POLITECNICO MILANO 1863 | DEPARTMENT OF DESIGN

Women Circular Furniture Conference

Designing the Circular Transition: Strategies for Products, Business Models, and Ecosystems

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Design+Strategies https://www.designplusstrategies.polimi.it/

Strategic Design aims to create innovative products, services, and systems that define a company's positioning in the market and in society, while fostering a mindset that supports organizational and systemic change.

We conduct **research**, **applied research**, and **educational activities**, focusing on and exploring three main areas:

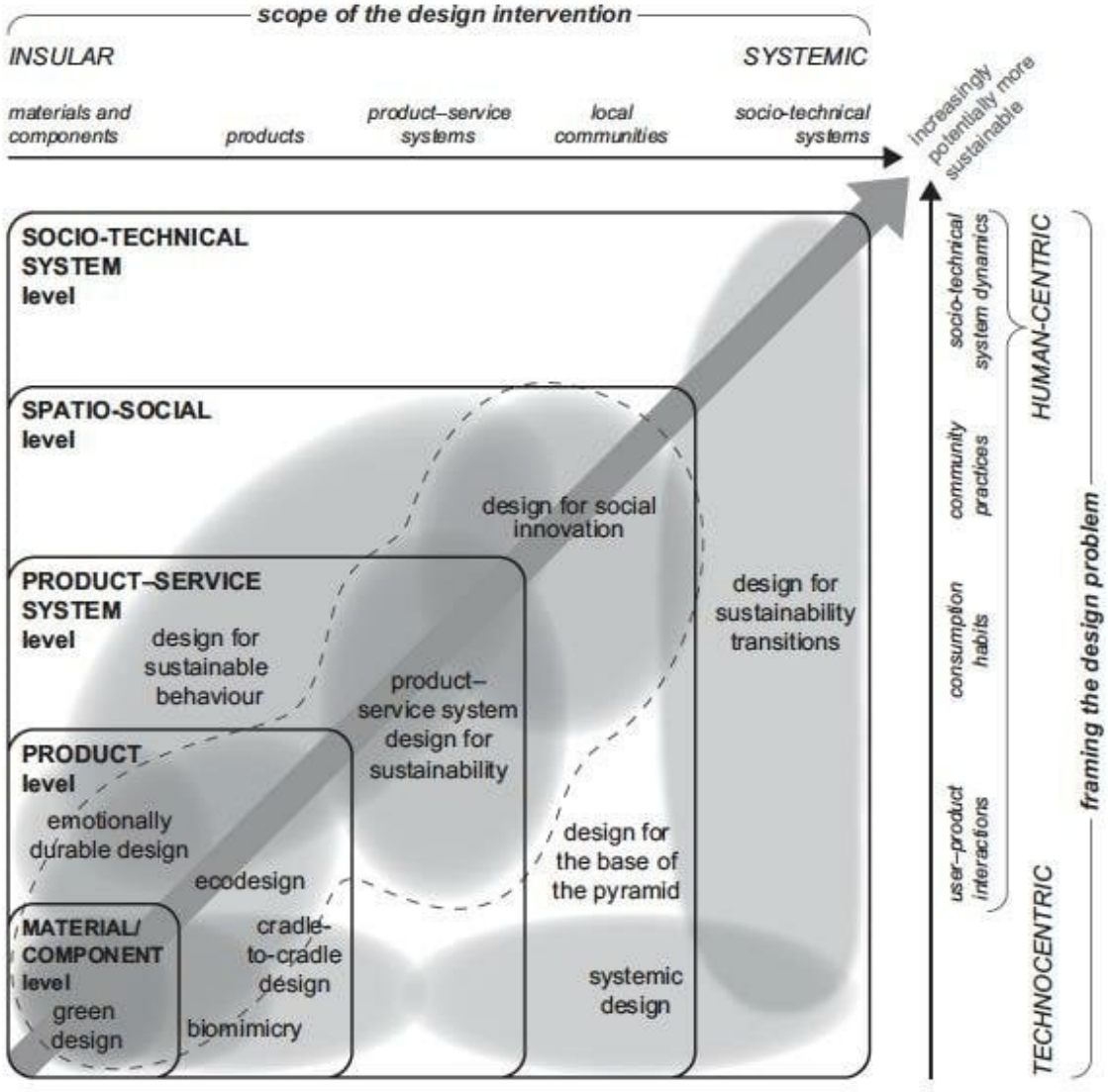
Design in Organization
Design for Sustainability Transitions
Cross-fertilization with Creative Industries

