



THE TECHNOLOGY IN CEARA'S FOREIGN TRADE



Ceará Global
by **nupex**

March Edition - 2023



CÂMARA DE
COMÉRCIO E
INDÚSTRIA | BRASIL
PORTUGAL
CEARA



Federação das Indústrias do Estado do Ceará
PELO FUTURO DA INDÚSTRIA



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CEARÁ GLOBAL MAGAZINE: TECHNOLOGY



LARISSA AMARAL

Head of Ceará Global-Redes

Ceará Global is a University Extension project that has the ambitious mission of contributing to the internationalization of business in the State of Ceará. It started with publications on LinkedIn in 2016, and today, with more than 11,000 followers, it reinvents itself once again. We have modernized our communication, our networks, and now, our content.

What do you think when we talk about Technologies applied to Foreign Trade?

In this edition we want to demonstrate to our audience that to reach the international market we can not be disconnected from technology, which reaches various spaces: In the tracking of goods, process management, database and even in your marketing, whether national or international.

This month, We've been discussing investments, the Ceará scenario in technology - including 5G, Internet of Things, and even featured an interview with a Startup that is genuinely from Ceará and operates in the LogTech area. I hope we all enjoy this new moment of our Ceará Global, which is only possible because of the network we have built, and the friends we have made.

**This is Ceará, at the forefront, in technology, in cooperation, in information.
This is Ceará Global.**



CONNECTIVITY MAKES CEARÁ INCREASE IN COMPETITIVENESS

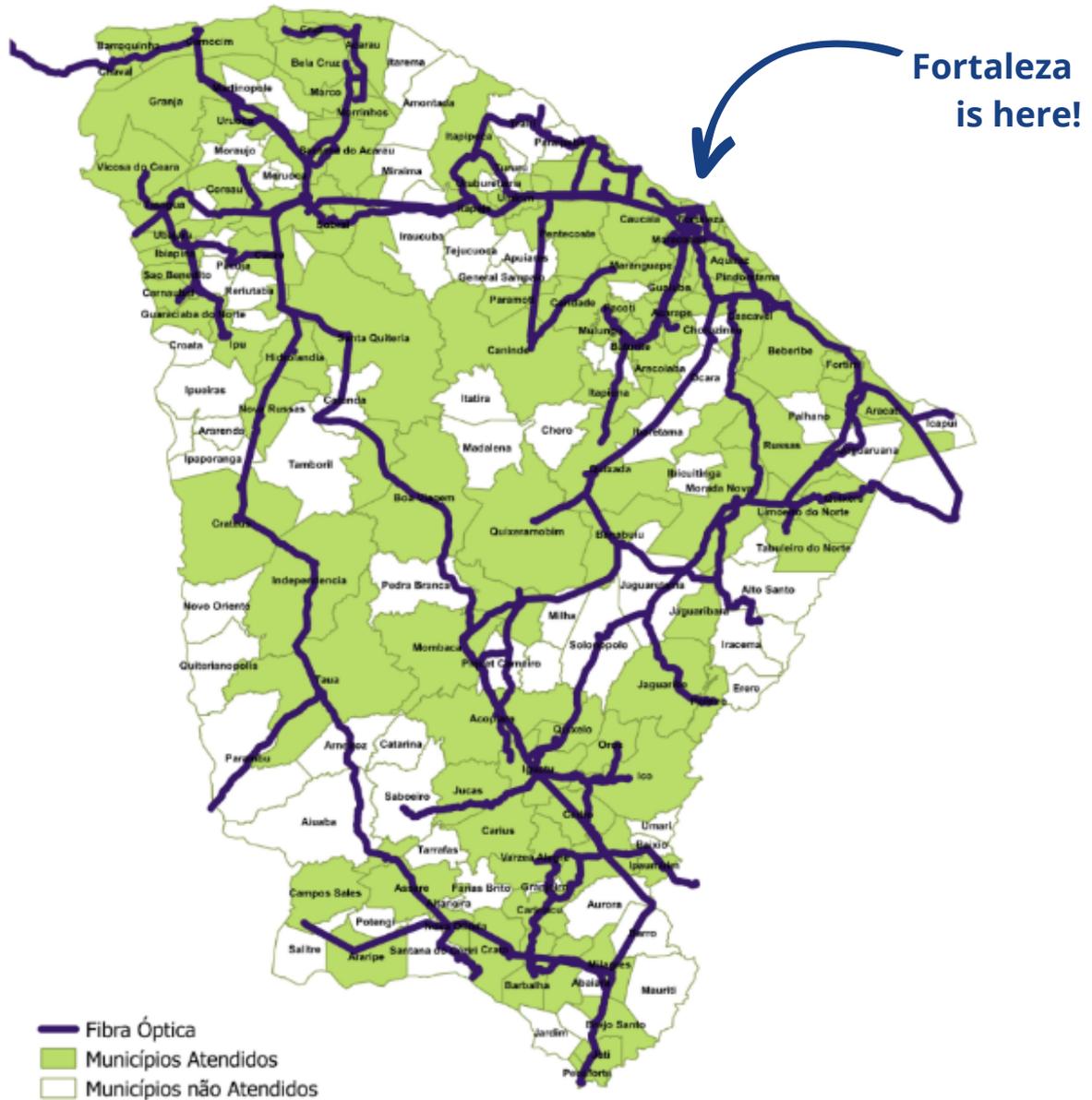
The Ceará Conectado Program, started by the government of Ceará, intends to connect fiber optics to all 184 towns in Ceará, Brazil, offering free internet connectivity via wi-fi in public areas. Etice (Information Technology Corporation of Ceará) will lead the program, which will connect equipment and public services and benefit the whole population of Ceará!

