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Cette publication a été réalisée avec les contributions de Clémentine PERE, Mathilde MASSET, Sophie GOTTSCHALK et Sandrine DE MOURA. New decade, new hopes, new commitments: let's go circular! Imagine the economy as circular. An economy that is restorative by design, where materials flow through the economic system and continuously restore capital via feedback loops. An economy minimizing raw material extraction and re-purposing waste. An economy using only renewable energy, and where resources are used, but not used up. An economy based on services, enabling access over ownership, and providing better quality and performance to its users. This concept is known as the circular economy.

Not only is the circular economy model trending – there is no stopping it. As our world slowly realizes that sustainability is our only option, new regulations are appearing which compel businesses to follow. In times where our ecological conscience is increasing and people worldwide become more aware of their power as consumers, being sustainable has become a competitive advantage for many businesses. More than a competitive advantage, going circular is a virtuous cycle enabling economies of scales, notabely on transportation costs, production or maintenance, while creating local jobs. What are you waiting for ? Be proactive and take the plunge towards the circular economy before your competitors do!

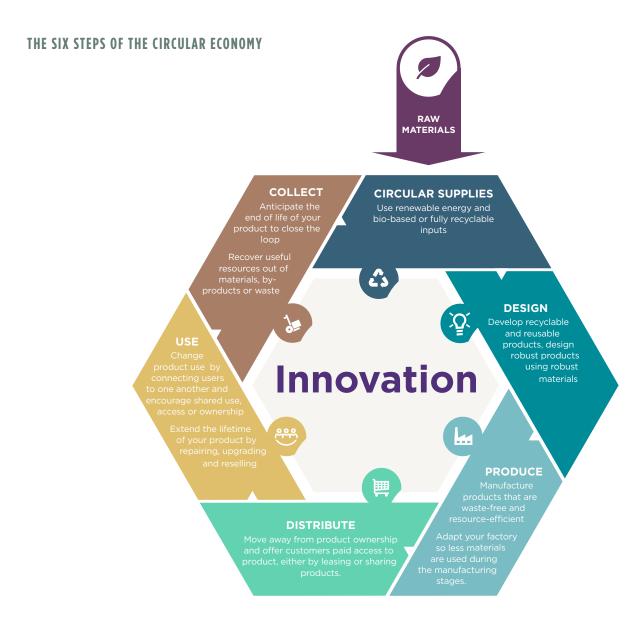
1. GET READY TO GO CIRCULAR: THE FIRST STEPS TOWARDS A COMPLETE VALUE CYCLE

Far from being restricted to waste management, the circular economy could be defined as a system of production and exchange that aims to improve resource management at every stage of the product lifecycle and creates value since it reduces your environmental impact. A circular economy is usually collaborative and local.

VÉPLUCHE

Vépluche illustrates perfectly the concept of the circular economy: the start-up collects biowaste from restaurants free of charge. In return, restaurants commit to buying a certain amount of fruit and vegetables that were grown with the help of compost and liquid digestate, resulting from Vepluche's biowaste valorization. Vépluche considers the whole value chain, including transport as the waste is collected by cargobikes.

The circular economy constitutes a deep paradigm shift and is defined by **its contrast with the linear economy, which is composed of the five steps: extraction, production, distribution, consumption, and disposal of products.** Our current «take, make, dispose» economy may have been efficient for a time, but it harms the environment and now faces the physical boundaries of the biosphere. The circular economy could regenerate the economic system by decoupling growth from resource constraints.



Implementing a circular approach requires a different mindset and way of thinking. It implies thinking in systems, in a systemic approach in which the transformation of one step will naturally impact the others. Going circular affects the entire value chain, or rather the value cycle, as we speak of circular business models. The transition towards a circular model means every loop of the value cycle must be redefined, adapted and improved. For example, eco-designing a product upstream, yet disposing of the waste in the landfill downstream only allows a fragment of the potential value. Vice versa, how can someone justify their strategic interest in trying to recycle products and materials at the end of their lives, if they are designed with intertwined toxic chemicals and non-separable materials?

This can seem challenging since implementing an efficient value cycle at each step of your business is not that easy. That is why we recommend companies to **start small and scale up** by first assessing your organization or part of it and identifying at which step a circular system would have the greatest impact on your business. Where are your strengths, where would it be easier to start and where would it generate the most impactful and scalable return on investment? Process, product and business model innovations are the trigger to bring along circular transformation.

