# Linear Turns Circular Fostering SMEs' Circular Economy Transition

English

Foster circular economy for SMEs

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**Linear Turns Circular**
**Fostering SMEs' Circular Economy Transition**
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- Energie Impuls OWL e.V. (Germany)
- PAIZ Konsulting Sp. z o.o. (Poland)
- EKOPOTENCJAŁ-PRZESTRZEŃ MOŻLIWOŚCI (Poland)
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# Summary

This book presents 18 success stories from three European countries. These are stories told by small- and medium-sized enterprises (SMEs) for SMEs, describing their path towards greater circularity. These living examples of transforming, **rethinking** and readjusting company processes, products and infrastructure should encourage other companies to take up these ideas and take action in pursuit of greater circularity.

SME leaders and representatives report in this publication about their individual paths towards a circular economy, describing their own starting situations, hurdles, and achievements. Their implementation processes may vary from industry to industry or from country to country. What they all have in common is an enthusiasm and personal drive to improve the company and hence the world. The variety of cases provides an illustration of different enterprises' individual situations as well as the specific way they chose to "upgrade" their company and inspire employees towards more circularity.

The L2C project seeks to foster exchange across industries and has already proven its potential and relevance. The potential resulting from different experiences, perspectives and levels of knowledge has been taken far too little advantage of.

The portrayed companies' thoughts and actions were collected and pictured in a personal way how the shift started and was carried out. The focus is not only on success but also on the challenges and doubts involved in the process. The focus on decision-making processes, experiences with stakeholders, obstacles, and assessment of the decision to switch from linear to circular make this publication unique. It should invite employers and employees to learn from the stories and think about how they can transfer the lessons learned to their own company context.

*Keywords:* circular economy; sustainability; SMEs

# Table of contents





# 1 Aspiration of the book

(Text by: Anett Wolgast, Alana Lamberts, Metje Rocklage)

The idea behind this book emerged some time ago as the project partners discussed the need and urgency to make their own institutions more sustainable and start the rethinking process towards more circularity. Questions about how to initiate and implement the transition to circular economy principles, while involving relevant stakeholders inside and outside the organisation, appeared but could not be answered. A lack of practical information and guidance, concrete examples of success and available training were common for all partner countries. A lack of information about and understanding of the transition process on the one hand and high outside expectations for the business sector to introduce changes and foster reforms towards more circularity on the other put SMEs under pressure.

This prompted us to create a publication with experiences and impressions gathered directly from SME representatives in three European partner countries. The aspiration of this book is to demonstrate how the transition and shift to circular-economy principles was successfully managed in small- and medium-sized enterprises in Poland, Germany, and Italy. These vignettes should serve as a source of inspiration for other SMEs, as they are real-life examples that reveal not only the achieved success and impact but also the challenges and difficulties companies confronted. It should encourage and empower business leaders to promote and initiate changes in structure, mindset, competences and also behaviour inside and outside the organisation.

What were the motives to initiate actions and re-think processes towards more circularity? How can employees and stakeholders be motivated and a new mindset cultivated? What kinds of challenges appeared during the implementation and how could they be overcome or prevented? In the 18 stories presented in this book, companies from various industries, with different backgrounds and preconditions, depict their individual evolution process and describe the possibilities and opportunities they were able to unlock. All stories are individual and unique, showing how each individual company paved the way forward for more circularity. These contributions should also animate mutual learning and experience sharing between different countries and enterprises. Apart from portraying these stories, the main principles of the circular economy as well as the current situation in Europe in terms of sustainability will be briefly introduced. This will help to provide a framework and allow for a better classification of strategies, concepts and appropriate actions.

# 2

# Circular Economy



## 2.1 Circular Economy Action Plan

(Text by: Metje Rocklage, Alana Lamberts, Anett Wolgast)

Climate change and environmental degradation represent worldwide existential threats. To get a handle on this, the European Commission issued the European Green Deal Strategy (European Commission, 2019) defining fields of actions to overcome challenges and encourage the transformation of the EU into a modern, resource-efficient and competitive economy, with the following goals:

- no net emissions of greenhouse gases by 2050
- economic growth decoupled from resource use
- no person and no place left behind.

The European Green Deal Strategy encompasses ten main elements, one of which is "sustainable industry". Currently, 20 percent of EU greenhouse gas emissions are caused by the industrial sector. It is therefore imperative to curb these emissions and advance decarbonization. Surveys reveal that up to 80% of products' environmental impacts are determined at the design phase (European Commission, 2014). Producers have little motivation to shift from the linear approach of "take-make-use-dispose" to the circular one. The reasons for this are various and include a lack of incentives, information, knowledge or understanding of the urgency. In addition, companies are often not aware of the benefits the changeover to more circularity may entail. And there is still the problem that many products break down too quickly, cannot be easily reused, repaired, or recycled – too many products are manufactured for single use only.

The circular economy can play a significant role in achieving greater climate neutrality. Following the principles of circular economy can generate substantial material savings along the value chain and in production processes, create additional value, and unlock economic innovations and opportunities (European Commission 2020).

The EU's **Circular Economy Action Plan** contains different initiatives aiming to increase the duration of product life and reduce the extraction and usage of natural resources. One of the core aims is to decouple economic growth from resource use. The Action Plan stipulates measures for the sustainable design of resource-intensive products. In addition to anchoring sustainability criteria such as durability, reparability or recyclability, the strategy also aims to strengthen consumer rights and the closed-loop principle in production processes in all sectors.

The following aspects to foster sustainability were stipulated in the Circular economy Action Plan:

- improving product durability, reusability, upgradability and reparability, addressing the presence of hazardous chemicals in products, and increasing their energy and resource efficiency
- increasing recycled content in products, while ensuring their performance and safety
- enabling remanufacturing and high-quality recycling
- reducing carbon and environmental footprints
- restricting single use and countering premature obsolescence
- banning the destruction of unsold durable goods
- incentivizing product-as-a-service or other models where producers maintain ownership of the product or responsibility for its performance throughout its lifecycle
- mobilising the potential of digitalizing product information, including solutions such as digital passports, tagging and watermarks
- rewarding products based on their sustainability performance, including by linking incentives to high performance levels.

A range of priority sectors crucial for the circular transition have been identified: **electronics and ICT; batteries and vehicles; packaging; plastics; textiles; construction and buildings; food, water and nutrients.**

| | |
|---|---|
| **Electronics and ICT** | • Design equipment for energy efficiency and durability, repairability, upgradability, maintenance, reuse, and recycling<br>• Implementation of the "right to repair"<br>• Introduction of a common charger for electronic devices<br>• Take-back system for old equipment<br>• Restrictions on dangerous substances in electrical and electronic equipment |
| **Batteries and vehicles** | • Improvement of collection and recycling rates for batteries<br>• Recoverability of valuable materials and provision of guidance to consumers<br>• Reduction of non-rechargeable batteries to phase out their use when alternatives are available<br>• Sustainability and transparency requirements for batteries (reuse, repurposing, and recycling) |
| **Packaging** | • Reduction of (over)packaging and packaging waste<br>• Sustainable reusable packaging design<br>• Reduction in the complexity of packaging materials, including the number of materials and polymers used |
| **Plastics** | • Regulatory measures for accidental release of microplastics<br>• Harmonisation of methods for measuring accidental release of microplastics<br>• Research into the risk and presence of microplastics in the environment, drinking water, and food<br>• Research to determine whether bio-based plastics have real environmental benefits? |
| **Textiles** | • Creation of incentives and support for product-as-a-service model and recyclable materials<br>• Provision of guidelines for separate collection of textile waste<br>• Promotion of sorting, reuse and recycling of textiles, including through innovation, promotion of industrial applications and regulatory measures such as extended producer responsibility |
| **Construction and buildings** | • Promotion of measures to improve the durability and adaptability of structures<br>• Revision of the targets set in EU legislation for the recovery of construction and demolition waste<br>• Promotion of reduced land use, rehabilitation of abandoned or contaminated industrial land and the safe, sustainable and circular use of excavated soil |
| **Food, water and nutrients** | • Reduction of food waste along the entire food value chain<br>• Greater sustainability of food distribution and consumption<br>• Initiatives to replace single-use packaging, tableware, and cutlery with reusable products in the catering sector<br>• Promotion of closed-loop approaches to water reuse in agriculture<br>• Encouragement of water reuse, including in industrial processes |

Figure 1 Priority sectors, according to the Circular Economy Action Plan





These industries are key as they have the largest potential for circular innovation and opportunities and also the largest environmental impact and resource demand (European Commission 2020).

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# 2.2 Circular economy principles – 9R Model

(Text by: Metje Rocklage, Alana Lamberts, Anett Wolgast)

There are strategies that minimise the consumption of natural resources and support the recycling of materials, thereby reducing waste generation (Potting et al., 2017). To extend the life cycle of a product, its energy efficiency and reusability should be rethought. The ideal state is, of course, the closed cycle, in which materials can be used repeatedly. However, this is often difficult to implement in practice. Therefore, various strategies have been developed that can be seen as the core framework for the transformation toward the circular value chain. One of these strategies is Potting's 9R Framework, which defines an almost complete set of circular strategies in a particularly simple and visually accessible way (Morseletto, 2019). It should be mentioned that there is no consensus in the scientific community as to how many R strategies should be assigned to the framework.

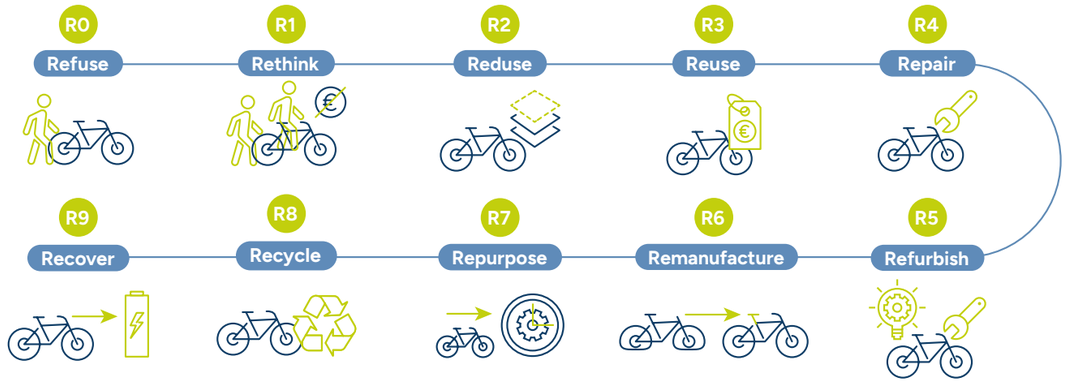
Potting assigns the various measures to different circularity levels, thereby creating a hierarchy. Basically, the longer materials can be kept in circulation, the higher the circularity level (von Unruh et al., 2023).

- Strategies **R0 to R2 (Smarter product use and manufacturing)** are intended to reduce expenditure on new raw materials or, at best, avoid it altogether. The aim is to question the existential purpose of products and reduce them only to what is necessary. In this way, the use of raw materials can be fundamentally reduced.
- Strategies **R3 to R7 (Extend lifespan of product and its parts)** focus on keeping materials in the cycle after a product has been disposed of, preferably such that they can be reused in a way that retains their original quality. By reusing or repurposing products or product parts, benefits can be provided without further raw material extraction. If this is not possible, individual product parts can still be further processed through recycling in some cases. In this way, fewer raw materials are newly extracted from the environment (Potting et al., 2017).
- Strategies **R8 and R9 (Useful application of materials)** can be applied in cases where the other possibilities are not available. However, R9 is of questionable applicability to some concepts, as it focuses on the recovery of energy from waste and residual materials. While the European Commission's Circular Economy Finance Expert Group recognizes that energy recovery is a better alternative than landfilling, it also believes that the waste-to-energy strategy should be classified at a lower level of the circular economy compared to other strategies. Therefore, energy recovery is often excluded when applying the framework (European Commission, 2020).

This book applies the R9 categorization scheme, as it illustrates the topic of circular economy particularly well. It can help companies that are still at the beginning of their transformation better understand the topic of circular economy and reflect on their own processes. The suggested 9R model can provide insight into and a general understanding of circular economy actions and activities and serve as an initial orientation tool to help companies comprehend, plan and create their own individual processes.








Own representation L2C
Authors: www.prosperkolleg.de/r-strategien/

| | | | |
|---|---|---|---|
| **Smarter product use and manufacturing** | **R0** | **Refuse** | Make product redundant by abandoning its function or offering the same function with a radically different product |
| | **R1** | **Rethink** | *Use product more intensively* (sharing) |
| | **R2** | **Reduce** | Increase efficiency of product manufacture or use by consuming fewer natural resources and materials |
| **Extend lifespan of product and its parts** | **R3** | **Reuse** | Reuse by another consumer of discarded product that is still in good condition and maintains its original function |
| | **R4** | **Repair** | Repair and maintenance of defective product so it can be used with its original function |
| | **R5** | **Refurbish** | *Bring* an old product up to date |
| | **R6** | **Remanufacture** | Use parts of discarded product in a new product with the same function |
| | **R7** | **Repurpose** | Use parts of discarded product in a new product with a different function |
| **Useful application of materials** | **R8** | **Recycle** | Process materials to obtain the same (high grade) or lower (lower grade) quality |
| | **R9** | **Recover** | Incineration of material with energy recovery |

Figure 2. The 9R Framework (adapted from Potting et al., 2017, p.5)

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# 2.3 Selection of small- and medium-sized enterprises

(Text by: Metje Rocklage, Alana Lamberts, Anett Wolgast)

Interview partners were selected by the project partners with the goal of representing a broad range of companies. As part of the Circular Economy Action Plan, the European Union has already identified industries that have the greatest potential for circular innovation and opportunities, but also the greatest environmental impact and resource requirements.

The project team sought to cover different sectors and paid particular attention to those prioritised in the Circular Economy Action Plan. Focus was put on small- and medium-sized companies to learn more about their specific experiences during the transformation process. More so than large companies, SME face many uncertainties, a lack knowledge and experience, and insufficient capacity and resources that make the situation complicated.

The interviews cover a total of 18 companies from the food and textile sectors, e-commerce, finance, food packaging production, upcycling production as well as companies from the construction and packaging industry. When selecting the SMEs, we sought to identify companies in the process of converting to circular economy principles or who had already partially completed this process. It was important to us to interview companies that already had practical experience with this topic, as their experiences during the transition process were of particularly great value and interest for this publication. Compiling real-life examples of companies taking this approach, including achievements but also challenges faced, can help to inspire other companies that have not yet started this process.

Although these businesses did not use the advisory services of consulting companies, the effects of their transformation are impressive and can be applied as examples of good practice for other SMEs. The common feature of all the presented companies is the desire to conduct business in a way that is fair to people and the environment. Moreover, the companies were motivated to transform their business into a closed loop, taking into account the principles of sustainable development.

The following examples of small business development show that the circular economy is not limited to manufacturers – its principles can also be successfully implemented in small service companies.



# 3.1 Introduction – Situation of the circular economy in Germany

(Text by: Anett Wolgast, Alana Lamberts, Metje Rocklage, Nastassja Neumaier, Monika Pieper)

Although Germany has a long tradition of waste management law (Di Foggia & Beccarello, 2022), there is still no uniform legal framework for the circular economy. Moreover, there is little differentiation between waste management and the circular economy in Germany. As a result, circular-economy-relevant aspects are scattered across different areas of law and are insufficient for real change.

Waste management in its current form is designed to treat waste safely and reliably so that it does not endanger humans or the environment. Here, it does not matter whether the waste can be used as a resource or not. Companies and consumers often have little incentive to avoid waste as long as the waste management system offers cost-effective alternatives. An analysis of innovations in Germany's leading environmental markets clearly shows how this dependence on the technological route plays out: The patent dataset shows that the waste management sector lags behind other environment-related markets such as air pollution control or climate protection. For example, Gehrke et al. (2014) summarized that in the fields of waste and recycling as well as wastewater, a stagnation of patent applications can be observed. If Germany wants to meet the growing challenges of improving resource efficiency and securing raw materials, the momentum in recycling may not be enough.

The Circular Economy Initiative in Germany (CEID, 2023) was founded in 2019 on behalf of the German Federal Ministry of Education and Research (BMBF) to promote Germany's transformation into a circular economy via a multi-stakeholder approach. The overarching goal was to develop a roadmap for Germany to achieve a more circular, resource-efficient economy by early 2021 and to formulate recommendations for action for policymakers, industry, and researchers. The working and steering group of the Circular Economy Initiative Germany consists of stakeholders from academia, business, and civil society as well as the Federal Ministries of Education and Research; the Environment, Nature Conservation and Nuclear Safety (BMU); and Economic Affairs and Energy (BMWi). This guarantees close coordination between clients, members and the office of the Circular Economy Initiative Germany and ensures permanent compatibility with German politics. The office of the CEID coordinates the overall process, ensures a high level of ambition in terms of content, and provides a Circular Economy Roadmap for the country (acatech et al. 2021).

