GUIDE TO DESIGN FOR CIRCULARITY

In order to prolong the life of products and materials we work with 9 circular design principles. Implementing these principles in every product we develop will create the platform for a circular IKEA. All our products will be circular by 2030.

The four circular design mandatories

1

DESIGNED FOR AN EXPECTED LIFESPAN
Product durability, condition, and material matches its functional and stylistic lifespan.

2

DESIGNED FOR THE USE OF RENEWABLE OR RECYCLED MATERIALS
Ensuring the right choice of materials from the beginning.

3

DESIGNED FOR RECYCLING
Choosing materials and how they are combined to enable recycling.

4

DESIGNED FOR PRODUCTION
Designed for minimum waste in production of material, water, energy, and chemicals.

Additional circular design principles

DESIGNED FOR STANDARDIZATION AND COMPATIBILITY Enabling interchangeability also between brands (ex. chargers), better production and re-manufacturing.

DESIGNED FOR ADAPTABILITY AND UPGRADABILITY Products that can fulfill the customer need throughout life.

DESIGNED FOR CARE AND REPAIR Products that fulfill customer needs for easy maintenance, repair, and long term enjoyment.

DESIGNED FOR DISASSEMBLY AND REASSEMBLY For moving, repairing, upgrading, and re-manufacturing.

DESIGNED FOR AN EMOTIONAL CONNECTION Enabling customers to make an emotional connection with the product, like design details that support keeping memories, uniqueness, or personalization.

Design & Quality
IKEA of Sweden

LET’S HAVE A LOOK AT EACH OF THE PRINCIPLES AND HOW TO WORK WITH THEM:

DESIGNED FOR AN EXPECTED LIFESPAN

Product durability, condition, and material matches its functional and stylistic lifespan.

The expected lifetime of a product begins when it is sold to the customer and lasts until the end of its life.

There is no rule for expected lifetime of a product. It is based on common sense and IKEA’s knowledge of customer behavior. It is important to remember that this is seen through the eyes of the customer – not based on how we test products today or existing guaranties.

- Our main goal is to prolong the life of products and materials. We challenge ourselves by thinking of how we look at the product today versus how it could be tomorrow.
- Is it typically a product we would sell second hand? In other words one or many owners?
- Could it, for example be rented or leased out?
- What would be the reason for a customer to throw out the product?
- What could help the product to stay in use longer?
- The world is changing. Are there new technologies that call for a completely new way of looking at the product?

DESIGNED FOR THE USE OF RENEWABLE OR RECYCLED MATERIALS

Ensuring the right choice of materials from the beginning.

Once you have decided on the expected lifetime of the product, many other decisions shall be based on this, such as choice of materials. For a short lifetime, it is key to choose materials that can be easily recycled. For a long lifetime, chosen materials should last, can be maintained and repaired, and preferably be recycled at the end.

- How to maintain and repair the material?
- How can it be recycled?
- Is it for renting and leasing out?

DESIGNED FOR RECYCLING

Choosing materials and how they are combined to enable recycling.

Today we do not know enough about how our products are recycled, therefore we will have to learn. However, we do already have some knowledge, for example, when it comes to electronics. When you make a design brief make sure to state what needs to be separable and what does not – material choice and surface treatments are important factors here. Our main goal is to prolong the life of products and materials. We challenge ourselves by thinking of how we look at the product today versus how it could be tomorrow.

- Do you know how a product like this is being recycled?

DESIGNED FOR PRODUCTION

Designed for minimum waste in production of material, water, energy, and chemicals.

When designing for production it is crucial to know the production process in detail. Therefore, it is valuable to have a close corporation with supplier and the product engineer in sourcing. Small changes may save material, chemicals, water, energy, and waste. It is important to know and have this in the brief for the designer and even have the designer on the production floor so they can fully understand what makes a difference.

- How to avoid waste in production?
- If there is any waste created, can it be used for something else?
- A lot of waste is created because of bad quality, what can be done in the design to avoid bad quality in the production?
- Are there chemicals that can be avoided or substituted with ones that are better for the environment?
- Can the energy used in production be reduced through the design of the product?
- Can the water used in production be reduced through the design?

