



RODAMIENTOS VIGO, S.A.

ha obtenido el indicador ARDÁN

EMPRESA CIRCULAR 2021

Las Empresas Circulares son aquellas que implementan una estrategia de economía circular, para lo cual establecen colaboraciones con grupos de interés, e incorporan criterios circulares en el consumo de recursos, en el diseño y producción de sus productos y, en general, en el conjunto de sus procesos productivos.

Empresas participantes en la Encuesta sobre Economía Circular en la empresa gallega (2021).
Consortio de la Zona Franca de Vigo

En Vigo, a 1 de octubre de 2021

David Regades Fernández

Delegado Especial del Estado en el Consorcio de la Zona Franca de Vigo



13. ECONOMIC CIRCULARITY OF THE GALICIAN COMPANY

13.2. What is the Circular Economy?

The term “circular economy” (in English, Circular Economy) has been coined in opposition to the “linear economy” model on which economic development has usually been based. The linear economic model, under the premise of “take, make, consume, discard”, is based on the idea of taking from nature high volumes and quantities of relatively cheap and easily accessible virgin natural resources - both renewable and non-renewable as for example water, energy, biomass, other mineral resources–, to be transformed into products and services that are consumed by companies and individuals, generating as a result high volumes of waste.

The linear economic model generates multiple environmental problems: the overexploitation of resources and the generation of waste that produce sources of pollution, in addition to causing the destruction of forests and loss of biodiversity, among others. All of the above has consequences that go beyond the strictly environmental, as they cause negative impacts on human health and also negatively affect economic activities, causing, for example, lower productivity in the exploitation of some natural resources, added costs or a partial or total loss of activities (eg tourism or leisure, agricultural or fishing activities).

On the contrary, a circular economy model must minimize the environmental impacts of economic activities, ensuring that any natural resource that enters economic activities remains inside it for as long as possible. To this end, it is necessary to promote the reuse and recycling of resources within the economic system in order to reduce the need to introduce virgin materials into the system. To this end, we must ensure that products, components and resources in general remain in their state of maximum utility and value for as long as possible within economic cycles. For example, the remanufacturing of a machine represents a state of greater utility and value of its materials than its treatment through recycling activities of each of its components. In other words, a computer is more useful after a process of preparation for re-use than its subsequent destruction and recycling of its different elements. In addition, it is necessary to return discarded materials - waste - to the natural system in a state that allows its absorption without generating pollution or loss of natural capital.

In short, the term “circular economy” defines a relationship framework between the natural environment (biomass, physical-chemical characteristics of air, soil and water, climate, etc.) and the economic environment (extraction, production and consumption activities) which aims to reduce both the entry of materials into the economic system (eg biomass, minerals; called virgin materials), and their exit to the natural environment (eg waste). Therefore, the ultimate objective of any strategy to promote economic circularity must be to close the economic and ecological “loops” or flows of resources (Geng and Doberstein, 2008), in such a way that the interactions between these two are minimized scopes. This new economic model ultimately tries to decouple global economic development from the consumption of finite resources.

According to the work of the Ellen MacArthur Foundation “Towards a circular economy: economic reasons for an accelerated transition” (Ellen MacArthur Foundation, 2012), a reference in the promotion of the concept of Circular Economy in the European political framework, it is possible to identify three basic principles of the circular economy:

- **Principle 1:** Preserve and enhance natural capital by controlling finite reserves and balancing the flows of renewable resources. In other words, minimize the consumption of virgin raw materials, replacing them with renewable resources, and consume renewable resources whose volume is compatible with their natural regeneration capacity.
- **Principle 2:** Optimize the yields of resources promoting the circular flows of products, components and materials so that they are used in the state of maximum utility at all times, both in technical and biological cycles (represented in Figure 1 on the right side and left, respectively). But what is the meaning of the idea of using resources in their “most useful state at all times”? Let’s take a simple example referring to technical cycles. An industrial machine used and discarded by one company could be reused by another company, with or without repair, thus prolonging its useful life in its “original state”, or on the contrary it could be subjected to a re-manufacturing process and then be put back on the market, or it could be subjected to a recycling process to take advantage of all those elements that are likely to be used as inputs in other production processes (eg metals). Each of these cycles represents a different use value or “utility state”, from the maximum value represented by the first cycle (extension of the useful life in its “original state”), to the minimum value represented by the processes of recycling.
- **Principle 3:** Promote the effectiveness of systems by detecting and eliminating negative external effects - p. ex. pollution, environmental degradation. The objective of this last principle is to minimize the negative impact of waste, ensuring that it is returned to the natural environment in a state that can be reabsorbed and that, therefore, can contribute to preserving and even increasing natural capital.

ECONOMIC CIRCULARITY OF THE GALICIAN COMPANY

► Companies with the ARDÁN Circular Company Indicator, 2021
(circularity index >= 600)



Company	Location	Sectoral productive system
23 RODAMIENTOS VIGO, S.A.	MOS	Machinery and equipment