

HOW NEW TECHNOLOGIES ARE TRANSFORMING MANUFACTURING IN LATIN AMERICA AND THE CARIBBEAN



Digital economy



Manufacturing

Context

The LAC manufacturing industry, which accounts for 15.7% of regional GDP, is undergoing a significant transformation towards digitalization and the incorporation of new technologies. Over the past decade, it has grown slightly in terms of its contribution to GDP, mainly owing to Mexico's role and its integration into US value chains.

The recent COVID-19 pandemic and geopolitical tensions have emphasized the risks of excessive external dependence on global supply chains, notably on high-end manufacturing concentrated in specific areas such as Asia and the United States.

Besides, the industry is currently undergoing intensive digitalization thanks to the adoption of emerging technologies, including the Industrial Internet of Things (IIoT), additive manufacturing, process automation, and advanced analytical capabilities. These advances are facilitating the digitalization of the supply chain and improving products and customer expectations.



"Latin America and the Caribbean's manufacturing industry, through the global adjustment of supply chains, can boost up to USD 78 billion in new exports, strengthening the regional economy and reaffirming its vital role in providing 20% of jobs in the region."

DIGITAL TRANSFORMATION ACCELERATORS IN THE MANUFACTURING INDUSTRY

In light of the changes in the global setting arising from technological advances and new patterns of globalization and trade slowdown, the region needs to transcend competition based on the cost of labor and focus on incorporating these new technological advances into its manufacturing offer.



IoT

It enables the ability to collect information in real-time and make decisions about production processes remotely, including the evaluation of environmental impact indicators.



Automation

Automation solutions improve productivity by enabling high-precision production processes and handling repetitive activities and hazardous tasks.



Big data / AI

They similarly provide models that not only improve product accuracy but also minimize manufacturing failures or errors, thus helping optimize the entire production process.



Digital Twins

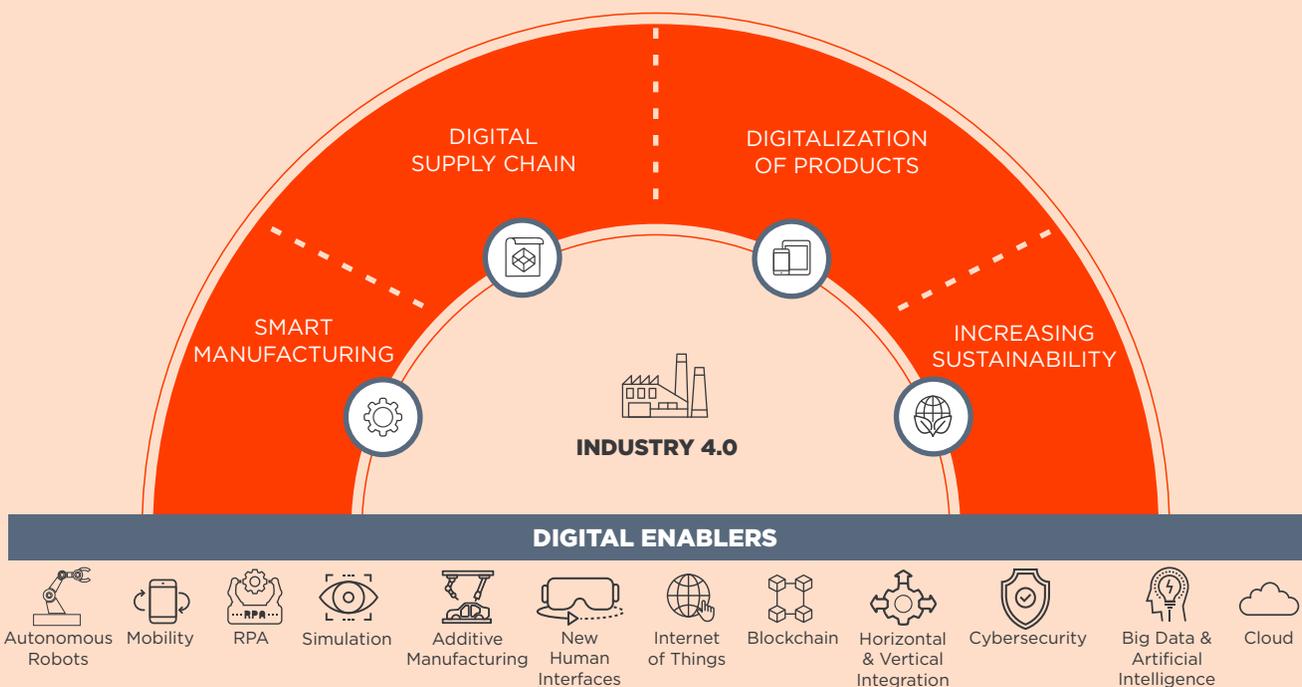
They allow for the analytical simulation of scenarios in the production process, including the testing of parts, packaging, and products, thus facilitating a more accurate and efficient perspective at the design and production stage.



