Fall / Winter 2022

The gateway to Mexico's business hub

Monterrey

TAKES THE BEST SHARE **OF FDI** in Mexico P. 30

MONTERREY will host the first "Mobility of the Future" Trade Show P.58

P. 43

MONTERREY takes the lead in the race towards

E-MOBILITY



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- + knowledge
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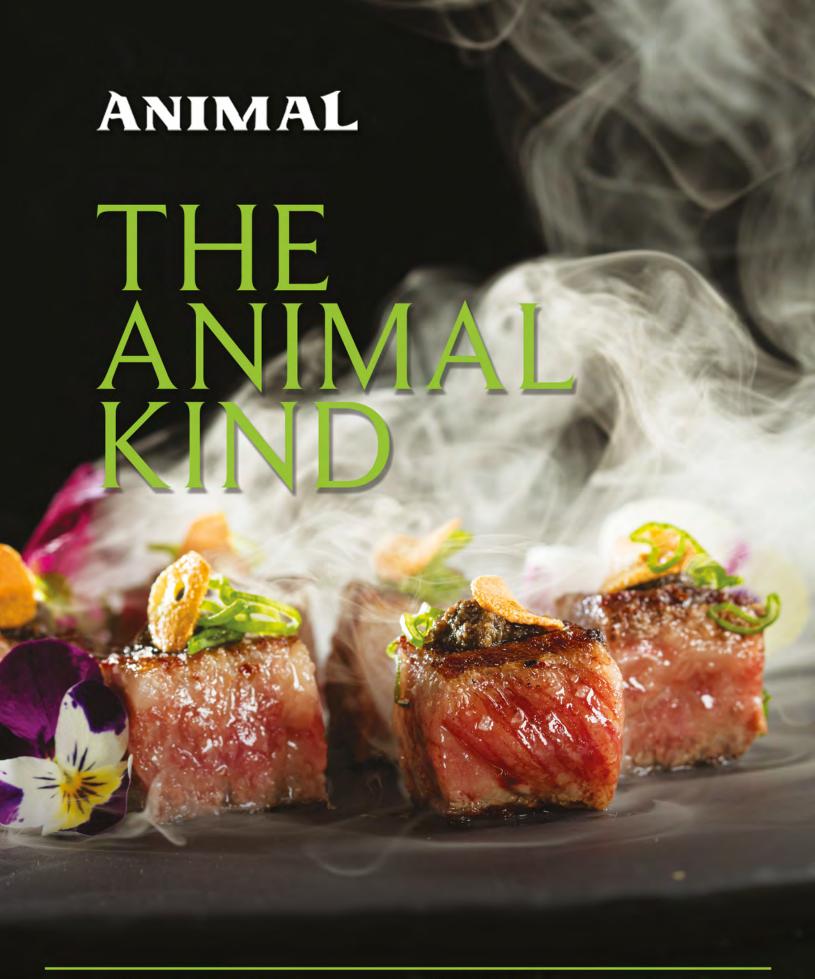
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BUSINESS DEVELOPMENT DIRECTOR

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MONTERREY

Land of Business, Land of Possibilities

Monterrey is the second largest city in Mexico and its main business hub. Strategically located just 200 kilometers south of the US border, Monterrey has positioned itself as one of the favorite destinations for multinational companies establishing operations in North America.

Monterrey is considered the best place to invest and do business in Mexico.

When you think about **Monterrey**'s early days, seeing the city as the sprawling, modern-day metropolis that it is today is not only impressive, but bordering on the unbelievable.

The city's remarkable transformation begs the question: "How did this global leader emerge from the region's once hard and rough soil?" The answer lies in its people.

The city didn't appear out of thin air, it was built from the ground up in an act that shows the great strength, willpower and sheer determination of its people.

CONCEPT

CONTACT

@INVESTMONTERREY

It takes one look at our history to confirm that there's nothing comparable to a regio's (the demonym of **Monterrey**'s residents) capacity to adapt to its surroundings and make the most out of every opportunity.

This legacy of a strong and determined spirit has stood the test of time, and it lives on in the people who make up **Monterrey**'s vibrant community of prepared, skilled, and hardworking businessmen and women.

Where the majority of people see a problem, regios see a possibility. Recognizing these opportunities and taking the necessary steps to turn them into reality has facilitated the establishment, growth, and success of a large number of the world's most prominent international companies in **Monterrey**.

These are just a few of the many reasons why **Monterrey** is known as the land of business, land of possibilities.

Invest Monterrey MAG

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Andres Ochoa-Bünsow

EXECUTIVE DIRECTOR

Hector Tijerina

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Elisabet Zuñiga

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Andres Ochoa-Bünsow

CHAIRMAN OF THE BOARD, INVEST MONTERREY

We are very pleased to close the year 2022 with encouraging figures in terms of attracting foreign investment and positioning Monterrey as an investment destination.

Even though this year was characterized by major changes in the industry, the migration towards more technological processes and caution in business decisions, Monterrey managed to continue being an engine of the national economy and one of the preferred destinations for investment in Mexico.

Since its founding, Monterrey has been characterized as a destination with a vibrant, hard-working and forward-looking community. Here you can find not only the most diversified economy, the most complete and integrated supplier base in the country, the most qualified and trained human capital, but also the best quality of life in Mexico.

Whether you are moving here to grow your business, pursue career opportunities, attend school, or enjoy your retirement, I know Monterrey's charm will provide a wonderful experience.





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Special Sections



Samuel Garcia

GOVERNOR OF THE STATE OF NUEVO LEON, MEXICO

I am delighted to extend greetings to readers of Invest Monterrey Magazine.

