

Co-Creating and Co-Design For Plastic Revaluation

Co-creation and a co-design process, are intrinsically connected but represented different phases or stages in the ideation and development processes. Co-creation is more connected to ideation, while co-design covers the step from the initial idea to the identification of the actual features of the product or service.

Once you have identified the plastic waste which can serve as a basis for revaluation (see [Analyzing for Plastic Revaluation](#)), and you have analysed the value chain and benefits (see [Planning for Revaluation](#)), you are ready to start with ideating the product (or service) based upon the waste you identified.

This exercise is best done in collaboration, and not as a “single (wo)man” show. The reason is not only to tap into more ideas, which is the most obvious one, but also involving the persons that are key in moving the product from a mere idea to a prototype and then to the market/client, they feel a sense of agency or ownership over the process and are more committed to make it a success. This is true in the development of any product or service, but even more important in a context of plastic revaluation, as it can require a change in mindset and shifting priorities within the different processes.

Co-creation and collaboration for ideation can take place on 2 levels,

1. Externally, involving outside stakeholders in the process of ideating and creating your product or service, e.g. members of the supply or value chain, environmental experts or even NGOs.
2. Internally: where persons from different departments engage in the process.

In both cases, the recommended approach for the first steps in the process towards a new product or service based upon revaluation of your plastic waste is a co-creation and co-design approach.

Co-creation & co-design

“Co-creation” is generally referred to as a process of collaboration between business, organisations and/or users/customers, in which through a mutual exchange of conversations and experiences, both parties co-create products and/or services. Although initially stemming from a marketing background, it can also be used for problem detection, solution finding and value creation.

A co-creation process can involve a wide range of stakeholders, such as employees, experts, suppliers or, even, other companies.

In PlasticValue we focus on co-creation processes with a specific purpose, i.e. bringing together different relevant actors to work together to generate new ideas for the development of products or services taking stock of the plastic waste the organisation generates, Depending on the type of waste and the internal processes, e.g. employees, suppliers or even NGOs.

Co-design refers to an approach of design focused on actively involving different stakeholders in the design process. That’s why co-design, also known as “participatory design”, refers to the process by which a user or group of users and other relevant stakeholders directly participates in the design of a given product or service, providing feedback and direct responses to ensure the obtained results meet the needs of end-users while being usable and environmentally-friendly.

While co-creation focuses more on the ideation process, i.e. the process of generating new ideas for products and/or services, co-design is related to the process of actually designing the product or service.

A **co-creation** process provides an answer to questions such as:

1. What is the challenge or problem we are trying to solve?
2. How are we going to solve it?
3. What are the boundaries or limits that determine our solution (i.e. product or service)?

Resulting in a picture of the idea for the product/service which defines: What it is, who it's for, and when and where it will be used.

The **co-design** process provides an answer to questions such as:

1. How can we create a useful product that could solve the challenge addressed in the co-creation process and meet the needs of our potential customers?
2. What features and functionalities should be included in the product or service?
3. How can we ensure that the product or service is visually appealing and aligns with the brand identity and values of the organization?

Resulting in a picture of a detailed product/service which defines: what it does, what functionalities and features it offers, what are the technical specifications and what does it look and feel like.

Benefits of co-creation & co-design for plastic revaluation

There are several benefits of using a co-creation and co-design approach for your plastic revaluation processes:

1. The integration of different departments and different stakeholders, generates a wider range of perspectives and consideration with regards to waste reduction and the ideation and design of a new product, this can enhance the sustainability of the ideated product.
2. Involving the staff members and/or stakeholders in the process increases the likelihood of success of the co-created and co-designed product or service, they are likely to have a sense of ownership and feel having a role in its outcome and success. It also leads to increased loyalty and positive word-of-mouth.
3. By involving external stakeholders or potential end-users or clients in the process, their needs and expectations are better understood, and the co-created products better serve these needs, not only co-creating and co-design a product but ensuring a market from the initial steps in the process.

Initiating a co-creation & co-design process

As seen before a co-creation and a co-design process, are intrinsically connected but represented different phases or stages in the ideation and development processes. Co-creation is more connected to ideation, while co-design covers the step from the initial idea to the identification of the actual features of the product or service.

In most cases the co-creation is followed by the co-design process, involving the same group of participants, although there is also the possibility of adding on or replacing some participants in between processes, for instance when the co-creation is done with both staff and external stakeholders, but for the co-design only participants from the departments of the company are involved.

Ideation is the first step towards the creation of a product or service, and the next unit will explain the process. This unit focusses on how prepare for a co-creation process, and what to bear in mind. Focus in on co-creation but it is the same for co-design. But as said, we assume this to be a continuous process with the same principles. A co-creation/co-design process has the following steps:

1. Engaging other businesses, organisations and stakeholders,
2. Understand mutual needs and expectations,
3. Ideate, re-think or design a product/service,
4. Validate it in the market.

In this unit we focus on the first 2 steps, while steps 3 and 4 are subject of the unit on [ideation](#) and are in essence the same for any ideation process (independently of whether or not a co-creation and co-design approach is used).

How to initiate a co-creation/ co-design process

Engagement and motivation are key factors when starting a co-creation/co-design process. Not only applies this to the involvement of external stakeholders, but also when involving in the process only internal staff from different departments.