The program, which has received approximately R\$ 67 million in funding, aims to increase state competitiveness, assist digital transformation in the public sector, and democratize access to the internet. To assure connectivity, the Ceará Digital Belt (CDC) infrastructure will be increased by around 60%, reaching a total length of 7,046 km.

The government of Ceará plans to expand internet connectivity in the state, which will be coordinated by Etice using the infrastructure of 16 submarine fiber optic cables and data centers located in the state. Fortaleza is one of the three cities in the world with the most submarine fiber optic cables, and the expectation is to anchor two more cables in the capital, totaling 18. These cables link Fortaleza to various countries such as Colombia, Venezuela, United States, and Portugal, among others.

The most recent submarine cables to enter into commercial operation – in June 2021 –, from Fortaleza, were those of the Portuguese company EllaLink. The two new cables connect Brazil, through Fortaleza, to Sines, in Portugal, operating with a capacity of 100 terabits per second. The structure is the first to directly connect Brazil to the European continent, without relying on a connection via the United States.





Fiber Optic Map in Ceará, 2019

Fortaleza's strategic location, combined with the connection potential present in Ceará, should create opportunities and attract new business to the state.

“Many companies and data centers will be in Fortaleza to have direct connectivity with the EllaLink cables, which connect Fortaleza to Sines, in Portugal, so that there is a significant offer of products and we have faster communication. Financial, research and health institutions will also benefit”

-Lassance Castro, Etice's ex-president.



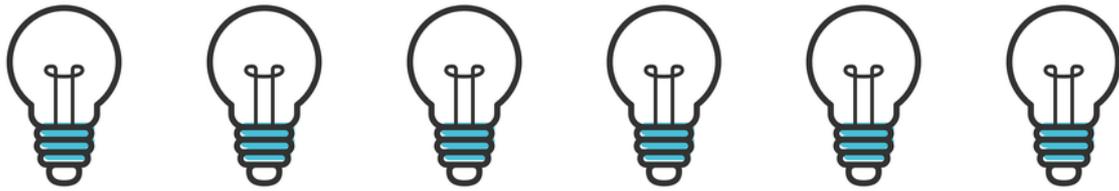
FORTALEZA IS LEADING IN TECHNOLOGY AND INNOVATION IN BRAZIL

More than a touristic center with paradisiacal places, Fortaleza is one of the cities that bets the most on smart solutions. The city has recently been recognized as a leader in technology and innovation in the country.



Logo of the Ranking, 2022

In the 2022 Connected Smart Cities Ranking, The capital was ranked first in the Technology and Innovation category and fourth in the overall ranking beating other major cities in the country. There have been made significant efforts to promote entrepreneurship and innovation, including the creation of the Fortaleza Innovation Laboratory and the Digital Youth program. The ranking evaluated various indicators related to smart services, such as average connection speed, smart traffic lights, technology parks, and business incubators. The ranking is expected to motivate society to invest further in technology and innovation for a more sustainable and humane city.