CEID places a particular emphasis on product design; products should be planned from the outset to be capable of being repaired. This is currently not always the case. A particular challenge will be to involve product manufacturers in the development of a circular economy, who often sell products with predetermined breaking points: In fact, for some product groups, initial life expectancy has decreased in recent years. Sweden and Belgium could serve as an example in this respect; they have successfully taken advantage of the opportunities offered by European tax law and tax services in the rental and repair sector at the reduced VAT rate of 9% (Destatis, 2023).

Most companies in Germany are small- and medium-sized enterprises. A solid half of employees in Germany worked in small- and medium-sized enterprises in 2020 (Destatis, 2023). These numbers reveal that the full potential of the circular economy can only be realised if SMEs are brought on board. They can be deemed an important lever in complex global value chains. Research over the past years has shown that many SMEs are open to developing their business models further in the direction of the circular economy. After all, a circular economy offers not only risks but also many advantages and opportunities for SMEs. They can change their image into that of a modern company focused on the future, one that has achieved low $CO^2$ emissions and is meeting sustainability goals, introduce new business models, and spur growth and increased production. However, there are also challenges when implementing the circular approach in SMEs. These include a lack of financial support by governments or credit institutions, inadequate information management systems, lack of appropriate technology, technical and financial resources, and lack of qualified environmental management and governance professionals (Prieto-Sandoval et al., 2018; Rizos et al., 2016).

The benefits of investing in circular economy measures are often not immediately obvious to companies and are therefore often rejected. In addition, standard financing instruments usually do not cover circular economy measures or reimburse them only to a limited extent (Ghisetti & Montresor, 2020). Also, a lack of government support via the provision of funding, training, effective fiscal measures, laws and regulations at the national and European levels (e.g., in the context of implementing the European Circular Economy Action Plan) as well as a lack of legal certainty or too many standards keep SMEs from transforming to greener and more circular solutions (Rizos et al., 2016). However, the emergence of agencies to support SMEs on their way from the linear to circular economy points to the increasing importance of the circular economy for SMEs in Germany.

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# 3.2 GLASS GmbH & Co. KG

(Interview by: Nastassja Neumaier, Monika Pieper)

| | |
|---|---|
| Name of the Company | GLASS GmbH & Co. KG |
| Interview Partner | Karsten Ollesch, member of board of directors |
| Company size | 50 employees |
| Sector | Mechanical Engineering (Food Processing Machines) |
| Country | Germany |

*My name is Karsten Ollesch. After graduating with a mechanical engineering degree 25 years ago, I started as a young worker at GLASS and have now been a member of the board of for about ten years. GLASS is a manufacturer of industrial food processing machinery and is celebrating its 50th anniversary as a family business this year.*

**Our Motivation: What was your motivation to grapple with the topic of the circular economy?**
Our recipe for success includes the courage to "be different" and to try things out, which is also an important basis for a company's transition to a circular economy. On the machinery side, we have been unconsciously applying principles of the circular economy ever since the company was founded. Sound product design is the foundation for the circular economy, and our machines are extremely durable and service-friendly products that hardly lose any value; you don't just throw them away. In principle, they can be endlessly repaired, refurbished, or remanufactured for subsequent reuse.

In addition, we manufacture with batch size 1, that is, each machine is a custom-made product for a specific use case. We have a very high vertical integration, as almost every part of the machine is manufactured at our site in Paderborn. Each machine has its own documentation, so that even after 20 years or more, we can still trace what we have installed and rebuild the corresponding part in case a repair is needed. On the one hand, this enables us to ensure lifelong availability of spare parts on-demand, and on the other, it eliminates the need to keep machines and spare parts in stock (and possibly dispose of them if they are not sold or not used). So, when the topic of the circular economy came up, it was as if it had just been waiting for us.

In general, we tend to be guided by our gut feelings, which often also come from an economic direction. For example, it makes little sense – neither ecologically nor economically – to throw away raw materials. We therefore take great care to ensure that we can either use raw materials (especially stainless steel) free of residues or sell them onward.

**Our Approach: How did the transformation process take place in the company?**
One transformation process at our company involved the packaging of spare parts. Originally, we reused our suppliers' cardboard boxes for economic reasons to contribute to sustainability, but not our brand awareness. With the introduction of our own branded boxes, we were faced with the problem of ever-increasing mountains of cardboard from our suppliers. And here we thought economically, too: recycling costs us money! Can't we use the boxes more sensibly than throwing them away? Today, we shred the cardboard so we can safely pack our spare parts and use it as filler material instead of using plastic bubble wrap. In doing so, we have again killed several birds with one stone. Since our suppliers had previously provided us not only with cardboard but also with packaging material made of plastic, which made it difficult to reuse the cardboard without sorting, our purchasing department placed new demands on our suppliers: no plastic. And then it was just a matter of fine-tuning, such as finding plastic-free alternatives for our adhesive tapes and address labels, so that we can now proudly claim: We have reduced plastic and are packing our spare parts 100% plastics-free.

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**
It has developed a momentum of its own. In our everyday business, all employees walk around with their eyes open. They have created a new awareness of "waste" and now ask themselves more often if something really must be thrown away or if there is a way to keep things in circulation. Internally, we handle such processes hands-on and immediately as they arise. We don't form a committee or anything like that to discuss the matter, most of the time it just happens over a cup of coffee. Of course, this requires a certain level of trust, but our company size allows us to encourage everyone: just do it! Trust your gut feeling and try things out.

That also means that we don't have a department that deals exclusively with these issues. We can't quantify exactly what the ecological value of our measures is, we just know that it feels right and that's enough for us. On the economic side, it's easier to quantify the added value. And I also believe that we would have fewer students applying for internships if we were not active in this area. New employees, especially the younger generation, evaluate the environmental and social impact of a company nowadays.

**Our Challenges: Did you face any challenges during the transformation?**
When we introduce new processes affecting the upstream supply chain, we have to keep in mind that this also triggers a new process with the supplier. In one case or another, we had to refuse deliveries because they did not comply with our packaging guidelines. We must be very consistent on the one hand and be patient and understanding on the other – after all, it's a learning process.

Another challenge is that miserly retailers are hard to convince of the added value at times. Due to our durable product design, we cannot compete on price with low-cost manufacturers. However, those who save at the wrong end will come back to us sooner or later anyway.

**Our Prospects: Has the transformation process in your company been completed?**
It is a work in progress. Together with the University of Paderborn, we are currently taking a close look at our machines and processes to find out where there is still potential for improvement. We are also active in networks and associations such as the Deutsches Institut für Lebensmitteltechnik e.V. (German Institute for Food technology), Verein Deutscher Ingenieure e.V. (Association of German Engineers) and Verband Deutscher Maschinen- und Anlagenbau e.V. (German Engineering Federation), where I have been involved in the topics of energy efficiency for a long time. Recently, the associations have made the circular economy a core topic. From my point of view, we should examine and find solutions on how to make value chains more transparent and production in Germany lucrative again.

My message to other SMEs is: **Start with small steps!** You may already be doing one or two things in the direction of the circular economy. You are certainly not starting from scratch, and even if you are, just start! Taking things step by step, you will progress much easier than if you tried to invent a huge wheel right off the bat.

# 3.3 IP Adelt GmbH

(Interview by: Nastassja Neumaier, Monika Pieper)

| | |
|---|---|
| Name of the Company | IP Adelt GmbH |
| Interview Partner | Eric Adelt, Owner & Managing Director |
| Company size | 50 employees |
| Sector | Advertising |
| Country | Germany |

*My name is Eric Adelt and I am the third-generation owner and managing director of IP Adelt. Originally, when the company was founded in the 1950s, IP stood for Inge Plastik. Inge was my grandmother and plastic was the material we were working with. Today, IP stands for Ideas and Production. We produce individual advertising and presentation materials and are primarily concerned with the idea behind our products.*

**Our Motivation: What was your motivation to grapple with the topic of the circular economy?**
Twenty or 30 years ago, the main thing to be proud of as an entrepreneur was purely economic success; the question today is rather: “What contribution are you making to society?” With the circular economy, even established SMEs like us are discovering this social contribution for ourselves and can thus find a new orientation and sense of purpose. I actually believe that one of the biggest levers of the circular economy lies in medium-sized industry.

As early as the 1980s, although more from an economic and not yet from a sustainability perspective, we began to **rethink** our choice of materials and to look for alternatives to plastic. That was when we introduced more paper and cardboard to our production. The aim was to provide our customers with solutions that are neither over-engineered and therefore far too expensive, nor something that needs to be constantly **replaced**. For example, it makes neither ecological nor economic sense to produce paper ring binders for use on construction sites. In that case, plastic would be the more sustainable choice because it is a more durable material than paper. I believe that our **openness** to different raw and processing materials as well as our focus on the respective use case and the purpose of the product made it easier for us to actively shape this current transformation.

**Our Approach: How did the transformation process take place in the company?**
As we manufacture individually to order, we do not have any products in stock. This means we can switch to sustainable products very flexibly as soon as customers open up to this type of product and begin to demand it. From year to year, plastic products are decreasing while paper products are increasing, so we are in the process of **replacing** plastic where possible and useful. Today, we are noticing a steadily increasing number of product development for our customers in which the idea of sustainability plays an important role. It is a gradual process that we are currently seeing with the topic of climate neutrality as well. We are certified by Climate Partners in this regard for taking a close look at our entire value chain, that is Scope 3, including raw materials. And even though it still affects a minority of our business, demand for our offsetting services is slowly increasing. While zero tons of $CO^2$ were offset three years ago, today we have **reduced** more than 250,000 kg of $CO^2$. This represents about 5% to 6% of all customers, and we hope to reach the 10% mark soon.

In the transformation process, we also realised that we have much better **recycling** and **reuse** capabilities than our customers, so we now offer solutions where we take back products to show that we are responsible throughout the entire life cycle of our products. We therefore think about how the individual parts can be **reused or remanufactured already during product design** and develop solutions that make the disassembly of the product into its individual parts as easy as possible (e.g., screwing instead of glueing). And when it comes to recycling, with a lot of effort, we changed our provider and found a local **recycler** who can separate paper and film from each other and **recycle** them separately. Not only have all kinds of raw materials become significantly more expensive, recyclable “waste” such as paper has as well. Because we now receive more money for well-sorted waste paper than we would have to pay to dispose of it, an economic advantage has led us to behave more sustainably overall as a company by making sure we separate recyclables correctly. So, it pays off twice! And even if recycling is not yet the ideal case in terms of the circular economy, it is at least quite a bit better than standard disposal. Transformation is not about perfection, but about the small steps in between, no matter how small, and it's definitely the right direction.

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**
I have made sustainability a top priority and manage the issue at a strategic level. However, we generally try to get to implementation quickly and not to work out a master plan first. Because when it concerns change, scepticism and prejudices are usually high at first. Here, I try to **encourage experimentation** and set a good example so that others can familiarise themselves with a new idea. In this way, a company vehicle that "only" has a maximum speed of 160 km/h because it is fully electric suddenly becomes several, to give just one example. The same is true for product ideas. When new ideas are well received by customers, this success drives our staff forward. In general, there is an ever-greater understanding among the workforce that an orientation toward greater sustainability represents more opportunity than risk for our company. As far as the sustainable optimization of our internal and external processes is concerned, we have people who have a very strong **intrinsic motivation**; those people are worth their weight in gold when it comes to driving things forward. For them, we try to encourage them to try new things by removing existing obstacles, providing resources or opportunities, and daring them to make mistakes. Most importantly, all efforts must be appropriately recognized and valued on a very individual level.

**Our Challenges: Did you face any challenges during the transformation?**
It is difficult to convert an established company in a competitive market like ours towards the circular economy. Some markets are like "the early bird catches the worm", our market is more like "the second mouse gets the cheese when the first one has triggered the trap"; it is characteristic for companies to first adopt a wait-and-see attitude. We have noticed that while there is a lot of talking about sustainability and climate neutrality, it often stops there. A status quo or a comfort zone with which one is actually halfway satisfied has a very high staying power. Let's take our offsetting service as an example: We already bear all the administrative costs associated with the certification and only share the $CO^2$ offset with the customer because we cannot finance the full offset ourselves. And although we are talking about costs that are usually well below one percent of the total project value, the hurdle seems still too big for most of our customers. One reason for this problematic situation might be the incentives of the people who ultimately make the purchasing decisions. Our contacts, who are usually corporate buyers, are rarely given incentives or resources to spend a little more to support climate-neutral projects. This is a great pity, because it has a negative impact on the speed of change throughout the value chain,

while it really doesn't take much to trigger positive change. Instead of optimising our costs until we are forced by the legislature or the market to leave this old path, we should rather work together to shape the entire change process toward a circular economy. The important thing here is to recognize that **we are pioneers, and we can be proud of that**. This value cannot be measured in money. That's why we are pleased about every customer who actively signals: "No more lip service! We want to take the issue of sustainability much more seriously."

**Our Prospects: Has the transformation process in your company been completed?**
We will be doing another project together with the University of Applied Sciences of Bielefeld to find out how it might be possible for us to introduce an idea management process, which will also involve the topic of innovation or change in the direction of sustainability. I'm curious to see what this yields. After all, we are an SME and don't want to complicate things for our employees who have ideas. In general, we have already achieved a lot, indeed. But we are part of a system and as such clearly not "done" yet. Therefore, we will continue to do our part, to network, to share our knowledge and experience, and to support each other to accelerate the transition.

On the journey towards a circular economy, there is not only one path or one major step to take, but rather many small steps that each company must take in its own way. And I believe this is exactly what SMEs are predestined to do, because they have been used to adapting to change for decades and doing so in a fluid process.





# 3.4 VegaSystems GmbH & Co. KG

(Interview by: Nastassja Neumaier, Monika Pieper)

| | |
|---|---|
| Name of the Company | VegaSystems GmbH & Co. KG |
| Interview Partner | Tobias Altemeier, Founder & Managing Director |
| Company size | 25 employees |
| Sector | IT |
| Country | Germany |

*My name is Tobias Altemeier. I founded VegaSystems 25 years ago, in 1997. From being a classic IT service provider, VegaSystems has now largely evolved into a data center operator.*

**Our Motivation: What was your motivation to grapple with the topic of the circular economy?**
With entrepreneurs, money is of course a crucial factor, so our first motivation was clearly economically driven. In neighbouring countries, energy prices are much cheaper than in Germany. And what does a data center need most? Energy! So, the question arose, "How can we compete internationally despite the cost structure existent in Germany?". Thanks to **heat recovery**, for example, heating and air conditioning for 1,300 square meters of office space currently costs us about €200 per year, which is less than you'd pay for the heating and air conditioning of a small garden shed. These are economically measurable things. However, when we were confronted with the mountains of IT hardware that we kept disposing of, there was just a gut feeling of "This can't be right!". Particularly against the background of supply shortages, there was a self-interest in **r**ethin**k**ing processes to preserve material.

As a managing director, I take time to think about where we still have potential for optimization. Even if optimization is only worthwhile in monetary terms up to a certain point, the joy of looking at the systems and processes every day and realising that they are running more than optimally is priceless. How seriously we take our transformation also shows when we receive acquisition requests from corporate groups. As long as we are dealing with investors that only count revenue, acquisition is not an option for us. Ultimately, by assuming responsibility at an ecological and social level, we can further and ultimately strengthen our **employer brand** as well as our **customer loyalty**.

**Our Approach: How did the transformation process take place in the company?**
Implementing the circular economy is difficult at first because existing processes have to be changed. However, ten years ago, when we were confronted with the mountains of hardware that we kept disposing of because customers tended to lease or buy hardware, we came to the realisation that if you look

more closely at the product life cycle of IT hardware, there is a wonderful opportunity for **reuse**. This is because every use case is different. It may be that the used hardware ideally meets the needs of another customer who is perhaps not looking for a high-end solution and prefers a more cost-effective alternative. As a first step, we therefore developed a process in our ERP system to be able to store used hardware instead of disposing of it. And today we have waiting lists for hardware as it moves from its first life cycle, which is usually 36 months, to a second life cycle at 36 to 72 months, and so on. And as a result, we haven't had to dispose of a single server in the last two years, not even one! However, even if the used hardware still functions reliably for its intended use case, some efficiency loss must be expected with older hardware, which we in turn either avoid by throttling the Central Processing Unit (CPU) or **compensate** for with solar systems.

In 2020, we also put one of the most modern and sustainable data centers in Germany into operation. In its planning and construction, we focused on **energy efficiency** and implemented the following concepts:

- heat **recover**y: we use the heat generated by the data center to heat the offices, and at the same time channel the cold from the offices back into the data center, thus closing the energy cycle
- 100% electricity from **renewable** energies, such as wind power, solar plants, or hydropower
- three-stage air conditioning with direct free cooling

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**

Even though a large proportion of our employees are interested in and personally committed to the topic of sustainability, there was also an equally large proportion who could not initially identify with it. IT people, for example, are known to love having new "toys" all the time. Fostering the understanding that it doesn't always have to be the latest hardware and that we can also create something wonderful out of something that already exists wasn't always easy. It was a **change process** and was primarily supported and driven by the process documentation department. Today, there is no longer any resistance among employees; on the contrary, they have recognized the value of it and are contributing their own ideas. To honour these and encourage further ideas, we have extended our internal "bonus model" to include the ecological level and are currently able to record a new optimization impetus every three months.

