WWW.USE2USE.SE

USE2USE THINKING ACTIVATION PACK

helps you to understand product circularity from a user perspective

A USE2USE DESIGN TOOL

The *Use2Use Thinking Activation Pack* is part of the *Use2Use Design Toolkit* created by Dr. Anneli Selvefors and Dr. Oskar Rexfelt at Chalmers University of Technology. The toolkit includes five mind-expanding packs designed to boost product circularity. They aid development of products and services for circular consumption processes.

Learn more about the toolkit and how to design for Use2Use at www.use2use.se.

A4

WWW.USE2USE.SE

AN INTRODUCTION

WHAT IS THE USE2USE THINKING ACTIVATION PACK?

The *Use2Use Thinking Activation Pack* provides an introduction to understanding, addressing and supporting product circularity from a user perspective. It accentuates the role of users in the circular economy, thus providing an important complement to the focus on production and business models which often prevails in industry and academia.

The pack comprises a set of 19 educational cards, each underlining an important aspect relating to users' roles in product circularity. Using the cards will provide insight into what circular consumption is (and what it entails for people), plus an initial understanding of how you can enable product circularity in people's everyday life.

A USE2USE DESIGN TOOL

HOW TO USE THE TOOL

GETTING STARTED
Gather a group of people interested in learning more about product circularity and how it can be understood from a user perspective. Anyone can use the cards, but they've been developed especially for designers, business strategists, product and service managers and policy-makers.

ACTIVATING A USE2USE MINDSET
The Use2Use thinking activation cards may be used as you see fit; in seminars, meetings, workshops and so on. Use them to stimulate learning and discussion activities.

WRAPPING UP
Discuss and document your main insights. Based on this, identify important challenges and opportunities that you want to explore further with the other Use2Use design tools.

A USE2USE DESIGN TOOL

WWW.USE2USE.SE

WE LIVE IN A WORLD OF FINITE RESOURCES

BACKGROUND   **1**

the World
1.7 Earths

Europe
2.86 Earths

Sweden
3.96 Earths

BACKGROUND

the world is using resources equivalent to 1.7 Earths

We are using the Earth's resources 1.7 times faster than the ecosystems can renew them, which means our demand on nature is exceeding what our Earth can provide. As noted by the research community, consistently exceeding our ecological budget has brought severe consequences on humanity and the planet, including resource scarcity, climate change and biodiversity loss. To limit further impact, it is imperative that our society reduces its use of resources and starts practising smarter use of what's available.
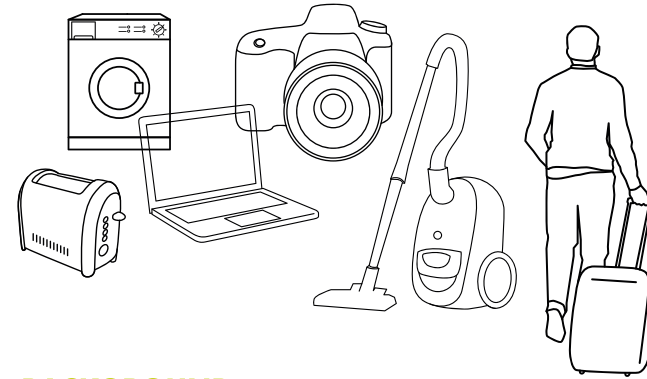
A USE2USE DESIGN TOOL

WWW.USE2USE.SE

PRODUCTS ARE NOT USED AS MUCH AS THEY COULD BE
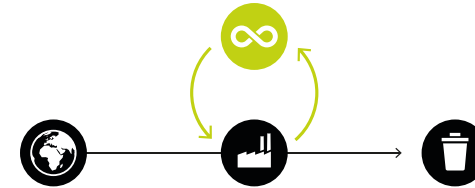
BACKGROUND 2

BACKGROUND

products like lawnmowers, tents, ladders and power drills are used only occasionally

The majority of products made today will only be in use for a fraction of their service life. Most people own products which they use only a few times a year or less. These products represent untapped potential.