Driver of local innovation development

Because of its smart solutions like the "Bilhete Único" system, free Wi-Fi, shared transportation choices, and the Juventude Digital initiative, Fortaleza is regarded as one of Brazil's top smart towns.

The city wants to increase its residents' access to information and communication technologies while also fostering local creativity, technological research, and development. Fortaleza placed first in the area previously mentioned, and fourth in entrepreneurship in the 2022 Connected Smart Cities Ranking.

Also, the city boasts considerably fast internet connections and a very complete 4G signal coverage. Fortaleza is committed to supporting sustainable development through technology and innovation, with 8.3% of its workforce working in research and development and 4.95% in the ICT sector.



CEARÁ'S TECHNOLOGY HUB IS STRENGTHENED BY A BRAND NEW STRUCTURE!

The governor of Ceará, Elmano de Freitas, attended the launch of **V.tal's** second data center in Praia do Futuro, Fortaleza. The event was also attended by important figures of the government and members of V.tal's board of directors.

During his visit, the governor had the opportunity to explore the data center's advanced infrastructure. In his view, the facility represents an environment of connectivity that can generate job opportunities and help Ceará establish itself as a technology hub. He also stressed the importance of implementing 5G technology in areas such as health and education.

"Ceará has hard-working people who are eager to grow. This data center offers a chance for a better life for our people. A sustainable future requires favorable conditions, and the technology sector is critical to Ceará's economic development. To this end, we will strengthen our partnership," said Elmano de Freitas.

-Elmano de Freitas, governor of Ceará



The brand-new, state-of-the-art data center, known as "Big Lobster," is completely linked with the Submarine Cable Landing Station (CLS - Cable Landing Station), promoting enhanced security in data transfer owing to any outside interference. The company's other data center, totaling a park with around 7,000 m² of built area, is connected to the new data center, which is located in Praia do Futuro. There are more than 600 rack locations and more than 5MW of capacity.

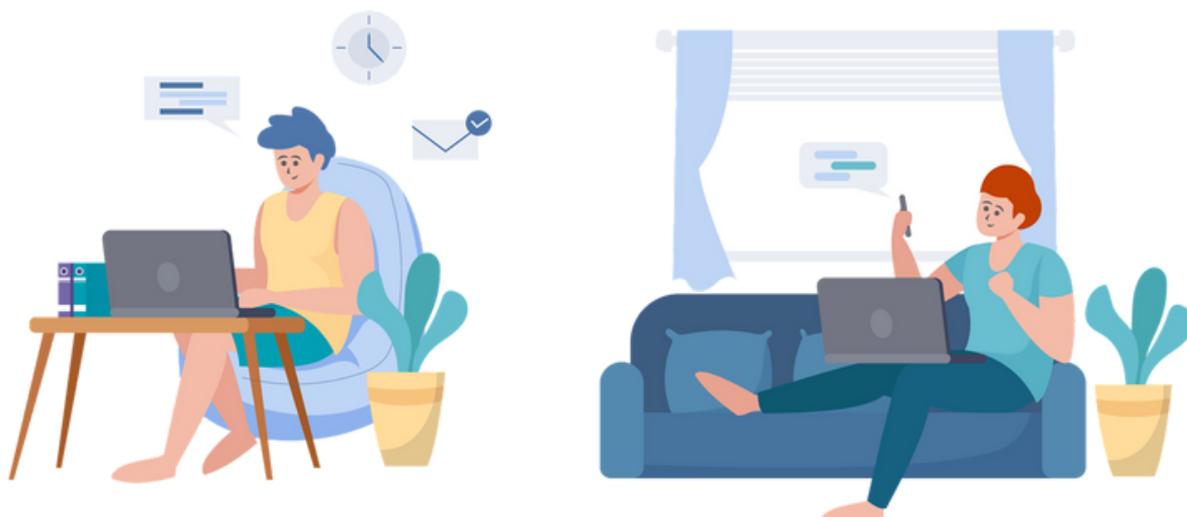
Investment

According to V.tal's vice-president of Strategy, **Eduardo Silveira**, the launch is part of the company's investment program for the expansion of data centers in Brazil, decentralizing from the Rio de Janeiro-São Paulo axis, and in more than five countries where it operates.