**Our Challenges: Did you face any challenges during the transformation?**

Ten years ago, neither ecological interest nor circularity had even entered the majority's mind. There was instead a very great aversion to it at the beginning because the understanding often prevailed that "new means fail-safe" and "never change a running system". That's why we initially used the returned hardware for our own purposes and proved by our own example that we can operate our systems fail-safe even with used hardware. Fortunately, awareness of topics such as the circular economy has increased significantly in the last 3-4 years. This is also reflected in the demand for our sustainability certificates.

Today's challenge is rather to explain and understand exactly what the circular processes actually are. For example, a data center is not necessarily "green" just because it uses green electricity; there is more to it than that. However, the high degree of complexity does not make it easy to identify greenwashing. Various standards and certifications can provide guidelines here. However, they can also hinder circular projects. Standards such as DIN, ISO and TÜV, for example, were decisive in the fact that the planning phase of our new data center took almost five years and that we ultimately had to decide in favour of a new building instead of applying the principles of circular economy to our existing property.

**Our Prospects: Has the transformation process in your company been completed?**

We will continue to pursue this issue consistently. In the near future, for example, we want to generate more electricity from renewable sources than we consume ourselves. And when it comes to materials, we have set an ambitious goal for ourselves: 99% **reuse** of materials. Currently, we are at about 92%. One example where we have not yet found a solution in terms of the circular economy is the destruction of harddrives. Due to data protection standards, they have to be shredded at the end of a life cycle, even if they still function. That hurts the soul; we can't be destroying so much money and valuable resources. But we are officially certified, and that means we must follow a set of rules. Unfortunately, legal standards and the circular economy sometimes seem far apart. At Eco-Verband, the German association for the internet industry, we address such issues and try to find solutions in dialogue with others. Alone, we will not achieve total circularity, nor should that be the aspiration. Together, however, we will learn from each other, find solutions, and make progress – step by step.

If there is one important lesson from our transition towards a circular economy that I would share with other SMEs, it would be to **start with small steps** so that the entire company can keep up with the new processes without frustration. Everyone needs to understand that there is a purpose and value behind it, even if sometimes it's just the certainty of doing the "right thing". It may sound silly, but at the end of the day we all want to live happily ever after. So don't be afraid, start small, don't give up and know: it will be **worth it**.

# 3.5 Bäckerei Lamm

(Interview by: Metje Rocklage, Alana Lamberts, Anett Wolgast)

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|---|---|
| Name of the Company | Bäckerei Lamm |
| Interview Partner | Marc-Philip Lamm, junior manager of the family-owned bakery since 2020. |
| Company size | 100 employees |
| Sector | Food industry / Bakery |
| Country | Germany |

*My name is Marc-Philip Lamm and together with my father, my mother and my brother, I am part of the Lamm company. The family business was founded in 1938 by my great-grandfather and specialises in bread and rolls. For the past three years, my brother and I have been supporting my father in the day-to-day business. Currently, we offer our baked goods in eleven proprietary stores in Bielefeld.*

**Our Motivation: What was your motivation to grapple with the topic of the circular economy?**
As a company, we attach great importance to sustainability. The topic of circular economy has actually been an issue in the bakery industry for decades. Both in the craft sector and in the food industry, the goal has always been to process high-quality materials in such a way that as little waste as possible is produced. Unnecessary waste of resources is crucial and should be avoided as far as possible: this is our aspiration.

In recent years, we have become even more involved with the topic of sustainability. The motivation to make changes to our company clearly lies in our responsibility towards the environment, but social obligations to our employees have also played a role. Being entrepreneurs, we also keep the economic factors and costs in view when introducing changes to our bakery.

**Our Approach: How did the transformation process take place in the company?**
One of our circular projects, which has been going on for a very long time, is the **recycling** of leftover bread into new bread. That might sound a bit strange, but it's not that unusual, as it has a positive effect on taste. We roast a part of it and add it to the new bread, another part is given to charity projects. The remaining bread goes back to the farmer and becomes animal feed. At this point I can also say that we would like to get more involved in **food sharing**.

A remarkable implementation of a circular idea is our **heat recovery** system. The topic of heat **recovery** was first brought up by my father during the construction of our new bakery. He took the opportunity to install the system in 2013 as part of our new building. It allows us to use the excess heat from the cooling system and the oven burners for other purposes. We redirect it to feed our radiant floor heating, to heat the building and for hot water.





The installation of the heat **recovery** pump was a big transformation.

We have also addressed the issue of **reduction** of packaging. It is important that the bread stays fresh and enjoyable for a particularly long time. We do not use plastic. Due to the high volume of packaging, we introduced a $CO^2$-neutral paper bag with a wax coating a few years ago and offer a deposit cup system for coffee.

Furthermore, it is also important for us to know where our raw materials come from and to produce them locally. Since 2016, we have even been growing our own corn on-site.

To avoid food waste, quantity planning is key. We introduced a software program for this purpose a few years ago. The program takes various factors such as weather, vacations, and holidays or local festivities into account. This helps us to optimally determine production quantities and thus minimise the production surplus.

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**
We didn't have one big change, but many smaller ones, which made it easier. One project was the installation of a heat **recovery** pump. The fact that this was done as part of the new construction meant that the change was only one of many.

When talking about employees, perceptions, actions and reactions are different: some staff members are aware of the topic and welcome every change towards circularity. Others are not familiar with the issue or the initiated changes, as appropriate **knowledge and sensitivity are lacking**. It's not always easy to get everyone on board.

That applies to customers as well. Some adjustments have an impact on the price: If we want to process high-quality raw materials and use climate-neutral packaging, additional costs are unavoidable. We try to keep the final price low and still be as sustainable as possible. However, the current energy crisis and rising raw material prices don't make it easier. This is perhaps where we need to step up and communicate our sustainability strategy even more strongly.

**Our Challenges: Did you face any challenges during the transformation?**
In general, the restructuring process went smoothly, as we had already been dealing with the issue for some time. The implementation of new measures is always associated with some risks. In particular, the introduction of new technologies and systems is often an adventure. These are well-considered investments for which we calculate in advance exactly how much we can bear economically. For various reasons, many costs cannot be passed on to the customer on a one-to-one basis, so we must think carefully about the extent to which the investments are economically viable.

We are currently in the process of trying to generate electricity via solar panels on the roof. However, this is proving to be difficult. The roof structure would withstand the solar cells, but unfortunately, the connecting elements required for this have not yet been approved. We have to wait. This is frustrating as we already resolved all technical difficulties. We produce mainly at night but would generate most of the energy during the day via photovoltaic systems. We thought for a long time about how to store the energy and use it when it is needed. There, we have solved the problem; now we just have to wait for the authorization. Let's hope that it will come. Because then we could also feed our new electric delivery vehicles with this energy.

Another challenge is **limited exchange** with other companies and **lack of information**. We do share ideas with other bakeries that have implemented circular economy measures; however, there is still a lack of cross-industry dialog. As bakers, we might be able to think about advantageous measures, but we often can't implement them ourselves: other companies and suppliers must be involved. Maybe I can illustrate this with a very **specific problem** we have at the moment: The heat pump is not a standard device and of course it needs to be maintained. Unfortunately, the company that installed the pump no longer exists. Therefore, it is currently very difficult for us to find people or a company who can perform maintenance.

So, it would be very enriching to exchange ideas and see examples of how other companies proceed, solve difficulties, and achieve success and results. I'm

sure more open discussions and interchange, including across different industries, would be beneficial and could accelerate the transition process, especially in small companies.

**Our Prospects: Has the transformation process in your company been completed?**
Of course, the **process is not yet complete**. We are constantly thinking about restructuring processes to further integrate the topic of circular economy and sustainability into our company. This is part of our self-image and corporate philosophy.

We are currently considering replacing the plastic films that we use to separate cake slices. The long-term goal is to find a biodegradable film. However, this would probably still end up in the plastics recycling bin, as many consumers do not yet know that the film is degradable. Of course, that is no reason not to introduce it, we would just have to work on knowledge transfer.
Finally, we want to be involved in the production of new raw materials. To this end, we are always on the lookout for new regional partners – as not only production but also regionality is important to us.





# 3.6 Begemann Distillery

(Interview by: Metje Rocklage, Alana Lamberts, Anett Wolgast)

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|---|---|
| Name of the Company | Begemann Distillery |
| Interview Partner | Friedhelm Begemann, owner of the distillery |
| Company size | 10 employees |
| Sector | Food/beverage industry – Liquor Production |
| Country | Germany |

*My name is Friedhelm Begemann and together with my sons, my wife and ten other employees I run the Begatal Estate Distillery. The name Begemann has a tradition that goes back to the 13th century and is strongly rooted in the village. I am a farmer and have combined my passion for distilling with farming. In 2012 came the first idea for the distillery, in 2018 I started the business. Currently, we offer various high-quality beverages: gin, fruit spirits, vodka, whiskey, as well as energy drinks and fruit juices.*

**Our Motivation: What was your motivation to grapple with the topic of the circular economy?**
The motivation to deal with the topic of sustainability comes naturally to me as a farmer. Even though I worked in a different industry for many years, the philosophy behind agriculture is deeply rooted in me. That's why we strive to produce most of the raw materials to make the beverages by ourselves. We are constantly thinking about the resources our 6-hectare farm offers and realised that our decentralised organic production is a unique selling point. Over the years, we have learned how to increase the efficiency and sustainability of many processes in our production. It has turned into a kind of competition.

If I think about other motives to engage with circularity, the responsibility I have towards the next generation is definitely one of the important reasons. I want my sons to take over the farm one day, and I want to teach them the right way to handle resources.

**Our Approach: How did the transformation process take place in the company?**
As stated at the beginning, sustainability is not a completely new topic for us, we dealt with it from the very beginning. Since our business model is not fundamentally based on the circular economy, we had to collect information on how to adjust our processes to meet the framework and adapt our production.

**Rethinking** is a constant factor: How can we further optimise processes to make the delivery of our products more climate-neutral? As a matter of principle, we make every effort to ensure that there are

no waste products that can't be **reused** elsewhere in the production process. For example, we **recycle** all mash left over from the production as fertiliser for our fields. We try to grow all the resources we need for our products ourselves. If we intend to add a new product to our range, we consider and check if we can produce and provide the ingredients ourselves. For example, in recent years we have planted a meadow orchard and barley fields and grown a variety of herbs. In addition, we maintain 12 bee colonies needed to pollinate our field and operate an orangery for the winter storage of our orange and lemon trees. This allows us to **reduce** packaging material and transport-related energy that would arise in deliveries.

Electricity is an important topic – we try to **reduce** the use of external electricity as much as possible. Most of the energy we need we generate ourselves. To heat our estate and distillery we burn wood from our own forest, taking care to grow more trees than we utilise in the burning process. In this way, we have been able to **reduce** the use of gas-produced electricity – which is still 5% of our use – more and more. In the next few years, we plan to generate additional electricity through a solar panel system in order to become completely independent. Since 2020, we have also relied on our own well for our water supply and consume only what it provides. This has been a process of **rethinking and reframing** how we can manage the resources we have been given. Until now, we have purchased water from the public utility company.

Unfortunately, we cannot produce everything ourselves. We purchase glass bottles for our products to fill them manually. To **reduce** waste, we have introduced our own deposit system: we charge a deposit of 2€ per bottle to guarantee that they are returned to us and can be **recycled**. We pay attention to the **reduction** of plastic in all production processes. The only place where we cannot do this due to a legal obligation is in the use of shrink capsules to create a seal between the cork and the bottle. We take a similar approach to filling our energy drink, where we take **recycled** cans, clean and touch them up in order to **reuse** them.

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**
The implementation of the various activities was unproblematic, as we keep **rethinking when** expanding our product range. We always look at the state of resources and consider the creation of new products in a sustainable way. Since we are a small team, we always involve our employees and thus ensure their contribution, commitment, and support from the very beginning.

**Our Challenges: Did you face any challenges during the transformation?**
The difficulties we experienced came mainly from outside and were caused by the bureaucratic system: mostly permits in various forms. We often have difficulties with building permits, approvals, authorization, certification, etc. Often changes and innovations require investments and create costs. Therefore, it is frustrating to acknowledge that plans and useful changes risk failing solely due to permits. For example, I am currently in discussion with the mayor: We plan to build a wind turbine on the rear part of the farm to supply electricity not only to us but also to a large part of the community. This is a project we are trying to realise by 2035. Currently, we are still lacking permits and many regulations must be followed.

Another challenge is our products – they are vulnerable. We are incredibly dependent on weather conditions. Last year, for example, we couldn't distil William's pears because they simply didn't ripen due to lack of sunshine. By the end of the summer, we had an entire field of unripe pears. In such non-standard situations, we become creative and look for new paths and solutions. So, we turned the pears into juice. This worked so well that we are now considering offering other juices in the future. Climate change is another reason why we want the circular economy, to help stabilise the climatic conditions under which we produce.





**Our Prospects: Has the transformation process in your company been completed?**
The transformation process is not completed – we are still inventing, implementing and re-assessing. One of the next steps and projects we have an eye on is electricity. We still depend on immersion heaters powered by external electricity to maintain heat in the distillery about 5% of the time. But with the installation of a wood chip heating system in 2023, we will make ourselves even more independent of the public electricity supply. This system – estimated to cost €500,000 – will not only supply the distillery, but also the 18 rental units connected to our farm. This self-sufficiency is important, since the base load of electricity in Germany is still provided by coal, gas and nuclear power. In the same spirit, we are planning to install a 500m² photovoltaic system on our roof by 2025.

I think to be an entrepreneur you need a certain kind of positivity and optimism as well as to keep looking out for opportunities and chances. We always consider ways of manufacturing products in a climate-neutral and efficient way and adapt production appropriately. We do our best to use and work with the resources and (raw) materials available to produce in the best possible and profitable way.

# 3.7 Poly-Pack

(Interview by Metje Rocklage, Alana Lamberts, Anett Wolgast)

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|---|---|
| Name of the Company | Poly- Pack |
| Interview Partner | Achim Schmitt Managing Partner |
| Company size | 19 employees |
| Sector | Plastic processing company |
| Country | Germany |

*My name is Achim Schmitt and I am the managing director of Poly-Pack. I took over the company from my parents-in-law in 2010 and today I run it together with my daughter, Jana. We produce film packaging for industry, retail and service companies. We do not generate the plastic film ourselves but buy them on large rolls and process them into bags, pouches, or hoods upon customers' request. We currently operate four machines and have 16 permanent employees and three employees from the Iserlohner Werkstätten, an initiative that helps people with disabilities find work.*

**Our Motivation: What was your motivation to grapple with the topic of the circular economy?**

Climate change has become obvious and can´t be ignored by any of us. Being not only an entrepreneur but also a father and a Christian, I clearly understand the individual responsibility I have towards the next generation. In general, I see it as my duty to use the resources given to us wisely and to make my contribution as an entrepreneur. Nevertheless, there are also economic reasons for dealing with the topic of sustainability. Packaging and plastic is an industry which is not always positively characterised, since it is associated with plastic waste and pollution, which cause negative environmental effects and damage. That's why it's important to take a fresh look and to think about contributions we can make towards more circularity. There are many advantages in addressing sustainability, not only saving resources but also money.

**Our Approach: How did the transformation process take place in the company?**

I do remember that the first steps I took years ago were quite small – in our old production hall, I started to replace all the lamps with LEDs relatively soon after taking over the company. Later, once we built our new production hall in 2016, we started to **rethink** and question a lot of aspects: we paid attention to optimal insulation and triple glazing, we installed an active ventilation system and a heat **recover**y pump. This allows us to run the underfloor heating. Also, during the construction process we mounted a large photovoltaic system on the roof. When we have to buy electricity, we make sure that it is certified green electricity. Over time, our company has switched nearly our entire vehicle pool over to electric propulsion. In combination with our photovoltaic system, we can now operate our vehicles almost exclusively with our own electricity. And LEDs have also been installed again.

These optimizations were accompanied by improvement of the production process in the new building. As our production increased, new compressors were purchased. We made sure that the new compressors had a heat exchanger to be able **to reuse** the excess heat. This means that "waste heat" is fed into the stratified storage tank and heats our production hall, for example.

Recently, we undertook some changes and updated our IT. That doesn't save much energy, but the new equipment uses only half as much energy as our old devices. Of course, this is also an investment, but we are confident that it will pay off in the near future.

We are in the process of re-thinking by carefully examining different processes inside the company which have circularity potential. As an entrepreneur, I can´t ignore and disregard the financial aspect – investments have to actually pay off at some point, this is always a balancing act. It´s a given that we have to act in an economically smart way, otherwise the company will no longer exist, and this is not in the interest of anyone.

