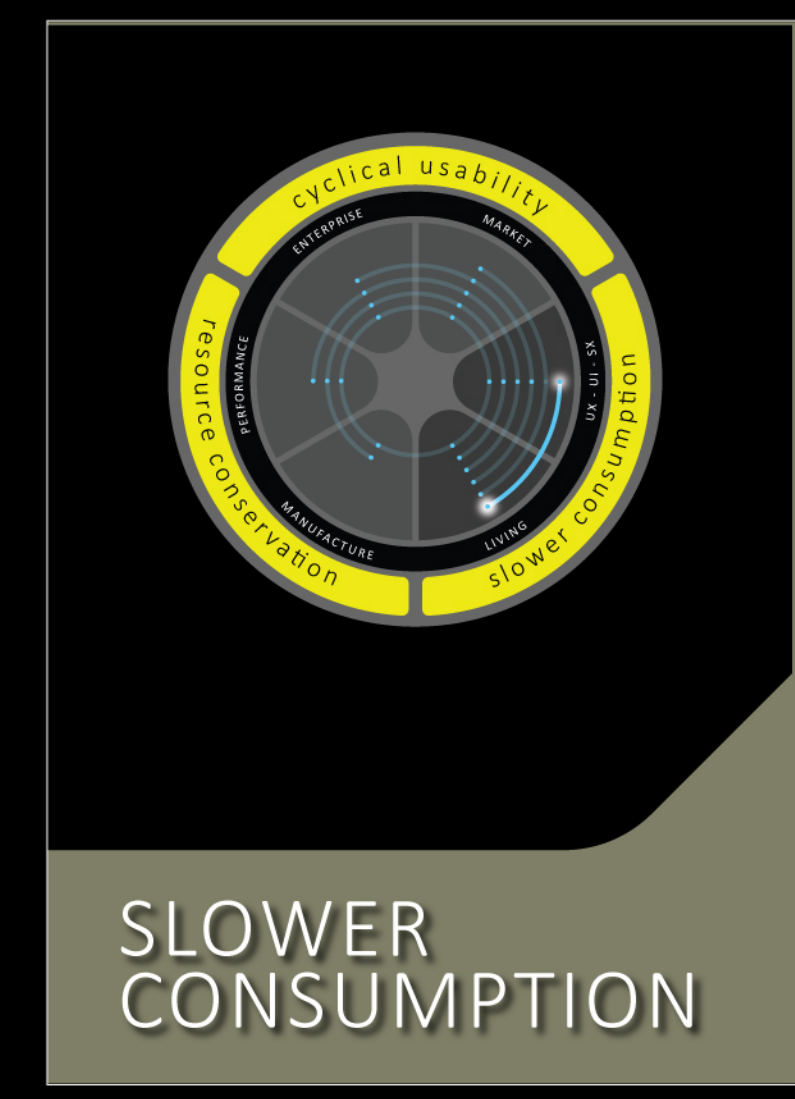
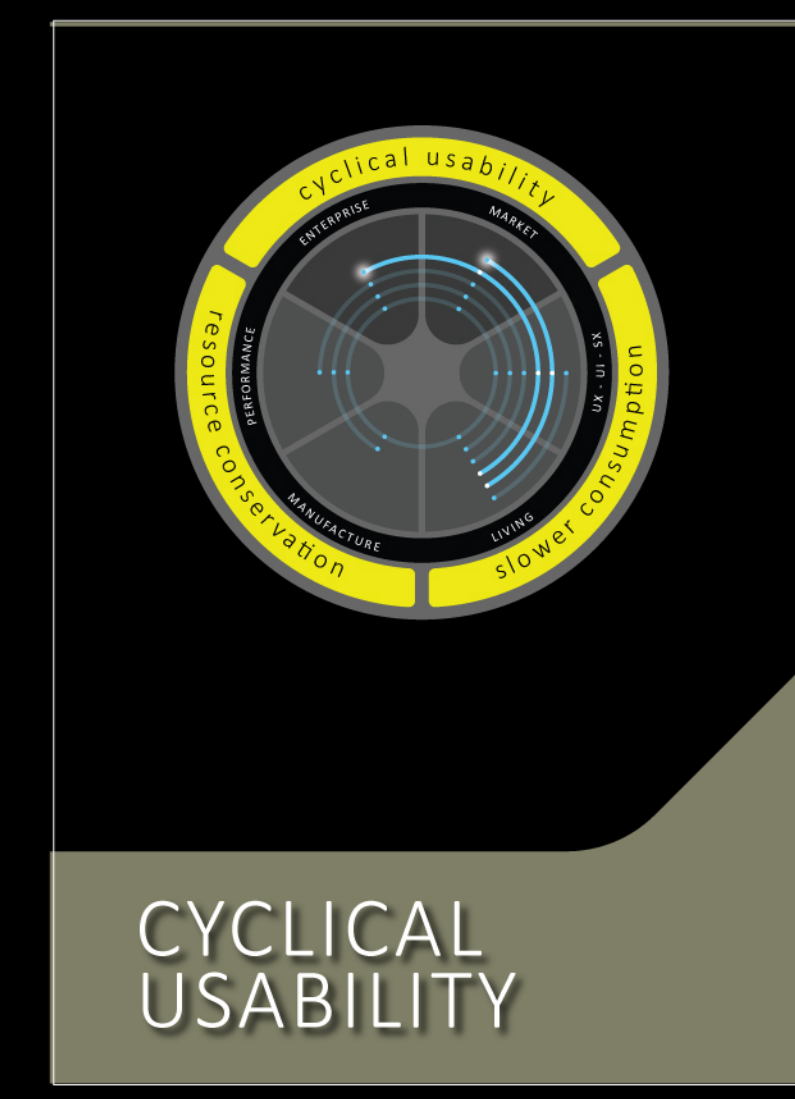
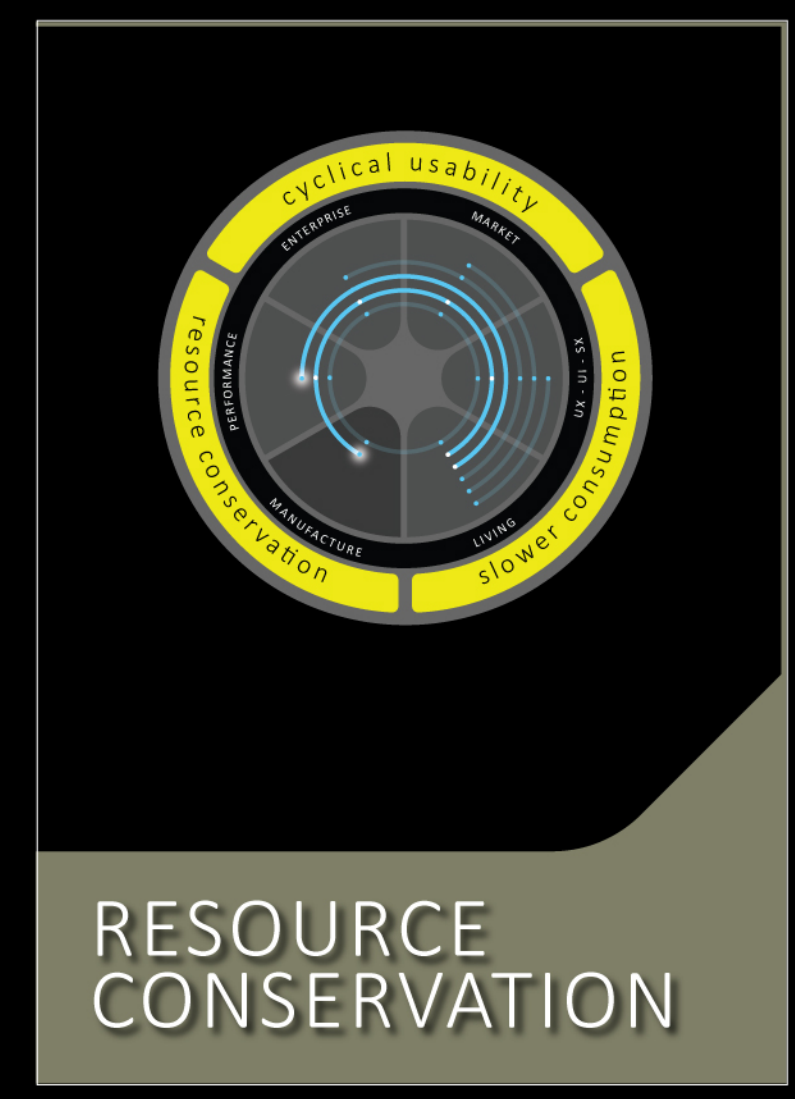
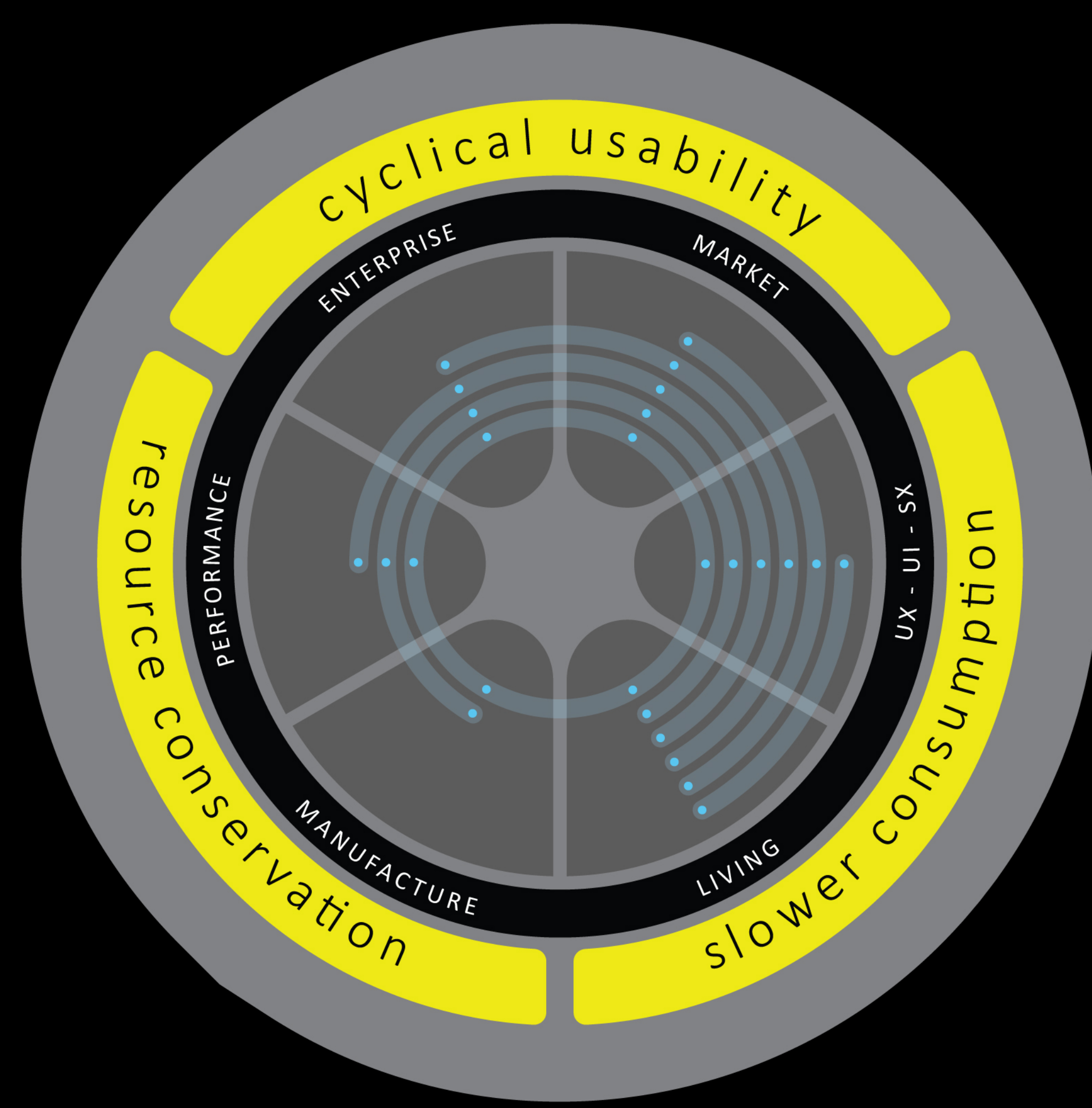


