

Towards a circular manufacturing industry

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Access to (raw) materials, but also climate, are important reasons why circularity should be high on the agenda of manufacturing companies. Two things are vital for companies in the manufacturing industry eager to make the transition to a circular economy: cooperation and trust.

You can now visit the VLAIO website (in Dutch) sharpen your insights on CE: in that article, we elaborate on **how working on more circularity really contributes to the resilience and robustness of manufacturing companies.**

Both raw material prices and delivery times are going up. Companies investing in circularity have more flexibility and are more resilient to deal with this type of crisis. The climate is also an important driving force: the impact of materials on emissions is often underestimated. A huge amount of energy is needed to make a casting, for example. We can greatly reduce the carbon footprint by reusing it in modular products.

The first explorers

Repairing, reusing, sharing, renting, recycling are becoming the norm if we want to use materials for as long as possible and create more value. But how far have manufacturing companies in Flanders come? We are still early on in the process, but it’s a good thing that more attention is

being paid to it. A growing number of companies are starting to explore or are already taking the first steps. In practice, it represents only a small percentage of their turnover, but we see that they are learning a lot and making rapid progress.

However, many do not yet see where the added value lies or cannot see the wood for the trees due to the multitude of information coming at them. There are many facets to circular thinking: product design, logistics, cooperation, business model, material cycles, supply chain, financing, legal issues in the case of leasing, etc. And then the big question, where do I start?

Start from you own values

The good news: you start where you want to. As long as you do start. All these facets interact at one time or another. Companies starting from their own values or from what they are good at have the best chance of success. Not everyone has to be a pioneer, but keep your eyes and ears open to see where you can play a role in the circular story. Together with Agoria, we developed the Cesar tool which indicates where the potential of a circular economy lies for your company, together with a white paper with ten steps to take towards circularity.

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Different paths lead to circularity

The manufacturing industry can be divided into different categories and, depending on the type of activity or product, the circular potential looks very different. You can sell something new sustainably, provide a product as a service, offer a remanufactured product... An **OEM company** (Original Equipment Manufacturer), which builds machines and delivers B2B, for example, is often in the lead of a circular network. They can make products, deliver them, maintain them, etc., which allows them to think in circular terms in almost all facets of the life cycle. If you are a **supplier** to an OEM, you have less freedom to work towards a closed loop, but you can play a role elsewhere in the cycle, e.g. in **remanufacturing**, by repairing or manufacturing the necessary parts.

A company that produces **consumables**, such as brake pads or other products that wear out through use, has a different dynamic. They should focus on improved product disposal and **recycling** after they have maximised the life cycle. And for those who make very high-quality products with a long life cycle and which are therefore very expensive to sell, a **product-as-a-service model** can be a solution.

Thus, each company has specific chances and opportunities to respond to the circular economy. Some companies have opportunities at different points in the life cycle, others in just a few.



Ten action domains from the white paper 'Circular economy: how to start as a company' by Agoria and Sirris

Challenges

To evolve into a circular manufacturing industry, some challenges have to be overcome and points of attention to be considered:

Setting up an ecosystem

In a circular economy, it is not just about your business. You have to open everything up and take a systemic approach. That's an important step. Cooperation is therefore crucial and trust is essential to achieving this.

Anyone who wants to embrace circularity will have to set up an ecosystem involving the entire supply chain: customers, customers of customers, distributors, service providers, etc. This does not mean that you are tied to that consortium for life, but if you want to remain completely independent, you cannot be circular. You'll have to be linear.

A first possible step is to look at the **flow of goods**: who are your customers, where do your products go, who is your end-user and what happens to your product at the end of its life cycle? Then you map out the **financial flow**: who pays who? And finally, map out the **data flows**: who needs which information to be able to decide what?

Once you have that picture, determine which circular strategy makes sense for your type of product. The strategy you choose will have an impact on your chain. Analyse where the costs and benefits are, and where the added value for each party lies. By entering into a dialogue together and looking for a common goal, you build up trust and the chain can function. Who can play which role, to gain each and all?