As already mentioned, our product is a plastic film. Even if plastic has a worse image than the product itself, we can certainly do something about it. Pure plastic films can in principle be recycled well. We collect and press plastic film waste generated during processing. This is processed by regeneration companies (or recycling companies) into granules, from which our raw material suppliers re-extrude high-quality movie. We have been offering **recycle**d-content plastic films for years. However, there is little we can do about our products, as this mainly depends on consumer demand.

I would also like to mention that our company and our employees deal extensively with the topic of circularity and sustainability. We have even been climate-neutral for a few years. To achieve this, we work together with "natureOffice – your best partner in things of voluntarily carbon offsetting and climate protection" and support a tree planting project in Togo as an offset. We also offer the possibility of climate neutrality to our customers. For a small additional charge, our customers can purchase our products in a climate-neutral way. Unfortunately, we cannot offer this as a general service, as this would put us at a competitive disadvantage. It is regrettable, but not many customers want to take advantage of this option.

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**

We constantly **review** our processes and have included this in our annual planning. We are ISO-certified and have a management program to set new goals annually. Risk management is also something we deal with on a regular basis. Every new acquisition is accompanied by thinking and **rethinking** of options and the optimal solution. Internal changes are usually not a big problem. It is much more difficult to bring our customers to **rethink** along with us when changes occur. During the Covid-19 pandemic, for example, our supplier could not deliver clear **recycle**d material as usual. The plastic films sometimes were more greyish than before, which also had to do with the slightly increased proportion of PCR (Post Consumer Recycled) material. Often, this is not really a problem for the intended use. But for many customers, a completely transparent plastic film is the only option. That's regrettable, as we can then only use virgin or PIR (Post Industrial **Recycle**d) material.

**Our Challenges: Did you face any challenges during the transformation?**

I would say that our biggest challenge is to motivate our direct customers, the companies, to make use of more sustainable alternatives. Even though the end consumer is paying more and more attention to sustainability, this is not yet common in industry. Here, it's often simply a matter of price. We have been trying for years to process as much plastic film as possible from **recycle**rs. Even if the reputation of PCR is not very good, the product can be **recycle**d extremely effectively, and new very high-quality plastic films can be made from it. The **recycle**d products are not more expensive than new goods, but actually somewhat cheaper. Nevertheless, customers often find it difficult to make the switch. In addition, we offer our customers the opportunity to buy a climate-neutral article for a surcharge of about 1% (through offsetting in collaboration with Nature Office). Unfortunately, however, this is taken up far too rarely.

The lack of exchange with other companies is a real loss, whether it's about the use of more sustainable plastic films or about sustainability in general. We tried to organise an event in our city on the topic of sustainability and circular economy in businesses. In the end, it had to be cancelled due to a lack of participants.

**Our Prospects: Has the transformation process in your company been completed?**
We are always thinking about further changes and improvements to make new solutions, products, and purchases as sustainable as possible. Now, during the energy crisis, for example, we are trying to manage our energy consumption more efficiently. To this end, I have ordered an energy manager to be connected to the solar panel system. In the future, it will be able to tell me when we produce more electricity than we consume. We can then store it and use it when needed. In the future, we will automate energy use so that we consume electricity when it is actually produced.



# 4

# Success stories from Italy

# 4.1 Introduction – Situation of the circular economy in Italy

(Text by: Annalisa Contu, Linda Meleo)

According to the 4th Report on the Circular Economy in Italy, the most relevant difficulties in Italy concern policies that underestimate the potential and strategic need for robust advancement of the circular economy in the country. The country's economic rebound in 2021 was significantly stronger than expected, with 6.6% growth in GDP compared to 2020. However, in the old linear economy model, such growth crashes against and is stifled by a lack of raw materials. Ultimately, GDP growth needs to be decoupled from raw material use. A substantial and technologically mature impulse towards a circular economy could have created a second, wide market for the materials needed for recovery, thus avoiding the crisis Italy is facing and that risks continuing. Consequently, the transition to circular consumption and production patterns is an increasing need, not only to ensure ecological sustainability but also to ensure a robust recovery, stable economic development, and competitive SMEs.

With the new "National Strategy for the Circular Economy", new tools have been defined to improve the market for secondary raw materials, extend the responsibility of the producer and the consumer, disseminate sharing practices and "products as a service", support the achievement of climate neutrality objectives, and inform the temporal planning of actions and measurable targets between now and 2040.

The new national strategy:

- defines the new digital waste traceability system, which will facilitate the development of a market for secondary raw materials on the one hand, and control and prevent illegal waste management phenomena on the other
- envisages tax incentive systems to support the use of materials derived from the recycling chain
- includes a taxation system to make recycling more convenient than landfilling
- promotes reuse and repair actions
- includes the reform of the EPR (Extended Producer Responsibility) and Consortia systems to support the achievement of EU objectives
- strengthens existing regulatory tools (End of Waste legislation, Minimum Environmental Criteria) and applies these tools to strategic sectors such as construction, textiles, plastics
- supports the development of industrial symbiosis projects.

The circular economy transition is still an ongoing process in Italy. The goal of decoupling growth and resource consumption has not been reached yet. The post-COVID economic recovery has again led to an increase in resource consumption.

The circular economy is prominently discussed within the Italian National Recovery and Resilience Plan as well. The plan includes funding and new regulations for the areas of agriculture, mobility, building energy efficiency, pollution, circular economy, and the energy transition, with the aim of promoting a progressive green evolution towards management systems that consume as few resources as possible and produce little waste.

However, Italy stands one step ahead of other European countries. The 4th Report on the Circular Economy of 2022 shows that Italy, along with France, tops the list of the most virtuous economies in Europe in 2021. It is important to take note of some data. First, the rate of circular use of materials reached 21.6%, much higher than the EU-wide average of 12.8%. In addition, the recycling rate is 68%, compared to the EU average rate of 35%, and material consumption per capita is 7.5 tons, much lower than the EU average of 13.5 tons. Italy has also experienced growth in resource productivity: while in the EU as a whole, 2.1 Euros of GDP were generated for every kg of resources consumed, Italy reached 3.5 Euro of GDP for every kg of resources consumed (2020, purchasing power parity).

For the future, Italy must resolve some challenges, including defining strong policies to drive changes in favour of more sustainable production processes. Similarly, Italian SMEs must engage in transformation to gain competitiveness in international markets and become greener. The Italian government approved a specific plan called "Piano Transizione 4.0" (Transition Plan 4.0) in May 2020, as part of the Italian Recovery Plan. The plan sets some measures to foster the circular economy, especially in SMEs, such as fiscal measures to incentivize green investment and circular economy actions (i.e. eco-design, product durability and repairability, reuse and recycling, disassembly and remanufacturing technologies, recovery of materials, production of quality secondary raw materials, and product as a service). The Italian government has also released additional funding to support companies with digital transition projects and investment for the circular economy. In November 2021, the Ministry of Economic Development added an additional 200 million Euros to a fund introduced in October 2019, with an initial investment of 256 million Euros. These resources provide support and incentives for SMEs investing in circular economy solutions, especially those based in less developed Italian regions (4th Report on the Circular Economy of 2022, p. 91).

# 4.2 Self Garden S.r.l.

(Interview by: Linda Meleo, Argha Kumar Jena, Serena Bernardini)

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|---|---|
| Name of the Company | Self Garden S.r.l. (Ltd.) |
| Interview Partner | Tiziana Vona, manager with over twenty years of experience; quality, environment and safety representative since 2006. |
| Company size | 9 employees |
| Sector | Fertilising soil for plants and gardens |
| Country | Italy |


*My name is Tiziana Vona and I have been working at Self Garden S.r.l. for a long time. The company was established in 1994 for the production and marketing of fertilising soil for plants and gardens. We turn non-hazardous waste into quality compost. We are quite proud of this activity because we actually started to **recycle** organic waste before one of the most important Italian laws on waste prevention and management entered into force (1997). We make several well-appreciated products such as Nutri Garden and Bio Garden Compost, Castles Potting Soil Lawn, Castles Potting Soil Repotting and Ornamental Rocks. Our company is quite small and currently has nine employees.*

**Our Motivation: What was your motivation to grapple with the topic of the circular economy?**
We believe that environmental protection is a collective responsibility from which no production process can be left out. Our vision is a future in which crops go back to being planted with crop rotations, along with exclusive use of natural fertilisers free of chemical additives.
Our mission has always been to achieve continuous improvement in environmental performance. Self Garden works to give new life to organic waste by **recycling** this material into produce compost, which when re-introduced into the environment, improves soil fertility, thus uniting efficiency with environmental protection and preservation.

**Our Approach: How did the transformation process take place in the company?**
Since the company's founding in 1994, we have anticipated the circular economy model , introducing activities that were completely unknown to institutional bodies, so much so that the Chamber of Commerce of the City of Latina actually had to set up a dedicated commission to define the product sector and activity performed by us.

The transition process has been guided by national regulations on waste, which have become increasingly detailed year by year. So, we have chosen to invest more and more in better technologies to improve the quantity and quality of the compost produced by the **recycled** organic waste. Thanks to this process, in 2010, the regional administration approved our composting plant, one of the first of its kind in the Lazio Region.

From the outset, we looked for the best available technologies for organic waste **recycling**. This means that we needed special support from external highly skilled consultants and thematic experts. We have also involved our workers in every step of the process. In addition, we have introduced technologies to **reduce** energy consumption and increase energy efficiency.

A key role in the company's organisation was the definition of a quality, environment and safety management System. This lets us check our production activities, measure their environmental impact, and set corrective actions when necessary.

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**
No, the investment has not changed the internal corporate structure. Sustainability is our core business and since we are a small company, when we plan changes, we share information and employees are fully involved. We are a kind of family, and we try to exchange ideas, information and discuss future plans together. On the other hand, our clients care about quality and sustainability, that is why they choose to buy our fertilising products made with **recycle**d materials. Their opinions on our products are important as well to set strategies and investment in terms of what the market needs.

**Our Challenges: Did you face any challenges during the transformation?**
The transformation process developed smoothly over time. We had problems improving the efficiency and effectiveness of our production system because regulations in the waste sector had changed over time. This means that we needed to be sure that our effort is sufficient to reach the goals and targets set or soon to be set by regulation. Currently, we strongly believe that regulation must be stricter to provide stronger incentives to move companies toward a circular economy transition.

In addition, when we started building the compost plant, citizens made strong complaints because of the noise and smells that could result from the process (“Not in My Backyard”). However, we tried to have discussions with and inform them as much as we could about the activities, benefits and real externalities produced by the process. It was not easy to manage, but we believe that involving and informing stakeholders is a fundamental step.

**Our Prospects: Has the transformation process in your company been completed?**
We believe that transformation is a continuing process; ours is not completed yet. Our industrial development plan includes growth of the sales department and the formulation of an innovative product to **recycle** more waste better as an input. There are also plans for training and digital implementation of some production processes, this will help us to **reduce** energy consumption even more.

There is no doubt that managers must acquire specific environmental skills so that they can harmoniously combine economic development with a proper assessment of environmental impacts. All companies should carry out an analysis of their process to optimise resources.

# 4.3 S.I.C.O.I. S.r.l.

(Interview by: Linda Meleo, Argha Kumar Jena, Serena Bernardini)

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|---|---|
| Name of the Company | S.I.C.O.I. S.r.l. (Ltd.) |
| Interview Partner | Chiara Valerie, head of the technical office |
| Company size | 165 employees |
| Sector | thermal and acoustic insulation, fireproof doors |
| Country | Italy |


*My name is Chiara Valerie, I have worked in the company for nine years. SICOI was established in 1980 to sell thermal and acoustic insulation solutions and fireproof doors. Our company currently has 165 employees, and in 2021 we started the transition to a circular economy.*

**Our Motivation: What was your motivation to grapple with the topic of the circular economy?**
SICOI from its very inception decided to build its identity around a strong vision of sustainability. It is about brand, reputation, and, of course, new opportunities. We are also aware that the processes towards sustainable development must now be considered irreversible, so we need to adapt our activities to be in line with regulations and to be competitive in the market. We are not scared about the challenges linked to this transition process.

**Our Approach: How did the transformation process take place in the company?**
We were aware that if we want to implement changes towards a circular economy, we must first involve the employees, then, where needed, other stakeholders. Our company does not have a relevant transformation process, but we knew that there were actions to take, especially in **reducing** the use of materials and energy, and in **recycling** waste, including waste generated by employees' everyday activities (plastic bottles, papers, plastic glasses, packaging, etc.). That is why we decided to write a Sustainability Report: to determine the environmental impact of all our activities and identify the things that need to change. To reach this goal, we completed a stakeholder mapping and a materials analysis, and then we collected some data to assess the overall impacts of our activities. These instruments were very useful for our transition process.

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**
No, the transformation process did not have an impact on the internal structure of SICOI. We introduced best practices that aim first and foremost to **reduce** the use of materials and energy where possible, and to increase **recycling** practices.

Among the good practices put in place, we need to mention the "Plastic-Free" project, which has increased employees' awareness and drastically **reduced** use of plastic, particularly plastic bottles. Employees are required to use reusable water bottles or glass/ceramic cups. This project has led to a decrease in plastic bottle consumption inside the organisation by 234 kg from 2019 to 2020. Another good practice developed by the company is the reduction of printed documents and paychecks. Thanks to this action, there was a **reduction** in paper purchasing of 5% in 2109-2020, and a **reduction** of 8.5% in 2020-2021. All the above materials, at the end of their use, are placed inside containers for separate collection, then sorted and delivered for recycling through the municipal waste collection system.

Another action taken relates to the goal of **reducing** fossil fuel energy use. In 2015, SICOI installed solar panels to obtain electricity for production processes and internal activities. In 2021, 40% of our internal energy use was met with the energy produced from the solar panels. This leads also to a **reduction in** energy costs.

**Our Challenges: Did you face any challenges during the transformation?**
The main difficulty that the company encountered involved cultural aspects; at the beginning, it was more challenging than we had expected. In fact, some employees were not used to using reusable water bottles instead of plastic bottles or were used to printing every single document. Some complained about the transformation. That is why we needed to **rethink** our approach and better involve the corporate structure at all levels in a process of mindset change, which included specific training and dedicated working groups or workshops. In the end, it worked.

**Our Prospects: Has the transformation process in your company been completed?**
The transformation process for SICOI is not over yet, and it will probably need to be continuously improved over time. Successfully meeting future challenges depends on the contribution of all stakeholders and employees. At this moment, SICOI is working on a new project to involve other companies in its network in the transition to the circular economy, by disseminating the results of its first Sustainability Report. We want to become a "guide" for other companies in the sector to plan and implement circular economy solutions. That is why we are also working with our European Association to organise and foster events and workshops on the topic of the circular economy.

# 4.4 Roma Servizi per la Mobilità S.r.l.

(Interview by: Linda Meleo, Argha Kumar Jena, Serena Bernardini)

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|---|---|
| Name of the Company | Roma Servizi per la Mobilità S.r.l. (Ltd.) |
| Interview Partner | Stefano Brinchi, Head of External Relations and Strategy Office |
| Company size | 300 employees |
| Sector | Planning and design projects for urban mobility and services |
| Country | Italy |

*My name is Stefano Brinchi and I am the head of Roma Servizi per la Mobilità S.r.l.. Our company operates in the urban mobility sector and is involved in planning, design, sustainable mobility services and light infrastructure (bike lanes, tramlines, pedestrian areas, car sharing*

**Our Motivation: What was your motivation to grapple with the topic of the circular economy?**
Our company is committed to sustainability, we work to develop sustainable solutions in the mobility sector, mostly regarding the city of Rome. We are aware of the challenges for the future, and we believe that everyone, companies and citizens, must change their approach and strategies towards sustainability.

Even though our company does not have a physical transformation process, we raise awareness about the importance of introducing circular economy solutions. We started to work on the circular economy almost at the beginning of our activities, in 2012. The first goal was quite easy to reach: introduction of separate disposal of paper and plastic to foster **recycling** activities inside the company. We installed many containers to separate garbage before disposal on every floor of the building. After this first measure, between 2018-2022, the company endeavoured to **reduce** and eliminate disposable materials, dematerializing activities where possible and investing in digitalization. This process asks employees to take initiative and attend additional training activities. Moreover, we had the chance to **reduce** internal use, thus internal costs (paper purchases, printing materials, etc.), thus increasing efficiency. Then we worked on solutions to **rethink** the way our employees move, i.e. subsidizing public car sharing at discounted fees, carpooling and internal bike sharing initiatives undertaken by our Mobility Manager. We are also **rethinking** the idea of working thanks to the introduction of the "Smart Working" concept, which implies a **reduction** in energy and maintenance costs.

