

# Prototyping Innovation Policies with(in) cities

Innovation Area:

Ecodesign – Fashion, Textile & Craft

Lund, Sweden



# How does “prototyping...” work?

This City Case Description is the outcome of a policy prototyping exercise within a city ecosystem. Once the ekip research team has explored a policy area and its connection to cultural and creative industries (CCIs) and innovation, we ask: what would this mean in a local city context?

Together with local stakeholders, we test how a draft policy recommendation might stimulate innovation. Using Portfolio Sensemaking, stakeholders simulate an innovation portfolio, analyse the strengths and gaps of the local support system, and identify what resources are needed to realise the portfolio.

## Lund Context & Area of Focus

Sweden (and Lund) has strong design and retail sectors, advanced fibre and material science, a vibrant crafts scene, but there is almost no textile manufacturing left. Yet, Lund is a **Net Zero Mission City** with ambitious leadership in sustainable transformation and wants to find a way to bring back circular manufacturing.

We explored what happens when fashion and craft meet in a shared mission for sustainable, circular manufacturing.

What role can the Digital Product Passport (DPP) play for circular and eco-design in a local context where manufacturing has largely moved to other countries outside Europe?



### DIGITAL PRODUCT PASSPORT AS AN OPPORTUNITY FOR CIRCULARITY

Europe's consumption of textiles is rising and so are the mountains of waste. To tackle this, the EU is introducing the Digital Product Passport (DPP) as part of the Ecodesign Product Responsibility Regulation (ESPR) prioritising textiles. From 2027, most products sold in Europe will require a DPP containing details about origin, materials, environmental impact, and end-of-life options.

The goal: **greater transparency** and consumer demand for reliable data to make sustainable choices. DPP obligations will affect craft, design, textiles, materials, logistics, manufacturing, electronics and other sectors.



# Portfolio sensemaking

## WASTE IS THE NEW RESOURCE

After analysing Lund's context and sharing needs, participants worked in five teams. They asked: what are the opportunities and potential working with DPP and ecodesign?

The teams highlighted the importance of how we handle waste. The ongoing implementation of the EU Waste Directive for textile is debated by citizens as well as companies. The cities are responsible for collecting the waste, but still no proper solutions are in place for it to work efficiently. With *Waste is the new resource* in mind, the teams developed concrete portfolio proposals.

- “*Let's make it easier to turn unloved materials – waste – into loved material!*”
- Christian Svensson, Skåne Craft Association



## The **five** portfolios

### ➤ Portfolio 1

#### DECENTRALISED DEMAND-DRIVEN PRODUCTION

##### Main idea/ Scope:

A decentralized, demand-driven local production system supported by a fiber hub, using 3D knitting and weaving, blockchain, and adaptive interfaces to reduce overproduction and create systemic innovation.

- Fiber hub as the central supplier of yarn for local producers.
- Blockchain ensures verified and authentic communication, transparency, and entrepreneurial connection.
- System innovation: integrating AI, adaptive production, and new/recycled wool.
- Timeline: test knitting machines before 2026; first yarn batch launched in 2026.



## Portfolio 2

DPP CARE (CONSUMPTION, ARTFULNESS, RESPONSIBILITY, EMOTION) PLATFORM



### Main idea and Scope:

To unify fragmented hubs, enable data-driven sustainability, and engage consumers through storytelling and collaboration.

- Three layers: ecosystem management, strategic choices, execution.
- Build on existing hubs (such as Future by Lund) rather than starting from scratch.
- Funding model inspired by Seamless project in Australia (shared fund).
- Storytelling and consumer engagement central to CARE's success.
- Incentives: deposit systems, academic collaboration, and data linked to imagination and dreams.

## Portfolio 3

TEAM TRUST

### Main idea and Scope:

Building trust across the textile value chain is essential for DPP adoption. Trust must be reinforced through regulation, collaboration, transparency, and incentives.

- DPP only works if trust issues are addressed at all levels (EU, national, municipal).
- Collaboration and storytelling are key for adoption.
- Support needed: EU seed funding, long-term research funding, tax incentives for early adopters.
- Balance of information sharing between producers, consumers, and regulators.
- Creative sector adds value by connecting communities and fostering collaboration.



## Portfolio 3

### VALUE UNLOVED MATERIALS



#### Main idea and Scope:

Using DPP to empower craft makers and SMEs by giving value to 'unloved materials' (waste streams), encouraging reuse, collaboration, and accessible innovation.

- Two perspectives: business innovation vs. craft/maker challenges.
- Product passports increase the value of waste by making it traceable and reusable.
- Platforms for collaboration and funding are vital for diverse stakeholders.
- Suggested student pilot projects to test tags and generate bottom-up insights.
- Risks: grassroots initiatives dying under regulation; unloved materials excluded and wasted.