Monterrey's thriving economy is a leading contributor to Mexico's GDP. Our state is home to the country's most productive and skilled workforce, a business-friendly climate, outstanding universities, cutting-edge technology facilities, premier art museums, modern shopping centers, a world-class healthcare system, top-notch infrastructure, and a vibrant community. Its privileged location and great connectivity, make Monterrey the most attractive destination for foreign companies willing to establish operations in Mexico to do business not only with our country, but with the whole region of North America.

Welcome to Monterrey.

Since 1999, Monterrey has been the largest recipient of foreign direct investment in Mexico, with more than 4,000 foreign-capitalized companies operating successfully in a diverse range of industries.

In the wake of the COVID-19 pandemic, Monterrey has emerged as the front runner in the economic recovery race, leading employment creation in Mexico, even surpassing the pre-pandemic level.

This is the result of a mature collaboration model where government, private sector, universities, and society work together to achieve a common goal: to make Monterrey the best place to be born, grow, study, work, and live.

Monterrey, the Mexican Technological Hub

Monterrey has been a leader in Foreign Investment at-traction in recent years. From 1999 to 2Q2022, the state has attracted \$62.4 billion USD, positioning as first place nationwide, after Mexico City. Most of the investment that Monterrey receives is directed to the manufacturing industry, which has attracted large and important companies such as Caterpillar, KIA, Mercedes-Benz, Stanley Black & Decker, Lego, Denso, Schneider Electric, Siemens, Hershey's, among many others.

During the past months, important companies have announced new productive investment projects in Monterrey, such as Forvia, AGP, ZF and Quanta. This is positioning Monterrey as an engineering hub in Mexico for the mobility of the future.

Mr. Rivas has recognized that Monterrey will continue to welcome manufacturing projects with open arms, from companies that see the state as an attractive destination to establish these types of operations, due to its strategic location, the high-skilled workforce, the mature business ecosystem, among many other competitive advantages; however, the priority to go out to the world looking to attract new investment projects will be focused on the economy of the future. Attracting this type of projects will eventually make the state desirable for many entrepreneurs.

Mr. Rivas trusts that just like California in the United States, Monterrey can also become the hub for technological innovation, entrepreneurial spirit, and a lifestyle founded on technologically based wealth for Mexico. He believes that Nuevo Leon must start thinking about technologies and sectors of the future, such as information technologies, artificial intelligence, cybersecurity, electromobility, Industry 4.0 operations, among many others.

The main axes on which the local Ministry of Economy is working on are the attraction of Foreign Direct Investment (FDI) with a vision in the "industries of the future", the promotion, reactivation and development of micro, small, and medium-sized businesses (SMEs), and the development of regulatory reforms to ensure certainty.

Mr. Rivas has it clear that companies need the government to be an ally and a facilitator that ensures certainty to new projects, and has the firm commitment to keep the collaboration with the different actors participating in the foreign investment attraction, to add efforts and generate better conditions for growth and development.

"After the entrepreneurs arrive, the investment that comes to support them, will turn Nuevo Leon into the next Mexican Silicon Valley."

- Rivas Rodríguez





Monterrey: From arid land to the Industrial Capital of Mexico

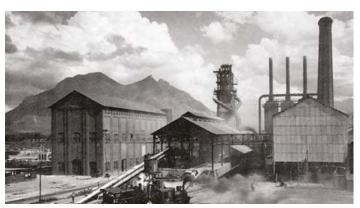
After being founded twice, once in 1577 and again in 1582, the city of Monterrey, with 12 people, was formally and finally established in 1596 with the name "La Ciudad Metropolitana de Nuestra Señora de Monterrey" in honor of the Viceroy of New Spain (also known as Count of Monterrey).

The diverse and changing climatic conditions made it difficult for the first two settlements to grow and develop in the region, forcing their inhabitants to migrate to more stable lands. However, the dedication and persistence of the city's inhabitants gradually boosted Monterrey's development, and after hundreds of years the city became, for a little while, Mexico's capital city in 1864.



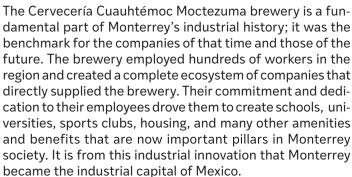
Like any other city starting out on its journey, Monterrey's activities focused, for hundreds of years, on farming, cattle raising and mining. However, in a very accelerated way, the city's industry and economy took an exponential leap at the end of the 19th century, boosted by the direct connection by railroad between Laredo, Texas and Monterrey, which gave rise to the attraction of foreign investment.





The city began to gain life and relevance in 1890 when industrial companies began to emerge. The entrepreneurial heart of Monterrey's inhabitants gave rise to the creation of the brewery 'Cervecería Cuauhtémoc Moctezuma' and the foundry 'Fundición de Fierro y Elaboración de Maquinaria Monterrey'. These two companies of very different industries initiated the industrial development and revolution of the state of Nuevo Leon, setting the basis for other entrepreneurs to create their own companies for the production of furniture, clothing, cigars, soap, steel, among many others.