Strategic Design and Circular Transition

01

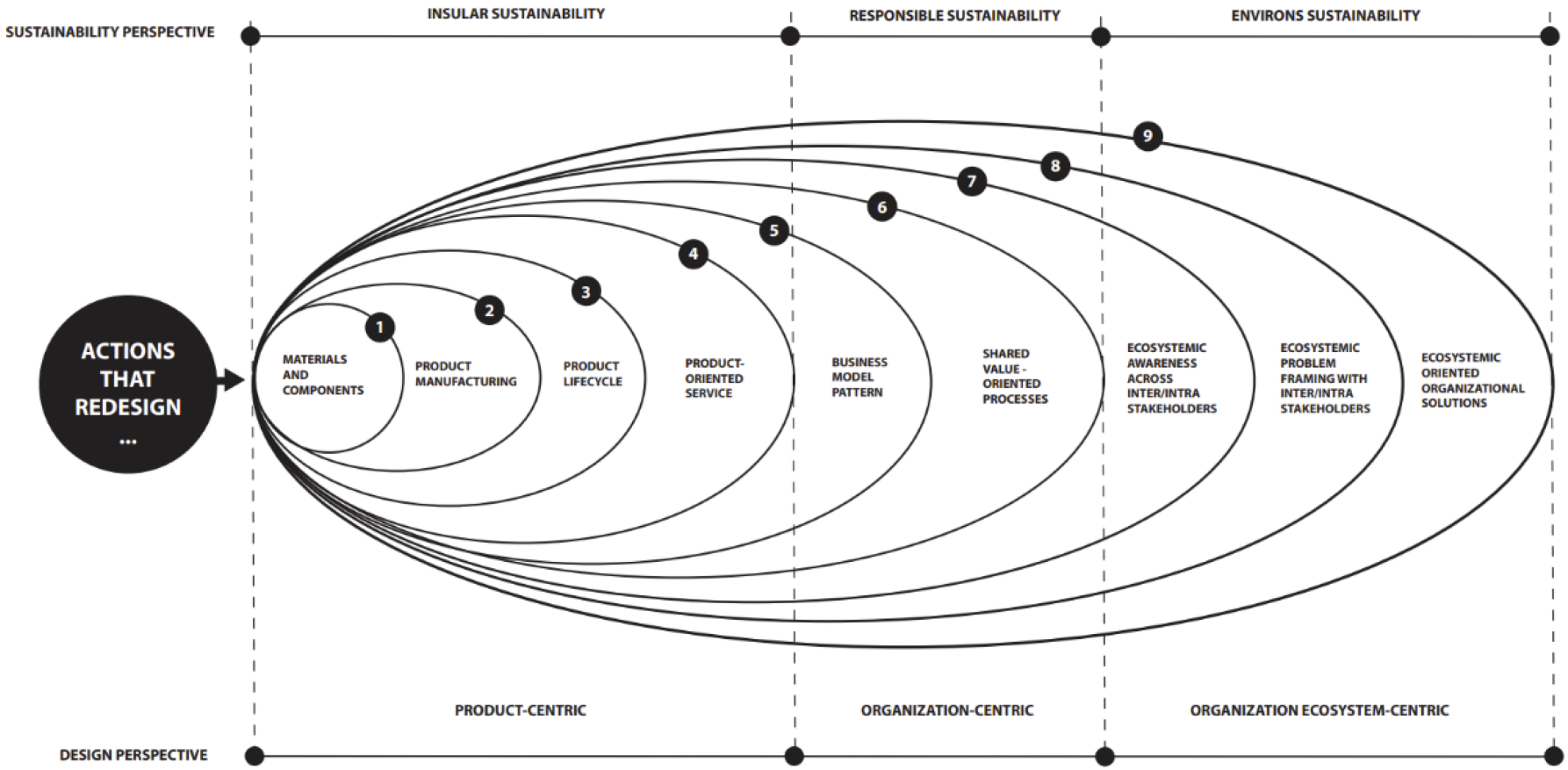
Design for Sustainable Framework

(Ceschin & Gaziulusoy, 2016)



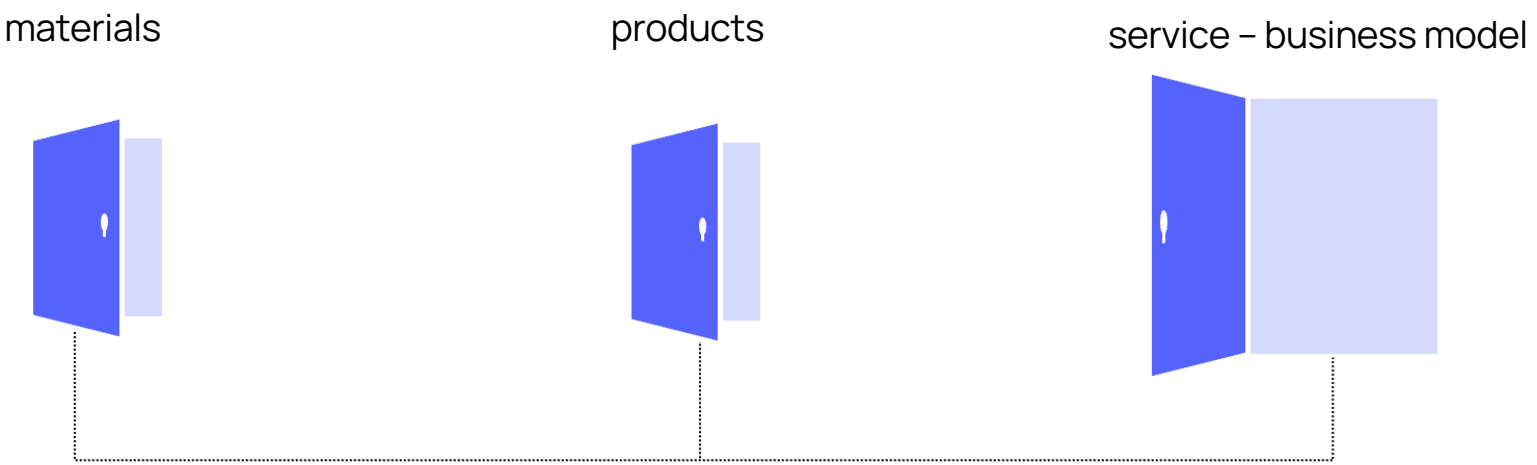
Design for Sustainable Framework in the Manufacturing Sectors

(D'Itria, Pei & Bertola, 2024)



Servitization: From **Product-Centric** to **Service-Oriented** toward a more sustainable future