## Portfolio 4

### ON-DEMAND PROTOTYPING

#### Main idea and Scope:

On-demand rapid prototyping through SMEs and industry networks as a way to drive innovation, customization, and reindustrialization in Europe while reducing waste.

- Rapid prototyping via SMEs as 'labs for change', faster than big research institutions.
- Benefits: more diverse brands/jobs, customized consumer products, resource efficiency.
- Context: regulatory frameworks, consumer behavior, SME development, reindustrialization.
- Support needed: collective use of infrastructure, new crowdfunding models, labeling (inspired by Slow Food).
- Indicators: engaged consumers, participating SMEs, improved resource efficiency



# Who was there?

A BROAD MIX OF STAKEHOLDERS CO-CREATED THIS CASE

## CCI ORGANISATIONS

Form & Design Center, Hemslöjden/Skåne  
Craft Association,  
7 Arte, Anibar



## BUSINESSES

JLindeberg, VATI of Sweden,  
Swedish Textile, Tailorstore,  
PM Digital Management,  
Adesso, KAMen Nordic AB



## ACADEMIA

Lund University:  
Design Sciences, Centre for Retail and Logistics  
(REAL), The International Institute for Environmental  
Industrial Economics, Collaboration Office, Fashion  
Studies/Dpt of Arts and Cultural Sciences, Sten K  
Johnson Center for Entrepreneurship



## LOCAL AUTHORITIES

Waste and Recycling Dpt,  
City of Lund



## OTHERS

Design training  
Medborgarskolan, Future by  
Lund



# Analysis

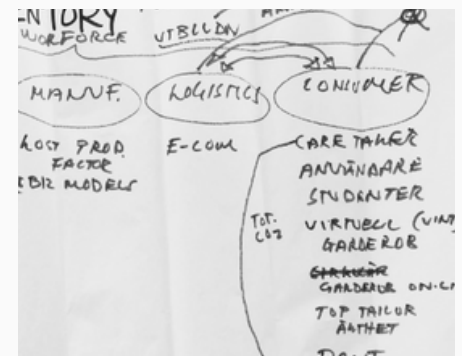
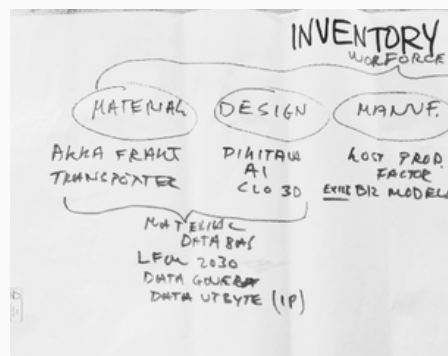
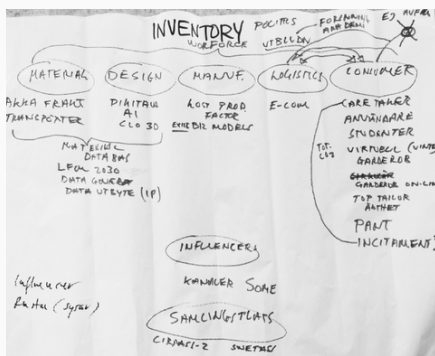
## THE LOCAL INNOVATION SUPPORT SYSTEM

Sweden has strong design, craft, and retail sectors but little or no textile manufacturing. This gap undermines circularity. To become circular and sustainable we need to restart the fashion and textile manufacturing industry using DPP and small, localised production.

The current innovation support system is fragmented and specialised. For example, the system cannot handle a cross-sector area such as fashion-textile-craft-ecodesign which has more the character of a portfolio than a selection of single start-ups. The stakeholders in this cross-sector area are very mixed, coming from academia, business, municipality/region, NGOs

and vocational education. Existing cultural grants for craft focus on its cultural dimensions, craft organisations and skills. It is not connected to innovation, markets, or cross-sector opportunities.

To achieve circular resilience, new forms of cross-sector learning environments are needed for agile experimentation and fast prototyping together with customers, market insight, and minimum viable product development.



# Conclusions

## & RECOMMENDATIONS

### 1. Infrastructure & System Innovation

Several groups stressed that change requires more than single technical solutions. It is about building systemic infrastructures:

- Fiber hubs (Group 1).
- Digital platforms to unify fragmented initiatives (Group 2).
- Collaborative networks of SMEs as "labs for change" (Group 5).

These infrastructures are adaptive, decentralized, and connected through blockchain, AI, and interface design.

**Conclusion:** Innovation must be framed as systemic and infrastructural, combining technology, entrepreneurship, and regulatory alignment rather than piecemeal projects.