Cloud & 5G

They allow all information to be in scalable and flexible systems, and enable high-speed connectivity for devices and data transmission.

Industry 4.0 is critical in the strategy of companies to take advantage of the opportunities of digitalization in production systems, the value chain, and the goods and services offered



INDUSTRY TRENDS

Digitalization is bringing about constant and increasingly accelerated changes in the market environment. This process of transformation accelerated by the application of new technologies is the driving force of digital trends in the industry.



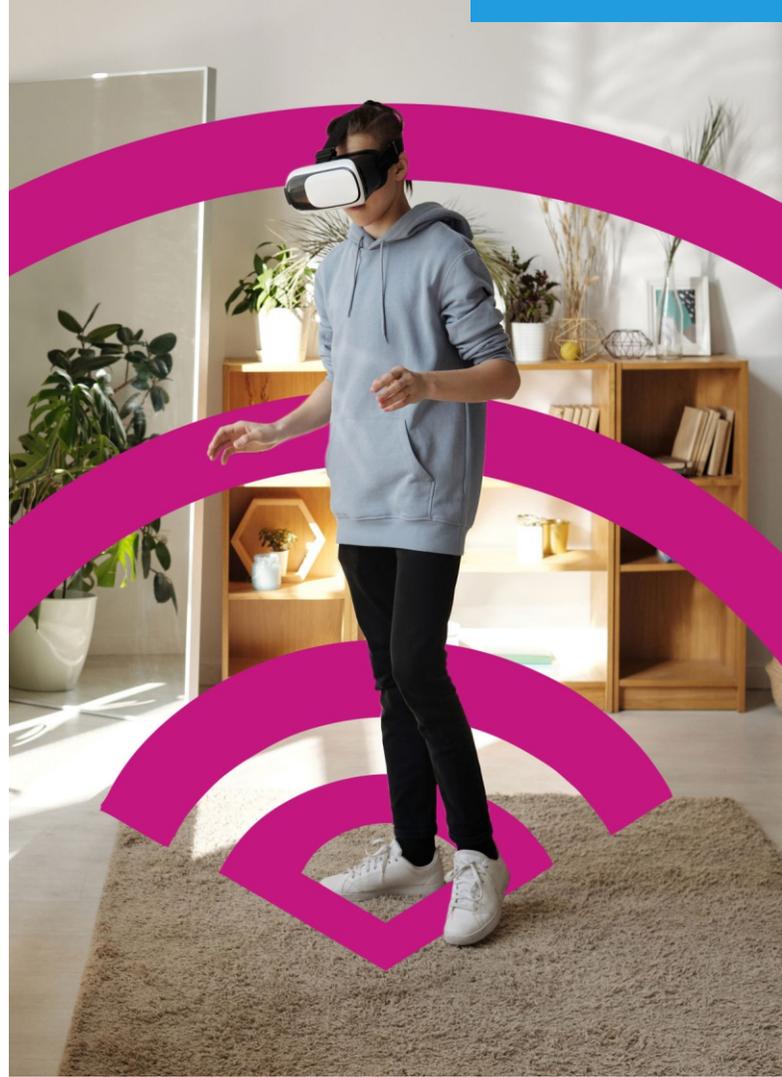
Smart manufacturing

The complete digitalization of a manufacturing plant, optimizing efficiency and productivity through the interconnection of all its elements. By implementing new technologies, companies can make decisions based on real-time data, maximizing value, and improving product quality.



Digital supply chain

A core element in logistics and warehousing processes for companies to achieve greater speed of delivery, traceability, and cost control. These technologies allow greater visibility and reliability in inventory management, implementing paperless processes, and facilitating electronic payments and digital signatures.



Digitalization of goods and services



A factor of change in the offer and sale of products, improving the quality and user experience in manufacturing and retail. Technologies such as digital twins and VR (Virtual Reality) increase efficiency and reduce costs, benefiting companies with less physical infrastructure, increased revenues, and a better customer experience through technologies such as ATMs, gamification, and augmented reality.



Sustainability enhancement

An intensified trend in LAC in recent years, driven by growing government sensitivity to climate change mitigation efforts. Organizations resort to digitalization to monitor emissions and optimize the use of resources, adopting circular business models to reduce environmental footprint.



NEW BUSINESS MODELS

The innovation of the industry and the adoption of new technologies are promoting the development of new business models that capture value derived from digitalization, highlighting 3 innovative business models enabled by digital solutions that are set to reshape the industry over the next decade:

MARKETPLACE INTEGRATION

Digitalization enables new sales channels and better pricing using analytics, generating additional revenue. Companies are able to create their own marketplaces for direct sales, disintermediating distribution and sales.



"Marketplace of model group created to directly market its products in physical stores"

15%
Total
Group
Sales

X2
growth in
number of stores
since 2015

+ 10,000
points of
sale in
Mexico

MANUFACTURING AS A SERVICE

contracting the manufacture of products under subscription in a shared smart factory allows companies to maximize the time of use of the machinery and save on investment in fixed assets.