These different levels are interconnected among them

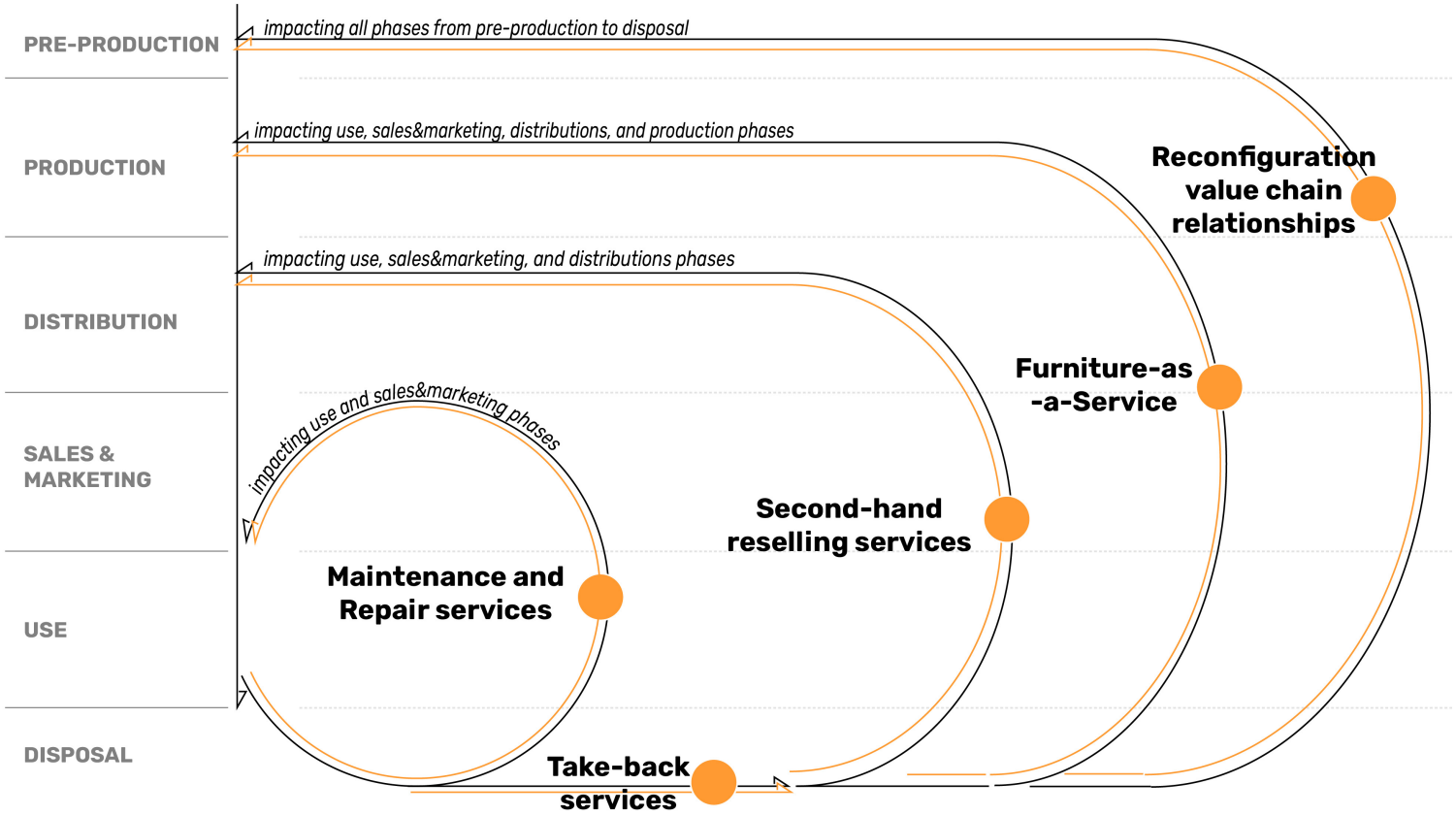


Several transversal aspects through which design action can intervene

- SUPPLY CHAIN
- CAPACITÀ DELL'AZIENDA
- CONSUMATORI
- STRUTTURA AZIENDALE
- COMUNICAZIONE
- ....

Servitization for Circular Economy

The different types of PSS on the product lifecycle



Pei X., Italia M., Migliozzi S. (incoming), Advancing the Circular Economy through Product Service Systems: A Multiple-Case Study in the Furniture Sector

AHREND FURNITURE AS A SERVICE

For a fixed monthly fee, the company delivers workspaces that can easily be adapted to the changing needs. With a sharing platform on which there's an exchange furniture based on supply and demand between organisations. In the marketplace for furniture it's possible to return used products as a customer. The company refurbishes the clients old furniture and re-use with another customer to prevent waste.