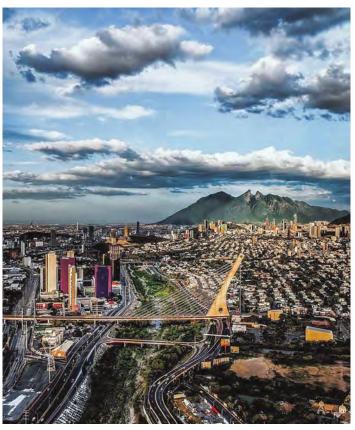




The city of Monterrey started to grow disproportionately, in all senses of the word, in the 1930s. Working families were drawn to the area when factories appeared, first from Nuevo Leon's rural areas and later from neighboring states like San Luis Potosi. In 1950, Monterrey had 350,000 residents, 4,000 companies, and 90,000 employees. This led to the growth of the municipalities surrounding the capital. Between the years of 1950-1960, the population nearly doubled, growing at a rapid rate of 6.7% annually. Monterrey's accelerated growth led to the uprising of neighboring municipalities, each of them with their own competitive advantages. What started with 2 cities annexing themselves to the metropolitan area of Monterrey, has now become a metropolis made up of 13 cities, with the capacity to attend to the needs of every person, company, or industry.



Over the years the city has developed more and more, becoming today the second largest metropolitan city in the country with more than 5.3 million inhabitants. Its exponential growth has been possible due to the people living here and their hard working culture. Monterrey's labor force of nearly 2.9 million people is responsible for shaping up Monterrey to what it has become today. It is regarded as the most important industrial city in the country, as the largest contribution to the secondary industries nationally. Nonetheless, it is also the third most important contributor of tertiary activities. Monterrey's exceptional geographic position, and its prosperous economy, has allowed it to be the perfect link between the Mexican and American economies.

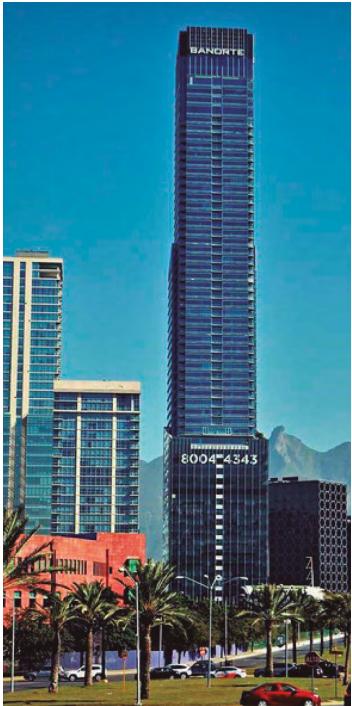




Monterrey is now a focal point for people around the world. Its modern and immersive architecture is widely renowned. Buildings such as Torre Koi and Torre Obispado, the tallest building in Latin America, are proof of the modernization that our city has experienced. Nevertheless, the city still has strong cultural, historical, and artistic value. To this day, Monterrey has historical venues, museums, and cathedrals that are reminiscent of our origins. Monterrey has rebranded itself, from a small city with high industrial potential, to one of the most important cities in Mexico, with a technological and diverse economy, which keeps implementing innovation in its value chain, focusing on creativity and innovation.



Monterrey has shown throughout history its willingness to move forward. From its origins, it was regarded as an inhospitable land, with a very difficult climate and landscape. Regardless, its founders did not give up on this land, and did all they could to transform it into a sustainable community. The city was able to adapt to Mexico's emerging industries, and the needs of the globalized economy that we live in. Its will power is the driving factor in its prosperous development. Monterrey has proven it has what it takes to be Mexico's economic hub.





Monterrey at a glance

NUEVO LEON | MEXICO

Most productive and high skilled workforce in Mexico

Monterrey is the 2nd largest city in Mexico:

5.8 million inhabitants



Monterrey is the educational hub of Mexico

and is among the most bilingual cities in the country and Latin America.

+8,000

Engineers graduates per year

Largest engineering school in Mexico

+150

universities

+1,000

Master and PhD graduates per year

Best ranked Business Schools and MBA Programs in Latin America + 246

technical schools

Economy

Mexico's Largest Recipient of Foreign Direct Investment*

\$3.2 B USD in 2021

*After Mexico City

9.4%

of the country's exports are from Monterrey (\$41.4 billion USD, 2021)



\$19,000 USD GDP per capita

88% higher than

the national average

4th state with the highest exports in Mexico

GDP: \$102 B USD

Mexico's Industrial Capital

Monterrey leads the country in job creation (2021)

+86,000

55% in the Manufacturing

Monterrey is the city with the most industrial parks in the country:

+140

Industrial Parks

+4,000 foreign-capitalized companies

amazon

and the second

CATERPILLAR®

Leader in Industry 4.0 in Mexico

KI

StanleyBlack&Decker

Heineken

DAIMLER

■ Kawasaki

Infosys

Hisense

HERSHEY'S

Whirlpool

Logistics Hub in Mexico

200km south of the US border

Colombia International Bridge, daily capacity of:

+12,000 trucks



+300 daily flights > **+40** destinations

in Mexico and around the world



For more information: www.investmonterrey.com

Foreign Direct Investment (FDI) Report

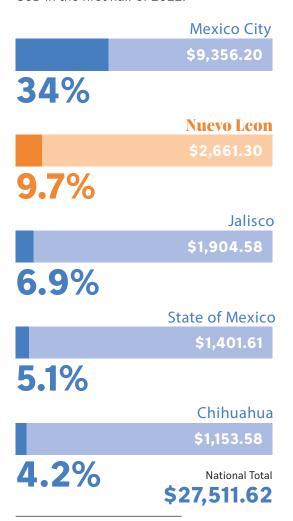
FIRST SEMESTER 2022

1. FDI in Mexico, by state

Figures in millions of USD %: Share

FDI First Semester 2022

Mexico attracted a total of \$27,511.6 million USD in the first half of 2022.



