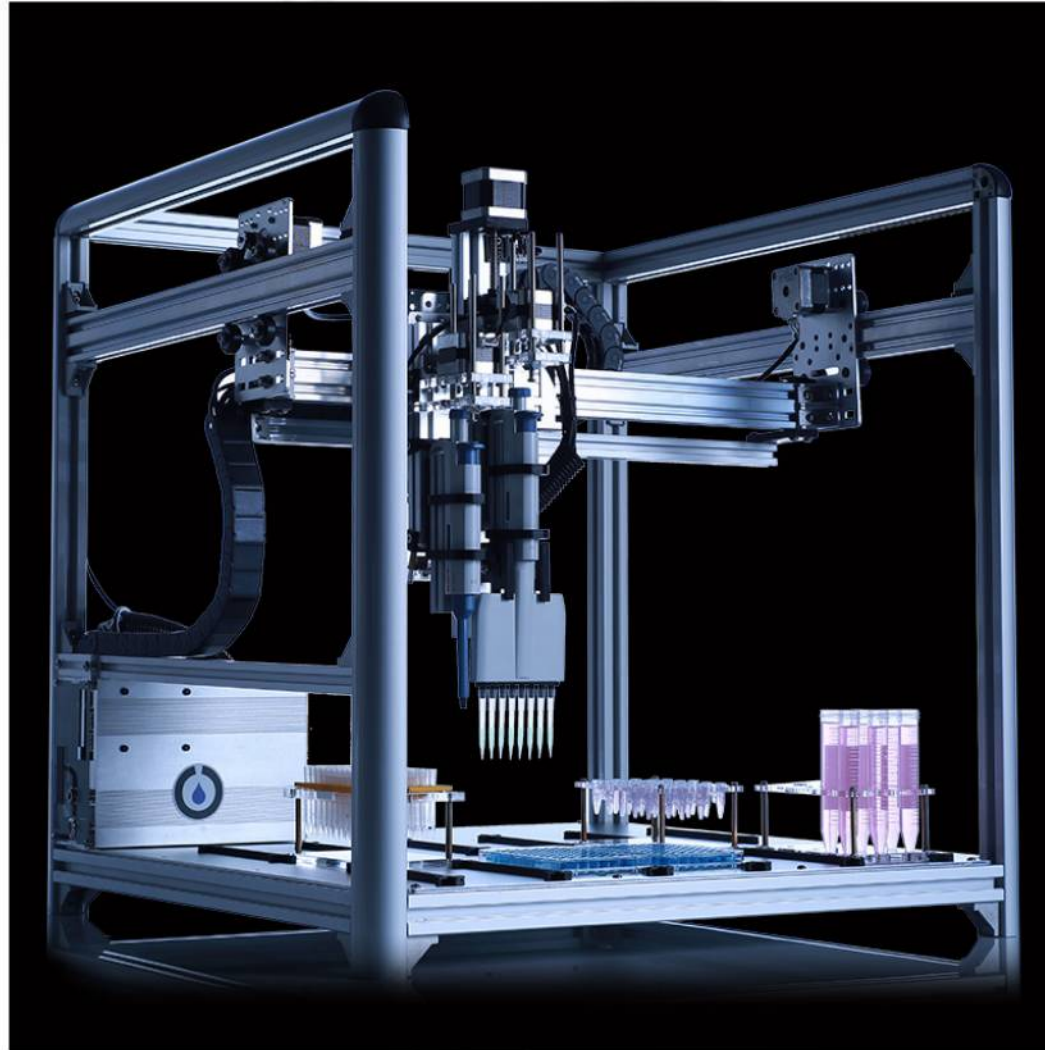
Professional amateurism?

(c) Frank Kolkman, Open Surgery: http://opensurgery.net/

How to regulate?

- Regulate 'access points'/gatekeepers: 3D printer manufacturers and online design repositories : desirable, possble?

- Get ISPs to monitor what users are doing online vis-à-vis 3D printing design files: desirable, possible?

- Self-regulation:

  - Danish 3D printing firm Create It REAL announced it had come up with a firearms component detection algorithm which can give 3D printers option to block gun parts;

  - example of Mega taking down the gun blueprint as well

  - **but still available on the dark web**

Liabilities

Example: A person gets injured by a bike made at a FabLab following an open design. Who's liable?

- Design author

- Machines

- Space / FabLab

- Builders

Privacy

- Big Data: User control over Personal Data
- Threat of Unravelling: Full Disclosure
- Government surveillance
- Anonimity
- Encryption

Other challenges

- Vehicle safety regulations

- Medical and product liability in Bioprinting

- Certifications like CE, FCC

Thanks!

- Questions?

- We need your help!

- http://www.didiy.eu/

  – Cases of legal challenges

  – Legal initiatives and proposals

  – Educational materials

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