The company visits the clients every two years to check the products function and aesthetics. If something breaks, the client can easily register a service request via the QR code on the product sticker. The company repairs this free of charge, as the warranty applies during the full term of the contract.

The Asset Management System is a smart tool provides insight into the location, type, state, purchase and current value of the furniture *(Source* https://www.ahrend.com/*)*

Service typology

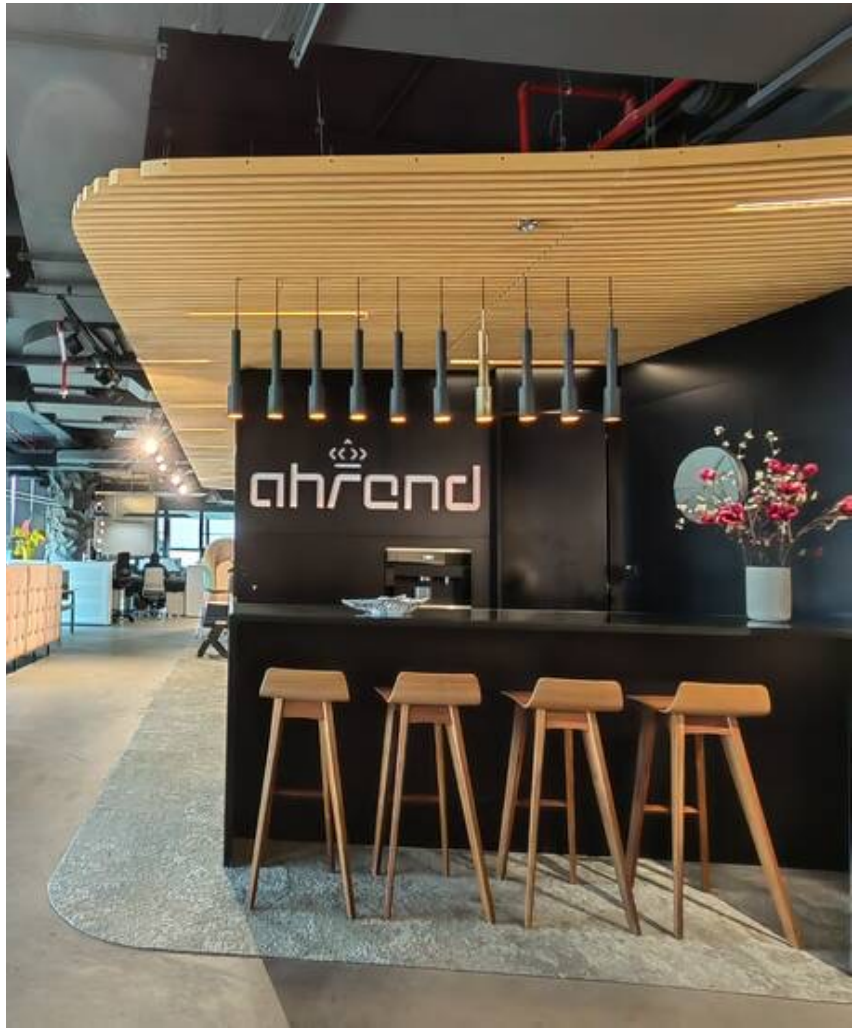
Product-oriented PSS
Use-oriented PSS

Relation with user

Company in charge

Service specifics

Take back
Second-hand market
Maintenance – repair
Renting – leasing



OPENDESK – NEW SYSTEM CONFIGURATION

Global maker platform to produce products locally on demand hosting digital furniture designs that can be made anywhere in the world through a global network of local makers. *(Source https://opendesk.cc/)*

