

Ctrl

# ctrl PRINT your wardrobe

an open source fashion system

## DEFINITION

3d printed, climate-positive, custom-made clothing will be the new norm for producing and consuming apparel enabled by emerging technologies such as 4D printing, robotic sewing, open-source revolution, and bio-based carbon zero materials.

A new decentralized & collaborative form of production emerges, characterized by a 'glocalization' dynamic where consumers have global open access to information and local (at-home) manufacturing opportunities, to be labeled as the Prosumer system or commons-based peer production system.

Consequently, traditional global supply chain manufacturing and distribution systems crumble as wardrobes are increasingly developed/manufactured at home or in local printing centers at accessible prices.

## Dynamic

### Topic

Name:  Actors...

Status: An open source fashion system

Type: Prosumer orientation

Where: In the fab lab near you Enablers...

Comment: "You never really own a design anyway. You have to let go of it, I think it's great people are finding joy in it." - JW Anderson  STEEPV

### Range (timeline)

All

Year(s) From:  To:

### Degree of impact

Disruptive  Radical

Incremental

Preview

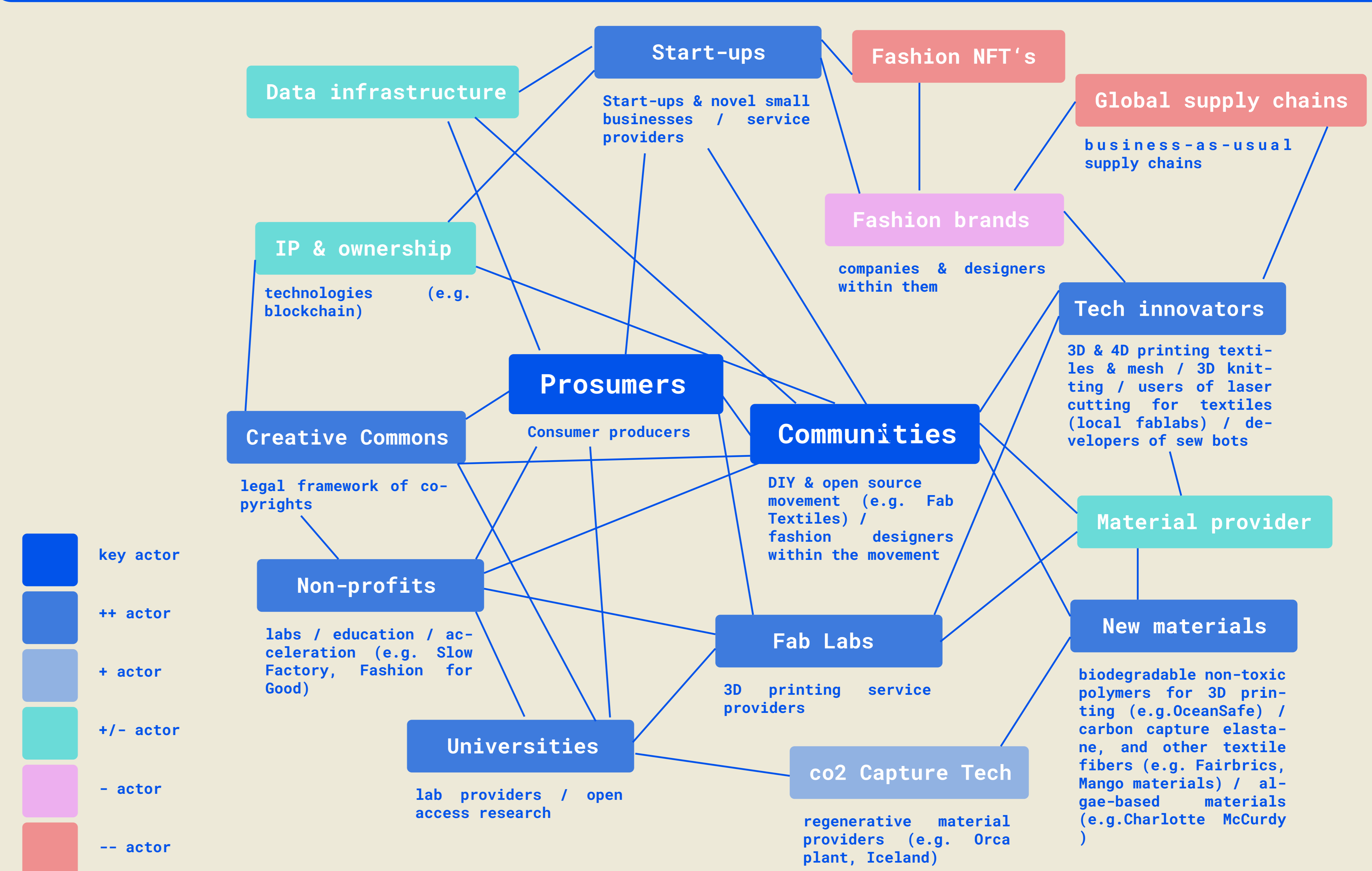
### Quote

„By putting the emotional grounding of fashion in focus, designers can focus on the experience of fashion amongst users, rather than the promotion of trends and number of units sold, thus better preparing us to shift fashion from craft and mass-production towards experiences of biosocial growth and a sense of aesthetic agency.”  
-Otto von Busch