If we can increase the collective use of existing but seldom-used products, the need to make more of them will decrease. Thus, fewer resources will be needed to satisfy everyone's needs.

A USE2USE DESIGN TOOL

WWW.USE2USE.SE

INCREASING CIRCULARITY IS CRUCIAL

BACKGROUND　　　　　**3**

BACKGROUND

we need to move away from a take-make-waste mentality

Reducing the use of resources globally requires more organisations to shift from a linear to a circular mindset. Such a shift will not only benefit the planet, but also the organisations themselves. This is because organisations that continue relying on linear and resource-intensive business logics risk being outrivalled as competition for resources gets fiercer.

By shifting to circular business logics, organisations will be able to reduce not only their resource dependency but also increase their opportunities to offer products and services that are relevant and attractive in future markets.
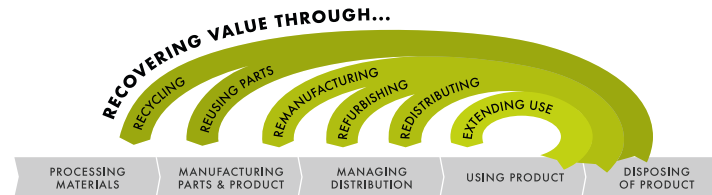
A USE2USE DESIGN TOOL

A4

ACHIEVING CIRCULARITY REQUIRES CHANGES IN BOTH PRODUCTION & CONSUMPTION
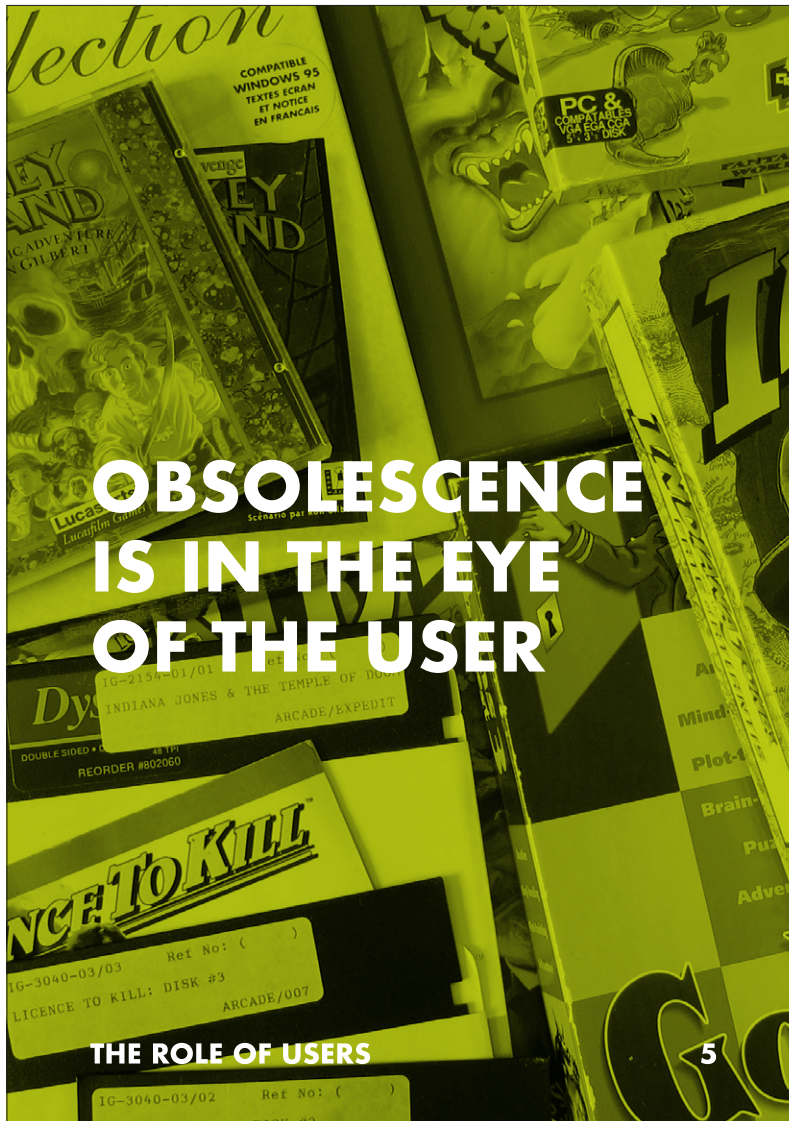
THE ROLE OF USERS

4

THE ROLE OF USERS

companies today are seen as the nexus of circularity

A frequent argument is that transitioning to a circular economy means companies must become more circular by designing products that can be, say, refurbished, remanufactured and recycled. Although such production-related changes are essential when transitioning to a circular economy, they are not enough. Achieving changed consumption is equally important.