FDI Second Quarter 2022

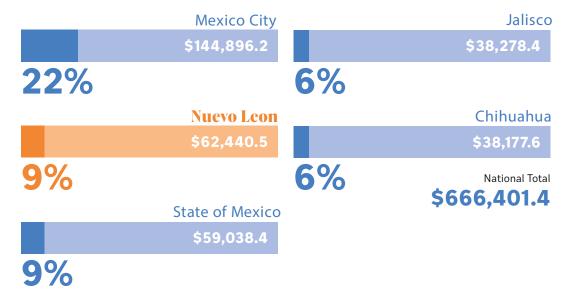
Mexico attracted a total of \$7,204 million USD in the second quarter of 2022.

	Nuevo Leon
	\$1,448.37
20.1%	
	Mexico City
	\$1,086.27
15.1%	
	Jalisco
	\$547.62
7.6%	
_	State of Mexico
	\$508.52
7.1%	
	Guanajuato
	\$411.08
5.7%	National Total \$7,204

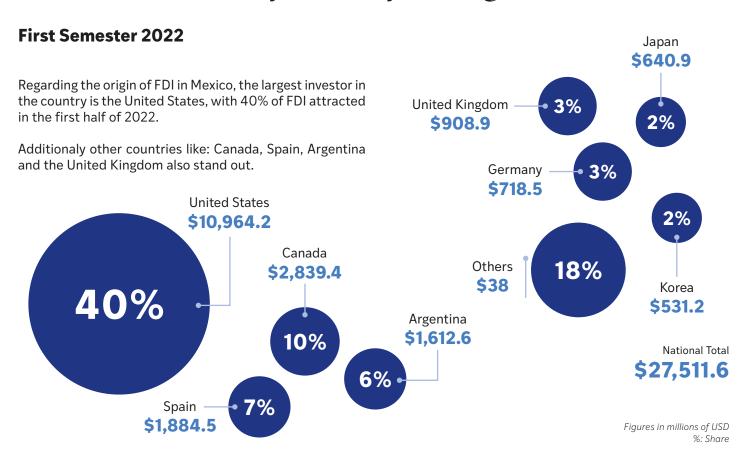
2. FDI in Mexico, by state

Figures in millions of USD %: Share





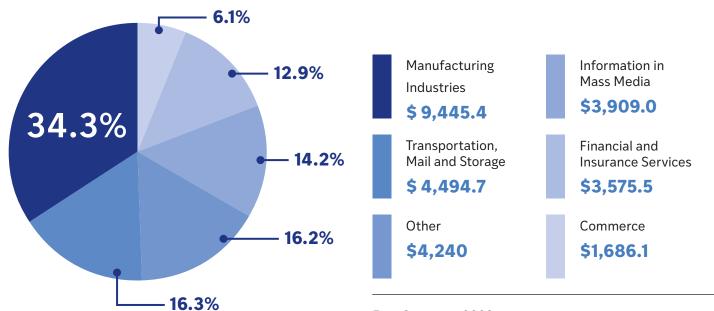
3. FDI in Mexico, by country of origin



4. FDI in Mexico, by sector

First Semester 2022

In the first semester of 2022, the sector with the highest FDI in Mexico was the manufacturing industry, representing 35% of the total investment captured.



First Semester 2022

\$27,511.6 Figures in millions of USD.



5. FDI in Nuevo Leon

Second Quarter 2022

In the second quarter of 2022, Nuevo Leon maintained its leadership in attracting Foreign Direct Investment, ranking first among all states, with \$1,448.37 million USD, representing 20.1% of the national total.



FDI in Nuevo Leon, Second Quarter 2022

Nuevo Leon stands out in first place nationwide **as the state** that attracted the most FDI in the second quarter of 2022.

The FDI attracted by NL in the second quarter of the year represents 20% of the FDI attracted by Mexico in this period.

Nuevo Leon attracted a total of \$1,448.37 million USD in the second quarter of the year (preliminary figure).

FDI in Nuevo Leon in 2Q2022 increased 30.9% compared to the previous quarter (preliminary vs. preliminary) (\$1,105.8 million USD in 1Q2022).

FDI in Nuevo Leon, First Semester 2022

The \$2,661.3 million USD attracted by Nuevo Leon in the first half of 2022 represents an 83% increase compared to the preliminary FDI figure captured by the state in the first half of 2021 (\$1,454.8 million USD).

FDI in Nuevo León in the **first half of 2022**, represents **82% of the total FDI attracted by the state in all of 2021** (\$3,232.3 million USD).

The \$2,661.3 million USD attracted by Nuevo Leon in the first half of 2022, represents the highest figure in the state for a first semester in the last 12 years.

It is the highest figure in the history of Nuevo León for a first semester, not taking to consideration the extraordinary investment that occurred in the first semester of 2010, with the acquisition of Cervecería Cuauhtémoc Moctezuma by Heineken. That year, \$3,890.2 million USD were registered in the first half of the year.

FDI in Nuevo Leon, 1999-2022

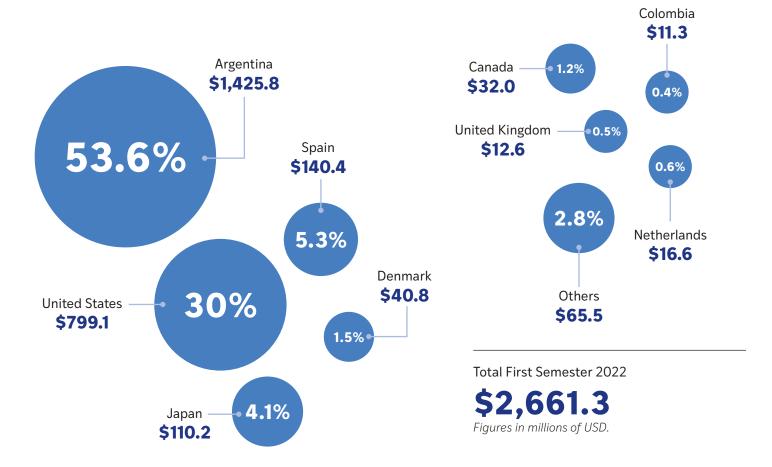
Nuevo Leon ranks **second nationwide in FDI attraction** with a total amount of \$62,440 million USD since 1999.