OK

Cancel

## Map of Actors



## Prosumer experience

### Preview



„Design is a work never finished.”  
- Otto von Busch

## FOLLOW THESE STEPS

The open source prosumer experience

- 1 Get into the movement, log in to any open source platforms
  - 2 Download a design
  - 3 (with designer help) adapt the design to your needs
  - 4 Buy the (regenerative) materials needed for your style
  - 5 Go to a local fab lab (membership based relationship)
  - 6 Ctrl PRINT!
  - 7 Share your changes open again using Creative commons licence
  - 8 Wear your style a lot!
  - 9 Adjust it (with the help of the community) if needed along the way
  - 10 End of life: the community will educate you for the best end-of-life scenario
- + 1 Start again from the beginning, but wiser, and share your experience with others

## Enablers...

### SOCIAL

There is a rising sense of locality and communal living, as people stay at home more. Populations are increasingly aware of environmental and social issues, and take action. Digital spaces expand and socially engaged online communities become more impactful. DIY culture and handmade products are popularised.

### TECHNOLOGIC

Technology continuously evolves, with advancements in 3D printing appliances, 3D design softwares, and R&D on regenerative and Smart 3D filament materials. Developments such as blockchain, Web 3.0 and OSS create new opportunities.

### ECONOMIC

Rising interest in economic models geared towards sustainable development, e.g. commons-based peer production. Discussions around & adoption of Open Source and Circular Economy. Shift in value system, with sentiments of anti-consumerism, anti-trend and anti-capitalism. Want for business with focus on community co-creation. Trend of less and more flexible working hours, increasing personal time.

### ENVIRONMENTAL

We are facing a climate crisis, with global industries and their supply chains creating huge waste and pollution issues and alarming levels of scarcity of raw materials.