However, exploring opportunities to foster circular consumption requires a shift in perspective, from seeing companies and organisations as the main agents to acknowledging the critical role people play in the circular economy.
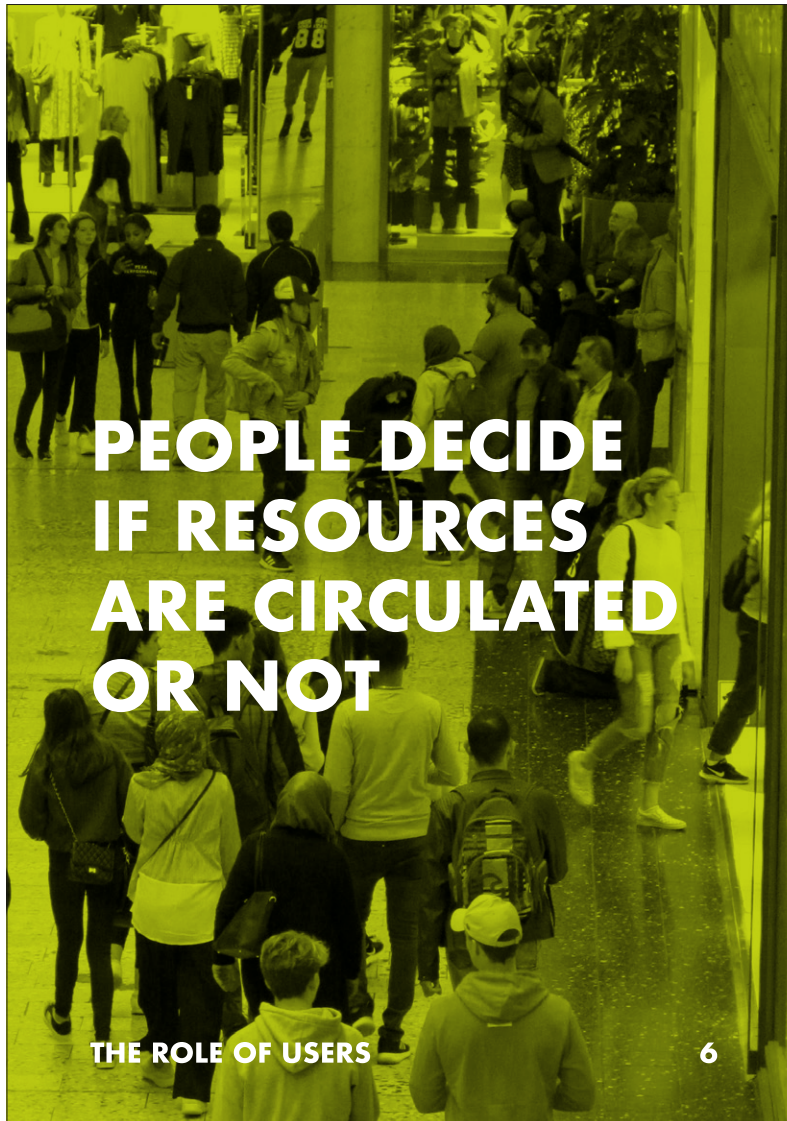
A USE2USE DESIGN TOOL

WWW.USE2USE.SE

OBSOLESCENCE IS IN THE EYE OF THE USER

THE ROLE OF USERS   **5**

THE ROLE OF USERS

people deem products obsolete for differing reasons

Most people would consider products that are no longer useful to be obsolete. Old technology incompatible with today's solutions, or products so worn out they can't be used anymore. But even products that are still in good working order may be viewed as obsolete by some; clothes in last season's colours or smartphones with lower camera quality than newer models. A well-functioning product is no guarantee that people will go on using it or even find it useful. People have different needs and preferences, so they'll also have different opinions on whether a product is obsolete or not. That means a product one person deems obsolete may still be useful and valuable to someone else.