**Our Approach: How did the transformation process take place in the company?**
After the basic activities introduced in 2012 to promote trash separation, we decided to improve our efforts. In 2018, we started to implement a digitalization process to reach 3 goals: **reduce** costs for materials, work faster on our daily tasks (even when working from home), and, of course, making a contribution to protecting the environment. We visited many private companies to assess the best methods to implement a digitalization process.

After this analysis of previous successful experiences, we set some goals and initiatives. First, we **refused** to use paper for internal documents, and we eliminated manual processing of timesheet documents. Then we **rethought** our methods of working by promoting remote work from 2019 onwards, to **reduce** commuting from home to work. We are also aware of the opportunities linked to shared mobility, which is why we introduced a bike-sharing program for employees to use during working hours, and we reached a special agreement to use public car sharing (owned by the Municipality of Rome and managed by our company) at discounted prices. Thanks to the introduction of a Mobility Manager, we are also experimenting with carpooling with other companies located close to our headquarters.

Now, we want to go a step further. We are looking for a new headquarters. We decided that it must be an energy-efficient building, and that there must be a deep **rethinking** of how work is organised. We have decided that the new building should have a **reduced** number of workstations. This means that employees must share a workstation. Workers will have to reserve the workstation and can change rooms from week to week. The building will also have a restroom for those who choose to commute by bicycle or walking. Over the years, we **replaced** plastic bottles for water with large jugs of water. We provided each employee with insulated water bottles and ceramic cups.

All employees were involved in the process of determining which actions to take in the transformation process; however, management was of course responsible for the decision making. Furthermore, we conduct annual surveys to determine and verify the effectiveness of the actions we have implemented. So far, these surveys have revealed satisfactory results.

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**
For the first phase, I have to say that the actions taken had no significant impacts on the internal corporate structures. We just had to make some adjustments (i.e. eliminate physical archives). Probably, the second phase, finding a new headquarters, will require some changes, especially in the management of workspaces, as said before. For us, the most important point is to include employees in the change. That is why we will continue to conduct the annual survey to understand workers' feelings about the new solutions.

The new headquarters project is important for us for many reasons, such as cutting the company's costs by an estimated 30% due to both the **reduction** of workspaces and the introduction of virtual workspaces.

**Our Challenges: Did you face any challenges during the transformation?**
We had to organise activities very well to foster circularity. We were looking for the best solution, which is why we carefully checked all the main similar experiences in the market. We also needed experts and consultants to define the new headquarters project. This was a necessary step because there are no experts in circular transition inside the company. Overall, we faced challenges that were foreseeable in relation to the transformation process we had in mind.

**Our Prospects: Has the transformation process in your company been completed?**
The first phase of the transformation process in our company is complete, but as said, we are now working on the new headquarters project and we want to fully digitalize internal processes. We are satisfied with our choices and decisions.

For the future, we believe that it is important to make employees more and more aware that the company is ready and willing to implement initiatives that can contribute to environmental protection. Further, collaboration with other SMEs is important to enact change together and to work on common benefits and shared projects.

# 4.5 Schema Libero

(Interview by: Annalisa Contu)

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|---|---|
| Name of the Company | Schema Libero |
| Interview Partner | Augusta Cabras, founder of Schema Libero |
| Company size | 5 employees |
| Sector | Textiles |
| Country | Italy |


*My name is Augusta Cabras and I'm the founder of a non-profit organisation, Schema Libero, based in Sardinia. In my organisation, my four employees and I carry out different activities in the social, cultural, and environmental fields. In 2011 we launched a project named "Tessere", which combines all these three fields of work. In a nutshell, the Tessere project consists of* ***recycling*** *fabrics, yarns, and clothes to give life to new clothes, interior decorations, bags, and other accessories. They are created with ancient Sardinian weaving methods and equipment.*

**Our Motivation: What was your motivation to grapple with the topic of the circular economy?**

Our idea related to circular economy was born by chance. We were looking at an old fabric typical forour community in Sardinia. It was made on the loom, with **recycled** yarns. It was not the first time I saw this kind of fabric, but at that moment, I recognized a great value and beauty in its colours and geometric forms. It was obvious to me that this kind of fabric should be much more valued, particularly given that in 2011 nobody was working with looms anymore. Thus, it was an occasion to **rethink** and revive ancient Sardinian weaving methods, fabrics and additional know-how. I decided to start working on this idea because I personally pay great attention to environmental issues. I was convinced my idea would help to **reduce** waste, **recover** the surplus of fabrics that weren't used, and give them an artistic and artisanal purpose.

But there was also another reason, a social one: through the project, we gave local women an opportunity to start working with the loom again, doing a job they enjoy. Indeed, this is an ancient tradition in Sardinia, but nowadays fewer and fewer people work with looms. Pursuing this idea, we created an opportunity to take up and revive this old tradition, thus valorizing our local ancient working methods, contributing to the recycling of fabrics and yarns, and reducing waste. Thus, our project has a cultural dimension as well, because we capitalised on a knowledge that was at risk of being lost forever.

**Our Approach: How did the transformation process take place in the company?**

The project started in 2011 and is still ongoing. In 2012, a regional call for proposals was made and we decided to submit our idea. We received some funding for the first 18 months of the project implementation.

Even after the funding ended, our project kept going. Currently, we receive the economic resources needed to keep the project going through the sale of our artisanal products. However, this does not cover our full costs, so we must also cover some costs through the profits obtained from other activities carried on in our organisation.

It is a matter of fact that artisanal work involves huge costs, even though nowadays more and more people are willing to pay a fair price for an artisanal product if they recognize its purpose, the work behind it and the attention paid to the environment.

We currently sell our products in three physical stores in Sardinia, but in these stores our products are mixed with other ones, so they are not really valued, and people don't usually fully understand their value or the story behind them. We've also tried to sell them online, but this was not successful.

One of the biggest difficulties at the beginning was that none of the employees in our organisation had any experience or knowledge in the textiles field. Therefore, we turned to professional women from the local community with several years of experience in traditional looming. Then we turned to an external communication agency to develop our publicity and communications strategy and visual identity. We also discussed creating some specific product lines with some external designers and will implement it in the future.

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**

The main tangible result we had in the first 18 months was the fact that we were able **to reuse and recycle** one and a half tons of fabrics and yarns that otherwise would have been wasted! That's a very big number for such a small dimension of the project.

However, I would like to highlight that we don't usually evaluate our results from a quantitative point of view, even if some of them are highly visible, as I've just mentioned. We instead pay great attention to the overall effects our project has from a social and cultural point of view, especially on the local society, and these can be evaluated only from a qualitative perspective.

An important step in the implementation process I would like to highlight is the need for dissemination and communication. At the beginning of the project, we needed to **rethink** our communication strategy and conduct a massive communication campaign, especially to the local community, making use of flyers, public meetings and a strong visual identity. The communication campaign helped us both make the local community aware of the project and our environmental and social effort, and to convince them to donate their clothes to our organisation. Therefore, I would advise turning to external professionals with strong competences when it comes to the communication strategy.

**Our Challenges: Did you face any challenges during the transformation?**

One of the biggest difficulties at the beginning was that none of the employees in our organisation had any experience or knowledge in the textiles field, as already mentioned above. Therefore, for experience and knowledge in the textiles sector, we turned to professional women from the local community with several years of experience in traditional looming, but we also needed to **repurpose** our knowledge and competencies, adapting them to the textile field.

Another challenge we faced during project implementation is that artisanal and craft work intrinsically has very high costs. Therefore, at the beginning of the project, we should have foreseen the use of machinery in some parts of the production process in order to reduce production costs but also make the production process faster, thus allowing us to make and sell more products in a certain period of time.

**Our Prospects: Has the transformation process in your company been completed?**

In the near future, we hope to be able to include our initiative in a European framework, since fabric and clothing waste is a common problem among European countries, especially in the Mediterranean region. In this way, we hope to receive some European funding to help us keep the project going. This will also help us to create a professional network at the European level.

In the future, we are also thinking about automating some steps of the production process in order to lower the production costs for our products. But we will need significant funding to purchase suitable and efficient machines.

# 4.6 Centro 3T

(Interview by: Annalisa Contu)

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| Name of the Company | Centro 3T – Associazione Post Industriale Ruralità |
| Interview Partner | Francesca Conchieri, project writer and horticulturist |
| Company size | 7 employees |
| Sector | Agriculture |
| Country | Italy |

*My name is Francesca Conchieri and I work at 3T as a horticulturist. 3T is part of an association based in northern Italy. We engage in several activities, but the main one based on circular economy principles relates to the **recovery** and enhancement of unprocessed wool to create hydroponic structures that are used to water plants and vegetables.*

Our Motivation: **What was your motivation to grapple with the topic of the circular economy?**
In the beginning, we didn't have knowledge and competences in this field at all, neither in wool processing nor in circular economy. The idea was born when we took over the management of some archeological sites in a rural area. When we started studying the history of this rural area and the different ways to capitalise on this history, we found out that it had an impressive amount of knowledge and competences that were not being exploited or capitalised on at all, due to gaps in the supply chains. The most important one was the wool supply chain, which was also the one with the biggest ecological impact.

At the same time, we were aware of the fact that in that same period there was a "boom" in urban gardening, and we tried to combine these two issues – wool and urban gardens. Thus, our idea was born as a "provocation", trying to find a solution for these problems. Wool is lighter than soil for building urban gardens.

We collect the waste produced by goat farming and **reuse** it in agricultural activities, mainly creating installations for vertical hydroponic and aquaponic horticulture. We develop vertical cultivation modules for indoor and outdoor cultivation, used both at a productive and ortho-therapeutic level. To do that, we **recycle** parts of the wool which would not be usable in other ways (e.g., in the textile sector), but at the same time would be difficult and expensive to dispose of as waste, since wool is considered "Special Waste" at the European level, creating very high costs for its disposal.

Our Approach: **How did the transformation process take place in the company?**
We started working on our idea in 2012, so ten years ago. The first year, we focused on the problem and tried to better understand it. We wanted to understand – with concrete data – how much the problems we were trying to solve impacted society and how many people were affected by them, to create a professional network of people who were really interested in our idea. The second year was focused on creativity and experimentation – we were **rethinking different steps and approaches**. And then the last eight years have been dedicated to training and implementation.

In the beginning, we built a structure that was exhibited as a piece of contemporary art, to sensitise the population to the wool problem and improper methodologies used for urban gardening. In this artistic structure, wool waste was **reused** to water the greenery composing. With the passing of time, we realised that the vegetables contained in the artistic structures were growing very well. Thus, we applied for projects to obtain some funding to develop our idea on a larger scale.

Our Implementation: **Did the transformation process have an impact on the internal corporate structure?**
For sure, the quantity and quality of the vegetables produced in our gardens thanks to the use of wool to water them is an indicator showing that our idea works well, but it is definitely not the main indicator. The transformation process is mainly a matter of influencing people's culture and sensitising them about the **importance of recycling** materials and giving them a new life. However, we obtain the economic resources we need thanks to public funding opportunities, including funding by the European Commission. In general, they are aimed at demonstrating not the quantity of vegetables produced, but rather the social, cultural, and environmental impact of our activities.

Our Challenges: **Did you face any challenges during the transformation?**
I don't think we've faced more challenges due to the fact that we adopt a circular economy business model. On the contrary, we have some advantages due to the fact that we are a non-profit organisation and not a commercial one. Being a non-profit organisation gives us the possibility to access more funding opportunities, such as European projects, especially in the environmental or socio-cultural fields. This is our main funding source; in the first phase, these funding opportunities gave us the possibility to experiment, and starting in 2012, they have granted us a certain economic continuity.

Our Prospects: **Has the transformation process in your company been completed?**
Our process was characterised by innovation, repurposing, **rethinking** and creativity: when we started, we were not even expected to develop such an idea! We had completely different objectives in mind, and we didn't have the knowledge or competences to implement such a project. Therefore, at a technical level, we made several mistakes, but this was due also to the fact that we are the only organisation on the whole Earth – as far as I know – using wool to conduct hydroponic gardening! Thus, everything was subject to experimentation because we didn't have any guidelines or benchmarks.

We are currently trying to expand our project, and especially better manage ourwool collection and transportation activities to reduce inefficiencies and production costs. To do that, we are trying to expand our professional network in the wool industry. At the moment, we are mainly working at the local and national level. In the near future, we would like to create a professional network at the European level, because the topics we deal with are widespread across Europe (Greece, Spain, Ireland and France, in particular).

# 4.7 Exseat

(Interview by: Annalisa Contu)

| | |
|---|---|
| Name of the Company | Exseat |
| Interview Partner | Alice Cococcioni, CEO and founder |
| Company size | 4 employees |
| Sector | Textiles (Bags and accessories) |
| Country | Italy |

*My name is Alice Cococcioni and I am the CEO and founder of Exseat, established in 2018. Exseat is a company that produces bags, backpacks and other accessories by **recycling** seat belts and fabrics obtained from no-longer-used vehicles. We've chosen to **reuse** these materials due to the great advantages they offer in terms of versatility and robustness. Exseat is an idea born from the willingness to revolutionise the way people think of an accessory in the world of fashion.*

**Our Motivation: What was your motivation to grapple with the topic of the circular economy?**
When I decided to shift from linear to circular economy, I already had ten years of experience in shoe manufacturing companies, where I specifically dealt with sample collection, production, and classification, as well as relationship with suppliers and the market. I also had relevant experience in the manufacturing industry. Indeed, Exseat was born out of a family business, owned and managed by my parents for 40 years, where I grew up. Thus, in founding Exseat I was able to combine all my past experiences, both managerial and practical/technical ones.

During my final years working at the shoe manufacturing company, I realised that kind of business wouldn't keep working well because it was not capable of regenerating itself. Indeed, that company was based on traditional fashion principles, including, for example, a huge quantity of samples that were immediately rejected and thrown away after presentation. In general, there was a huge waste of cost, energy, work, materials and the whole system was not sustainable at all. When I speak about sustainability, I don't only mean environmental sustainability, I also refer to human relations with customers, with suppliers, and to the choice of materials. There were several warehouses full of fabric that was not used due to very small imperfections. We were working on seven or eight seasons per year, and it was really difficult to keep the pace because we continuously had to create new models. So, at a certain point I realised that I didn't belong in that environment anymore and that I didn't see myself reflected there.

**Our Approach: How did the transformation process take place in the company?**
The transition process of my business lasted two years. The choice of getting out of that environment was done individually and exclusively by me, without receiving any support from previous colleagues. The only support I received came from my family and my own morals. On the contrary, some people couldn't accept that a woman, young and alone, could leave a secure position as a permanent employee to start a business which was seen as uncertain, precarious and not so fruitful.

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**
A relevant change that happens when you work within a circular economy model is that the process you go through to create your products is completely the opposite of the one used in traditional fashion. Indeed, in traditional fashion, you start from an idea/model and then you develop it in various materials and colours. On the contrary, in circular economy business models, you firstly must assess which kinds of materials you have at your disposal in that specific moment – and their quantity – and on this basis you can determine what you can produce.
Another thing that was not possible for me when I started working with a circular economy model is selling through intermediaries. My products are produced with a high level of artisanal labour: recovery of materials, transformation and manufacturing take a long time. Indeed, in my case, the most relevant price component of the final products is not the raw materials, but indeed the artisanal labour. Moreover, all my creations are unique pieces, since due to the intrinsic quality of the materials I use, I'm not able to do mass production. These elements, which represent an added value for me, are instead a limitation for intermediaries and big chains. Therefore, it was a fundamental choice for me to opt for direct selling rather than selling to intermediaries. On the one hand, this means that it takes more to reach the final customers, in terms of effort, time and also economic resources, because nobody is helping you in any way. But on the other hand, I have the possibility to talk about my initiative and my products myself, without filters, thus transmitting correct and clear information. Another positive element is that the price the final customer has to pay is not inflated with intermediary fees, thus being more affordable.

**Our Challenges: Did you face any challenges during the transformation?**
I believe I had to face more challenges than those faced by a company that wants to launch a linear business. The first challenge was involving suppliers in this new business. For them, it was something completely new and unimaginable, so the challenge was making them believe in a new and innovative project. Indeed, the suppliers of the raw materials I recycle to create my products are mainly vehicle dismantlers: typically, males who have no idea about the fashion sector, for whom my initiative was absurd and seen as a waste of time. After a long time, I was able to connect with a young man and show him several prototypes, and thanks to my perseverance and willingness to create a long-lasting collaboration, we managed to find an agreement. I had to explain to the suppliers that, even if those are waste materials for them, for me they are precious. Of course, even if those are waste materials, they need to be remanufactured, and I had to explain to them that I would pay them for this remanufacturing work as well. This happened with all the bigger suppliers I contacted at the beginning of my new business, then – after a very short time – I realised that it was better to deal only with local suppliers, in the range of maximum 30 kilometres. I saw that they had more trust in me and that the possibility of going to visit them frequently and communicating with them allowed me to create a significantly more personal relationship. Indeed, it's completely different from sending a brief formal email to a supplier located far away from me.