Pushed by clients' health & environmental concerns, carpet manufacturers like TARKETT and DESSO have invested millions in R&D in order to be able to produce environmental-friendly and recyclable carpets. Because in a transactional business model B2B clients were not willing to pay more, Desso transformed its sales & distribution model by implementing a leasing model for its clients. DESSO retains ownership of carpets and replaces them at the end of their life, which naturally leads to product life extension. By doing so, DESSO secures its supply chain on raw materials, as its suppliers become its own final clients.

However, it's not only these specialists which can integrate circular initiatives. Large

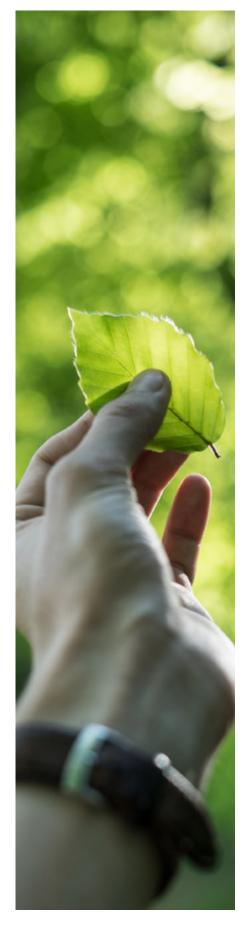
companies are increasingly trying to take their own first steps into a more sustainable direction. For instance, Head & Shoulders (Procter & Gamble), recently embarked on a new project to manufacture recyclable shampoo bottles made of up to 25% recycled plastic. To do so, the brand has joined forces with TerraCycle Europe, a company that is involved in collection campaigns on the beaches of France and Northern Europe, as well as in waste management.

Introducing a circular approach to your business is a big step and it may seem complex at first. However, in the age of digitalization and big data, going circular is – simply put – just another business transformation. While engaging in several large transformation projects and continuing business as usual can be challenging, your organization will be able to build on what it has already learned in the past. As a large company, you can find inspiration in the start-up world.

Entrepreneurs and innovators around the world are already making the circular economy a reality. What can we learn from their inspiring initiatives? How could we accelerate the transition towards a circular economy? How could large companies get started? What are the key success factors to succeed in transforming into circular business models?

2. LET'S GET CIRCULAR: SUCCESSFUL EXAMPLES TO IMITATE

The following examples of circular, small structures could inspire the transformations of larger companies. As explained in the scheme above, the circular economy can be implemented in every stage of the value chain and also during its use. The whole value chain is concerned: sustainable supplies, eco conception, sustainable distribution and waste management participate in this paradigm shift. It is important not to avoid the key role that citizens play in order to foster the circular economic paradigm.





More and more companies commit to developing more **sustainable supply solutions**, by selecting sustainable partners and checking the origin of the raw material they use. For instance, a great number of companies commit to buy green energy for their production or even to produce it locally.

Indeed, **Pocheco**, a French envelope manufacturer, installed solar panels on its roof, which enable the company to produce up to 80% of the energy they consume. Likewise, the French shoe brand **Veja** produces shoes with organic cotton and natural rubber with a fairtrade approach. The shoe production costs are 5 times higher than the average costs, but their price remains similar to the market average since Veja decided not to spend on advertising and communication, which usually represents 70% of product's cost.

1083 FAIRPHON

Eco conception, which includes the design as well as the production, is also two great ways for companies to reduce their impact. The means is twofold: first, to reduce production impact, and second, to offer long-lasting or easily reparable products. As an example of the first point, the French brand **1083** decided to produce denims in France, as the production usually causes the trousers to be transported up to 65 000 km while 1083 km is the largest distance between two French cities.

The Dutch brand **Fairphone** illustrates perfectly the desire for a few companies to promote long-lasting products. Indeed, Fairphone sells smartphones which are easily reparable, and thus last longer, since each component can be replaced by the owner without having to go through a repair service (the new components are provided by Fairphone or by a reseller). **Biomimetics** is also an innovative eco-conception solution that is inspired by the shapes, materials, properties, processes and functions of living systems. **Susana de Mantos Fernandes** is a researcher and faculty member at the University of Pau, where she holds the position of the Chair of Biomimetics. She draws her innovations from the study of the oceanic fauna and flora, for instance making sunscreen from red algae molecules usually eaten by fishes that can absorb UV rays.

