

Journey to a sustainable future: supply chains

The **energy transition** is changing the paradigms of **supply chains** around the world. From the restructuring of **energy models** to readjustments in **logistics strategies**, this evolution poses major **challenges** and opportunities for the sector.

This revolution is shaping the logistics and energy landscape, as explained by Iratxe García Gil, an expert at the [Basque Institute of Logistics and Sustainable Mobility \(IVL\)](#), a leading research and development company in her region.

From an industry perspective, we can see how supply chains are adapting to meet **sustainability and emissions reduction targets** acquired by the world's leading governments. In this evolution, emerging technologies such as Artificial Intelligence and IoT are playing a crucial role.

The EU drive

“Europe and the member states are regulating in such a way that, rather than influencing, they are forcing compliance. According to the World Economic Forum, more than 50% of global emissions come from eight supply chains: food, construction, fashion, electronics, automotive, fast-moving consumer goods, professional services, and freight transport,” assures García Gil.

The IVL also adds that **this transformation would have a marginal impact on costs**, which would only increase between 1% and 4% for the end consumer. Therefore, the transition to a more sustainable energy future is not only an individual ambition, but a [collective effort driven by the European Union](#) that includes:

- **Ambitious EU deadlines.** They seek to meet decarbonization and have generated a new dynamic in European supply chains. This urgency has driven fundamental changes in the way products are produced, distributed, and consumed across Europe, as companies must adapt to these new standards and find innovative solutions to minimize their environmental impact.
- **Protection of local production.** In a context of increasing globalization, ensuring security and autonomy in the production of goods and services is essential to maintain the stability of the regional economy. Therefore, policies that encourage the protection of domestic production and the regulation of imports are intended to strengthen the Euro Zone's competitive position in the global marketplace.
- **Commitment to compliance.** Companies are taking a proactive approach toward stricter environmental standards, implementing practices and processes that minimize their environmental footprint. This commitment is not only a demonstration of business leadership, but also contributes to the development of a [more sustainable and resilient economy](#) for future generations.

Adopting new technologies

“Digitization and sustainability go hand in hand, as it is not possible to decarbonize supply chains and their use and implementation,” she explains. In response to growing environmental awareness and the need to optimize processes, numerous organizations are already integrating these technologies in various areas.

These changes not only represent a response to market demands and government regulations, but also an opportunity to **improve efficiency**, transparency, and competitiveness in an ever-changing business environment. Some of these shared steps would be:

- **Renewable energy integration.** As companies seek to reduce their dependence on fossil fuels and adopt cleaner energy sources, changes to traditional logistics models are required. From the planning of transportation routes to the [design](#) of warehouses and distribution centers, every aspect of the supply chain must adapt to a more sustainable way.
- **Advances in predictive logistics.** Thanks to Big Data and Artificial Intelligence, companies can collect and analyze large amounts of data in real time to identify patterns, trends, and opportunities. This allows them to anticipate market demands, foresee potential logistics problems, and make informed decisions.
- **The emergence of the Internet of Things (IoT).** It enables real-time monitoring of all participants throughout the supply chain for companies to optimize processes, reduce operating costs, and improve product visibility. The goal is to make more informed decisions and respond quickly to changing market conditions.

Looking to the future

Iratxe García Gil highlights how “Basque companies are at the forefront in environmental management and commitment to sustainability.” As revealed by the first edition of the [‘Atlas de la Empresa Comprometida de Euskadi’](#), 91% of companies in the region show outstanding planning in environmental management and the [commitment to sustainability](#). This is manifested in a variety of actions, from actively seeking environmental certifications to promoting awareness among employees.

However, the expert also points out that, “despite these advances, resistance tends to come almost always from the people aspect, as the weakness of [technologies](#) is the human factor, because we generally do not handle the management of change and leaving our comfort zone very well.”

Despite the challenges, the expert insists on the importance of addressing these challenges to move towards a more sustainable future, and urges companies to “work on decarbonization as an opportunity to [improve the industry](#), setting ambitious and holistic reduction targets, and also interpreting it as a way to compensate for malpractice and damage caused to the environment,” she concludes.

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This company aims to promote efficient logistics and sustainable mobility in the Basque Country region. She has been in charge of the Management and Direction Area, managed the Master's Degree in Integrated Logistics, and the Institutional Representation Area.