PARAMETERS	SUSTAIN-DRIVERS	INNOVATION CHANGE TRIGGERS	DESIGN PARADIGMS
resource conservation	1. product greening 2. product recycling	renewable materials - zero footprint remanufacture - zero waste	Fair, Ethical, Green Procurement + Manufacture Recover + Recycle + Upcycle
cyclical usability	3. product reuse 4. product replace	rental library - multiple use product service - zero consumption	Rent, Loan, Swap Custom Made - Prodluc Care + Repair
slower consumption	5. product resell 6. product for life	product buy-back - extended product life cycle enduring usability - evocative product value	Redesign product Subscription High Quality & Timeless Design

green technologies ethical procurement	loyalty buy back collection services	product rental product library	premium customised products	subscription products product replacement	life-long service evocative products
<b>01:</b> Circular value chain	<b>02:</b> Recovery and collection including industrial symbiosis	<b>03:</b> Durability, modularity with repair services	<b>04:</b> Personalisation, made to order and lock-in	<b>05:</b> Product service systems & dematerialised services	<b>06:</b> Collaborative/sharing economy



**01:**  
Circular value chain

resource conservation

**02:**  
Recovery and collection including industrial symbiosis.

resource conservation

**03:**  
Durability, modularity with repair services.

cyclical usability

**04:**  
Personalisation, made to order and lock-in

cyclical usability

**05:**  
Product service systems & dematerialised services

slower consumption

**06:**  
Collaborative/sharing economy

slower consumption

**01:**  
Circular value chain

Production cycles aim to close the loop across the entire value chain. They use fully renewable, recycled and/or recyclable or biodegradable materials that can be used in consecutive lifecycles to reduce costs and increase predictability and control. Products are designed efficiently, minimising material use without affecting performance. Low toxicity materials selected where possible; biological and technical materials are easily separated and recovered or renewed.