FDI captured by NL since 1999 represents 9% of the FDI attracted by the country.

6. FDI in Nuevo Leon, by country of origin

In the first half of 2022 the largest investor in the state was Argentina, with a total of \$1,425.8 million USD, representing 53.6% of the total captured by the state in that period.

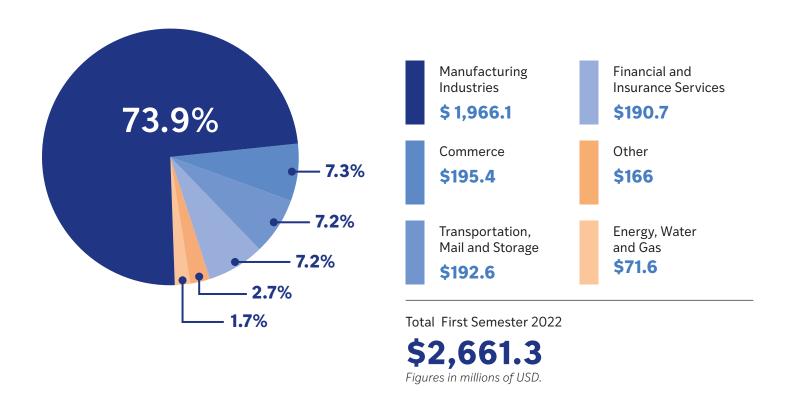
Additionaly other countries like United States, Spain, Japan and Denmark also stand out.





7. FDI in Nuevo Leon, by sector

In the first half of 2022, the sector with the highest FDI in Nuevo León was: Manufacturing Industries.



Nuevo Leon was the state in Mexico that attracted the most FDI in the manufacturing industries in the first half of 2022.

Тор 3	1. Nuevo Leon	2. Mexico City	3. Guanajuato
FDI	\$1,966.1	\$1,570.9	\$867.4
Share %	21%	17%	9%

Total First Semester 2022

\$9,445.4

Figures in millions of USD.

Monterrey takes the best share of FDI in Mexico

MONTERREY ATTRACTED 20% OF MEXICO'S TOTAL FOREIGN DIRECT INVESTMENT IN THE SECOND QUARTER OF 2022, THE BEST FIGURE NATIONWIDE; IN THE FIRST HALF OF 2022 IT ALREADY ACCUMULATED 2.6 BILLION USD.

Between April and June, the state registered \$1.44 billion USD of FDI, which represented 20.1% of the nations total and was also the highest figure.

This amount, added to the \$1.21 billion USD of FDI registered in the first quarter of 2022, which gives a cumulative total of \$2.66 billion USD.

Analyzing the semester, Mexico City alone came in first place, with an investment attraction of \$9.35 billion USD, driven, according to analysts, by the merger of the companies Televisa and Univision.

The foreign investment registered by Nuevo Leon between last January and June, that is, in the first half of this year, is only surpassed by what the state registered in the first half of 2010, when the transaction between Heineken and Cervecería Cuauhtémoc took place.

The \$1.44 billion USD in the second quarter of 2022 was 19.4% higher than the \$1.21 billion USD in the first quarter and more than four times the amount registered from April to June of 2021.

In the analysis of the first semester of 2022, Monterrey registered 10% of the \$27.51 billion USD of FDI reaptured by Mexico, according to the figures of the Federal Ministry of Economy.

"This is a great moment for Monterrey, many value-added companies are arriving as well as many projects that have important technology transfer," said Hector Tijerina, director of Invest Monterrey.





Relocation of companies drive the arrival of investment

MONTERREY'S MAIN COMPETITIVE ADVANTAGES SUCH AS ITS QUALITY OF LIFE, SKILLED LABOR FORCE, AND CONNECTIVITY FAVOR FOREIGN INVESTMENT.

The 2.66 billion USD attracted by Monterrey in the first semester, says Héctor Tijerina, director of Invest Monterrey, were driven by the "nearshoring" phenomenon, which favors the relocation of production centers.

"Many companies that are looking to establish operations in North America do this in the state, since they find the talent, the connectivity that our city of Monterrey has, the proximity to the United States, the infrastructure, the quality of life, and the universities," ensures.

The interest of the companies to settle in Monterrey, is reflected in the occupation of the industrial spaces.





"Monterrey generally registers eight million square feet (ft²) of industrial absorption every year and with that, Monterrey is the first place in the category. In 2021, the state recorded 16 million square feet of industrial absorption," he says.

The record-breaking 2021 has resulted in the development of new industrial parks in different areas of Monterrey and the construction of new facilities.

Tijerina points out that 60% of the foreign capital invested in Monterrey derives from the expansion of companies already installed in the entity.

That means that these companies "are finding everything they need in Monterrey and that they are achieving success."

China increases interest

Although the United States, usually leads FDI in Mexico, China has begun to show greater interest in the relocation of its companies, so much so that, according to the director of Invest Monterrey, together they already represent more than half of the investments.

"Companies are relocating from the United States, a country that always leads in investment attraction, but today China is rapidly moving up to the charts to second place. Between the US and China they account for 60% of what has been registered," he commented.

For a historic closing

The Ministry of Economy of the state of Nuevo Leon alongside its Secretary Ivan Rivas, bets to close 2022 with record figures of Foreign Direct Investment.