The second biggest challenge we faced is how to work with and remanufacture these materials: as we are very innovative materials for the fashion sector, there is no consultant with any previous experience capable of providing suggestions as to the best techniques, equipment and machines to use. Thus, we had to proceed by trial and error, and it took two years to find the perfect methods.

Another issue is that the batches of materials – being recycled material – are often very small. Thus, you need to continuously modify your initial idea and the product model based on the materials you have at your disposal at that moment.

**Our Prospects: Has the transformation process in your company been completed?**
On the basis of my experience, I would suggest moving step by step. We are speaking about a sector that has emerged in the last few years, so nobody knows the key to success yet, not even the most in-demand consultants or suppliers, and lots of answers are still missing. This recommendation is especially for those who have a situation similar to mine: in my case, everything was self-financed by me, so I couldn't make any mistakes. Making small attempts and moving forward step by step allowed me to find the ideal solution that best fit my brand, without big mistakes.

# 5

# Success stories from Poland



## 5.1 Introduction – Situation of the circular economy in Poland

(Text by: Barbara Goleniewska, Danuta Łukasińska)

**CE in Poland**

Polish regulations related to the implementation of the circular economy are a direct result of legislation at the EU level. Legal acts supporting the implementation of this concept have been translated into Polish legislation and constitute the basis for the activities of the Polish government aimed at transition from a linear economic model towards a circular one. For the current term, the European Commission has set itself the goal of continuing the implementation of the circular economic model. The introduced changes will soon also apply in Poland. The creation of an appropriate legal framework is expected to make sustainable products, services and business models a core activity, primarily with the aim of preventing waste. The development of the secondary raw materials market, a more complete application of the principles of eco-design in as many products as possible and further expansion of producer responsibility are also prioritised (Bukowski et al., 2021).

From a legal point of view, the circular economy in Poland began with the introduction of the first Circular Economy Action Plan in 2015. In 2015-2019, a number of significant legislative changes were introduced in the field of eco-design, waste and plastics.

The Polish government adopted **a Roadmap for Transformation towards a Circular Economy in 2019**. The aim is twofold: first, to identify cross-cutting measures capable of having the broadest possible impact in Poland, both socially and economically; and second, to prioritise areas that will enable Poland to take advantage of current opportunities and deal with existing or future challenges.

**The Roadmap focuses on 5 areas in particular:**

1. Sustainable industrial production
2. Sustainable consumption
3. Bioeconomy
4. New business models
5. Implementation, monitoring and financing of CE.

The Roadmap includes a set of tools, which are not purely legislative, to create the conditions for a **new economic model** in Poland.

Legislative work is currently underway in Poland to implement the provisions of the **Extended Producer Responsibility (EPR)** policy approach and to introduce a **deposit-refund system** in Poland (August 2021 and January 2022 – the Polish legislator has submitted two projects amending the Act on Packaging and Packaging Waste Management and some other acts (UC81), Kancelaria Prezesa Rady Ministrów, 2023).

These provisions are in response to **Directive (EU) 2018 of the European Parliament and of May 30, 2018, amending Directive 2008/98/EC on waste – introducing Extended Producer Responsibility**. Producers are to bear the costs of the development. The more difficult a given packaging waste is to manage, the higher the financial burden. The use of reusable or recyclable packaging should therefore pay off for producers.

Draft amendments to the acts on packaging waste have been presented by the Ministry of Climate and Environment and are currently under consultation, awaiting further processing as part of the legislative path. The regulations are to enter into force by the end of 2024.

On July 26, 2022, a new draft Act on the obligations of entrepreneurs regarding the management of certain wastes and on the product fee and certain other acts was announced, which transposes the provisions of **Directive (EU) 2019/904 on reducing the impact of certain plastic products on the environment into Polish law**. The regulations are to enter into force in 2023. (Kancelaria Prezesa Rady Ministrów, 2023).

**Fundamental drivers of the circular economy in Poland**

1. Regulatory push towards circularity: Existing and prospective regulations, especially on the EU level, are fuelling the transition towards the circular economy
2. Circular activities gain momentum: Consumer demand is gradually shifting towards more sustainable products. There are a growing number of initiatives that aim to educate, train, inform and transfer knowledge on the circular economic model.
3. Companies prioritise cost reduction – resource use as well: Cost reduction was and still is one of the main objectives of Polish businesses. This also concerns the cost of water, materials and energy (including emissions trading scheme costs), creating an incentive for resource use reduction due to the implementation of the circular economy.
4. Financial incentives support circularity: Grants, subsidies, loans and other public financial incentives for circular business activities are available on the EU and national level. These concern EU funds in particular, as Poland is one of the biggest beneficiaries of the EU 2021-2027 financial framework, but also special economic zones, tax exemptions for certain investments, tax relief for innovation and income from property rights.

**Fundamental barriers to the circular economy in Poland**

• **Prioritising short-term price**

Consumers and companies (including state-owned enterprises) still primarily prioritise short-term costs over long-term economic and environmental outcomes. In effect, the limited demand compromises the ability to obtain economies of scale for circular products, which results in a vicious cycle of high prices and low production levels.

• **Insufficient business environment development**

There is a lack of an appropriate business environment in the form of subcontractors, circular materials provision, waste collection systems, etc. Increasing innovation and competitiveness in sectors typically focused on price minimization requires intensive cross-sector cooperation between companies and appropriate diffusion of knowledge at the national level, which is still lacking.

• **Underestimated role of information**

There is also limited access to reliable information, interest in such data and lack of trust between the seller and the buyer. Information about the origin and entire life cycle of a product is hard to acquire, meaning that it does not influence consumption choices to the extent it should. Public procurement law and practices in Poland do not prioritise circularity-oriented selection criteria. For example, in 2017, only 0.01% (17) of total public procurements used life cycle assessment (LCA) in their procedures.

• **Insufficient research and development efforts**

Weak industry-science links as well as insufficient research effort limits international competitiveness. While large companies are more likely to innovate, small- and medium-sized enterprises are reluctant to do so. Low awareness of the benefits of implementing circular innovation and poor knowledge of tools to support circular evaluation in the value chain is also a major constraint

• **Legal instability**

In order to thrive, it is necessary to ensure adequate legal stability for circular technologies and businesses. This applies to the entire system and predictability in terms of its direction of change, as well as the modification of individual regulations. In this context, both reporting and techn ical requirements on waste change exceptionally frequently.

**Identifying Polish businesses with circularity as their core competence**

As an analysis of members of the Polish Circular Hotspot showed, more and more start-ups and small companies are emerging that put circular concepts at the center of their activities. Typically, these are small and medium-sized companies that need to find a way to be profitable in the long term. To do so, they use new technologies or try to meet the needs of environmentally conscious consumers

According to Butkowski et al. (2022), most of the companies operate in the construction sector and range from 3D-printed housing (Rebuild) to enabling energy-construction industrial symbiosis (Eco-Tech). The second area where companies show the most interest is tackling the problem of plastics overconsumption and inappropriate plastic waste management (e.g., TOMRA). Textile sector is an area where companies are engaged in the implementation of the circular economic model as well. This ranges from production of sustainable clothing (Bohema clothing) to upcycling (Dekoeko). Analysis of Polish Circular Hotspot's members shows that other important areas for circular transformation are: food, energy and IT (Bukowski et al., 2021).

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# 5.2 Lisek App

(Interview by: Danuta Łukasińska, Barbara Goleniewska)

| | |
|---|---|
| Name of the Company | Lisek App |
| Interview Partner | Justyna Sztengreber, marketing director |
| Company size | 240 employees |
| Sector | E-commerce |
| Country | Poland |

*I´m Justyna Sztengreber and I´m the marketing director of Lisek App. Lisek started in 2018 in Warsaw with 7 micro-warehouses. The main aim was to create an online app-based store (for food and cosmetics), providing the service of a short delivery time, even on Sundays or late in the evening.*

**Our Motivation: What was your motivation to grapple with the topic of the circular economy?**

We think that nature is always close by when you're a Lisek, that means "fox" in Polish. From our perspective, we strive to improve our surroundings and the environment for the better. We as the Lisek team, including the owner, practise an eco-conscious lifestyle. Therefore, the motivation behind improving business practices to become more circular was mainly personal. So, choosing electric scooters and bikes as a delivery method was logical: it's ecological, economical and fast, especially in big cities with a lot of traffic. We previously worked in a corporation abroad and the idea came from our own personal needs and preferences – the aversion to going shopping and a desire to save time. We followed foreign examples of such e-commerce businesses and were the first such business in Poland.

**Our Approach: How did the transformation process take place in the company?**

During the pandemic, business was suspended, and Lisek was relaunched in 2021 r. After relaunching, we opened new micro-warehouses in Krakow and 8 other cities. The changes were implemented from the beginning and some processes are still in progress. We introduced some changes to **reduce waste and rethink** the process to save energy: in Lisek, neither plastic nor water dispensers are used in the headquarters. When it comes to the delivery service, we choose electric bikes and scooters as the fastest and most eco-friendly delivery method. Now we have launched an option in the app to create "rescue and save up" packs from products that are about to expire to prevent them from going to waste. The possibility to buy overripe or imperfect produce is also being introduced. We participate in food sharing – products are collected by an external organisation and transferred to the food sharing fridges. Our products are delivered in **reusable** bags that can be unpacked and given back to the delivery person to use for other orders. Other improvements include installing LED lights in the warehouses to **reduce** electricity consumption, buying some warehouse equipment second-hand, and **rethinking** the strategic location of warehouses, which saves couriers time and travel. All our staff members, including couriers, are encouraged to share their ideas for improvements – they are often the driving force of ideas. We are constantly expanding the skills and knowledge of our staff, as we are a new industry and have had to reinvent nearly everything to launch this innovation. This business is pioneering and constantly evolving, so our employees are invited to be creative and introduce new ideas with respect to every area of our company. In Warsaw centre, we hold weekly management meetings where we develop our ideas and improvements.

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**

At the beginning, we opened micro-warehouses, as we planned to resemble the "good neighbour" who brings you your shopping and also improves the community through small actions. During the pandemic, the e-commerce sector became highly competitive and very lucrative at the same time. The company grew, inspiring us to **rethink** our actions and introduce further measures allowing us to expand the business to other cities. Our aspiration was to provide useful services by acting in an economical and environmentally friendly way at the same time. We operate in selected areas in Warsaw as well as in Krakow, Wroclaw, Gdansk, Gdynia, Sopot, Poznan and Lodz. In Piaseczno, Ząbki, Wawer and Katowice, Lisek operates in the form of the Lisek.PLUS service, where a wider assortment is available and the delivery time can be up to 30 minutes.

**Our Challenges: Did you face any challenges during the transformation?**

The main mission of our business was to enable the fastest delivery in big metropolises like Warsaw. In the beginning, it was difficult to manage the micro-warehouses so that as few products as possible were wasted, since the app had not gained popularity at that time. When we started this model, we had full warehouses, and we needed to get customers quickly. We had to ensure that the products on offer were available in the warehouse, and we had to plan in such a way as to **reduce** product losses due to expired shelf lives. It was a balancing act. The pandemic has changed a lot in the way people shop, with the majority shifting to online shopping. We, for unrelated reasons, suspended operations at the time. In April 2021, we reopened Lisek, then already in a more competitive environment.

As I have already stressed, our business model is innovative in Poland and Europe, so one of the challenges is to keep innovating and paving the way in this sector. During COVID-19, we were confronted with various problems, like waste handling, and had to **redesign** warehouse facilities to minimise product loss and wastage. We had to **rethink** the way we manage the warehouses and **redesign** the system that helps the couriers collect orders as fast as possible, while at the same time preventing product waste. For example, we introduced the food sharing fridge and discounts for products close to their expiry date. By doing so, we contribute to the reduction of food waste.

**Our Prospects: Has the transformation process in your company been completed?**

Last summer we opened a temporary store by the Baltic Sea, in Jastarnia. We have noticed the problem of waste at seaside resorts in Poland. The problem is that people go there to enjoy their holidays and the beautiful nature, and when they depart, they often leave behind a lot of garbage and pollution. We are thinking of carrying out some eco-educational actions (trash challenge) in those areas where we deliver ordered products to tourists via electric scooter. Tourists order their purchases from us, and we organise actions with other organisations to help raise awareness for reducing waste and garbage. I think this is also important to change the behaviour of our clients and make them understand how important their contribution to changing the environmental situation actually is. We also plan to open more temporary warehouses and deliver shopping to nature tourism destinations using electric scooters, allowing us to **reduce** $CO^2$ and exhaust emissions, since tourists do not have to drive on their own to shopping centers.

# 5.3 Takto Finanse

(Interview by: Danuta Łukasińska, Aleksandra Simla, Barbara Goleniewska)

| | |
|---|---|
| Name of the Company | TAKTO Finanse |
| Interview Partner | Ewa Górna (EKOTAKTO project manager) |
| Company size | 45 employees |
| Sector | Financial services |
| Country | Poland |

(Picture: Katarzyna Grajewka (President of Takto Finanse)

*The company was founded in 2012 and grants loans to individual clients. Until now, granting a loan consisted of concluding a contract electronically or by phone or in financial partners' branches, and sending a paper version to the customer's home. Printing and shipping was handled by an external company.*
*In 2020, we implemented a system of signing contracts in financial partners' branches using the text message method; for customers who have provided their email, we send documents only in electronic form to limit paper consumption.*

To encourage customers to provide their e-mail addresses and motivate employees to obtain email addresses for customers, we decided to use the money saved on paper to plant trees – via the portal www.posadzimy.pl.

Our Motivation: **What was your motivation to grapple with the topic of the circular economy?**
In customer satisfaction surveys, we often saw comments on sending documents in paper form, which customers saw as an unnecessary step. They thought **reducing** the amount of paper and **refusing** to use so much paper would be a good idea. We decided to change this. The change resulted mainly from the clients' needs and was highly supported by our company. We did not think about it in terms of the circular economy, though. The very idea of "planting trees with the money saved" came up during a brainstorming session in a team meeting. By planting trees, we can illustrate that electronic document submission, such as via email, translates into **reduced** usage of environmental resources (paper, water) and a reduction in $CO^2$ as a result of planting new trees.

We intend to implement a pro-ecological philosophy in the company. In particular, we want to **rethink** employees' education towards greater sustainability and green skills, and then continue with green skills education for customers using social media as a channel.

Our Approach: **How did the transformation process take place in the company?**
It took one year to implement some circular principles in our company. Starting in 2020, our company has participated in the EKOTAKTO project, aiming to make enterprises more environmentally friendly. In 2020 and 2021, a paper **reduction** system was introduced. In the current year, focus was put on employees' environmental training. We are running an information campaign on saving environmental resources (electricity, water), and thus **reducing** utility bills, which is closely related to managing one's personal finances – our area of expertise.
We have organised a training with the Polish blogger and sustainability consultant Dominika Lenkowska Piechocka (www.whowillsavetheplanet.pl), with the aim of introducing the path towards introducing the company's sustainable development policy. The training revealed that changes must be implemented in small steps, and we always should start with ourselves, adjusting our habits towards more environmental and ecological friendliness. We have introduced employee rankings – who has obtained the most email addresses and how many trees they have planted as a result.
It is well-known that big corporations can initiate and change a lot, whereas translating this to a small company is difficult. It's hard to compare, as the resources are limited, and we have to look for ideas that are applicable to our small business. Let's go back to the idea of planting trees. It turned out that there are actually companies that support this process, so you don't have to go to the forest and plant the trees yourself, but you can commission specific organisations who already have experience and can take over the entire process.

Our Implementation: **Did the transformation process have an impact on the internal corporate structure?**
When it comes to **reducing** paper consumption, we started an internal project, a technical one, so that we could differentiate between customers who have an email address on file to whom we can send documents online, and those who do not and need the paper version. This involved working with our cybersecurity team to develop a secure and protected system. So, this technical part was the first stage, which made it possible to launch the option of sending contracts electronically. And then the second part was actually the process of launching it and, above all, convincing employees and introducing a change in habits among employees.
It turned out that the COVID pandemic and lockdown brought many benefits for the company and the environment. During the pandemic, the company worked in home-office mode, which resulted **in reduced energy consumption** and led to significant savings. Lockdown contributed to a change in the functioning of the company – to a hybrid mode. Office space has been **reduced** by 50%. The desk booking system was organised via a designated app. More common space for teamwork has been established. We also **rethought** some internal processes and introduced standing workstations and three fitness bicycles on which you can charge your computer while you work and pedal. The surplus furniture has been auctioned off, and the money collected from the auction was allocated to environmental education.

Our Challenges: **Did you face any challenges during the transformation?**
At the stage of implementing the transformation, the challenge was to change employees' habits. We had to work on our employees' behaviour and adjust the processes. Firstly, the first phase of the process involved working with employees and training them on how to communicate appropriately with customers about their email address, obtaining it and storing it.
I can't hide the fact that in such small companies, there are no employees with the experience to carry out such sustainable development activities, so we will probably resort to some external support or consulting.