**02:**  
Recovery and collection including industrial symbiosis

The focus is on production and consumption systems in which everything that was previously considered as waste is retained for other uses through tracing and recovering products at the 'end of their life'. This feature also includes reclaiming waste and by-products from the production process, and incentivised return systems. The recycling process can include both upcycling (into higher value) and down-cycling (into lower value).

**03:**  
Durability, modularity with repair services

The focus is on increasing or extending the life of products across the whole product lifecycle. This could be by maintaining and improving products through repairs, upgrades, refurbishment, remanufacturing or remarketing. The effectiveness of this feature is impacted on through the design process with a focus on design for disassembly; modular design; material selection for durability and design for repair.

**04:**  
Personalisation, made to order and lock-in

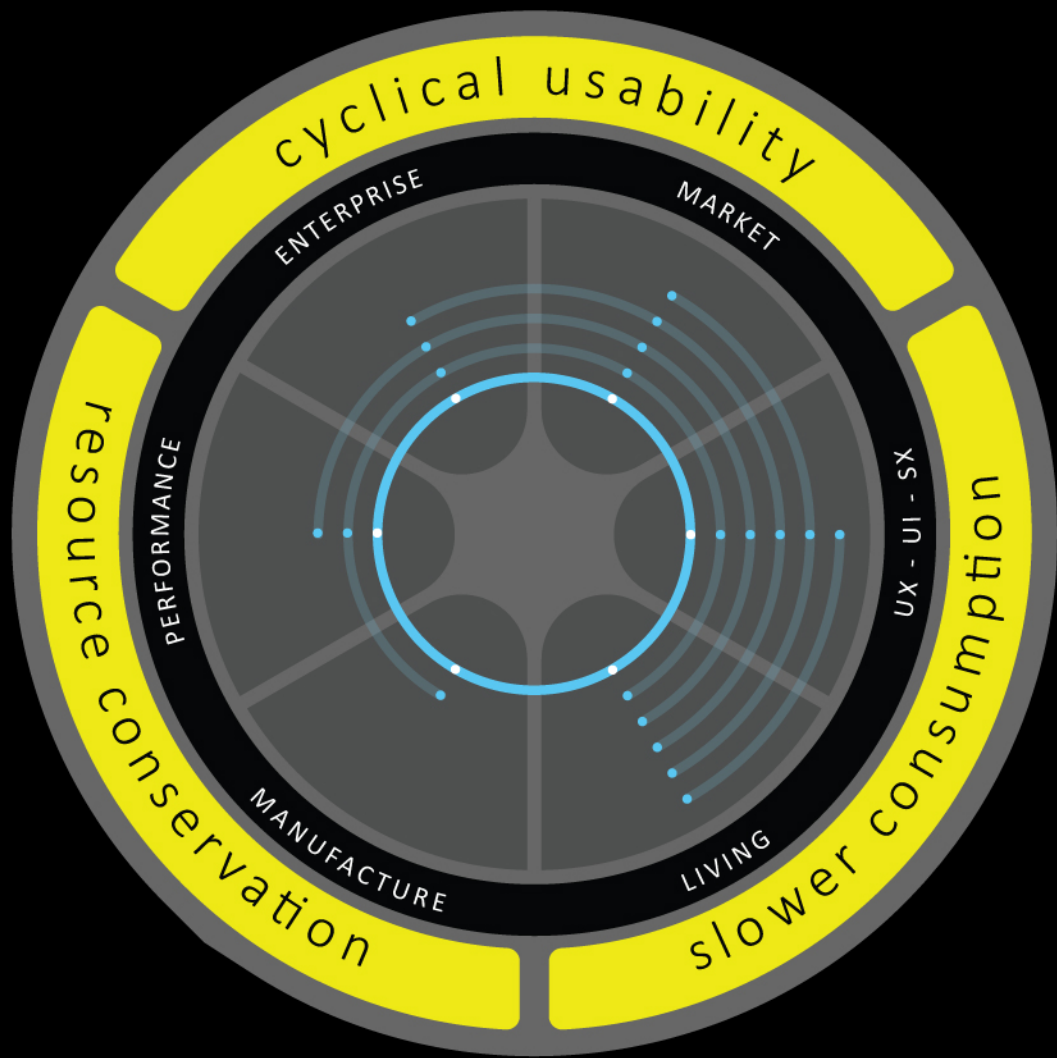
This is about building a more personalised, longer-term relationship with the customer. By doing so, it becomes easier to close loops, recover materials/products and reduce resource use. Made-to-order production minimises material requirements and avoids potential losses from overstocking. Businesses that directly 'lock in' consumers can circumvent the need for a separate retailer, and enable greater insight into the potential demand for the product itself or, where relevant, the product retail.

