

New European standardization committee for furniture circularity

Tayfun Avdan





EUROPEAN COMMITTEE
FOR STANDARDIZATION

CEN/TC 207 - Furniture

CEN/TC 207 Subcommittees and Working Groups

Working group	Title
CEN/TC 207/WG 1	Requirements for domestic furniture
CEN/TC 207/WG 10	Requirements and tools for furniture circularity
CEN/TC 207/WG 2	Requirements for children's and nursery furniture
CEN/TC 207/WG 3	Office furniture
CEN/TC 207/WG 4	Requirements for Outdoor furniture
CEN/TC 207/WG 5	Requirements for non domestic furniture
CEN/TC 207/WG 6	Requirements for educational furniture
CEN/TC 207/WG 7	Requirements and test methods for furniture surfaces
CEN/TC 207/WG 8	Requirements and test methods for hardware for furniture
CEN/TC 207/WG 9	Test methods

New European Standardization Committee – WG10



Scope

“Requirements and evaluation methods for circular furniture design and product life extension strategies.

Convenor: Tayfun Avdan

Secretary: SIS

Participating national committees;

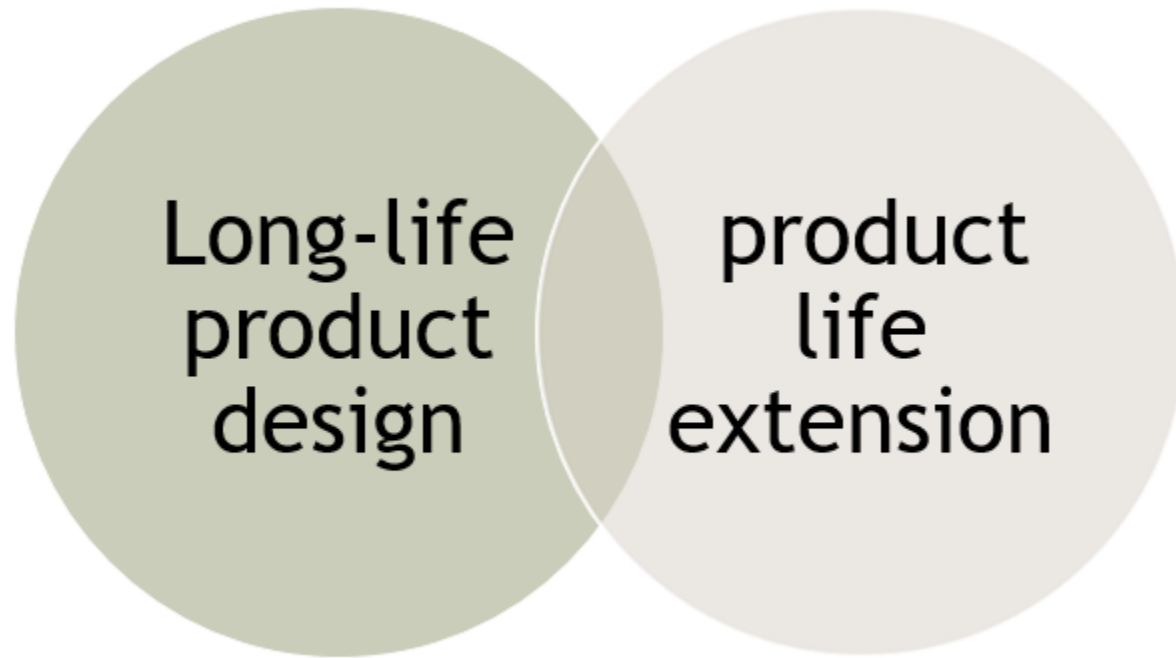
AU, BE, DK, FR, DE, IT, NL, NO, RS, ES, SE, GB