“

*We need to embed business thinking from the start. Design, cultural and craft sectors often undervalue this, but without viable business and support models, grassroots and SMEs risk dying under heavy regulation and bureaucracy. It's a work that need to be done, time to be spent. By involving different sizes of actors, industries and brands early in DPP development we can ensure the system is practical and beneficial rather than burdensome.”*

”

Marie Löwegren, Assistant Professor, PhD  
at Sten K Johnson Centre for Entrepreneurship, Lund University

## 2. Trust, Transparency & Regulation

Trust was highlighted as a prerequisite for adoption of DPP and other innovations (Group 3). Regulations at EU, national, and municipal levels must reinforce consumer confidence and ensure consistent implementation. Transparency in the value chain, enabled by blockchain and product passports, is a recurring solution (Groups 1, 3, 4).

**Conclusion:** Without trust and credible regulation, technical solutions will not achieve behavioral change or systemic transformation.

## 3. Consumer Engagement & Storytelling

- Emotional connection and storytelling are critical for consumer adoption (Group 2).
- Consumers need accessible, understandable information that translates technical data into meaning (Groups 2 & 3).
- Craft and grassroots perspectives (Group 4) emphasized bottom-up engagement, from student experiments to small-scale innovators.

**Conclusion:** Consumers must not just comply but feel emotionally engaged and empowered through storytelling, incentives (like deposit schemes), and accessible participation.

## 4. Circularity & “Unloved Materials”

Reuse, recycling, and recognition of waste as a resource were emphasized by the Craft Group (Group 4). DPPs can increase the value of waste by making it traceable and usable. Grassroots and SME perspectives highlighted risks: overregulation could kill small initiatives, and unloved materials might be excluded if systems are not inclusive.

**Conclusion:** Circularity must be designed inclusively, ensuring that waste streams and grassroots actors are part of the system, not left behind.

## 5. Financing & Support Structures

Multiple groups raised the need for new funding models:

- Shared funds like Seamless (Group 2).
- Crowdfunding from consumers alongside public funding (Group 5).
- EU seed money and long-term research support (Group 3).

Collaboration platforms are needed to bring together diverse stakeholders with different funding models (Group 4).

**Conclusion:** The transition requires innovative, hybrid financing models that combine public, private, and consumer-driven funding with collaborative support structures.



## Overall Conclusions

- System-level innovation is needed: connecting hubs, SMEs, and infrastructures rather than focusing on isolated technologies.
- Trust and regulation are foundational; without them, adoption will stall.
- Consumers are central: emotional engagement, storytelling, and incentives will drive real behavioral change.
- Circularity must be inclusive, turning waste into value and supporting grassroots innovators.
- New financial architectures are critical to sustain experimentation, scaling, and long-term impact
- Textile waste handling and collecting has become mandatory without any proper solutions in place.

# What happened **next?**

This City Case sparked new collaborations:

- Future by Lund applied with partners to become a national demonstrator for sustainable manufacturing.
- Lund University joined several Horizon projects on DPP and eco-design.
- Pilot tests of on-demand production and DPP for cultural artefacts were demonstrated at the Unexpected conference in June 2025.

More actors are now exploring how to align ecodesign and circular manufacturing with European regulations.





## Our methods

### THE INNOVATION PORTFOLIO POLICY CANVAS

The Prototyping Workshop Methodology and the Innovation Portfolio Policy Canvas guide local stakeholders to analyse their local ecosystem, make an inventory of actors and resources, identify and create a potential innovation portfolio and analyse their local innovation support system.

### THE OPSI MODEL

The OPSI-model (Open Public Sector Innovation OECD) is adapted to analyze the innovation character of the policy area. Participants explore whether the policy involves new legislative measures or is more exploratory in nature, allowing for a deeper understanding of how the policy might influence the local ecosystem

### THE LIEPT MODEL

The Lund Innovation Ecosystem Portfolio Tracking (LIEPT) model is a tool that provides a framework for tracking changes in innovation portfolios in ecosystems where impact and growth happen not in one organisation but in many. This relies on collaborative efforts by many stakeholders.

## What is ekip

The ekip partnership funded by the European Commission consists of 5 universities, 4 consultancies, 4 creative and cultural organisations and 4 cities. Together we develop innovation policies for the cultural and creative industries in Europe. We do that in various ways: through research, consultations and interaction with people in the sector at policy labs and focus groups and assessments in city ecosystems.

## Want to know more? Want to do it in your city?

Would you like to explore the topic of Ecodesign further? Visit the [\*Fashion Transition: Eco-Design for Circularity\*](#) on ekip website, where you'll find relevant policy posters, presentations, videos, and articles.

You can even host your own session in your city! It's an empowering and insightful way to bring together local stakeholders across sectors and disciplines for a focused discussion on a topic of shared importance. The ekip method and approach are open for anyone to use including a Facilitator's Guide and templates available in the ekip Knowledge Bank under [\*Tools and Methods\*](#).

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**Future by Lund, 2025**

*Disclaimer:*

*Each City Case Description reflects the views of workshop participants. It is a perspective from one city context, intended to inspire and ignite action*



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