PANDOBAC

Distribution aspects, such as distances, transportation means or packaging, also have to be taken into account in the whole impact measurement. Located in the huge Rungis food market, **Pandobac** offers a service of reusable trays for professional food freight transport. This means the use of disposable packaging can be avoided, such as cardboard boxes, single-use wooden boxes or polystyrene cassettes.



CIRCULAR ECONOMY: THE ONLY VIABLE WAY TO DO BUSINESS

















The use of the products also remains fundamental in a circular approach. In that sense, the economy of functionality offers to switch from an economy of ownership to an economy based on accessibility, where people are users, but not owners. There are lots of examples of this, both in the private and public sector.

The French cooperative **Commown** offers a phone rental service: instead of buying a new phone every two years to get a more efficient one, you can rent it for the duration you want and change it whenever you want, thus lowering waste. The use of the products constitutes an increasingly talked-about topic for citizens since they are more and more committed to respecting the environment, and to reducing their carbon footprint. Consequently, tools dedicated to helping citizens in their choices, such as apps and labels, are growing rapidly. For instance, the French label **Ecotable** promotes restaurants with commendable environmental practises. Another French label, **SloWeAre**, is dedicated to auditing clothing brands, while the app **Clear Fashion** enables users to know the social and environmental impact of their clothes. Moreover, the **sharing economy** contributes to the development of sustainable use. Its concept is simple: acquiring, providing or sharing access to goods and services among peers. For instance, **La Textilerie** in Paris offers a rental service for sewing machines, since most people only sew occasionally and don't necessarily need to own such devices.

Regarding the increase of product lifespan, various options are available, such as reusing, repairing and swapping. The second-hand market is trendy and widening. **Crush On sells carefully selected vintage clothes on the Internet**, thus promoting the use of second-hand clothes. Vintage shopping contributes to reducing the environmental impact of fashion, which remains the second most polluting industry. The barter economy also constitutes a solution to improving the 'use' part of the cycle and to reducing the consumption impact.

MerciBOOKoup encourages book swapping instead of buying new books; this association does so by organizing book-swapping parties and installing book-swapping boxes made out of recycled wood by users. More and more people are getting involved in this initiative. For instance, an association named **Repair café**, which is getting popular all throughout Europe, offers free repairing services to a whole range of products, from toys to electrical goods.



Last but not least, waste collection and upcycling constitute a fundamental part of the circular system. Upcycling is about creating a product of higher quality, value or utility than the original one. Here are two examples to demonstrate this. First, La tête dans les nuages saves balloons' envelopes from the trash and make bean bags with them. Second, following the same logic, Muzzicycles produces bike structures thanks to plastic bottles being upcycled.

These various examples show many different ways to integrate the circular economy in business and society. The purpose is to get fully circular in a systemic approach, which is not easy. How to begin this circular journey? Once you have identified the part of your value chain you want to start with or focus on, use the following three main drivers to accelerate your transformation.

3. JOIN THE SUSTAINABLE TEAM: CIRCULAR TRANSFORMATION DRIVERS

Transformational projects have similar drivers and challenges in common, so when you bring circular initiatives into your business, you will be prepared. To avoid being overwhelmed, don't do everything at once. Instead, start small and scale-up. The value cycle presented in the following shows the many different sides of circular economy within your business process. Start one step at a time depending on which stages have the strongest value potential for you. You can find inspiration in the entrepreneurial world from our examples below. Once you know where to begin your circular transformation, build on the three main drivers to implement these initiatives successfully: internal engagement, strong partner relationships and technology.

1\ Engage internally

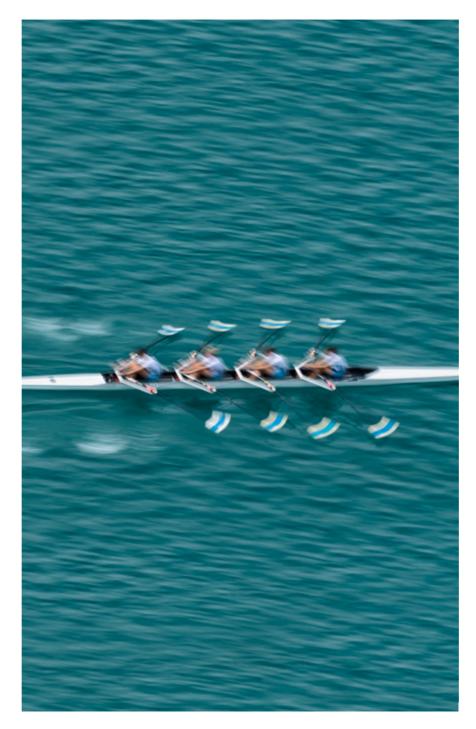
Engaging the entire workforce is key when integrating circular economy initiatives. More than a business model, the circular initiative becomes an essential part of the company's mindset. The transformation project requires a high-level of sponsorship, a strong management support, and a large commitment from employees throughout the entire company's functions and business units. Focus on the following 3 pillars in order to achieve this:

/ 1st: Top management: driving the movement

Company leaders should be on board and ready to deploy the necessary financial and human resources. It is important that this engagement is perceived within the organization: for example, by promoting sponsor interviews, employees will feel how involved top management is.

/ 2nd: Determining cross-functional teams

For instance, organizations can design an ambassador program with one



representative in each business unit to support the transformation. This team then acts as an enabler and spreads the circular movement across the company.

3rd: Monitoring progress and celebrating it

Implementing a monitoring strategy provides the elements to follow the transformation thanks to the circular initiatives, to measure their impact on business and to capitalize on the results. This can be done with financial, environmental and social metrics, which can and should be shared with all internal stakeholders.

More than an engagement, circular transformation must go beyond the company and be promoted to its external stakeholders.

2\ Build strong relationships with partners & the ecosystem

Companies increasingly try to please not only their customers but also other **stake-holders** such as government agencies, NGOs or community organizations. Being proactive about subjects that matter to them has thus become crucial. Today, sustainability is more relevant than ever, which underlines how important it is to keep up with circular initiatives.

In order to do so, building strong, lasting relationships with key partners is essential. This could mean reinforcing existing collaborations, transforming customer relationships from transaction-based contacts to strategic, long-term partnerships and forging completely new ones along the way. This is particularly essential for SRM (supplier relationship management), which plays an important role in selecting the most sustainable suppliers.

Embracing this collaborative approach by including a variety of different external partners is more promising than trying to generate value individually. Whether private or public, large or small and even crossindustry, these partners bring their own set of skills and resources which will help you gain a more circular perspective.

STAKEHOLDERS & THE ECOSYSTEM: POTENTIAL PARTNERS

CUSTOMER

SUPPLIER

START-UP

RESEARCH INSTITUTION

NGO

3\ Implement new technologies

As part of the fourth industrial revolution/ Industry 4.0, technologies are flourishing and transforming business models across sectors. While implementing new technologies should never be a goal itself it represents powerful enablers to leverage circular economy initiatives. Potentially, they can eliminate waste altogether and thus play a significant role.

Disruptive **digital technologies** such as the Internet of Things (IoT) challenge the linear economic model by increasing traceability along the entire value cycle. By collecting relevant data, controlling and analyzing performance, IoT boosts productivity and supports remanufacturing. **Physical technologies** like 3D printing help companies manage production and material costs but also contribute reducing their environmental footprint. Biological technologies, such as biocatalysts, help companies in different industries including pharmaceutical, fine, chemicals and consumer goods.

DIGITAL, PHYSICAL & BIOLOGICAL TECHNOLOGIES: 3 INNOVATION DRIVERS

TECHNOLOGY APPLICATION



Digital technologies

enable tracking resources, monitoring utilization and waste capacity.

Physical technologies

enable a reduction in production and material costs, as well as reducing its environmental impact.



Biological technologies

enable companies enable companies to move away from fossil-based energy

EXAMPLE

Internet of things (IoT), big data, blockchain, and RFID.

3D printing, robotics, energy storage and harvesting, modular design technology and nanotechnology.

Bio-based materials, biocatalysis, hydroponics and aeroponics.

CONCLUSION

Adopting a circular economy is the next transformation companies worldwide need to face, starting from today. It is not an option but rather an inevitable **new way of thinking** if companies wish to keep up with tomorrow's competitive business environment. By betting on innovation, organizations can accelerate their transformation.

As the examples in this article illustrate, you will benefit from bringing circular initiatives into your organization. The more circular you become, the higher its added value will be. Define your **long-term strategy**, launch and **lead innovative programs**, make **quick wins** to motivate contributors and rapidly generate **positive and concrete results**, then measure and **evaluate initiatives** and be flexible to adapt your strategy.

Are you ready to go circular?



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