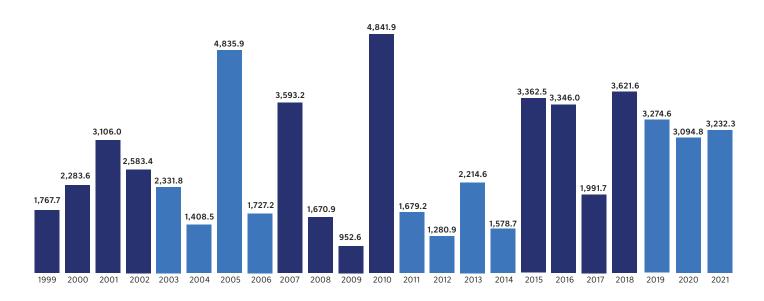
Recently, the state official showed his optimism regarding the results obtained in the first semester of 2022 and anticipated that "more than \$5 billion USD could be reached by the end of this year."

This, thanks to the relocation of companies and external factors that favor the entity.

A healthy segment

Evolution of Foreign Direct Investment (FDI) in Monterrey.

Foreign Direct Investment 1999-2021



Figures in millions of USD.



Manufacturing in the Age of Technological Transformation

BY ALBERTO VILLARREAL MANAGING DIRECTOR AT NEPANOA

In both business and in life, the difference between those who thrive and those who simply survive, is not only the degree in which they are able to adapt to changing circumstances, but also leverage opportunities for change. Companies must equip their operations with the ability to transform and consistently re-adapt if they are to thrive and remain competitive in their industries. By establishing operations in new countries, redesigning supply chains, and integrating innovative technologies, they can harness emerging opportunities and set themselves up for sustainable success.

Given today's climate, it is safe to say that the integration of technology into a company's operations is essential to their success. For the manufacturing sector, this integration contemplates people, machines, and tools. It takes shape through the automation of all or some parts of the sector's operations using cutting-edge technologies like Robotics and Artificial Intelligence (AI), Enterprise Resource Planning systems (ERP), and Additive Manufacturing.

Robotics and AI aim to enhance productivity by introducing automation. With the progress of AI, typical industrial robotics has evolved into a new sort of collaborative robot, capable of sensing their surroundings, comprehending, acting, and learning, bringing customer satisfaction, efficiency and reliability of products.

Robotics and Al aim to enhance productivity through the automation of repetitive tasks and processes, speeding up operations and allowing humans to focus on work where their judgment is needed. Al-based robots in the manufacturing industry can be programmed to improve performance by identifying faults, offering quicker and more efficient ways for correction. Their roles can be autonomous or collaborative, and they can predict machine maintenance by sorting through hordes of data in a fraction of the time.

ERP systems are management software tools that incorporate all key business processes, including production planning, accounting, inventory management, marketing, sales, finance, and human resources, into a single system with a common database, allowing the company to automatically collect data, order materials for production, simplify processes, eliminate waste and redundancy, among others. Regarded as a leader in the use of Lean manufacturing within the ERP system, Oracle's Flow Manufacturing module has been distinguished for its effectiveness in the reduction of product cycle times, and the minimization of inventories and process complexities, enhancing companies' overall performance.

Additive Manufacturing (AM), also known as 3D printing, has been gaining significant traction within the sector due to its numerous advantages. First, AM is a more sustainable approach to manufacturing, producing minimal carbon footprints throughout the different stages of product development and production.



Second, it optimizes product design by printing multiple components in much simpler configurations, resulting in easier assemblies. Lastly, it eases the production process, because unlike traditional manufacturing methods that use subtraction (such as cutting and shearing) and shaping (like stamping, bending, and molding), AM involves the joining of materials to create pieces in one step.

Nevertheless, all of these benefits can be easily missed if the implementation is not done adequately. It is of crucial importance for companies to set themselves up for success by not only leveraging the correct tech solutions, but by also having the most agile and efficient management strategies in place.

Most problems associated with the introduction of new technologies are often technical, administrative and cultural, therefore companies should seek highly experienced advisors with the adequate technical and functional expertise to facilitate the implementation process. Additionally, advisors should help the company go beyond implementation and into true company-wide adoption of their transformations by effectively engaging all stakeholders and accompanying them every step of the way.

For manufacturing companies seeking to be at the fore-front of the technological wave, it is necessary for them to undergo significant transformations. At Nepanoa, we partner with multinational companies operating in the United States, Mexico, and LATAM to execute major transformation initiatives. Our highly experienced team is ready to accompany your business through your most challenging endeavors to help you succeed.

Nepanoa means
"to accompany".
Nepanoa accompanies
multinational
businesses through
expansion and
transformation
endeavors in the
United States and
Latin America.



Becoming an employer of choice in Monterrey

MONTERREY OFFERS SKILLED WORKFORCE & A GROWING POOL OF PEOPLE; COMPANIES SHOULD CREATE A UNIQUE EMPLOYEE VALUE PROPOSITION (EPV) IN ORDER TO ATTRACT AND RETAIN TALENT.

Compensation

One of the most important factors to take into consideration when creating an attractive EPV is compensation. According to our latest 2022 salary & benefits survey in Monterrey, these are the average salary range for key manufacturing positions:

Position (Hourly)	Average Salary Range (Daily Rate)	Position (Salary)	Average Salary Range (Monthly Rate)
General Operator	\$300 MXN - \$345 MXN	Process Engineer	\$41,050 MXN - \$47,206 MXN
Maintenance Technician	\$641 MXN - \$738 MXN	Production Planner	\$29,041 MXN- \$33,350 MXN
Forklift Operator	\$400 MXN - \$450 MXN	Maintenance Jr. Engineer	\$26,917 MXN - \$30,954 MXN

MOST COMPANIES OFFER AN INCREASE OF SALARY/CATEGORY TO HOURLY EMPLOYEES WITHIN A RANGE OF 30 TO 45 DAYS AFTER THE PERSON IS HIRED. THIS IS A COMMON PRACTICE AND CANDIDATES USUALLY ASK ABOUT THIS DURING A RECRUITMENT PROCESS.