Our Prospects: **Has the transformation process in your company been completed?**
We have not yet completed our transformation process. We are currently raising the environmental awareness of our employees and afterwards will start educating our clients via social media. We are letting our employees become part of the process and inviting them to share their perceptions and points of view. We conducted a survey among employees to find out if they support the green direction and whether they think this direction is good for the company. Fortunately, the majority of employees agreed. They confirmed that TAKTO should be green-oriented, since this is not only important in terms of image, but absolutely necessary in our times. We want to expand these activities.
We would also like to inspire customers. We are in constant contact with customers, either through social media or a blog on our website, and we cover different topics and plan to expand such activities. The subject of loans is very broad, and people take out loans for very different things, so it's possible to communicate on various topics. So, we've decided to include environmental information in our social media and share some of our ideas and achievements, like with respect to electricity costs. This is also related to finance, to be honest, and hence a topic very relevant to our customers who are looking for financial support.

# 5.4 BEZ PUDŁA

(Interview by: Danuta Łukasińska, Aleksandra Simla, Barbara Goleniewska)

| | |
|---|---|
| Name of the Company | BEZ PUDŁA |
| Interview Partner | Kamila Małolepsza (Founder) |
| Company size | 3 employees |
| Sector | Grocery |
| Country | Poland |

*BEZ PUDŁA is the first shop in Wroclaw based on the zero waste lifestyle. The shop offers: food by weight, natural and handmade cosmetics, zero waste accessories, **reusable** and eco-friendly alternatives to everyday household items, and eco-friendly cleaning products by weight and without packaging.*

Our Motivation: **What was your motivation to grapple with the topic of the circular economy?**
The shop sells natural products that, wherever possible, come from local suppliers and producers. The shop cares that every product purchased serves the environment and generates as little waste as possible. The grocery supports responsible producers with similar ideas and makes sure that products generate as little waste as possible during transport. Everyone can buy products there with their own packaging, to **reuse** packaging or **repurpose** what they already have.

The idea came from my own need. In 2016, I became interested in the idea of zero waste and started implementing it into my life. I was a bit fed up with my previous job and always wanted to do something for people. I was a bit worried that the idea of such a shop had no chance in Poland. But then I found a similar shop in Warsaw: Naked by Nature. The next day I called my supervisor and said: I quit. I got a grant from the unemployment office to start my own business. When it came to my own life, I felt very inspired by Western Europe, where the idea of zero waste already existed. For example, I took up the idea of shopping bags made of fabric, to **refuse** to use plastic bags. I was reading articles by Bea Johnson and thought that using your own containers while shopping is a genius idea – even though at that time in Poland, it was looked upon as really weird.

The BEZ PUDŁA product range includes many products that enable ecological living in accordance with the idea of zero waste. We try to choose local products, from small farms and manufacturers, with the safest composition, and make sure that the products arrive in the most sensible packaging.

Our Approach: **How did the transformation process take place in the company?**
I'm always convincing my customers to bring their own containers. We also offer a 5% discount if they do. We have decided to focus on locally grown produce to limit the carbon footprint and to support Polish producers. We slowly introduced glass packaging for loose products sold in paper bags, customers' own packaging, boomerang bags, returnable packaging for cosmetics and cleaning products returned and topped up by the manufacturer. We have also conducted talks with manufacturers about a change in packaging approach, so they could ship their products in **reused** cardboard boxes.

Our Implementation: **Did the transformation process have an impact on the internal corporate structure?**
It took half a year to implement the full circular economy process. When it comes to suppliers, we choose those who can provide us with 20-25kg bags; in this way, we limit plastic at the level of deliveries. When we order something in Poland, straight from the producer, we can negotiate how the product will be delivered. Most of the time, that will be paper packaging. But there are still health and safety restrictions. The regulations for similar shops are still pending. Nevertheless, our shop has been approved.

Finding local suppliers who are willing to cooperate and **reduce** waste is a very important step. I looked for them on the Internet and on store shelves – Polish products made locally – and I spoke with some on the phone. Sometimes customers asked about a specific supplier and then contacted the producer themselves to start distribution with us. We have indicated how the product can be packed in **returnable**, **reusable** packaging.

When it comes to the office, we apply many sustainable practices. For example, we use BPA-free receipt paper, store our documents in the cloud instead of printing them, and when we do print, we use **recycle**d printing paper. We use paper and sheets that we already have (like shipment lists) for note taking and tasks, thus trying to use up everything we have already and **reduce** waste disposal.

Our Challenges: **Did you face any challenges during the transformation?**
It's common, that big delivery bags are made from plastic, especially when it comes to exotic produce (like dates). It's challenging to eliminate plastic completely at this stage. I had to negotiate with logistics businesses to use up the packaging that had already been made and was used to send the product from the producer, instead of repacking the product into new plastic bags. Those bags we can use as trash bags instead of buying new ones.
Another challenge was to offer a good price point. Of course, it is not possible to compete with a major supermarket, because the quality and price there will always be low. I'm trying to offer ecological and certified organic products. But my way is still cheaper than products sold in the normal way, because we can discount the price of the packaging. Our prices are competitive with organic brands and local products.

I will admit that the coronavirus pandemic thwarted our plans to introduce buying with your own containers in supermarkets, as physical contact with the customer had to be limited, which we also had to apply in our markets, which has been challenging for us.

Our Prospects: **Has the transformation process in your company been completed?**
The change process in the BEZ PUDŁA (NO BOX) shop is still ongoing. The response to continuous change will be to adapt the shop's strategy and internal sustainability policy to current environmental changes and needs. Constant contact with customers allows us to make such changes on an ongoing basis to be in tune with the environment. Our company policy is in line with our philosophy. Many other SME companies follow our model and incorporate certain elements into their businesses. At the supplier level, we can negotiate with food producers, **rethink** the way we cooperate, and make selections according to our needs and beliefs. We need to look at where waste is generated and try to **reduce** it.

# 5.5 Trashki

(Interview by: Danuta Łukasińska, Aleksandra Simla, Barbara Goleniewska)

| | |
|---|---|
| Name of the Company | Trashki |
| Interview Partner | Magdalena Olearczyk-Porębska and Łukasz Porębski (Founders) |
| Company size | 10 Employees |
| Sector | Upcycling manufacture |
| Country | Poland |

(Picture: Magda Olearczyk – Porębska)

*Trashki is a Krakow-based brand, operating since 2010. For individual customers, we create unique bags, cases for tablets and laptops, various accessories, and add-ons, all from reclaimed materials that we carefully select and prepare for the sewing process. For business customers, we provide a service of transforming advertising, and all the materials used for this, into unique products, great for **reuse** in customer communication. We don't use materials of animal origin.*

**Our Motivation: What was your motivation to grapple with the topic of the circular economy?**
During a trip to Barcelona, we discovered a company that works with city hall to bring advertising banners back into circulation, using them to make different products, like backpacks. We thought: our city, Krakow, also uses such material to print banners for public advertisements, and we could take this business model to Poland. There is a lot of this material that we could make usable again, making practical products out of it, before it goes to waste. This was our first motivation. Besides, we always felt the need to be eco-conscious and we tried to care for the environment with our individual actions.

There are three power slogans that define our brand: upcycling, zero waste and fair trade. Upcycling indicates that the materials we use to sew our bags are **always recycled** materials: outdated cultural and advertising banners, car seatbelts, bicycle tires, printing rubber and other ever-new and inspiring forms of waste. Zero waste defines the direction we want to aim for, using materials as much as possible so that we have as little waste of our own as possible. It is also a reference point for the **recovery** process, water consumption, energy consumption, and disposal of production residue. The idea of fair trade in Trashka's case is a way of building relationships with the people we work with and collaborate with at different stages of production.

**Our Approach: How did the transformation process take place in the company?**
When we started to take action to build this business, it turned out that there are a lot of different legal limitations and paperwork to fill out to be able to work with waste and upcycle it on a large scale. At first, we were discouraged. We decided to firstly focus on making products for individual clients, not for companies. We obtained materials from the city, used them to develop and sew our first backpacks and bags. and took part in Independent Fashion Fairs all over Poland. We focused on building brand awareness first.
However, our operations at that moment were not satisfying for us. But it soon became apparent that we were being approached by large companies looking to convert the waste they generated during their advertising campaigns into usable items as part of their CSR and responsible business activities. It was a breakthrough, as it were, for the company, for our operations, because we decided to take a business approach to this as well. That is, we could actually make a living out of this, but it turned out only after four or five years.

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**
We decided to fully go for it and hired people to sew on special machines, because advertising banners are made of a difficult and heavy material to work with. It's a **recovery process**, so this of course also required some space. We later decided to rent more space. And so, step by step, it turned out that this service is sought after by large corporations, because our customers are mainly large corporations. There are also, of course, smaller companies, and there are also museums, theatres, etc.

Companies in any case spend a lot of money on various gadgets promoting their own brand or talking about their own brand. Therefore, the type of product that we offer offers great opportunities for companies to communicate with their customers in many respects, mainly in environmental terms.
We made it a priority that we would check the things we sew, and we actually did product testing so that we would not let things in that were unfriendly to the environment or to human health, in accordance with the EU directive on chemicals.

We try to **reduce** our own waste or even eliminate it: that is, if we sew, we then shred what is left and use it for our other products. These might be products that, for example, block the opening of doors. However, we are thinking about other products, such as punching bags, so there are a number of ways in which our waste can be used, as there is nothing else we can do with it. Our initial thought was that they would act a bit like plastic, that they could be moulded at high temperatures, but again, our chemical research has shown that we can't process them at such high temperatures, so we're left with shredding them into small pieces and **reusing** them as a filler for all sorts of items that need filling.

**Our Challenges: Did you face any challenges during the transformation?**
The pandemic period was very difficult for us because as big corporations cut their costs, they cut primarily things that are not necessary. And marketing this kind of CSR is not the company's most important field of communication. Unfortunately for us, they can do without it for a while. That's why, for us, 2020 was the worst year. That first pandemic year, we had no orders until August. It wasn't until the end of the year when companies actually had some budget planned for this type of CSR activity. But the pandemic was a moment where we had to cut back and **rethink** what to do next.

I must stress that this is not a highly profitable activity, it is an activity which in our case constantly keeps us busy. That is to say, we sew every day, we process material every day.

We have had to cut back a lot, but this is enough for us to react very quickly. In other words, if a customer comes to us with a product requirement, we are able to produce it within two or three days.

**Our Prospects: Has the transformation process in your company been completed?**
What we are doing at the moment is to implement an EU grant related to production. So, it seems that from January 2023, Trashki will be a completely different company that will also stand out in the market for the retail customer. Above all, we will have a very wide choice for the retail customer. We are going to have quite complex designs here, so these products will of course also have to be a little bit higher in price. We are planning to build an individual brand in 2023, and all these activities on our social media will have to be fine-tuned to make this possible.

# 5.6 BreadPack

(Interview by: Danuta Łukasińska, Aleksandra Simla, Barbara Goleniewska)

| | |
|---|---|
| Name of the Company | BreadPack |
| Interview Partner | Angelika Szkołuda (CMO) and Eugeniusz Adintsov (Founder, CEO) |
| Company size | 3 Employees |
| Sector | Food industry |
| Country | Poland |

*We – Angelika Szkołuda and Eugeniusz Adintsov – are creators of BreadPack, which produces edible cups with a long expiration date for serving food in restaurants and eco-packaging shops. We also offer the technology and ovens for baking these cups. The idea for BreadPack was born from a gap in the market noticed while running a small vegan restaurant called Soup Culture. We were asked questions about edible dishes for the restaurant sector as the owners of SoupCulture.pl, and that's why we started working on the technology and creating a second brand – not a restaurant but producing a product for the restaurant sector – edible cups with a longer shelf life. Soup Culture (small franchise chain established in Kiev that offered vegan soups in edible dishes baked on-site), was introduced to the Polish market by Eugeniusz after he created the technology and the final oven for the chain and started developing the technology of baking the edible cups himself in 2016. I joined SC in 2018. We are co-owners of SC co-creators and co-owners of BreadPack.*

**Our Motivation: What was your motivation to grapple with the topic of the circular economy?**

Our motivation to create a new brand was to respond to the needs of customers – a great interest in edible packaging. When we were running our business, we were very often approached by caterers who also wanted to use a healthy serving bowl that is not made of plastic and does not harm humanity or nature. The interest in edible dishes was so great that there was a need to create bowls with a longer shelf life – so that they could be sold to restaurants and companies offering disposable biodegradable packaging. Unfortunately, the existing technology for edible cups did not allow them to be stored for a long time or transported over long distances. Their expiration date is one day. So, offering edible cups as a catering company required a special furnace to produce them. This furnace is a big investment (10,000 PLN, approx. 2,000 Euro), so most caterers were more interested in buying ready-made cups. There was a need to invent a product with a long expiration date that could be produced in mass quantities. We had this situation about three years ago. We decided that it was worth investing in developing new solutions and technologies. We worked for about one year on the first machine and on the technology itself, and in 2020, we launched production of ovens under the name BreadPack and started manufacturing.

Regrettably, we didn't hit a favourable period, because we started production in March 2020, just before everything shut down due the COVID Pandemic and the restaurant sector was struggling to survive. Indeed, nobody from the sector was geared up to look for new green solutions. We used the time to fully develop the technology and have now created cups with a shelf life of one year. We are still working on optimising and extending the shelf life to up to two years. We have made a crossover product with Inna Bajka, a Polish food manufacturer, that can now be found on the shelves of Leclerc and Carrefour shops. This product is already available and you can buy the dish in an edible bowl. Edible bowls are interesting not only for environmentally conscious adults, but also for children. Some parents who can't persuade their children to eat soup serve it in our bowl: kids really want to munch on the bowl, but first they must eat the soup. So, it's such a nice trick to get children to eat healthily.

Soup Culture sources fresh products locally, we do not have centralised procurement of ingredients. This provides franchisees a great deal of independence, and every franchisee uses local products. We do not transport ingredients over long distances, which not only **reduces** transportation costs, but also $CO^2$ emissions. So, we had to make contacts with local mills and producers in different countries and select responsible local businesses.

**Our Approach: How did the transformation process take place in the company?**

Through working on other projects, including community actions, and research, we have become more aware of the issue and would like to make our business even more ecological and circular-oriented. We offer our furnace technology and expect it to run for five years without maintenance. At the moment, we have been operating for 2.5 years and no oven has broken down. However, our plan is to provide services and maintenance in the near future. We want every element of the oven to be manufactured in Poland and in close proximity to us.

We are already saving money at the production stage itself. In the production of edible bowls, $CO^2$ emissions and carbon footprint are much lower than in the production of, for example, polystyrene packaging. So, as of today, we have already **reduced** and hence saved over five tons of $CO^2$ by **replacing** polystyrene bowls on the market with edible ones. Apart from the fact that it's more environmentally friendly, this product is a non-waste one: there is no need to throw it away, transport, dispose of or **reprocess** it. To make it simple – the package or bowl is part of the meal. Here, as far as furnaces are concerned, well, the whole process is still at the design stage from every angle regarding CE.

The choice of technologies and solutions has been made in a way to manufacture products once for a long time. This is not in line with current trends, where products, tools and devices work for two years, and after the guarantee ends, it breaks down and must be replaced.

We pursue the opposite strategy to generate products with high quality, ensuring its long-life and also its **repairability**. It is very important that all product components are selected in an eco-friendly and sustainable way – such as reducing transport-related $CO^2$ emissions, since all products are produced locally. We also strive to support the local economy by avoiding imports from China. As you see, everything is made from scratch, and we had to **rethink** the design accordingly.

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**

We work with companies that offer locally grown produce to use as ingredients for our foods. We don't transport it over long distances, so in every country the taste and proportions of the ingredients are different. So we had to make contacts with local mills and producers in different countries and choose responsible local businesses.

When it comes to staff, we have three employees working on production of the ovens, and every franchisee has its own employees. Currently, it's hard to say how the changes will affect the structure, as we have only been operating for a few years now. We are classified as a microbusiness and feel that we are

still at a very early stage. For the future, we believe that this can develop a lot, but also strategically we don't want to get into something to build up huge numbers of people. Growing into a big corporation would affect our structures and require centralising processes, forcing us to produce a large number of products in one place. Automatically, transportation costs would increase, and this is no longer compatible with ecology. Due to that, our aspiration is to build smaller branches that work with local products from local companies and meet the demand in their own small district. The ecological approach still underlies every assumption, at every stage of business development.

Our Challenges: **Did you face any challenges during the transformation?**
A challenge was at the beginning of the process of designing the oven and producing edible cups – there was a vision. We gathered opinions from various professionals, looked for a solution in many Polish companies, and built the first unsuccessful trial. Then we looked for new solutions, repeated the whole process, and tested again how to produce our bowls. After the first test, it turned out that after a few days, they no longer met the requirements, so we had to start again. Now, thinking about this stage, I don't know if I would still go into the same thing now, because it was a very time-consuming and exhausting period. It was a path of trial and error. We had the feeling that this product was needed, and so the desire to bring it to a successful end was high. At the beginning, such a business is very unprofitable, it can pay off in 5-10 years, and people who are only driven by profit will quickly give up in such a business. Some professionals and companies in the field of such technology or furnace-building who helped us to design the oven were very sceptical of our vision and the fact that something like this was feasible and would work. The premise of the project is that we would rely on local products.