**05:**  
Product service systems & dematerialised services

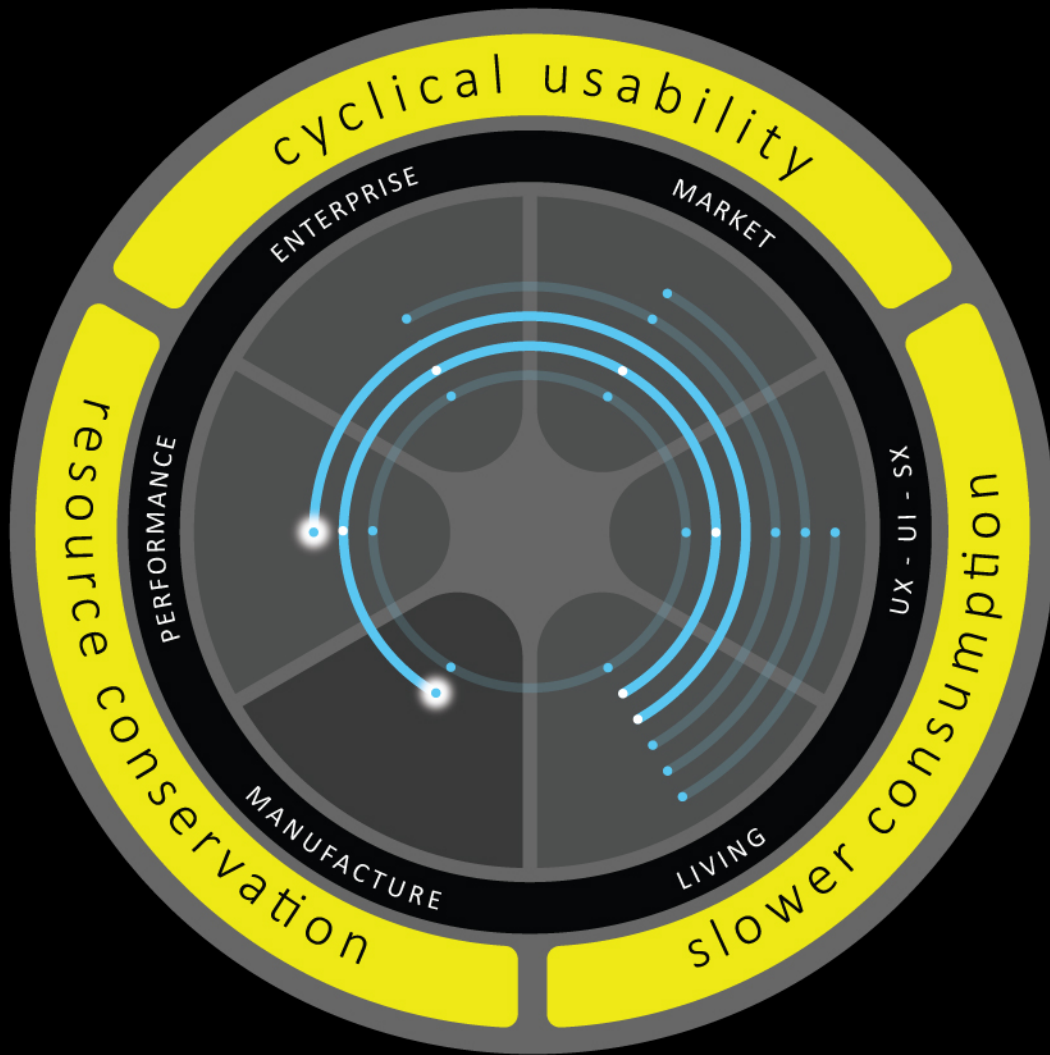
The manufacturer or retailer bear the 'whole cost of ownership' with a subsequent focus on the durability, longevity and reliability of the product along with usage rates and reusability. Also, dematerialised services such as Netflix, Spotify and cloud computing play a big role. Here the business provides access to a service for the customer, rather than the product itself.

**06:**  
Collaborative/sharing economy

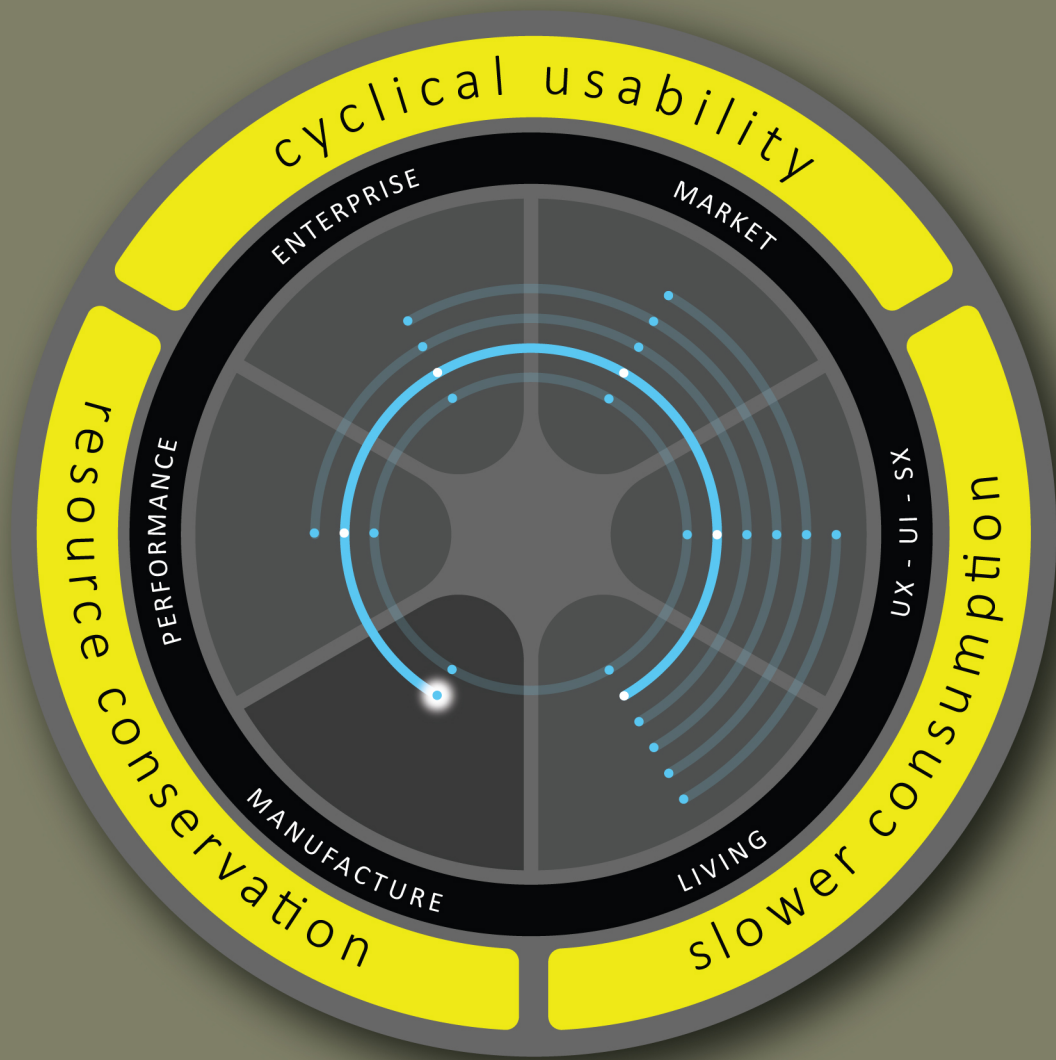
Digital technology is used to create new relationships and business opportunities for consumers, companies and microentrepreneurs to rent, share, swap or lend their 'idle goods'. Fewer resources are required to make products that are infrequently used, and consumers have a new way to make and save money. This feature requires the platform, and the users of the platform, to function effectively.