HOW IT WORKS

Select designs

Browse and add designs to your basket or get in touch for help

Request quotes

Get quotes from local makers in your area within two business days

Choose your maker

Choose the local maker's quote that works best for you

Receive your furniture

Get furniture delivered to your door in 2-4 weeks, direct from your maker

Service typology

Result-oriented PSS

Relation with user

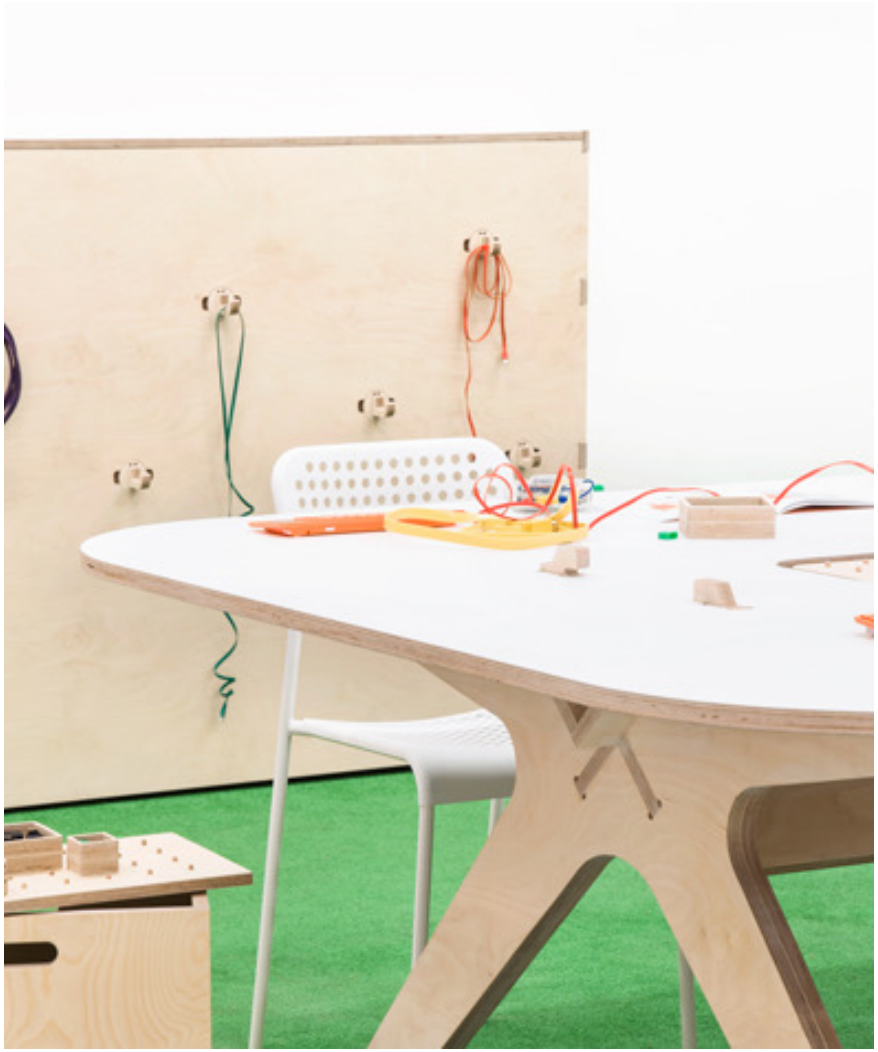
Company;

User is also playing an important role

Service specifics

On-demand production

Reduction of transport (of new furniture)



RE-TUNA RECYCLING MALL

ReTuna is the world's first shopping mall dedicated entirely to reuse and upcycling. Located in Eskilstuna, Sweden, it operates alongside a municipal recycling center, where citizens can donate reusable items such as furniture, clothing, electronics, and household goods.