This **added value** is not necessarily monetary, it can also be about image benefit through sustainable profiling, access to new knowledge, materials, a network, employer branding... These other motivations are extremely important because they are a key driver of the new partnership. If only the cash counts, it usually doesn't work.

Once the roles and responsibilities are clear, you can check out the next steps and procedures, how to go about it in concrete terms.

Product design

A product that is sold with no control over the disposal phase looks completely different from a product that you are still responsible for in terms of maintenance or recycling after sale. The revenue model of your circular strategy influences the product design. It is important to coordinate these two things. Do so as early as possible in the design process.

Return logistcs

We are strong in making products in one place and then distributing them everywhere. But how do the products you want to reuse or recycle get back to you? Return logistics is an essential part of circular thinking. So you will have to think about setting up an efficient system. But it is not always necessary for products to return to the place where they were made. Shortening the paths by decentralising and processing closer to the end user is also a possibility. Here, too, cooperation is the new normal.

Measuring progress

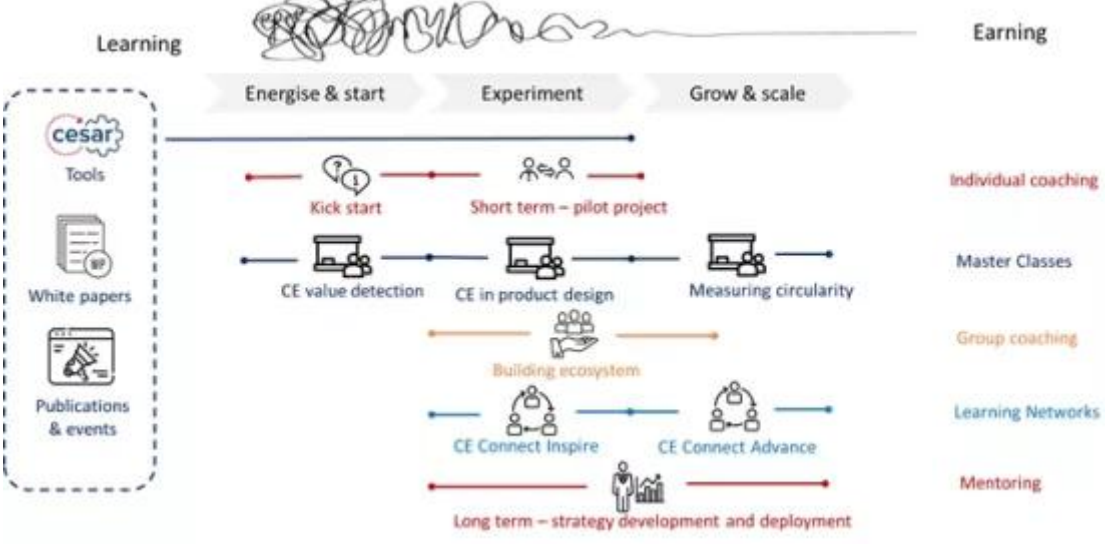
Companies want to know how circular they are, how they can work even more on this, which KPI’s they have to integrate... In short, they want to be able to monitor the degree of circularity and the progress they are making. This is quite a challenge that we, Sirris, Agoria and other partners want to take up again in the coming working year, including through group coaching, through the learning networks and through the masterclasses.

Some circulair tips

- Look beyond your company, team up beyond your borders.
- Make choices according to your product or product portfolio. Each type of product may require a different strategy.
- Explore for different customer segments. Customer segment A may need a certain strategy, but customer segment B will need a completely different angle for the same product. Read about Q-lite here.

Do you also want to make your organisation ready for the emerging circular economy? You can always call on the expertise and experience of Sirris, Agoria and the many manufacturing companies that are already on their way.

Here is an overview of how we can support you:



(Source picture above: GettyImages)

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