“V.tal is the largest neutral digital infrastructure solutions company in the country. We have more than eight thousand technicians working, having tripled the number of employees in Fortaleza. More than 2,000 municipalities are connected with fiber optics. Our infrastructure serves the entire country. We are ready for the future, new solutions, including 5G, with a more capillary network. All of this needs a data center, infrastructure and mobility, which is part of our growth tripod”

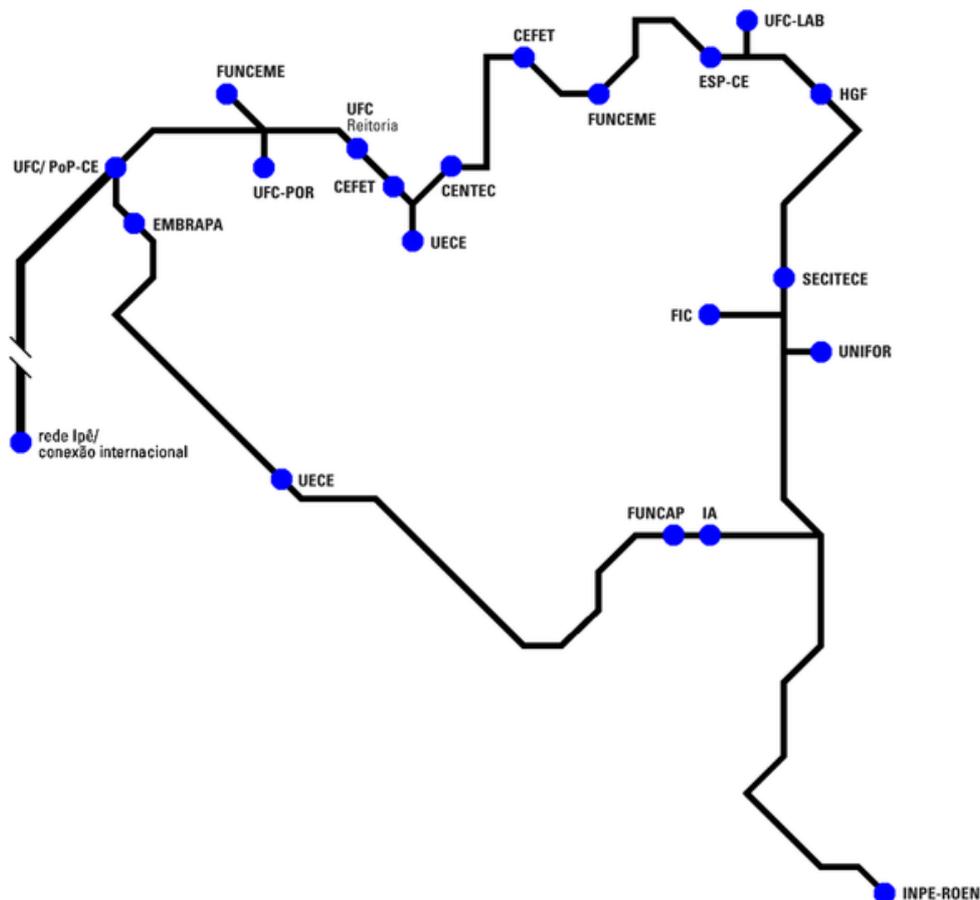
-Eduardo Silveira, V.tal's Strategy VP

V.tal has 20 million households available for FTTH (Fiber To The Home), 430,000 km of terrestrial fiber optics, and 26,000 km of submarine cables connecting Brazil to several countries. They also have edge data centers in Brazil and Colombia. The VP of V.tal said that their investments in Fortaleza were a result of the unique ecosystem created by the submarine cables and internet service providers. Anatel's counselor, Vicente Aquino Neto, emphasized that Fortaleza's natural and geographical conditions make it a vital hub for submarine cables, with over 90% of Brazil's internet traffic passing through the city.



HAVE YOU HEARD ABOUT GIGAFOR?