# CIRCULAR ECONOMY STRATEGIES



# RESOURCE CONSERVATION



01:

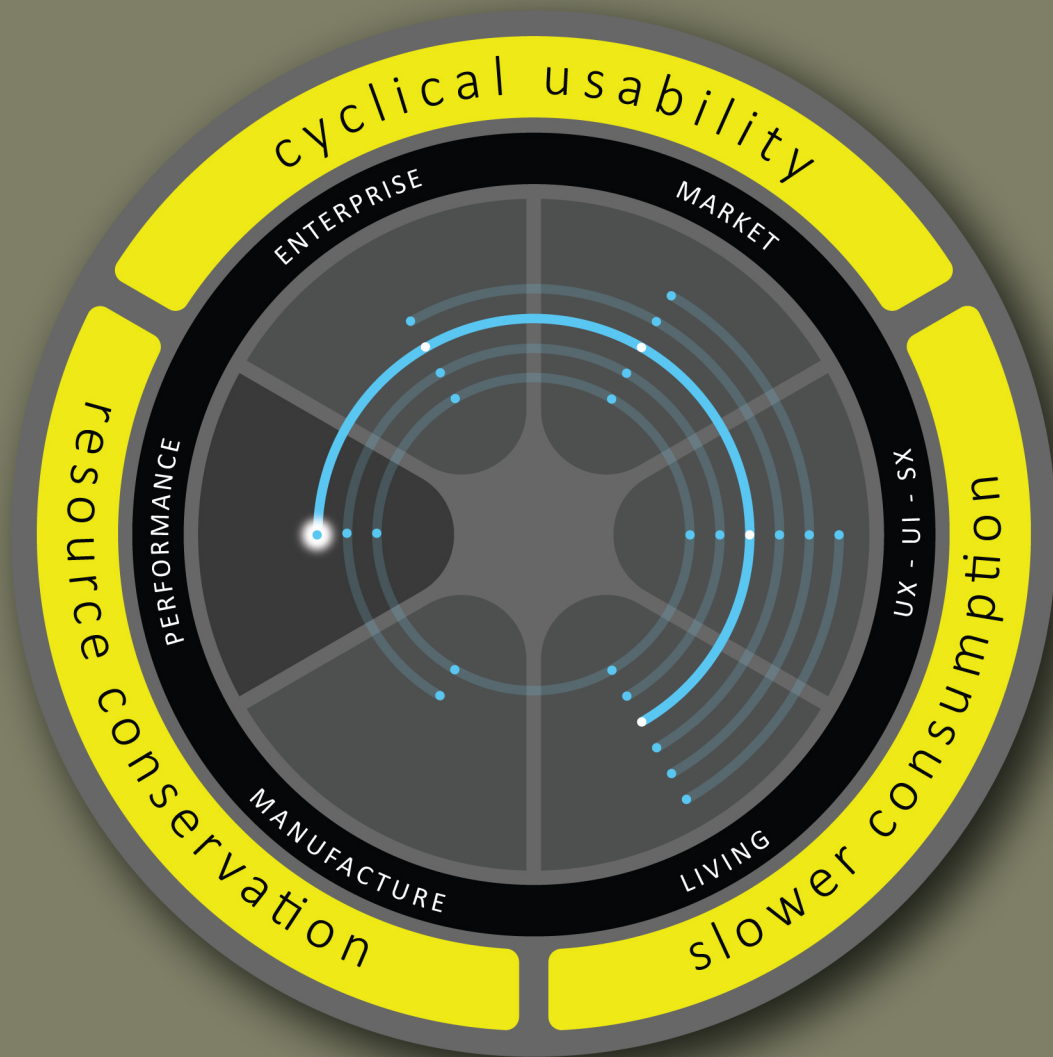
Circular value chain

resource conservation

# 01:

## **Circular value chain**

Production cycles aim to close the loop across the entire value chain. They use fully renewable, recycled and/or recyclable or biodegradable materials that can be used in consecutive lifecycles to reduce costs and increase predictability and control. Products are designed efficiently, minimising material use without affecting performance. Low toxicity materials selected where possible; biological and technical materials are easily separated and recovered or renewed.



# 02:

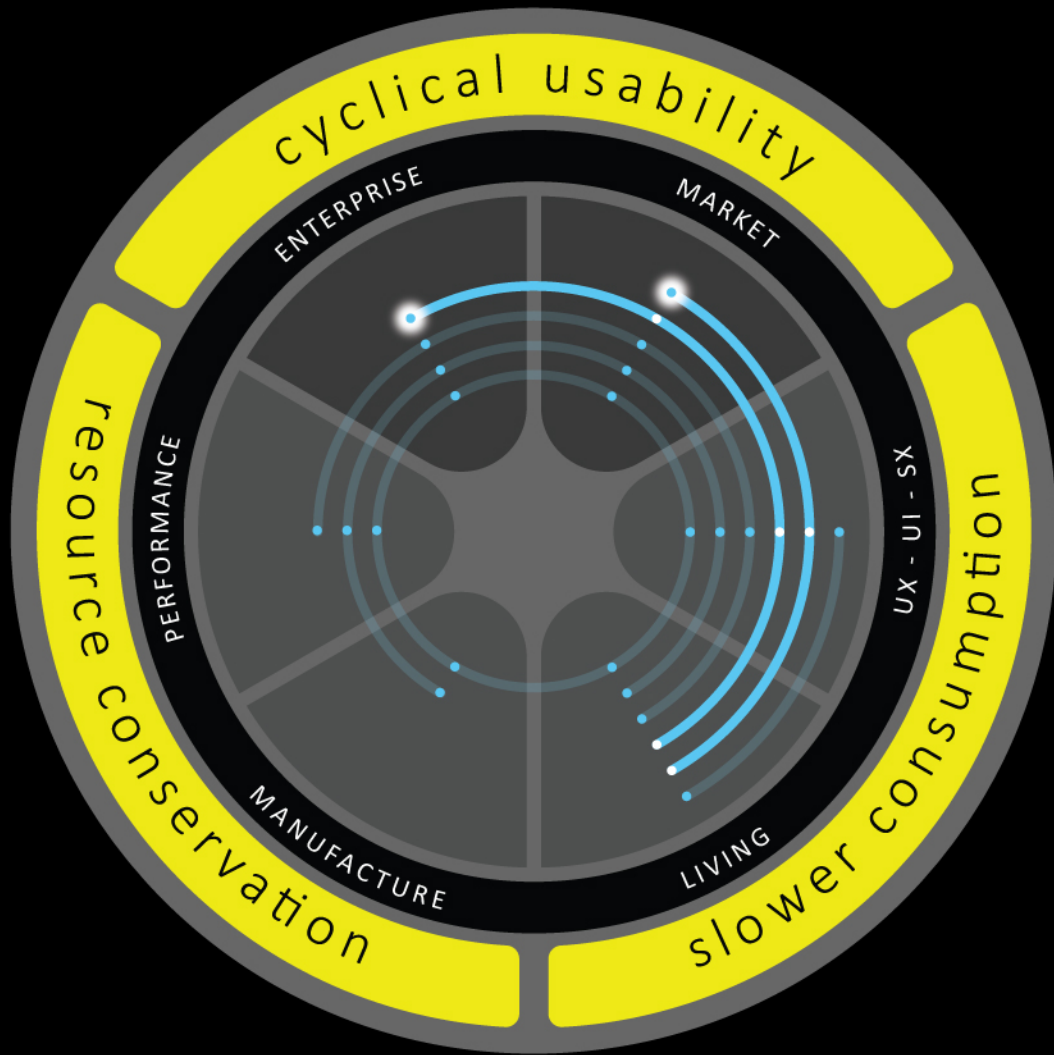
**Recovery and collection  
including industrial symbiosis.**