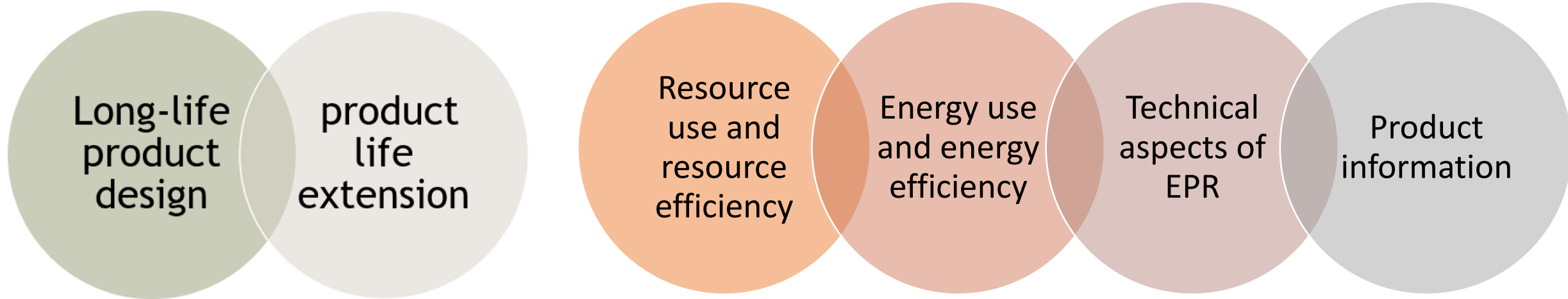
CEN/TC207 Working Group 10

Manufacturer	Institutions/Assosiations	Test Labs	NGO/ Research	Academy
IKEA	FCBA French Institute of Technology for Forest-based and Furniture Sectors	CATAS (Italy)	ECOS	University of Belgrade
Ahrend	VDM The Association of the German Furniture Industry	TUV (Germany)	Manufaktura	Technical University of Rosenheim
Steelcase	Teknologisk Danish Technological Institute	COSMOB (Italy) Test Lab/Certification Body		Linköping University-Sweden
VS	Fedustria			
Fritz Hansen	Norskindustri			
Flokk	AIDIMME Technological Institute			
ASS-Einrichtungssysteme GmbH	National Bed Federation UK			
Haworth	BSI (British Standardization Ins.)			