The Metropolitan Network of Fortaleza, also known as GigaFor, was inaugurated in 2008 and interconnects 15 participating institutions in the capital and metropolitan region of Fortaleza. The project enables the use of advanced applications and the exchange of large volumes of data. GigaFor was implemented by the National Education and Research Network (RNP) with an investment of R\$ 840,000 from the Financier of Studies and Projects (Finep) and assistance from partnerships with the Government of the State of Ceará, the city of Fortaleza, and the Energy Company of Ceará (Coelce).



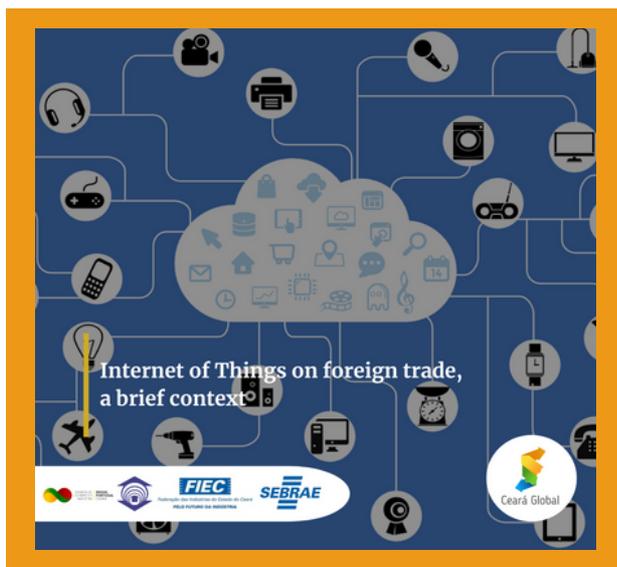
Map of the GigaFor Network

The Government of the State entered into an agreement with RNP to assign two pairs of optical fibers off the infrastructure of the GigaFor Network to promote the interconnection of government bodies and entities located in Fortaleza and the Metropolitan Region. The project aims to optimize the exchange of data, voice, and internet, reduce telecommunications costs, and improve the quality of interconnection between citizens and government bodies.

TECHNOLOGY POSTS on Ceará Global's social media

Technology is deeply rooted in countless daily processes, including in Foreign Trade. The use of intelligent technologies that support the monitoring of logistics processes has become one of the main competitive differentials. Therefore, LogTechs have emerged, that are technology companies that seek to solve problems and meet demands in logistics operations, based on a logistics 4.0.

Check out the full versions on our [LinkedIn page!](#)



The Internet of things (IoT) is a network of connected physical devices, vehicles, buildings, and other objects that collect and exchange data in real time. In foreign trade, it is being used to improve the efficiency and safety of logistics operations in various areas, such as cargo tracking, inventory management, border control, and quality control. IoT is allowing companies to better control their logistics operations.

At least 10 industries in Ceará are already integrating new technologies driven by 5G to have productivity gains. The list, which includes businesses in diverse sectors, from cosmetics to food or metallurgy, is part of a program by the Superintendence for the Development of the Northeast (Sudene) supported by the Institute of Electrical and Electronics Engineers (IEEE).



TECHNOLOGY POSTS on Ceará Global's social media

Ceará has been leveraging technology to drive foreign trade growth in recent years. With a strategic location and a strong transportation infrastructure, the state has been using technology to enhance its potential and improve its competitiveness in the global market. A notable technological advancement is the use of renewable energy sources in its export operations. Ceará is one of Brazil's leading states in the generation of renewable energy.

Check out the full versions on our [LinkedIn page!](#)



On March 20th, the government of Ceará received a delegation from Cameroon at the Palácio da Abolição. The delegation was made up of members of the country's embassy in Brazil and executives from Cameroon's state-owned telecommunications company, Camtel. Camtel's Director-General said in the meeting that the Cameroonian company's idea is to open a branch in Ceará because of the presence of the SAIL cable.