Becoming an employer of choice depends on the joint work of all areas of a company. Specially HR + Operations + Communication must define together a proper strategy/formula to achieve the following:

- Ensure that you provide a competitive salary + superior benefits according to the area/municipality/industrial park.
- Build a consistent, genuine and valued company's culture.
- Make a conscious effort to design a good candidate/employee journey (from before a candidate is hired and during onboarding and offboarding processes).
- Promote training and development of employees of all levels.
- Identify emerging leaders and "brand influencers".

MXN: Mexican Pesos 1USD = 20 Mexican Pesos

Benefits & Perks

In Monterrey is a common practice to offer a superior benefits package to the mandated by law, some of the following are not obligatory but are expected by employees:









Transportation

Meals

Grocery Vouchers

Savings Fund



Medical & Life Insurance



Additional Bonuses



Extra Christmas Bonus



Additional Paid Vacation Days

Prodensa is a consilting and project management firm with 35 years of experiense assisting manufacturing start-up projects in Mexico through strategic advisory and hands-on support. From shelter operations to consulting and advisory insights, we've got you covered. Over 1,000 multinational corporations have entrusted their operations in Mexico to our local experts.



WHAT TOP COMPANIES ARE DOING

High-quality & safe facilities

Employee events (focused on the employees and/or their children/family)

Christmas party

Communication strategies using local influencers or promote employer brand on popular TV Shows

Wellness & Health Centers

Cafeteria thematic events (BBQ, Food Trucks)

High-quality transportation service (A/C, Wi-Fi)

Salary-on-demand

Flexible Work Schedules & Spaces (Salary Employees)

Fixed shifts (Hourly Employees)

OUR RECOMMENDATIONS

Cross-cultural training is required

Employee satisfaction survey is auseful tool

Good leadership, supervision and development is essential

Companies should provide competitive salary & benefits

Apply local best practices

Invest Monterrey's successful Business Missions throughout Europe in 2022

Business Mission to Germany

A business mission to Germany organized by the Ministry of Economy of Nuevo Leon and Invest Monterrey wrapped up a successful week full of meetings with the aim of promoting the state as one of the most attractive destinations for investing in North America.

The triple-helix delegation (Government – Companies – Universities) from Nuevo Leon was headed by Ivan Rivas, Secretary of Economy. The delegation included Anabell Flores, Director of Investment of the State of Nuevo Leon, Andres Ochoa, President of Invest Monterrey, Hector Tijerina, Executive Director of Invest Monterrey, Clelia Hernández, Director of NL 4.0, and Manuel Montoya, Director of the Automotive Cluster of NL, among many others.

Partners from Invest Monterrey were also an important part of the delegation that travelled to Germany: Paulina González (American Industries), Nicole Felix (FINSA), Miguel Cavazos (Citius AG), Eduardo Diaz (RMSG), Rogelio Soto (Prodensa), and Nasser Mohamed (UANL).





The delegation from Nuevo Leon participated in the world's leading trade show for industrial technology: Hannover Messe 2022. After two years impacted by the pandemic, the event attracted more than 75,000 visitors and 2,500 exhibitors to discuss the latest trends in industrial technology like Industry 4.0, Hydrogen, Artificial Intelligence, E-Mobility, Machine Learning, and Robotics.

Dozens of business meetings were held with transnational companies, chambers of commerce, educational institutions, public sector representatives, and international organizations. The delegation from Nuevo Leon also teamed up in Hannover Messe with counterparts from Jalisco, Aguascalientes, Querétaro, and Puebla in promoting Mexico as an attractive investment destination.

At Hannover Messe 2022, Alejandro Preinfalk, CEO of Siemens Mexico, announced a \$35 million USD investment to expand the company's operations in Monterrey. The 'Mitras Project' will create 450 new jobs in Siemens' largest facility in Mexico. Siemens is the largest industrial manufacturing company in Europe, with an annual revenue of more than 90 billion USD and 300,000 employees around the world.

As part of the activities in Hannover, the Secretary of Economy, Ivan Rivas, had the opportunity of highlighting Nuevo Leon's competitive advantages for doing business at the Global Investment Convention, organized by Crescendo Worldwide, alongside representatives from investment promotion agencies from Portugal and India.

After Hannover, the delegation traveled to south Germany, to the State of Baden-Württemberg, one of the most powerful economies in Europe (GDP: 570 billion USD), home to big companies like Daimler, Bosch, and Porsche, and the one with the most 'hidden champions' in the world.

'Hidden Champion', is a term used in Germany to describe medium-sized companies (with a revenue below 5 billion USD), mostly family-owned, that are highly specialized world-market leaders with a low level of public awareness. According to Professor Hermann Simon, there are 1,300 'hidden champions' in Germany, which is almost half of the 2,700 that exist worldwide. The state of Baden-Württemberg has around 400 'hidden champions'.

Alongside the Ministry of Economy of the State of Nuevo Leon, the Mexican Embassy to Germany, and Deloitte, Invest Monterrey organized a business seminar in Stuttgart, the capital of the State of Baden-Württemberg, to promote Monterrey I Nuevo Leon as a top investment destination among German companies interested in expanding operations to North America.