Circular Product Design Principles



Ecodesign Principles



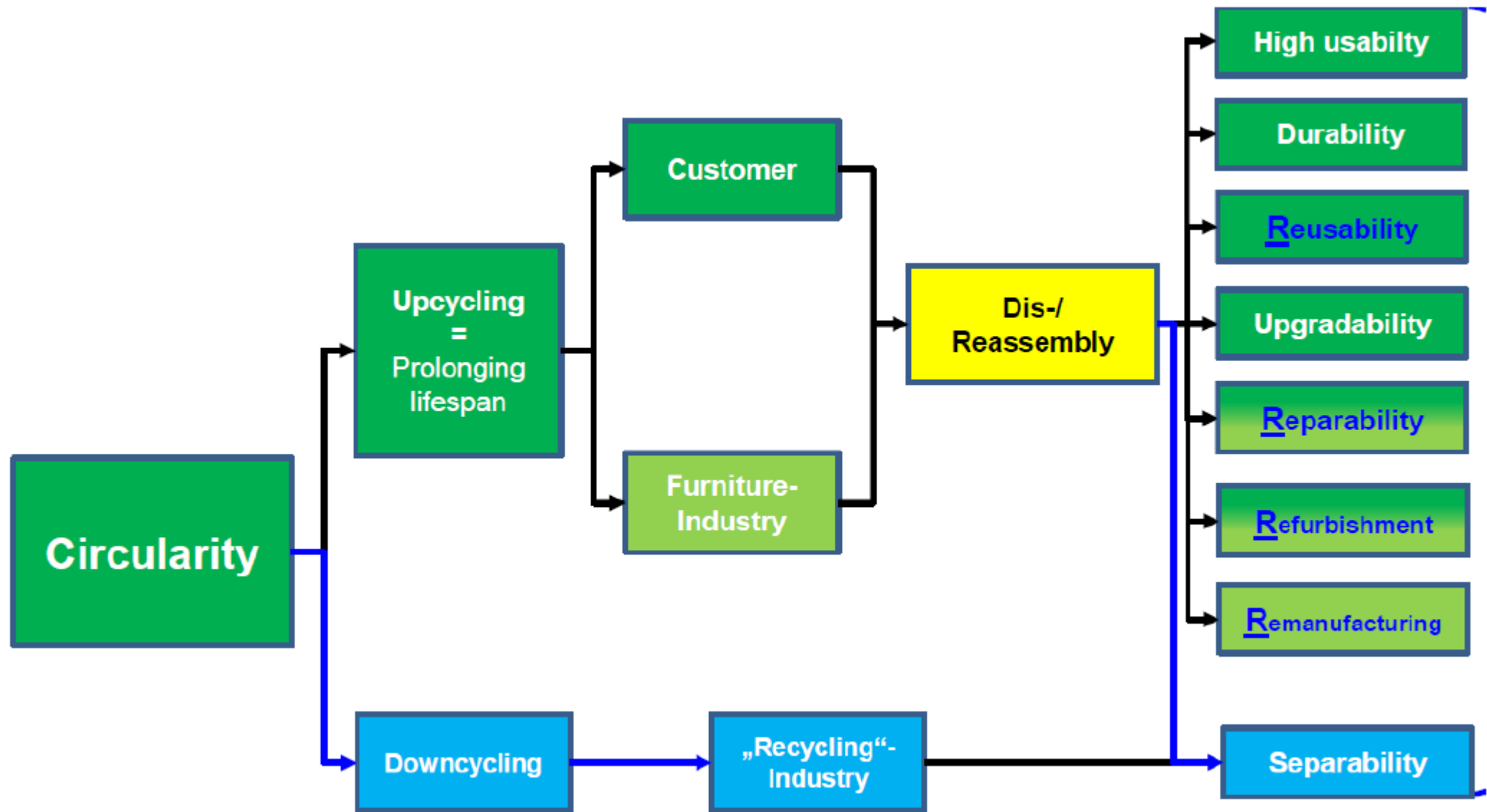
CEN/TC207 WG 10 Furniture circularity

Work programme

Standardization activities under WG10 will cover a full package of furniture circularity by taking into account the relevant product aspects among those listed in the Article 5 of the European Commission 's regulatory proposal, ESPR, as listed below

- Product durability and lifetime
- reliability;
- reusability;
- upgradability;
- reparability;
- possibility of maintenance and refurbishment;
- presence of substances of concern;
- energy use or energy efficiency;
- resource use or resource efficiency;
- recycled content;
- possibility of remanufacturing and recycling;
- possibility of recovery of materials;
- environmental impacts, including carbon and environmental footprint;
- expected generation of waste materials
- Technical aspects of EPR (Extended Producer Responsibility)
- Digital Product Passport





EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 17902

September 2022

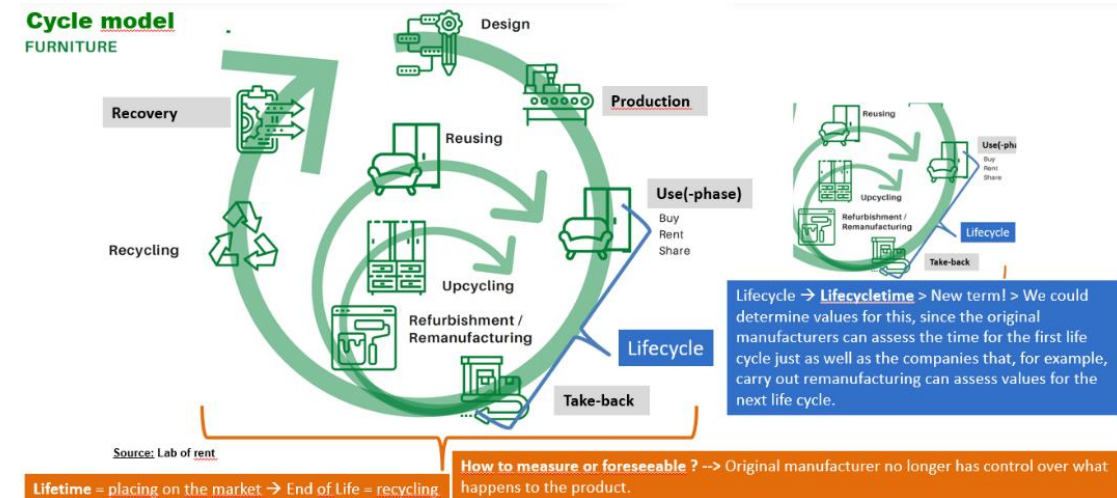
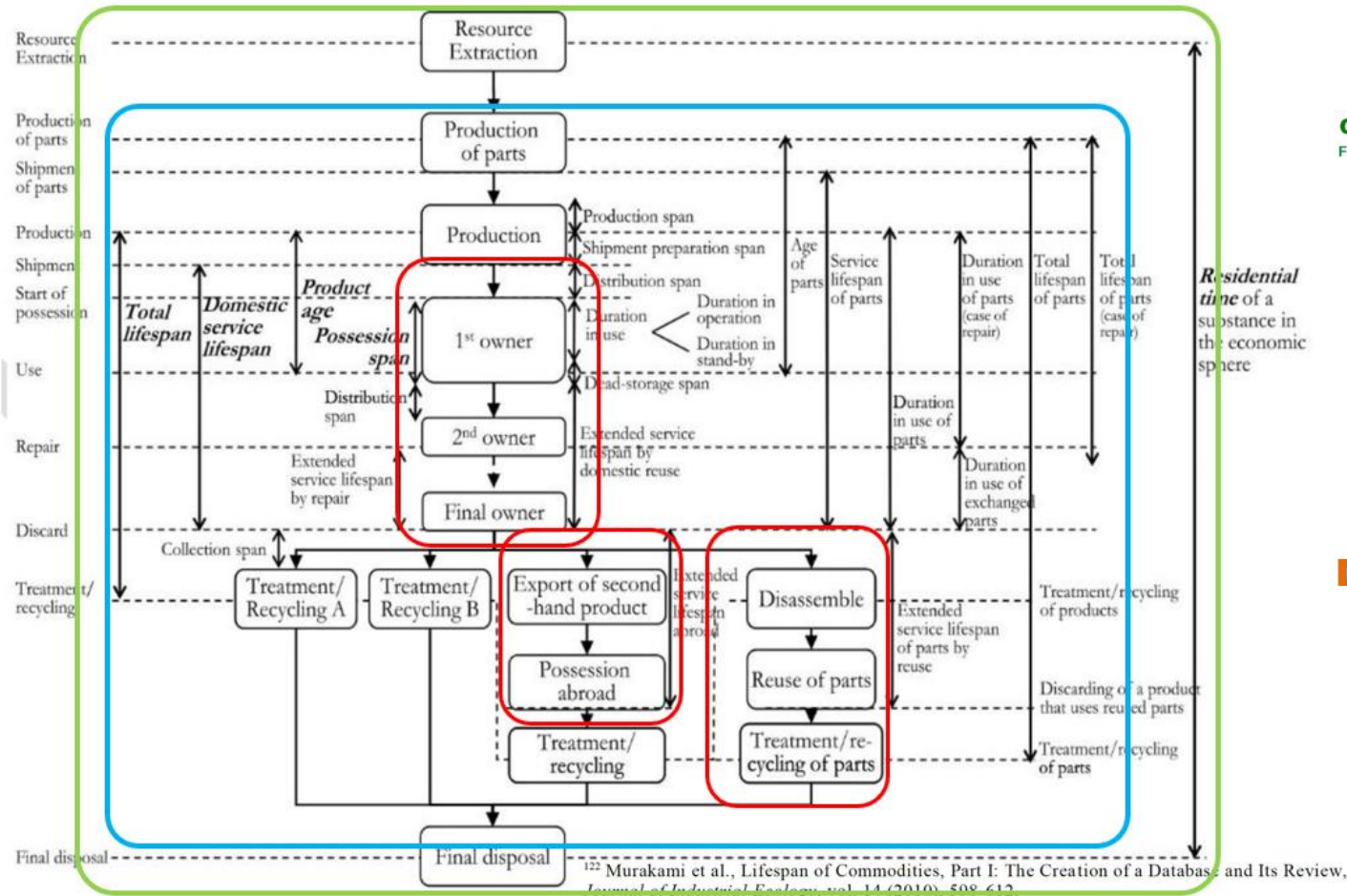
ICS 97.140