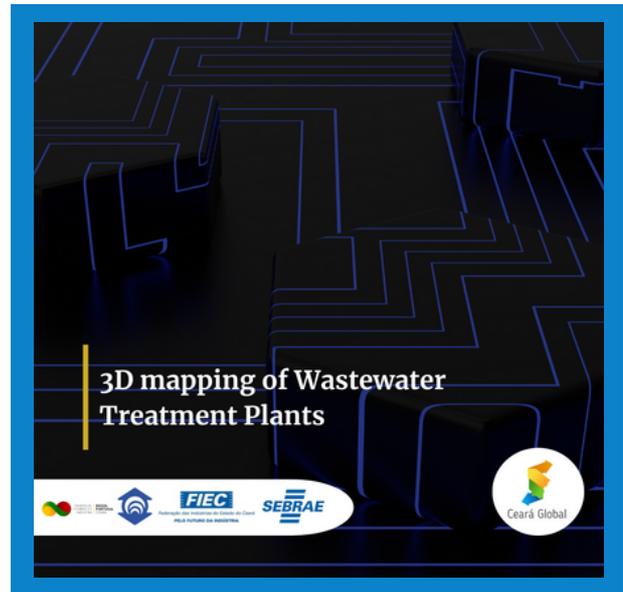
The Court of Auditors of the State of Ceará was present at the National Meeting of Technology and Innovation of Public Ministries and Courts of Auditors - Enastic 2023, held in Salvador, at the headquarters of the Administrative Center of Bahia (CAB), between the 7th and 9th of March. The meeting made it possible to present technologies and innovations aimed at the legal and inspection areas.



TECHNOLOGY POSTS on Ceará Global's social media

About 5,000 assets and more than 100 plants of the Sewage Treatment Plants (ETEs) of Ceará are being mapped and cataloged using drones, GPS, and 360° cameras. The technology used by Ambiental Ceará, through the Intelligent Infrastructure program, of Aegea Saneamento, speeds up the processes of the assisted operation period of the Public-Private Partnership (PPP) of basic sanitation.

Check out the full versions on our [LinkedIn page!](#)



Some countries have a robust IT ecosystem that drives their economy and generates a competitive advantage, but did you know about Ceará's IT ecosystem?

The state has great potential in various different areas, one of which is the IT sector. Today, we will talk a little bit more about the challenges and questions regarding the IT ecosystem of Ceará and all its potential.

Did you know that the Internet of Things (IoT) can be used to monitor the quality of the water?

That's what four students from the Federal University of Ceará (UFC) did to help the carciniculturists. The startup Stiiá Brasil commercialize an automated solution using the IoT that simplifies the production process and offers quality and convenience in shrimp production.





IGOR PONTES

PESSE LOGTECH

**Founder of PESSE Logtech
Technology in Logistics.**

What is Pesse LogTech and how did it come about?

Four undergraduate students were interning at Unifor's Vortex Lab together with me. We decided to start an enterprising venture. We built a software company and started to be entrepreneurial, developing projects for clients in several areas.

What was the problem identified in the market that led you to create the product?

The problem in the market is to have managerial information in real time in an easy and reliable way. Sensing technologies deliver hard data, which needs to be consulted through several clicks, worked in spreadsheets until it reaches the information desired by managers. We adopt a Big Data architecture that captures the data and processes it in seconds according to the customer's needs, whether it is information from a truck, or from various machines.

Which role do you believe technology plays in the logistics management of international trade?

This importance was revealed during the pandemic; whoever was able to view in real time where their product or container was, came out ahead. We call this the degree of transparency and visibility in the supply chain

How is the process of implementing new technological solutions in Foreign Trade and Logistics?

From our experience in the market, it is an arduous process of persuasion, especially when it is a genuinely regional startup. Therefore, we usually offer clients a trial period to get to know the product and the countless benefits it provides. In this process, we are also able to map the operation and suggest adjustments, with the objective of making the technology in tune with the operation.





IGOR PONTES

PESSE LOGTECH

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Which role do you believe technology plays in the logistics management of international trade?

We live in the age of Big Data, where data is compared to the gold or oil of the future. Real-time tracking, transparency, and visibility will be an increasingly important requirement for supply chains. To know from the point of origin to the point of destination, with a guarantee of provenance and of the route followed, will be an ever-increasing demand.

What are some of the biggest technology challenges that companies face in logistics?

The biggest challenge for logistics companies, is to change the organizational mindset. We understand that it is a traditional sector that has been developing and learning to operate through trial and error, resistance to innovation is natural. Another issue is the lack of technological solutions in the market. Some technology packages come to the sector, usually at a very high cost and without customization possibilities, that is, requiring the operation to adapt to the product.