DESIGNED FOR STANDARDIZATION AND COMPATABILITY

Enabling interchangeability also between brands (ex. chargers), better production and re-manufacturing.

By using our platforms we ensure that IKEA products can be used in different IKEA systems. By using standardized fittings, we also reduce the number of spare parts needed, thereby limiting the amount of waste in this part of our business. It also enables possibilities for future refurbishment and remanufacturing.

- Will the product be used for rent or lease?
- Do we have a platform solution that supports this type of product?
- What kind of fittings should be used?
- What other IKEA products should it be compatible with?

DESIGNED FOR ADAPTABILITY AND UPGRADABILITY

Products that can fulfill the customer need throughout life.

In order for a product to have a long life it is important that it can adapt to the life in the home of the customer. Sometimes we live small, sometimes big, sometimes we live alone and sometimes we live with others. Our needs and wants change. During a lifetime of some products the customers would like to upgrade them or renovate them.

- What are the customer's typical life stages a products will follow and is it adaptable for this?
- Is this a product that will be sold 2nd hand? Maybe even 3rd and 4th time? New owners often want to refurbish the product. How can this be done easily and how can we support this?
- What other IKEA products should this be possible to use with, and do the measurements then fit?

DESIGNED FOR CARE AND REPAIR

Products that fulfill customer needs for easy maintenance, repair, and long term enjoyment.

In order to understand how a customer needs to care for a product and what is most likely to need repair, it is important to understand both the use of the product and what is most likely to break first. A good idea to find out what spare parts customers ask for in similar products. If there is a part that breaks often, this information should be included in the product design brief so it is redesigned.
First, we identify how a product should be cared for in order to prolong its life and then ensure that we have the supporting products needed. We need to make sure the customers and co-workers can easily gain access to care instructions.
Secondly, we identify what parts are likely to or can break, and create a plan to provide spare parts. The design of the product must also enable easy disassembled and assembled for repair, too.

- What spare parts are needed?
- What care instructions and products are needed?

DESIGNED FOR DISASSEMBLY AND REASSEMBLY

For moving, repairing, upgrading, and re-manufacturing.

One of the big complaints from our customers is that they are not able to move our big furniture without it breaking. Fortunately, a lot of work has already been done to make it easier and better to disassemble and reassemble the products again, but we still have a way to go. Disassembly and reassembly is important for moving, repairing, and recycling of a product.

- What are the important parts that need to be possible to disassemble and reassemble when moving, repairing, and recycling?
- How many times during its life do you estimate that the product will be disassembled and reassembled?

DESIGNED FOR AN EMOTIONAL CONNECTION

Enabling customers to make an emotional connection with the product, like design details that support keeping memories, uniqueness, or personalization.

Together with great functionality, an emotional connection is the reason for people to maintain, repair, care, and not throw out a product. It is therefore extremely important to be conscious of how to create this kind of connection when we design our products.
Customers already today create an emotional connections with our products through the assembly process– it makes people feel that they have been part of making the product themselves. They take pride in this.
A way to create a connection to the product is to include special details in the design. This shows that we care about every little detail, and when discovered by the customer will create a positive reaction. An example can be to work with the NCR number of a product's colour to ensure they have the number if needing to repaint or repair, and an added 'something' to the design.
It can also be in hidden details such as rubber feet that have a unique shape even though you only see it when you assemble it.
A third example of how to create an emotional connection to the product is by telling the story behind it. Who made it? Is it handmade? Is there something special about the production or raw material? What is the story of the product that a person can connect to? Can it be personalized to tell the customer's own story?
Combining any of the above with a great functionality and buying experience, we have an opportunity to create an emotional connection that will last and make the customer care for the products. When it is time to let it go, they will sell it or give it away, rather than just throw it away.

- What are the details you can work with, how can the designer be briefed about this?
- Is there a story behind it and how do we ensure that it follows the product? Can there be hints in the design?
- What can be done with the assembly instruction?