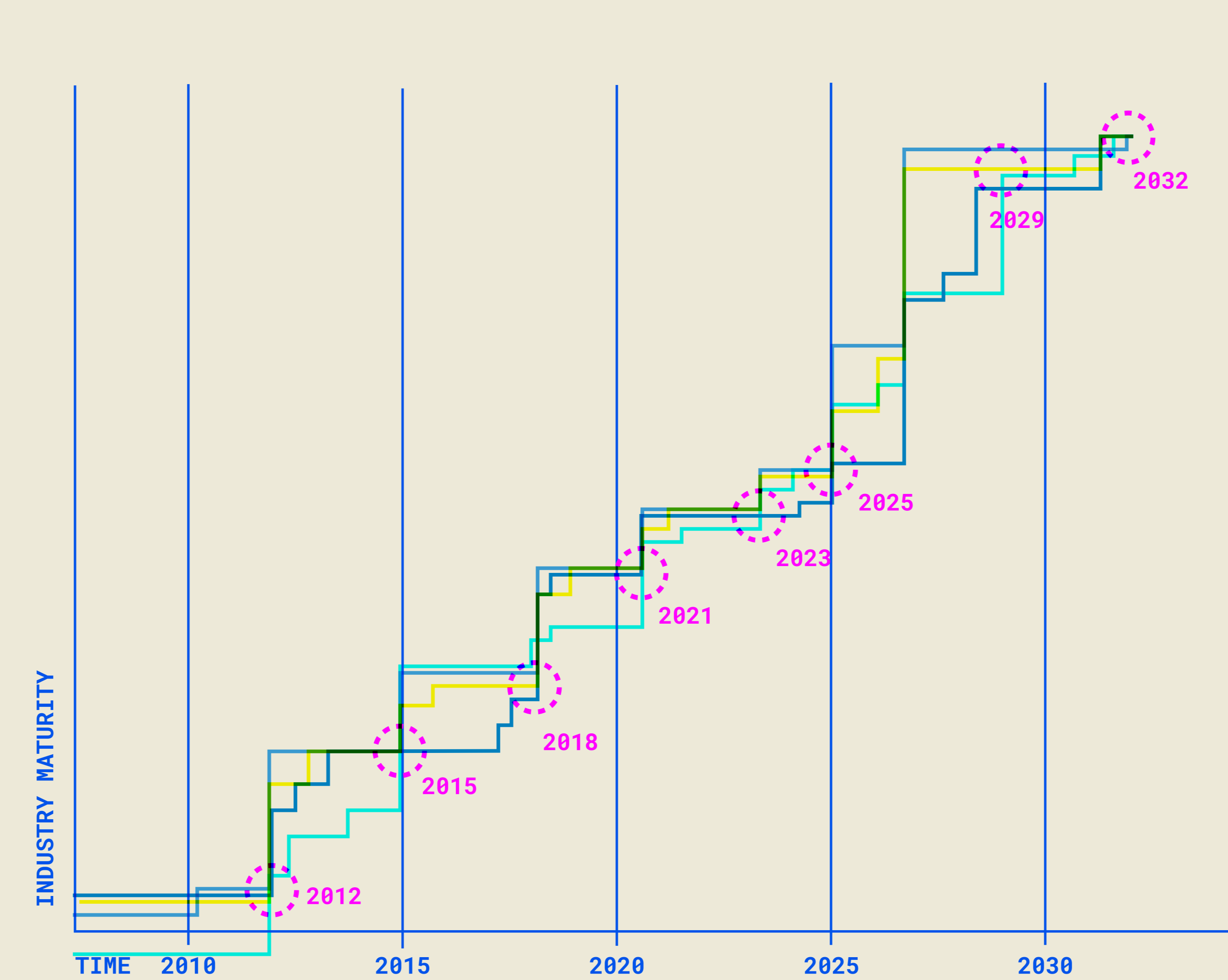
### POLITICAL

Political stakeholders feel pressure to address sustainability issues, providing new legal frameworks, invest in green technologies and innovations, push circular economy, and create environmental policies. Socially, there is a push towards universal basic income

### VALUES

Shift towards co-creational, community-based living (production+consumption) with emphasis on solidarity, self-sufficiency, openness, sustainability and collaboration.

## Path of the dynamic



## Iceberg model

### EVENTS

emergence of commons based peer production models, 3D printer, 'maker movement', anti-consumerism, open source communities, DIY communities, digital fabrication, craft consumption

### PATTERNS OF BEHAVIOUR

Individualism/ mass customization/ aesthetic agency, localism, hobbyism/craftiness, conscious creation and consumption

### SYSTEM STRUCTURE

Local manufacturing, creative commons, global open distribution and democratization of information, collaborative and open learning & education, decentralized, non-proprietary/lack of ownership, value over ownership, collaboration & cooperation

### MENTAL MODELS

Democratization, self-sufficiency, openness, being involved in the creation of what you consume (new fashion experience) + deeper personal & emotional connection

## Temporal reach

**-10**  
OSS is normalized standard in tech  
3D print hardware and software creates viable possibilities for additive manufacturing  
DIY culture & maker movements on the rise  
Fabrication Laboratories appear globally

**-7**  
Open source fashion platforms: Openwear & Pinshape  
Domestic use of 3D print technologies  
Research & development on 3D print biomaterial

**-3**  
CC license update by the European Commission  
Introduction of marketable 3D printed products in apparel companies (Nike, Adidas, New Balance)

**-1**  
Danit Peleg offers downloadable 3D design files to print

**0**  
Partnership Shapeways x Desktop Metal  
young generations want flexible working  
small online open source design communities integrate 3D printing & other technologies  
Fab Labs (MIT) has over 1000 labs in 40 countries

**+1**  
NICHE  
Dynamic will remain niche within relatively small-scale fashion communities that employ the latest technologies of 3D printing and digital designing  
Greater use of FabLabs globally  
Expansion of open source fashion platforms such as Openwear  
Discussions regarding open source and creative commons in academic and political spaces

**+3**  
EMERGING  
Change on a more systematic level, as desktop 3D printing technologies become affordable towards the general public and software also becomes easy to use for non-fashion insiders to download and customize designs digitally  
Traditional fashion companies create open source capsule collections  
4 day work week is the new standard

**+7**  
EARLY MATURITY  
Wide adoption of 3D printing for personal use, broad involvement of the general public in open source communities (fashion and non-fashion related)  
3D printing technologies accessible through domestic ownership of hardware and software  
Predominant emergence of maker-spaces and FabLabs across the world in local environments  
Biomaterials and SMART materials are widely adopted in 3D printed fashion

**+10**  
LATE MATURITY  
Commons-based, open source peer production reaches a wide level of adoption within societies' economic and cultural structures. Fashion designs can be shared, downloaded, adapted and printed through online open source communities and 3D print technology centres worldwide. Open source fashion becomes a widespread alternative to traditional fashion industry production models.