Our Prospects: **Has the transformation process in your company been completed?**
My impression is that there is no one specific competence needed to decide on the choice of circular economy. When building the brand, we used only our own investments of our own resources, we didn't have any research centre or any outside investors. It is not the case that we are already profitable after two years, but the trend, in terms to what we were selling in 2020 and what we are selling today, is positive and growing, so at least the projections are good. We perceive a growing interest and demand on the customer side. Although the brand is constantly developing and new eateries are opening, we don't want our brand to develop on a massive scale – like McDonald's. We want to rely on local resources and product delivery. From my perspective, it was worth starting such a business. But responsible, circular, and ecological business is only for persistent people who want to do something really good for themselves and also for the planet.





# 5.7 Ubrania Do Oddania

(Interview by: ) Danuta Łukasińska, Aleksandra Simla, Barbara Goleniewska

| | |
|---|---|
| Name of the Company | Ubrania Do Oddania |
| Interview Partner | Zofia Zochniak, Founder |
| Company size | 150 employees |
| Sector | Textile industry |
| Country | Germany |

*I´m Zofia Zochniak and together with Tomasz Bocian we founded Ubrania Do Oddania in 2018. Our Company collects second-hand clothes through a fundraising portal ubraniadooddania.pl. We donate part of the profits from the sale of the acquired clothes to charity – PLN 1 per 1 kg of clothes. We sort and **refurbish** the clothes we collect – giving them a second life. Our second brand is Circular Boutiques – pop-up stores located in shopping centres. There, you can buy selected and **refurbished** second-hand clothes and also donate unwanted clothes. In this way, we financially support partner NGOs.*

Our Motivation: **What was your motivation to grapple with the topic of the circular economy?**
I founded the company with the idea of opening a transparent business focused on collecting used clothes through a fundraising platform for NGOs. The idea was a response to the unfair second-hand clothing market in Poland and abroad.

I knew that clothing collection companies donate very little money to charity. They segregate clothes, and textiles that are not suitable for further use and processing are gotten rid of,often by throwing them into landfills. They do this because the disposal of textile waste by a specialist company costs a lot of money. We wanted something to change in the second-hand clothing market and that is why we created an innovative business model based on collecting used clothes through a fundraising platform. Furthermore, the boutiques host workshops, panel discussions and special events. In this way, we develop and promote the idea of circularity.

We also introduced a programme “Let’s circle together”, which enables clothing brands to be more circular and make their 'green strategies' stop being just CSR and become significant branches of their business, generating profits from second-hand sales. Our partnership with 4F/OTCF Company to collect, **refresh and repair** clothing is the first of its kind in Europe. We collect and refresh their clothes for them, and they can **re-sell** them in their boutiques at a discount.

**Our Approach: How did the transformation process take place in the company?**
In 2017, I started a business that collects unnecessary clothes and puts them into the second cycle. The idea, however, differed from the classic collection of clothes in containers, which are not always transparent, fair or ecological. We created a fundraising portal, www.ubraniadooddania.pl, where people donating their unwanted clothes could choose the charity they want to support, and we donate 1 PLN for each 1 kg of clothes collected. Clothes, packed in cardboard boxes, are collected directly from the residents' homes by free courier transport. Clothes go to a shop in Poland and are sold to Polish secondhand shops. It is an innovative business model for clothes collection.

After 3 years of operation, we opened our first branded secondhand shop in the exclusive Mokotów Shopping Center. Currently, we have 14 secondhand clothing shops called Circular Boutiques. It was important for us to introduce only textiles collected from Poland into **second circulation**, so as not to import anything from abroad and thus **reduce** the carbon footprint.

Our second-hand clothing collections are exchanged between our shops every two weeks until they are sold out. So, at this first level of sales, which are our own shops, you have 26 weeks to try to sell one item. Then there are the partner shops working with us, and that's 20 shops. And again, you have two weeks in each of those. This supply chain between our shops and our partner shops is arranged in such a way that they have a very short route. We have also built a base of partners who are already processing textiles from clothes that have not sold after this cycle.

Well, we are currently at the stage where 97% of all the things that come to us go back into circulation, so it is a spectacular result, and the 3% that is left over, which in fact should be **recycled** – we try to manage it and look for ways to handle it, to upcycle or transform it, so as not to define it as rubbish.

Probably the most important competence needed to go into the circular economy is motivation. Why do you want to move towards a circular economy? Is it because it's fashionable, and if you want to do it because it's fashionable, then get a professional company to set it up for you. Your competence should be curiosity and the ability to adapt solutions. We have a partnership on this strategy with the European Commission, so I have de facto first-hand access to knowledge within this area of interest.

**Our Implementation: Did the transformation process have an impact on the internal corporate structure?**
I would like to tell you a bit more about our recent development and expansion. In 2021, a new path of development was opened for the company. We were contacted by the 4F brand (owned by OTCF, a Polish company – a manufacturer of sportswear, ski jackets, etc.). In 2020, 4F/OTCF launched the 4F Change program. They set the goal of transforming towards a closed loop. The company is looking for solutions in the use of environmentally friendly materials, but these activities are at the research stage.

4F wanted to act now. They came to the conclusion that one of the simplest things they can do now is simply collect clothes produced by 4F that have already hit the market, refresh, mend them and put the items on sale again. If there are clothes that are so damaged that they cannot be put back into circulation, 4F has found a way around it. They have started to sew clothes and accessories for animals from the remnants of materials and worn clothes at their headquarters in Krakow.

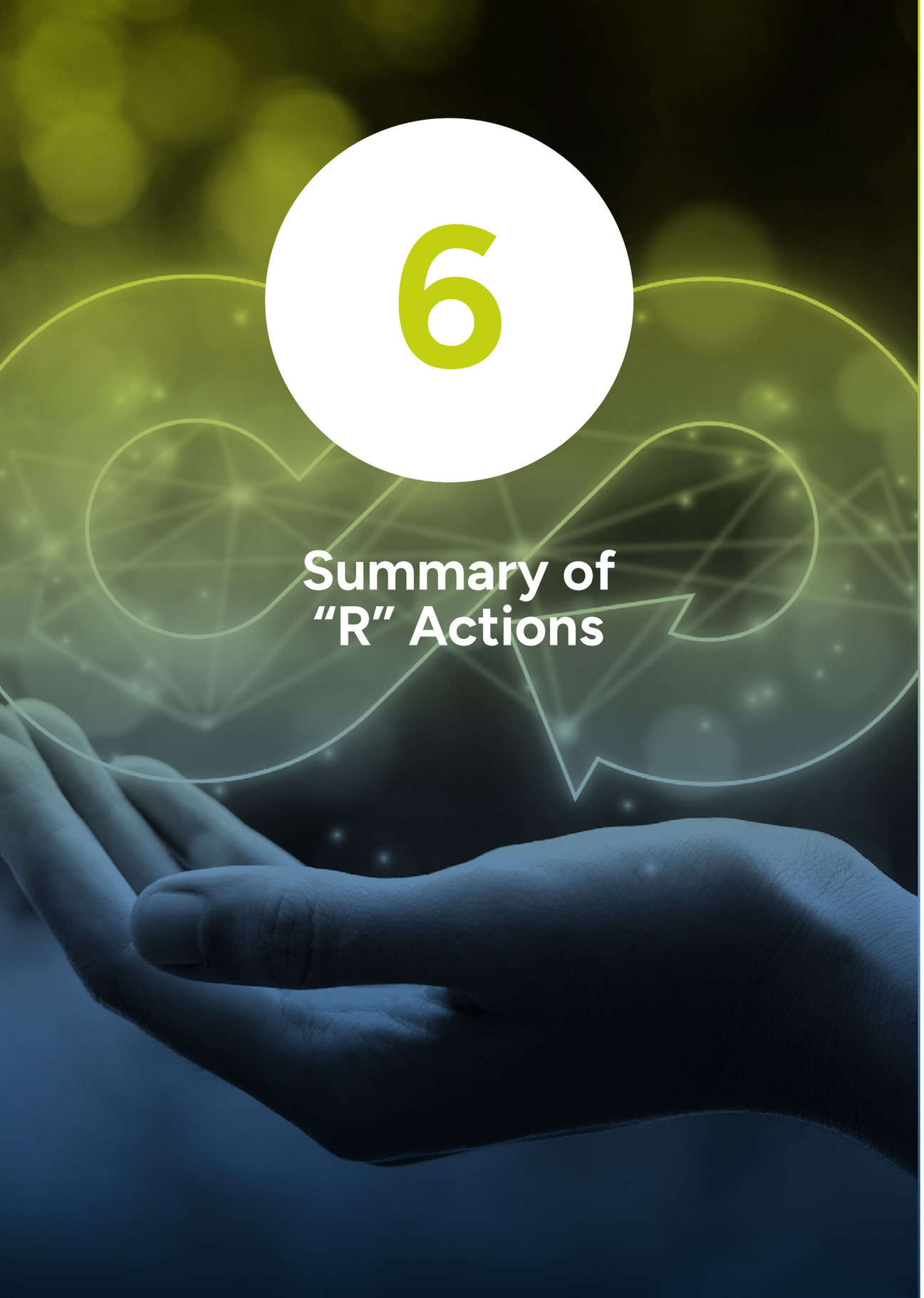
And it was the 4F company that contacted us about collecting jackets and ski pants. 4F customers can also donate damaged or no-longer-needed clothes in 4F stores and in our Circular Boutiques located in shopping centres. We established a cooperation that allowed us to accelerate the development of the company. We had to increase the team from 13 people to about 150. We hired employees to clean, maintain and **repair** the clothes. Our staff is a group of excellent craftspeople, people interested in sustainable living, as they knew our company profile from the beginning of the recruitment process. The clothes collected for 4F are resold in 233 4F stores located all over Poland. This is real circularity. Based on such cooperation between companies, we can implement the transformation of the economy in a circular direction.





**Our Challenges: Did you face any challenges during the transformation?**
Our challenge now is to find a solution for 100% of the collected textiles. We at Ubrania Do Oddania don't call anything rubbish. We have started to divide the obtained clothes not only by the degree of wear and tear, but also by the materials from which they are made. Because of this, a lot less stuff goes to waste and a lot more textiles find a **reuse**. If you look at clothes or textiles, even a single piece of clothing can actually be used in this whole process. What we have focused on is to clean and manage what comes to us in our country. Here, we also cooperate with companies that specialise in **upcycling** processes, who collect things from us that are, for example, damaged or unfit to be put back into circulation. These companies in turn **recycle** these things, such as by turning, cotton into industrial cleaning products and washed wool into carpets.

**Our Prospects: Has the transformation process in your company been completed?**
Our goal now is to give clothes a second life on a large scale. We want to help big clothing brands repair their clothes and sell them again, closing the loop. The path we have chosen for clothes to be donated and, as it were, develop this business is not a shortcut. It's difficult, it's very ambitious, but it's probably the only right path at the moment. That's why we also decided to simply add educational activities to our business. I wanted people to know that it is difficult to find information about the textile manufacturing process. It is logical that such information is difficult to find because chain store producers do not want us to be aware of their ecological and ethical impact.



# 6

# Summary of “R” Actions



## Conclusions and Recommendations

(Text by: Anett Wolgast, Alana Lamberts, Metje Rocklage)

The circular economy can help mitigate the climate crisis and preserve the environment (Sileryte, 2022). The introduction of a circular economy will also positively influence the decoupling of economic growth and prosperity from raw material use (EU Commission, 2022). The key principle of circular economy is to design and generate long-lasting products with elements or materials that can be reused, allowing natural systems to regenerate.

There is an urgent need to alter the way of thinking and acting to build a circular economy and to break the link between economic well-being and environmental destruction. There are calls for incentivizing circularity at the system level as well as for educating and informing companies about opportunities the transition to a circular economy offers. In particular, information about social and economic impact, such as employment opportunities and business growth, should be articulated and disclosed to business representatives. It is worth mentioning that the systemic transformation to a circular economy is increasingly being promoted and further developed through politics (e.g., EU Commission, 2022), laws (e.g., Kyriakopoulos, 2021), norms and standards (e.g., Patra, 2021). The individual SME reports compiled in this publication can be interpreted as a trend indicator revealing the perceptions and attitudes of company representatives towards the circular economy, providing insight into the implementation process as well as accompanying circumstances and challenges.

It is interesting to see the interviewees’ motivation to innovate their companies towards circularity – their personal attitudes towards sustainability and the responsibility they felt as entrepreneurs were mentioned most often. Almost all were aware that they can make a difference with circular economy actions – even if small – and thereby contribute to environmental protection. The employers’ own enthusiasm and personal motivation were the primary driving force and trigger for changes: “...responsible, circular, and ecological business is only for persistent people who want to do something really good for themselves and also for the planet.”

The paths and approaches companies followed when implementing circular economy actions were not always the same; no single recipe exists, since companies` starting situation, strategy and vision are often unique and individual. As the stories above demonstrate, the move to greater circularity in SMEs is rarely organised systematically or based on a holistic approach; in all interviewed companies, no specific department dedicated to circular economy existed. This situation is typical for SMEs – no additional resources, capacities or knowledge were available to identify, conceptualise, and launch closed-loop actions and innovations. Smaller or larger transformation projects started often with a re-thinking.

A lot of actions and initiatives in small- and medium-sized enterprises were made up of smaller steps pursuing specific changes and targeting particular areas. “On the journey towards a circular economy, there is not one path or one great step to take, but rather many small steps that each company must take in its own way. And I believe this is exactly what SMEs are predestined to do, because they have been used to adapting to change for decades and doing so in a fluid process.” According to several statements by company heads, this was the most transparent way to introduce circular economy actions and to measure the related impact and assess the investments made. Respondents stated that the small-steps approach is beneficial for launching innovations: “If there is one important lesson from our transition towards a circular economy that I would share with other SMEs, it would be to start with small steps so that the entire company can keep up with the new processes without frustration. Everyone needs to

understand that there is a purpose and value behind it, even if sometimes it's just the certainty of doing the 'right thing'."

Some ideas to initiate the shift to greater circular economy were dictated by the market, others created by company owners. Respondents also referred to employees and customers as an important source of ideation and inspiration. In any case, keeping one's eyes open and spotting opportunities is an important approach and principle.

One relevant factor to establish circularity and sustainably integrate appropriate actions in companies is the engagement of staff members. Some company representatives related that not all employees have the same information level, so engagement, endorsement and backing differ. Employees` commitment and support are crucial for the success of the transformation. Active involvement and participation of staff already during the ideation stage is decisive here. One company owner made the recommendation "...to encourage experimentation and to set a good example so that others can familiarise themselves with a new idea. ... we have people who have a very strong intrinsic motivation; those people are worth their weight in gold when it comes to driving things forward." Involvement and education of staff members are deemed important.

Another factor for instilling circular economy principles more systematically is education and involvement of customers: "...I think, this is also important to change the behaviour of our clients and make them understand how important their contribution towards changing the environmental situation in fact is." But not only employees and customers should become an active and integral part of the CIRCULAR ECONOMY process. In general, all participants along the whole value chain should be on the lookout for opportunities and chances for more circularity and thus propel the transition. Isolated consideration and actions by individual companies are not expedient, intersectoral exchange and a dialogue- and solution-oriented approach and working principles are more advantageous and promising.

Furthermore, education is key in this context: informing, raising awareness, and training different target groups can accelerate mindset recalibration o and alter behaviour in different spheres. Filling the competence gap and outfitting key actors and stakeholders with relevant knowledge can help to achieve long-term and long-lasting effects and results. Respondents also opt to train managers, who "...must acquire specific environmental skills so that they can combine economic development in harmony with a proper assessment of environmental impacts."

New concepts always are fraught with challenges. Interviewees reported various difficulties, such as a lack of dialogue with "...other companies, which is seen as a real loss." Exchange between different industries has great potential for innovation due to distinct levels of knowledge, which is taken far too little advantage of. Lack of awareness and understanding of the urgency of the topic among different stakeholders, such as employees and/or customers, hampers the acceptance of circular economy actions, leading to the situation that the expected results and effects cannot be fully achieved. Additionally, bureaucratic hurdles, formalities, and need for authorization were voiced, which slowed down or even blocked the processes of, for example, integrating new technologies, buildings, infrastructure.

Despite all these smaller and larger challenges the interviewed companies confronted during implementation, they were all willing and very motivated to continue the process and extend and expand circular economy actions inside and outside their companies. They have already defined goals and concrete plans for further next steps. The interplay of goals, plans, R strategies, action competences and cooperations will foster perseverance on the way to a circular economy. More and more customers expect, value, and prefer circular economy-oriented SMEs in the market.





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