**resource conservation**

# 02:

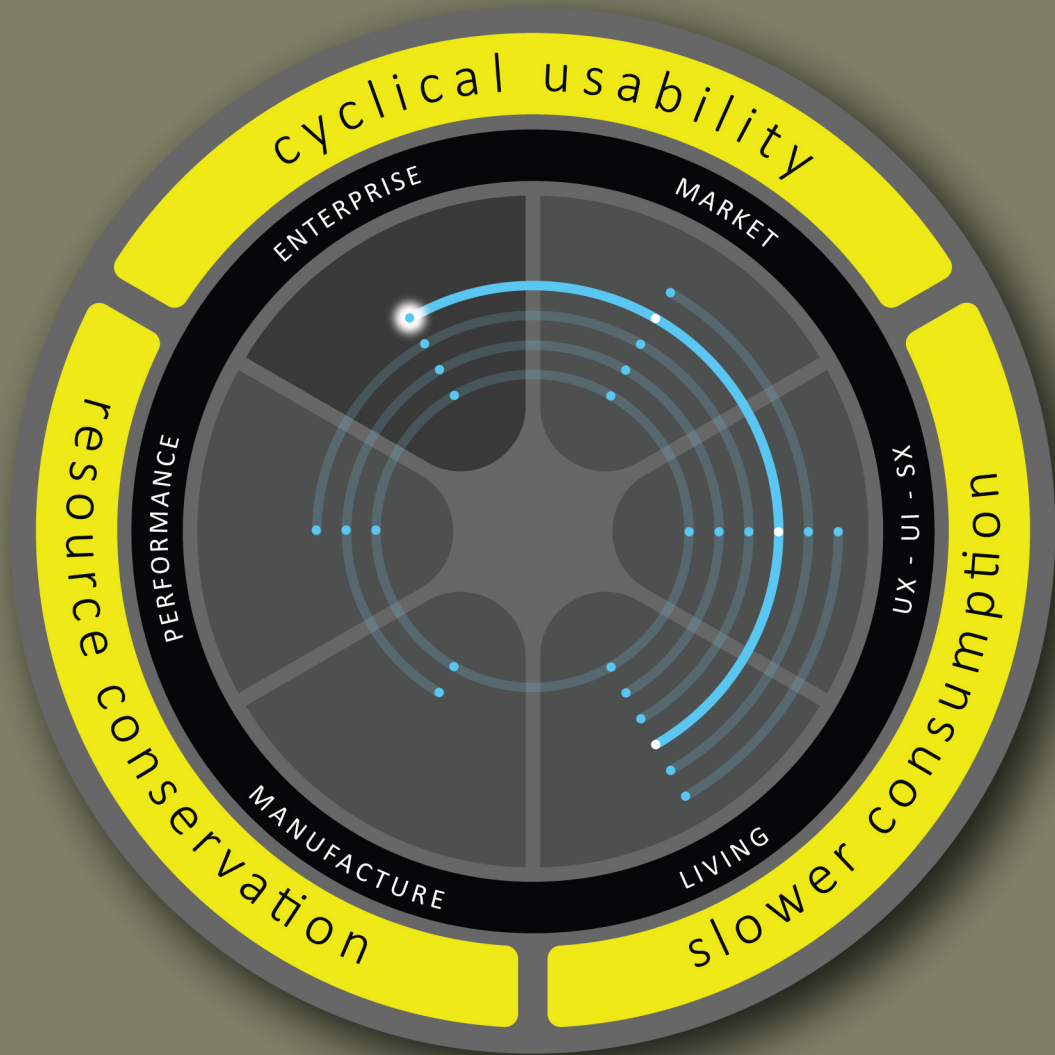
## **Recovery and collection including industrial symbiosis**

The focus is on production and consumption systems in which everything that was previously considered as waste is retained for other uses through tracing and recovering products at the 'end of their life'. This feature also includes reclaiming waste and by-products from the production process, and incentivised return systems. The recycling process can include both upcycling (into higher value) and down-cycling (into lower value).



# CYCLICAL USABILITY





03:

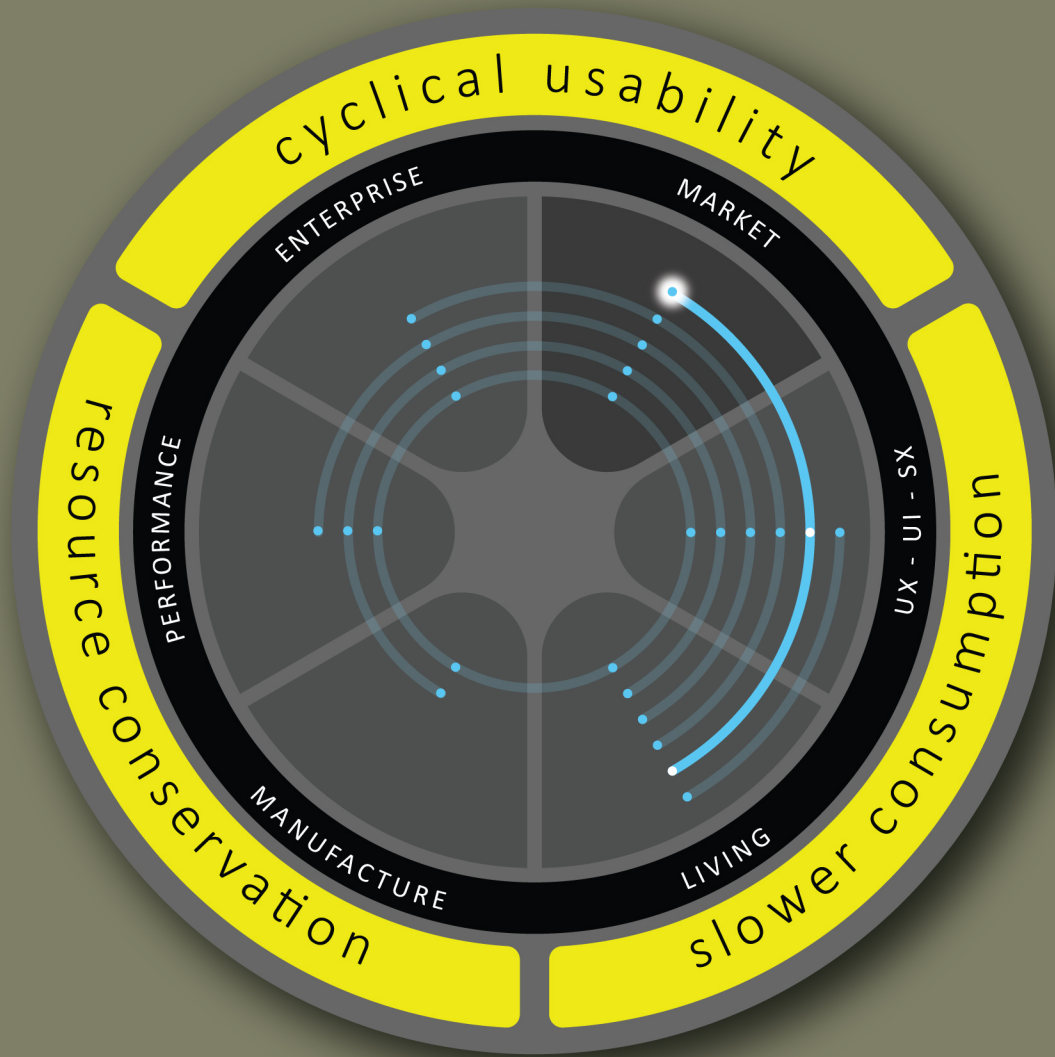
**Durability, modularity  
with repair services.**