However, just as any other interaction-based process the participation of all different partners should be ruled by some principles:

- A mutual relationship of trust and respect between the participants should be established for the proper development of the process.
- Build a transparent process of value creation and end-users-led.
- The main objective of the process is an innovation that brings value to customers and should therefore be based on the development of creativity and the sharing of resources and knowledge between the participants and their departments or organisations.
- In the case of continuing the collaboration even in the phases beyond the mere co-creation and co-design, it will be useful to develop action guides that include tools for dealing with potential conflicts. Boundaries and scopes should also be clarified in advance.
- Set deadlines and SMART goals (i.e. goals which are Specific, Measurable, Achievable, Realistic and Timebound) for the co-creation and co-design processes.
- Bear in mind, connectivity drives creativity.

Now with these principles clarified, the process starts.

STEP 1: Define your objective

The first step is to define your objective: Take your time to think carefully about what your motivations for co-creating are and what results you are hoping to achieve. Which are the main objectives of the co-creation and co-design process? Here you should define why you want to use a co-creation approach, what you want to achieve (e.g. a suite of ideas for inspiration or as an initial exploration to see if the plastic revaluation is viable or one idea that can be taken forward). This is important as you need to inform the participants clearly about what is expected from the process and why it is important for the company.

STEP 2: Identify the support

Once you know what your goals are, reflect on who will be helpful:

- Do you know any business or organisation aiming to achieve the same? This will help to reflect whether the involvement of external stakeholders is of added value or not.
- Who may be interested in co-create and/or co-design an innovative product/service? It is important to involve those that believe in the possibilities of plastic revaluation and although it is always good to have critical voices in the group, they should still consider the process are useful and valid. So avoid those that can sabotage the process.
- Do you share common values? Apart from of course being committed to being more sustainable, it also concerns values related to collaboration, you need other who share you're the view of open knowledge, respectful conversations and trust in the relationship. This of course is normally the same within the same organisation but become pivotal in the collaboration with external stakeholders.
- What is the timeline and what are the milestones for the co-creation process, a careful planning is important for the potential participants to have a clear idea on what is expected and when. But it allows also to have accountability on the process and not make an eternal activity not leading to the expected results.
- What resources do you need? Not only a space and time is relevant, but also what kind of knowledge, this allows you identify from within those organisations, departments or persons interested the ones that bring the most added value to the co-creation process.

It is important to ensure a diverse range of perspectives and expertise within the participant group.

STEP 3: Start co-creating

Once you have defined the objective of the co-creation and identified and invited the participants the process can start. Below are some tips and tricks for a co-creation session you can use:

- The environment in which you hold the co-creation session can have a big impact on its success. You need to make sure to provide a comfortable and inspiring environment that encourages collaboration and creativity. This includes comfortable seating, good lighting, and a well-equipped workspace. A good tip is to create a circular seating with sufficient space to walk around if needed.
- Facilitation is key, this goes from providing clear instructions and guidelines for participants, encouraging participation and contributions from all, and keeping the session on track and focused.
- Use different tools such as brainstorming or mind mapping (see unit on tools for ideation) to help stakeholders generate and develop ideas.
- It is important to follow up and evaluate the session and its outcomes, this includes documenting the ideas generated, identifying any next steps that need to be taken, and evaluating reaching the initial objectives. Make sure to communicate the outcomes of the session to all stakeholders and follow up on any actions that were identified.

Case studies & Examples

The co-creation and co-design principles and strategies have already been successfully applied by some companies to create revaluated plastic products. Here we show the achieved results with different kind of products.

3Dimension supported by **Mymedia**, in cooperation with the **Slovak Academy of Sciences**, has developed a highly ecological material - a hybrid polymer material for 3D printing with recycled PETG. The fillers used are carbon-based, such as graphite. Therefore, they do not pollute the living environment. At the same time, the final products are 20-25% lighter compared to competing materials, which leads to a reduction in fuel consumption and emissions production (e.g. in the automotive and aviation industries).

We selected this case because it is a clear example of cocreation of a product between a university and a private company. You can see more about this process of cocreation in their website: <https://www.3dimension3d.com/>

The company **EcoButt**, in cooperation with the **Technical University of Košice**, created a unique technology across Europe that separates cigarette butts into tobacco ash intended for compost and a filter that is used, for example, in asphalt blend. This year, the first sidewalk containing recycled butts will be created in the town of Žiar nad Hronom, where the company is also based.

Resources

Links:

[“Collaboration and Co-Creation: The Road to Creating Value” – Gaurav Bhalla](#)
[Re-valuing plastic: social innovation as a means to reduce or revalue plastics](#)

Videos:

[The Journey of Co Creation](#)
[MASTERS: Plastic, recycling, design: Dave Hakkens \(Precious Plastic\)](#)
[Key Principles for Successful Co-Creation](#)

Papers (press articles, guides, reports):

SISCODE project, Co-design for society in innovation and science: D3.1. Co-creation journeys

https://siscodeproject.eu/wp-content/uploads/2019/03/D3.1_Co-creation_Journeys.pdf

Understanding niche innovation systems for plastic revaluation set up by universities and NGOs, Patricia Wolf, Julie Harboe, Catherine Sudbrack Rothbarth, Urs Gaudenz, Chris Obrist, Manon van Leeuwen and Leyla Arsan.

[\(PDF\) UNDERSTANDING NICHE INNOVATION SYSTEMS FOR PLASTIC REVALUATION SET UP BY UNIVERSITIES AND NGOS](#)

The place of waste: Changing business value for the circular economy, Robert Perey, Suzanne Benn, Renu Agarwal and Melissa Edwards

[\(PDF\) The place of waste: Changing business value for the circular economy](#)