"Global supplier of supply chain and manufacturing solutions"

USD 258
Million
Earnings

USD 0.62
Earnings
per Share

USD 7.8
Billion in
Revenue

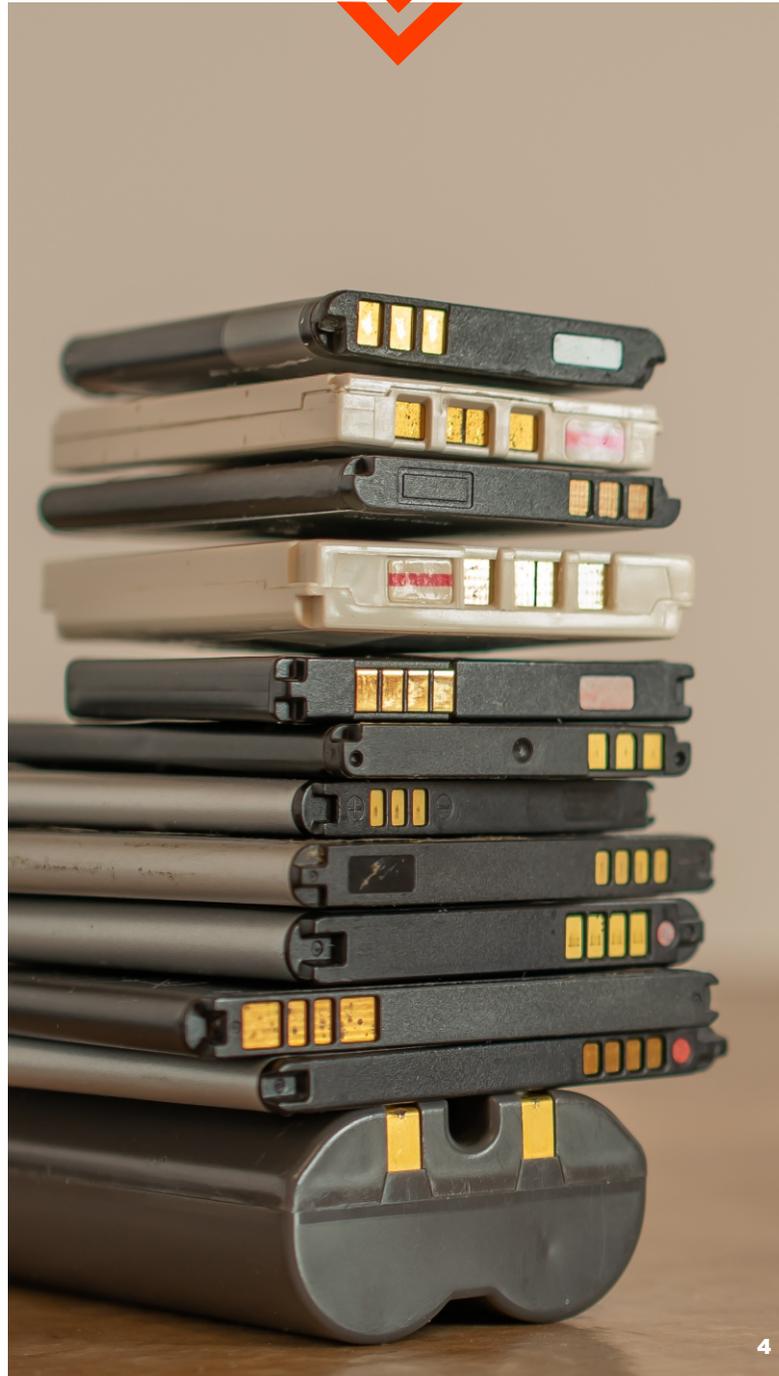
CIRCULAR ECONOMY MODELS

The circular economy seeks to generate closed cycles of production and consumption, where resources are reused and the lifespan of products is extended. Its development is crucial to reduce the carbon footprint and achieve sustainable goals by 2030.



"Recycling and waste processing services to contribute to the circular economy"

First company in Central America to offer a comprehensive service for the recycling of lithium batteries



SUCCESS STORY: GAIA

IDB Invest provided a capital investment of US\$ 15 million to GAIA, contributing to the furtherance of e-commerce in Mexico and supporting the development of small and medium local furniture producers. GAIA is using investment resources to strengthen its digital supply and expand the company's product and service portfolio.

GAIA

GAIA is a manufacturing company specializing in the design of furniture and accessories, which produces 100% of its inputs in Mexico. It started in 2014 as an online store and in 2016 opened its first physical store, integrating an omnichannel shopping experience through the website, app, and its physical stores.

**USD 15
Million**
Amount
Awarded

2020
Approval
Date



27

Physical Stores



+60

Cities with
Shipping
Availability

+500

Employees

If you want to know more about how technologies are impacting the manufacturing sector, favoring sustainable economic development in the region, click on the link to see the details of the report.

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