How can we build a more Global Ceará?

We understand that a more global Ceará will be built through the qualification of young people in the most diverse areas. We need to reach levels of excellence in the provision of this service. We have observed some Brazilian ports creating innovation centers linked to the port, spreading the concepts of innovation and stimulating young people to insert themselves in this sector.



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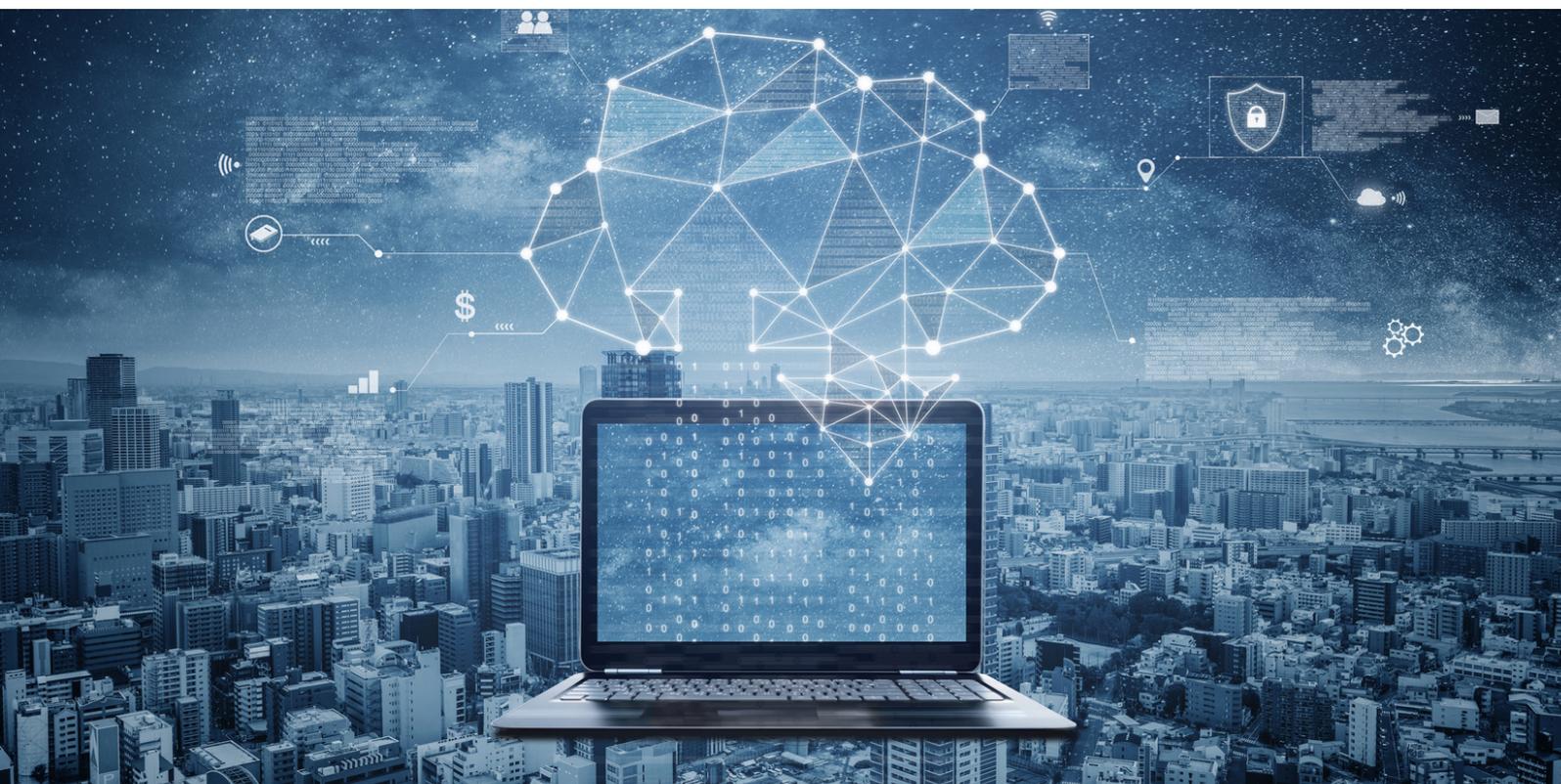
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