English Version

Furniture - Circularity - Requirement and evaluation
methods for dis-/reassembly

New Project

Product lifetime and durability



Product specification and constituents

Internal structure

Lifetime risks related to components, joints and components' co-functionality

Material

Lifetime risks related to components' materials

Wear and aging

Lifetime risks related to surfaces exposed to wear
Lifetime risks related to functionality deteriorating due to time

1. Product lifetime risks canvas

Support system

Lifetime risks due to needs for fundamental resources, like wear parts, spare parts, energy sources

Product

Identity

Functionality

Set of functions or capabilities of the product

External co-functionality

Lifetime risks due to inability to function together with external devices

Product in use phase context

Lifetime definition

Includes the lifetime itself, the way this lifetime is to be reached, through service, maintenance, upgrade, etc. and specifies what needs to be accessible in order to uphold this lifetime in a sustainable way

2

User preferences, such as shifting needs or affections

Lifetime risks due to anticipated shifts in user preferences

8

Regulatory requirements

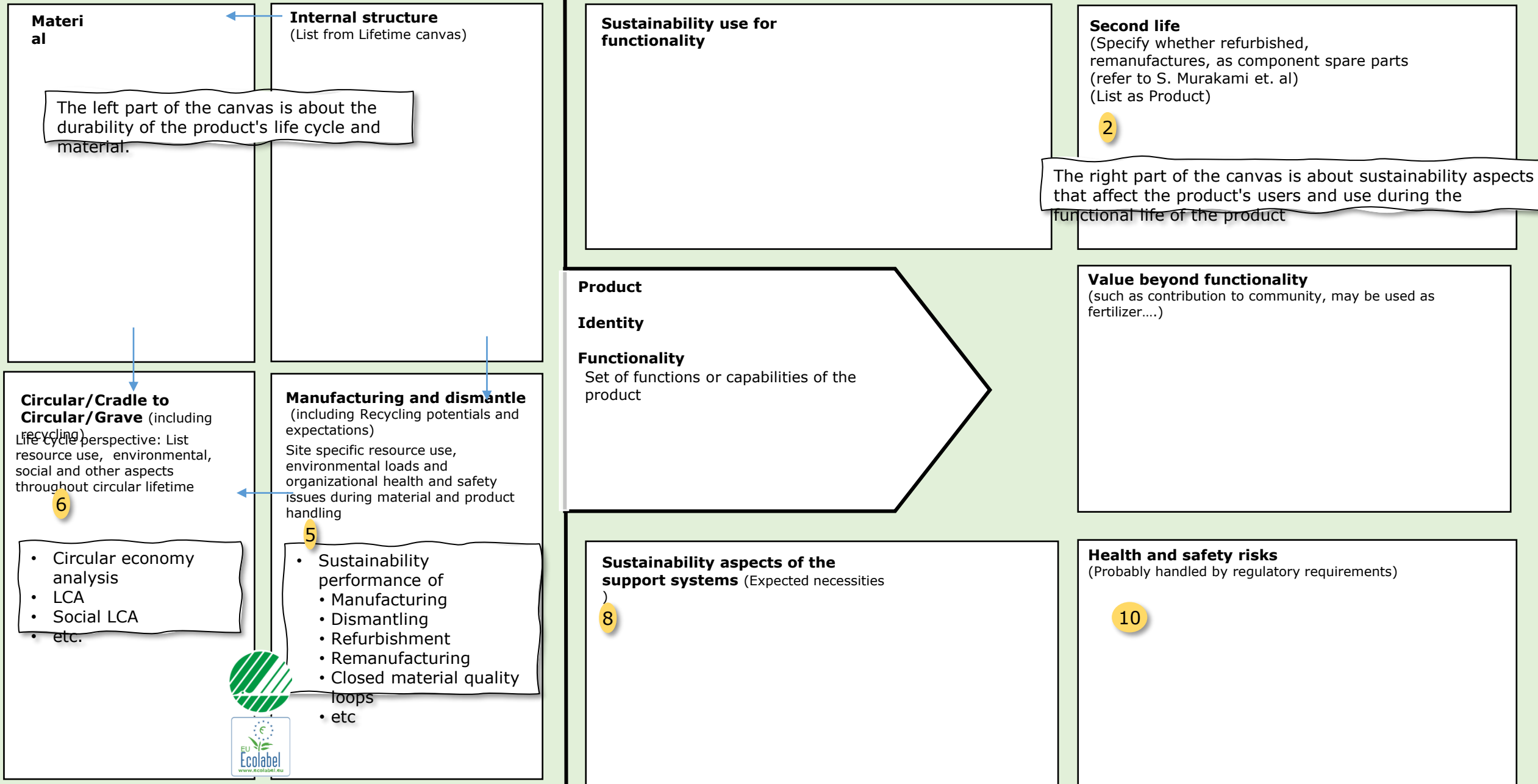
Lifetime risks due to anticipated changes in regulatory requirements that prevent to future use of this model of the product.