A USE2USE DESIGN TOOL

WWW.USE2USE.SE

PEOPLE DECIDE IF RESOURCES ARE CIRCULATED OR NOT

THE ROLE OF USERS

6

THE ROLE OF USERS

providing circular opportunities doesn't guarantee circularity

Providing opportunities to recycle materials, rent products, or buy remanufactured products doesn't necessarily mean that people will accept them. No matter how well a production line is set up to enable remanufacturing, circularity can't be guaranteed. Consumers will always decide whether they want to return products for remanufacturing and whether they're willing to have remanufactured products or pay for services that offer them. If not, the products won't get circulated and the company's efforts won't aid circularity. When aiming to support circularity, it's therefore crucial to understand people and address their everyday consumption decisions.
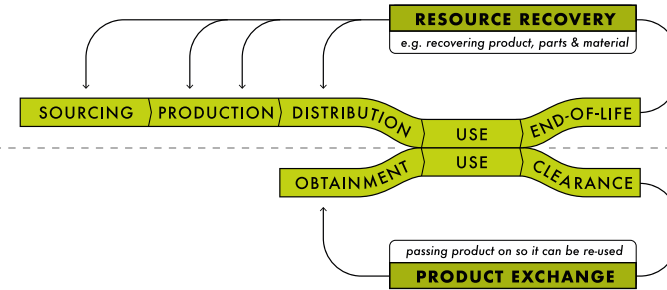
A USE2USE DESIGN TOOL

WWW.USE2USE.SE

RESOURCES CAN BE CIRCULATED CRADLE-TO-CRADLE & USE-TO-USE

THE ROLE OF USERS　　　　　7

THE ROLE OF USERS

circularity can be achieved via wide or tight loops

If circularity is viewed from a production point of view, the main approach is to loop resources from cradle to cradle; to recover products, parts and materials by circulating them back into a production process. Wide loops, such as material recycling and product remanufacturing, are key strategies for this approach as they enable new production processes without sourcing virgin material. However, if products are still fit for use, a less resource-intensive approach may be enabling product exchange and circular consumption processes, thus helping people circulate products in tight loops from use to use.