cyclical usability

# 03:

## **Durability, modularity with repair services**

The focus is on increasing or extending the life of products across the whole product lifecycle. This could be by maintaining and improving products through repairs, upgrades, refurbishment, remanufacturing or remarketing. The effectiveness of this feature is impacted on through the design process with a focus on design for disassembly; modular design; material selection for durability and design for repair.



04:

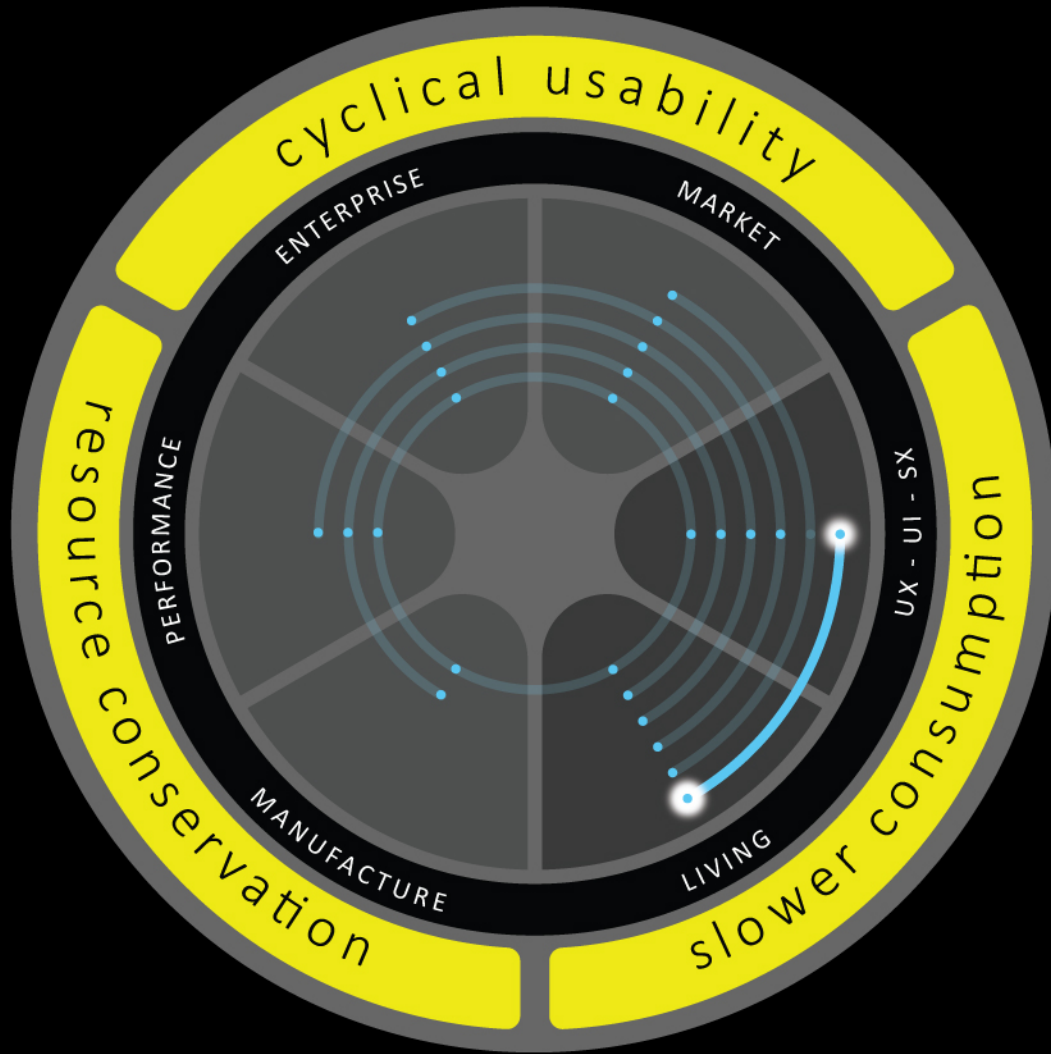
**Personalisation, made to order and lock-in**