9

canvas

Material, life cycle and circularity

Product in use phase context



A risk and fact based method to manage product lifetime

Product lifetime:

- **Identify** risks to product lifetime
- **Mitigate** risks to product lifetime
- **Verify** materiality and mitigation of risks related to product lifetime

Risk: Product lifetime risks + Product lifecycle(s) sustainability risks

Example of **existing** durability standards

Seating-Furniture-&-Tables¶

Standard¶	Title¶
EN-12520¶	Furniture°-Strength, durability and safety°-Requirements for domestic-seating α
EN-12521¶	Furniture°-Strength, durability and safety°-Requirements for domestic-tables α
EN-16139¶	Furniture°-Strength, durability and safety°-Requirements for non-domestic-seating α
EN-15372¶	Furniture°-Strength, durability and safety°-Requirements for non-domestic-tables α

Surfaces¶

Standard¶	Title¶
EN-12720¶	Furniture°-Assessment of surface-resistance-to-cold-liquids α
EN-12721¶	Furniture°-Assessment of surface-resistance-to-wet-heat α
EN-12722¶	Furniture°-Assessment of surface-resistance-to-dry-heat α
EN-15185¶	Furniture°-Assessment of the surface-resistance-to-abrasion α
EN-15186¶	Furniture°-Assessment of the surface-resistance-to-scratching α
EN-15187¶	Furniture°-Assessment of the effect-of-light-exposure α

Hardware/-Functional-fittings¶

Standard¶	Title¶
EN-15828¶	Hardware for furniture°-Strength and durability-of-hinges and their components°-Stays and hinges pivoting on a horizontal-axis α
EN-15338¶	Hardware for furniture°-Strength and durability of extension-elements and their componentsα
EN-15570¶	Hardware for furniture°-Strength and durability-of-hinges and their components°-Hinges pivoting on a vertical-axis α
EN-16014¶	Hardware for furniture°-Strength and durability-of-locking-mechanisms α
EN-15706¶	Hardware for furniture°-Strength and durability-of-slide-fittings for sliding doors and roll-frontsα