A USE2USE DESIGN TOOL

PEOPLE CAN CIRCULATE PRODUCTS WITHOUT INVOLVING COMPANIES

THE ROLE OF USERS   **8**

WWW.USE2USE.SE
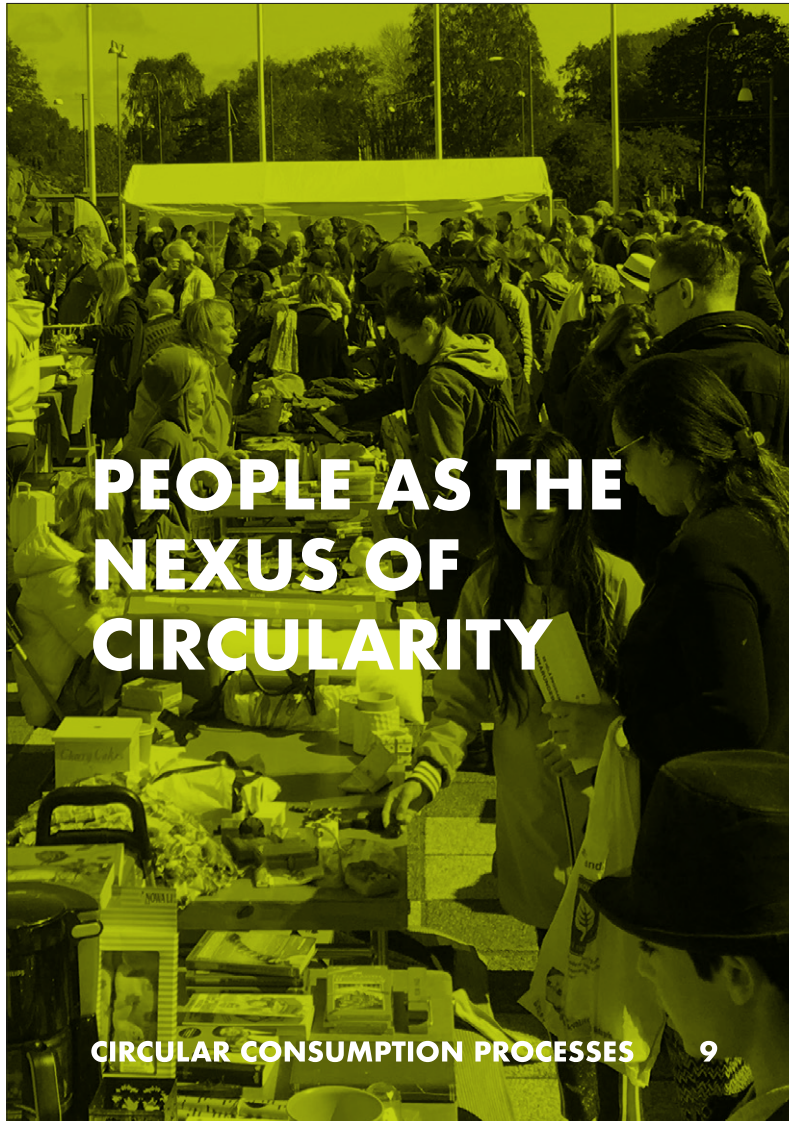
THE ROLE OF USERS

products can be exchanged directly from user to user

Companies don't have to be involved in people's consumption processes; people can, and often do, circulate products from one user to the next without any support from external agents.

Today, more and more consumers are joining a growing movement in which they collaborate on using products with others, get pre-used products from other people and pass products on for reuse by others. Although many people do make use of sharing platforms, organised events and online communities, they also swap products with friends, borrow products from each other and leave products in common spaces for strangers to find.

A USE2USE DESIGN TOOL

PEOPLE AS THE NEXUS OF CIRCULARITY

CIRCULAR CONSUMPTION PROCESSES   9

UTILISING AND MANAGING...

ACQUIRING NEW PRODUCT   DISPOSING OF PRODUCT

OWNED PRODUCTS
ACCESSED PRODUCTS

GAINING...   RESIGNING...
OWNERSHIP   OWNERSHIP
ACCESS   ACCESS

CO-USING   ENDING CO-USE
BORROWING   RETURNING
RENTING
SUBSCRIBING   ENDING CONTRACT
LEASING   OFFERING ACCESS
RECEIVING   GIVING
          TRADING
TRADING   SELLING
BUYING   BRINGING BACK

PRODUCT EXCHANGE

CIRCULAR CONSUMPTION PROCESSES

people practice circular consumption in different ways

When people are seen as the nexus of circularity, starting with their consumption processes is essential in understanding opportunities for circularity. If we look more closely at how people obtain, use and clear products, we see many ways to engage in circular rather than linear consumption processes.

A USE2USE DESIGN TOOL

A4

WWW.USE2USE.SE

PEOPLE DON'T CARE ABOUT BUSINESS MODELS

CIRCULAR CONSUMPTION PROCESSES   **10**

CIRCULAR CONSUMPTION PROCESSES

they care about the consequences of different consumption alternatives

Generally, there are abundant opportunities for people to engage in circular consumption processes. Some are supported by companies and their business models. However, people sometimes don't bother as these processes are often deemed more cumbersome and awkward than linear alternatives. Whether people find a particular path desirable depends on its perceived benefits and how these compare with the consumption consequences of other alternatives. If it means engaging in undesirable activities or experiencing undesirable outcomes, users may avoid some consumption paths and disregard any related offers.
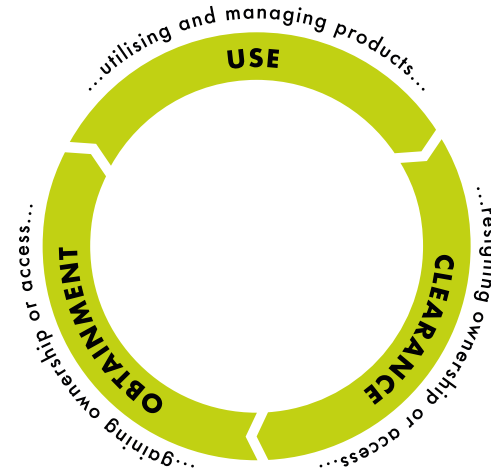
A USE2USE DESIGN TOOL