These products are sorted and distributed to shops within the mall, where they are repaired, refurbished, redesigned, and resold by local entrepreneurs. Through collaboration between the **municipality, citizens, and businesses**, ReTuna extends product lifecycles, reduces waste, creates local jobs, and demonstrates a successful circular economy ecosystem.
(Source https://www.retuna.se/english)



Service typology

Product-oriented PSS
Use-oriented PSS

Relation with user

Company & User participation

Service specifics

Take back (used furniture)
Second-hand products
Maintenance – repair – repurpose - upgrade
Recycling

Applying Circular Strategies through Strategic Design

02

MICS
Made in Italy
Circolare e Sostenibile

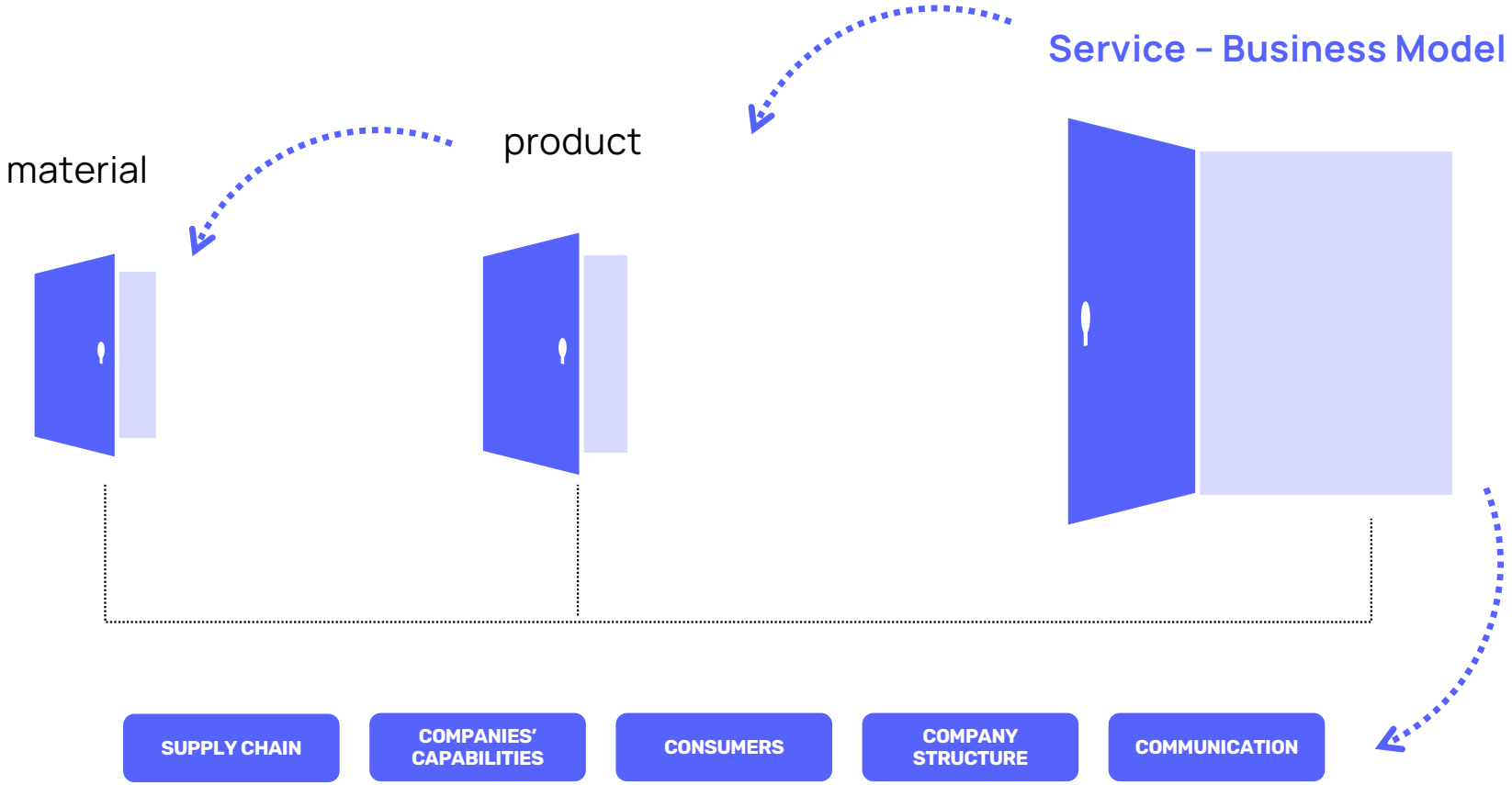
ACTAS
Advancing Contract Furniture through Design-Driven Servitization Strategies towards Sustainable Transition: Activating, Testing and Adopting

ACTAS is one of the projects within the MICS program. Its objective is to develop strategies, methods, and tools tailored to the **contract furniture sector**, supporting companies and their stakeholders in **the transition from product-centric to service-oriented business models**.