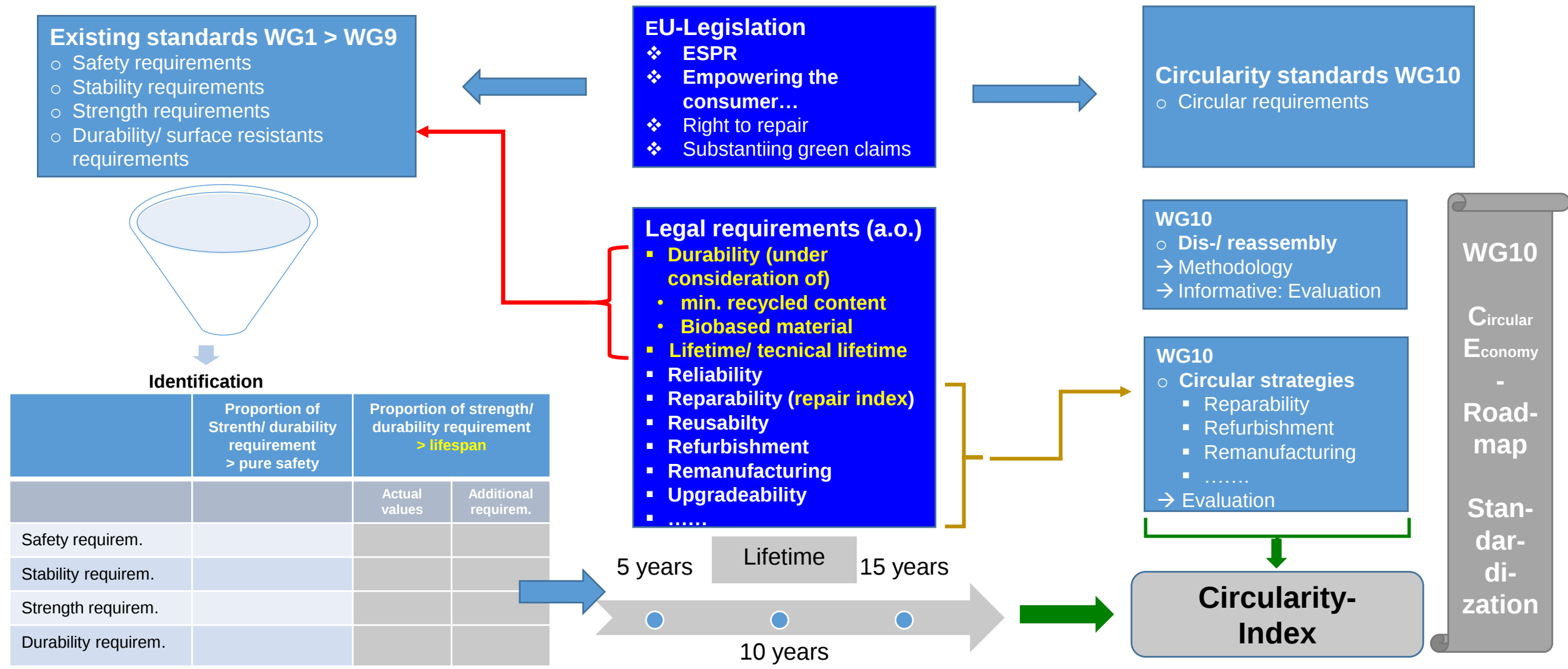
Important areas of actions

We need to

- identify **critical/relevant spare parts**. This is important to avoid unnecessary production!
 - How to utilize DPP
- Consensus on **product/part durability** between existing requirements/test methods and circular strategies

Link legislation <> standardization

Implementation of legal requirements (proposal)



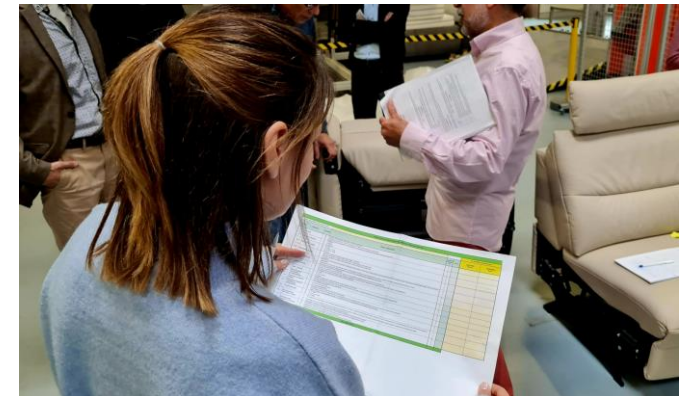
Meeting schedule

- Monthly official meetings
- Weekly open knowledge sharing and general CE related discussions

Workshops

- 3 days workshop in October in Germany
- 2 days workshop will be in November in France

3 days workshop-Dis/re-assembly methodology





Thank you!