PEOPLE'S CONSUMPTION PROCESSES DICTATE WHETHER CIRCULATITY HAPPENS

CIRCULAR CONSUMPTION PROCESSES   11

...utilising and managing products...

USE

...resigning ownership or access...

CLEARANCE

...gaining ownership or access...

OBTAINMENT

...gaining ownership or access...

CIRCULAR CONSUMPTION PROCESSES

the three stages obtainment, use and clearance are equally important

Circular consumption isn't just about obtaining and using pre-used products, it's also about passing them on to others. Each consumption stage entails activities and practicalities that may be undesirable and each stage may thus be a potential hindrance to circularity.

A USE2USE DESIGN TOOL

WWW.USE2USE.SE

WWW.USE2USE.SE

OBTAINING PRE-USED PRODUCTS IS CHALLENGING FOR PEOPLE

CIRCULAR CONSUMPTION PROCESSES   12

CIRCULAR CONSUMPTION PROCESSES

it's easier to buy new products than pre-used ones

When people shift from linear to circular consumption, they don't just change what they consume, but how they do it. Circular consumption often involves different activities and practicalities when compared to linear consumption processes. This may make people less likely to obtain pre-used products. It may involve inconvenient activities, such as having to clean something after obtaining it and having to check first whether a product still works or that no parts are missing. Depending on the likely practicalities, people may not find all possible ways of getting pre-used products to be relevant. So, they may disregard some (or all) paths in favour of linear alternatives.

A USE2USE DESIGN TOOL

A4

MANY PRODUCTS GET STUCK IN DISUSE LIMBO

CIRCULAR CONSUMPTION PROCESSES　13

CIRCULAR CONSUMPTION PROCESSES

it's easier to store products than pass them on

Most people today own many products which they've stopped using. This might be due to changing needs or because they've replaced them with another product.

It's often easier for people to store these old products away in drawers or garages, rather than contemplating how best to pass them on to someone else. This means these products may be left unused for years, even though they might have been useful to someone else.

A USE2USE DESIGN TOOL

CIRCULATING PRODUCTS TO OTHERS IS CHALLENGING

CIRCULAR CONSUMPTION PROCESSES   **14**

CIRCULAR CONSUMPTION PROCESSES

throwing products away is easier than passing them on to others

Passing a product on to someone else involves additional activities and practicalities, as compared to storing or disposing it. Planning to sell a product may mean finding a suitable sales channel, creating an ad, liaising with and meeting potential buyers and negotiating a price. This takes time and effort and can make passing products on less attractive.

A USE2USE DESIGN TOOL

WWW.USE2USE.SE

IT'S NOT ABOUT MAKING PEOPLE ACCEPT A BUSINESS MODEL

DESIGN OPPORTUNITIES   15

DESIGN OPPORTUNITIES

it's about enabling circularity in everyday life

Companies should choose a business model that makes circularity easier for people, rather than pushing a model that makes circularity easier for the company. Given the right preconditions, people will find circular consumption less onerous and time-consuming and more convenient and desirable. This, in turn, will make the underlying business model more successful. Companies can make circularity an everyday reality by offering circular products and services to aid the three stages of people's consumption processes; obtainment, use and clearance.

A USE2USE DESIGN TOOL

A4

PRODUCT & SERVICE DESIGN BOTH MATTER

DESIGN OPPORTUNITIES   **16**

DESIGN OPPORTUNITIES

product circularity can be enabled in various ways

A company that designs and makes products has various ways of supporting circularity. If a product needs a clean between users, it might be designed for easy cleaning by users (or to not even get dirty), or the company might offer a cleaning service, or both.