R-evolve
Roll Out Systemic Change to Evolve the Furniture Industry Towards a Circular Economy Through the Implementation of Innovative Circular Business Models, Material and Design Strategies, and the Digital Product Passport

R-evolve is an EU-funded project that aims to transform the furniture industry through **a systemic approach**, promoting **circular business models**, **sustainable design** and **material strategies**, and the **Digital Product Passport**.

A SYSTEMIC APPROACH



Barriers to developing PSS toward Circular Economy

A series of identified barriers:
Schoonover (2022)

- **Product design,**
- **Finance and economics,**
- **Capabilities,**
- **Relationships,**
- **Consumer-related barriers,**
- **Policy**

Product & material level

organizational level

systemic level

Why Strategic Design

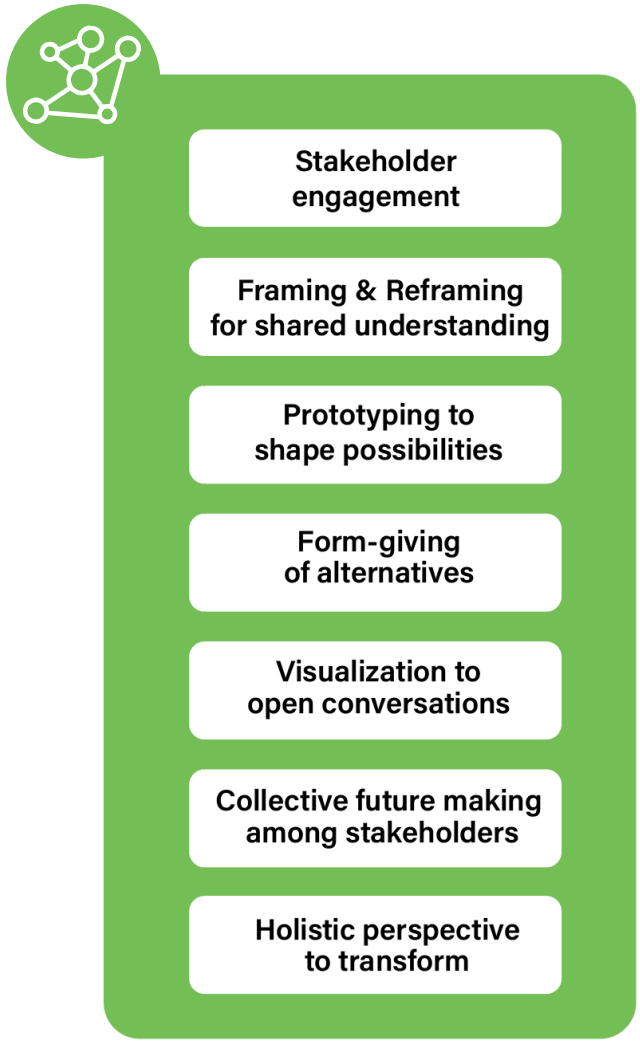
03

Why Strategic Design?

The circular transition requires organizations to rethink not only products, but also business models, stakeholder relationships, and entire value systems.

Strategic Design plays a key role in this transformation by leveraging capabilities such as **holistic thinking, facilitation, experimentation, prototyping, and complexity management**.

These capabilities enable organizations to navigate uncertainty, align stakeholders, and develop innovative circular solutions that generate environmental, social, and economic value.



Pei X., Pirrone L. (incoming), Design Thinking in the System. Emerging Features, Contributions, and Practices

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Thank you for your attention

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