cyclical usability

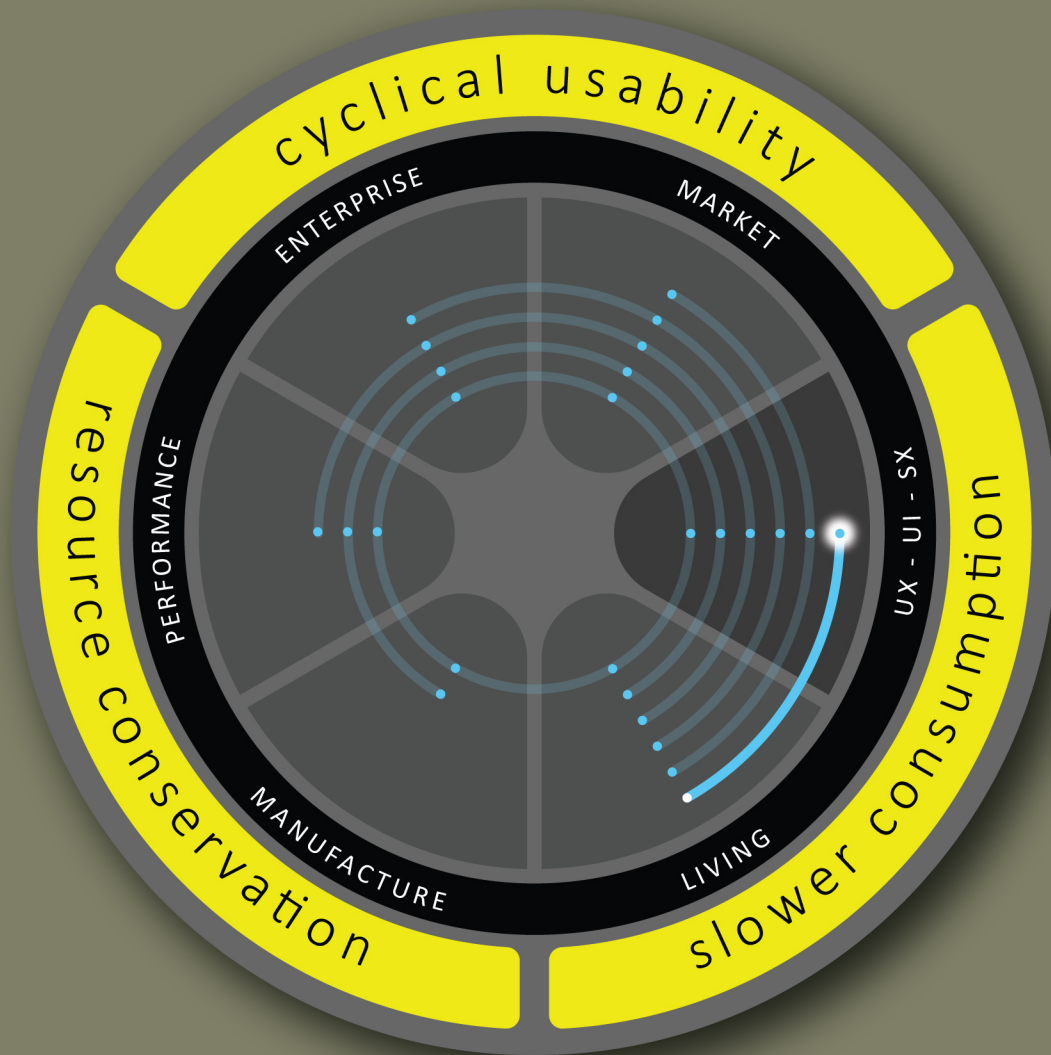
# 04:

## **Personalisation, made to order and lock-in**

This is about building a more personalised, longer-term relationship with the customer. By doing so, it becomes easier to close loops, recover materials/products and reduce resource use. Made-to-order production minimises material requirements and avoids potential losses from overstocking. Businesses that directly 'lock in' consumers can circumvent the need for a separate retailer, and enable greater insight into the potential demand for the product itself or, where relevant, the product refill.



# SLOWER CONSUMPTION



05:

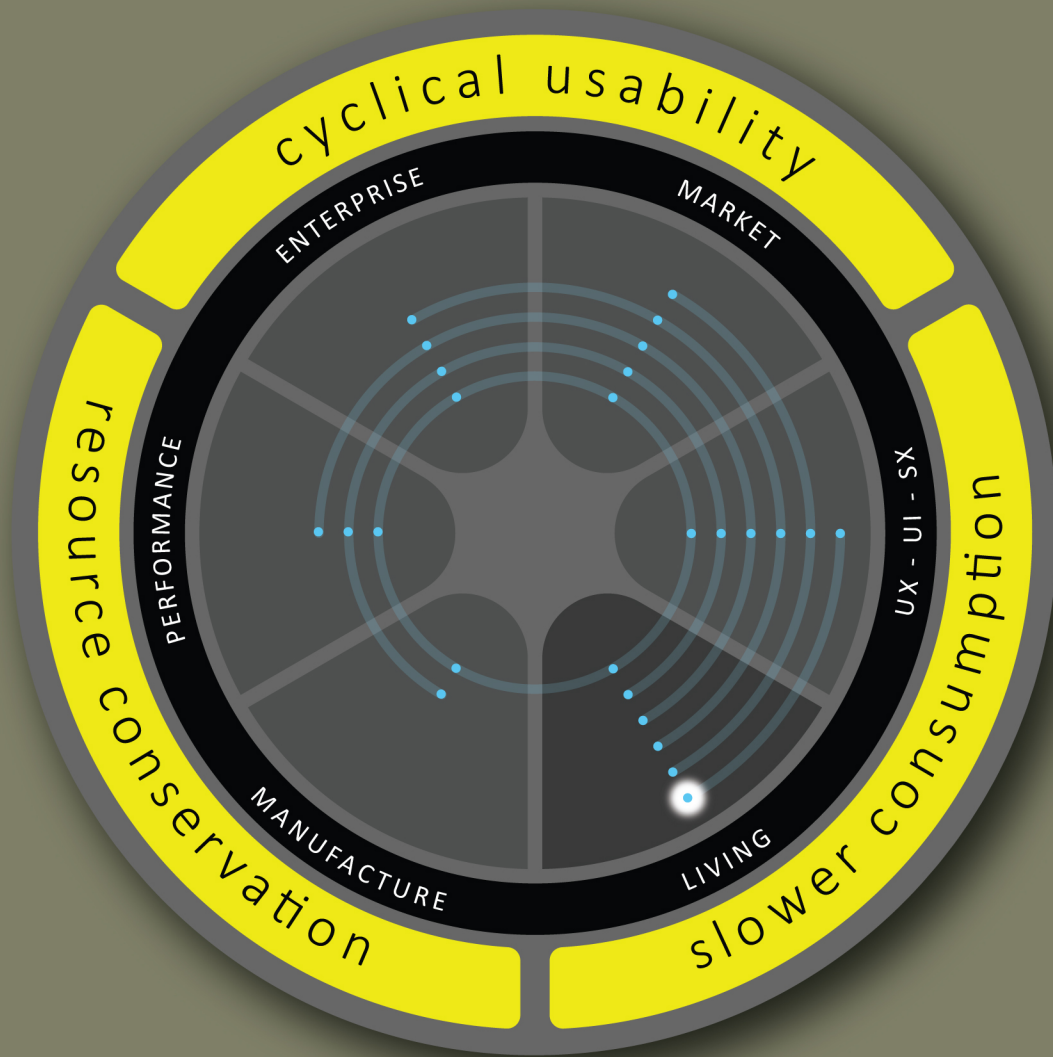
**Product service systems &  
dematerialised services**

slower consumption

# 05:

## **Product service systems & dematerialised services**

The manufacturer or retailer bear the 'whole cost of ownership' with a subsequent focus on the durability, longevity and reliability of the product along with usage rates and reusability. Also, dematerialised services such as Netflix, Spotify and cloud computing play a big role. Here the business provides access to a service for the customer, rather than the product itself..



06:

**Collaborative/sharing  
economy**

slower consumption



# 06:

## **Collaborative/sharing economy**

Digital technology is used to create new relationships and business opportunities for consumers, companies and microentrepreneurs to rent, share, swap or lend their idle goods. Fewer resources are required to make products that are infrequently used, and consumers have a new way to make and save money. This feature requires the platform, and the users of the platform, to function effectively.