Hence, a company might not need to "servitisise" in order to enable circular consumption. It can adapt its products to directly enable people's consumption processes, or make products suitable for use in other companies' circular services.

A USE2USE DESIGN TOOL

MANY PRODUCTS TODAY AREN'T DESIGNED FOR CIRCULAR CONSUMPTION PROCESSES

DESIGN OPPORTUNITIES   **17**
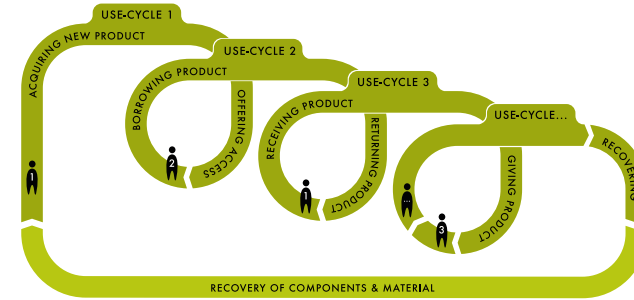
DESIGN OPPORTUNITIES

products can be designed to be certified for re-use

Most products today are designed to be bought, used and disposed of by a single end-user. So, they're seldom adapted to circular consumption processes and the associated user requirements.

For instance, flat-packed furniture is designed for ease of purchase, transportation and first-time assembly. However, not much flat-packed furniture is designed for ease of disassembly, transportation elsewhere and reassembly by new users. If products were designed for the activities and practicalities of reuse, they would be more attractive and have greater potential for circularity.

A USE2USE DESIGN TOOL

WWW.USE2USE.SE

WWW.USE2USE.SE

MANY PRODUCTS TODAY AREN'T DESIGNED FOR MULTIPLE USE-CYCLES

DESIGN OPPORTUNITIES

18

DESIGN OPPORTUNITIES

products can be designed for multiple exchanges before recovery is needed

Few products today are designed with a string of users in mind. For instance, toys are often designed for the first child that gets to assemble, personalise and use them. Designing products for circular consumption requires a new mindset; no more designing for single end-users but for multiple users and multiple use-cycles. This aim makes it essential to question how a product or service can deliver a desirable user experience, not just for the first user but for future ones too.
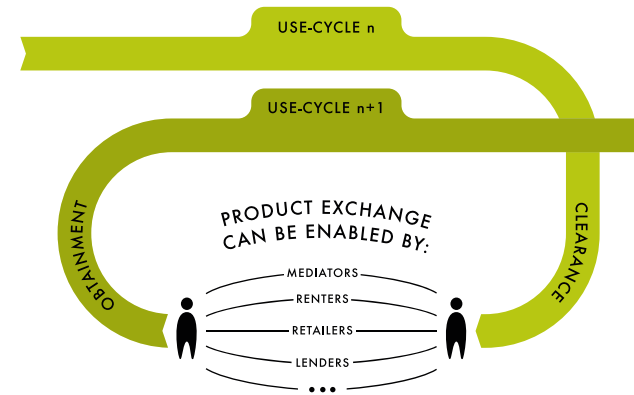
A USE2USE DESIGN TOOL

A USER PERSPECTIVE SHOWS NEW WAYS FOR COMPANIES TO CONTRIBUTE TO CIRCULARITY

Circular life

DESIGN OPPORTUNITIES   **19**

USE-CYCLE n

USE-CYCLE n+1

OBTAINMENT

PRODUCT EXCHANGE CAN BE ENABLED BY:

CLEARANCE

MEDIATORS
RENTERS
RETAILERS
LENDERS
...

DESIGN OPPORTUNITIES

companies can become exchange agents and enable circularity in various ways

Taking a user perspective helps companies find out how to become exchange agents, enabling and aiding circular consumption. For instance, they can become leasing agents and make circularity hassle-free. They can also provide other services, dealing with the unwelcome aspects of particular obtainment and clearance paths; ones identified as hindering people from circulating products.

A USE2USE DESIGN TOOL