The companies who attended the seminar were able to hear information from experts in fields like real estate, taxes, and labor, by Invest Monterrey's partners Citius AG, RMSG, Deloitte, American Industries, Prodensa, Zeitgeist, and TMH.

The delegation also visited companies directly in their headquarters all around Baden-Württemberg:

Kern Liebers, global technology leader in the production of high-precision metal parts, announced an investment to expand its current operations in Monterrey. With this project, the company will be reaching a total of more than \$7 million USD in investments since they arrived in Monterrey and 450 jobs. Kern Liebers is considered a 'hidden champion'.

Trumpf, a 'hidden champion', global leader in the production of machine tools and laser technology, shares with the delegation the latest technology and their growth plans. The company has a 90-employee operation in Monterrey, where they produce components for high-tech industrial machines.

Daimler Trucks is one of the world's largest commercial vehicle manufacturers, with a revenue of more than 40 billion USD, more than 100,000 employees, and over 40 production sites around the globe, one of them in Monterrey, where they have 800 people and 600 local suppliers. The company shared with the delegation an insight of their future plans for their operation in Monterrey, which will be focused on electrification.

Bosch is one of the largest companies in the world with a revenue of more than 80 billion USD and 400,000 employees worldwide. Through its consumer goods subsidiary, B/S/H, the company recently announced a 260 million USD investment in a carbon-free facility in Monterrey that will create 1,500 new jobs, located inside Interpuerto Industrial Park. The company's executives shared with the delegation insights of their future facility in Monterrey, where in a first phase they will be producing high-end refrigerators for the North American Market.





Business Mission to the United Kingdom

A trade mission to the United Kingdom led by the Ministry of Economy of Nuevo Leon and Invest Monterrey wrapped up a successful week full of meetings with the aim of promoting Monterrey as one of the most attractive destinations for investing in North America.

The delegation was headed by Anabell Flores, Director of Investment of Nuevo Leon, and Héctor Tijerina, Executive Director of Invest Monterrey, alongside members of Invest Monterrey: David Barrera (Banco Base), Nicole Felix (FINSA), Carlos Alvarado (Prodensa), Pablo Culebro (RMSG), and Humberto Garza (Terraregia).

FARNBOROUGH INTERNATIONAL AIRSHOW

A booth to promote Monterrey was part of the Mexico Pavilion at the Farnborough International Airshow 2022, the world's leading event in the aerospace industry, which hosted more than 1,500 exhibitors from 48 countries and more than 80,000 attendees, who gathered for 5 days to reconnect, do business, and discuss future technologies.

Dozens of business meetings were carried out by the Monterrey delegation with representatives from multinational companies, chambers of commerce, educational institutions, public sector officials, and international organizations.



INVESTMENT PROMOTION SEMINAR IN LONDON

Alongside the Ministry of Economy of the State of Nuevo Leon, the Mexican Embassy to Germany, and Baker McKenzie, Invest Monterrey organized a business seminar in London, to promote Monterrey | Nuevo Leon as a top investment destination among international site selectors, chambers of commerce, and British companies interested in expanding operations to North America.

The attendees were able to hear information from experts in fields like real estate, finance, human resources, and much more from Invest Monterrey's partners Banco BASE, FINSA, Prodensa, RMSG, and Terraregia.



MEETINGS WITH IMPORTANT BRITISH COMPANIES

The delegation visited BAT, one of the largest companies in the UK, at their global headquarters in London. The company has been operating in Monterrey since 1997, which has become one of their most important in the world, surpassing 3,000 employees and exporting from there to multiple countries.

Renishaw was another company with whom the Monterrey delegation met during the trade mission at their global head-quarters in Gloucestershire. Renishaw is one of the world's leading engineering technology companies and already has a successful operation in Monterrey, with room to grow.

More meetings were held during the week with companies that in recent months have shown interest in establishing an operation in Monterrey.

THE STRONG ECONOMIC RELATIONSHIP BETWEEN THE UK AND MEXICO

The United Kingdom is Mexico's sixteenth global trading partner, as well as the country's eighth source of foreign investment. On December 15th, 2020, both countries signed a Trade Continuity Agreement to, despite BREXIT, maintain preferential access for mutual trade; the Agreement entered into effect on June 1st, 2021. Since 1999, Mexico has attracted more than \$17.5 Billion USD in British Foreign Direct Investment.

In the state of Nuevo Leon, more than 90 British companies operate successfully, among them BAT, Renishaw, Edwards Vacuum, and EY (Ernst & Young).









The ever growing industrial real estate sector in Monterrey

There's currently at least 25 new industrial parks being developed in Mexico, 8 of them in Monterrey.

Sergio Arguelles, president of the Mexican Association of Private Industrial Parks (AMPIP), said that these new real estate developments represent an investment of two billion dollars that will be made in the next two years.

"The relocation of companies from Asia that are moving to the north of Mexico to be closer to their customers (manufacturers) from the North American region is driving the development of more industrial buildings. We have identified some 25 projects, this is 20% more than the current capacity, generating six million square meters and seven thousand new jobs," he said.

The investment of industrial buildings in the state will be of 2.5 billion USD.

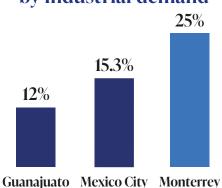
Jose Maria Garza, board member of AMPIP, said that these new developments derived from the expansions of companies that are already installed in the state and are expanding their operations.

He affirmed that there are 400 private industrial parks represented with presence in 27 states, which generate close to three million jobs, this confirms the strength of the sector and the representativeness of the association.

It is estimated that more than 90% of operations related to nearshoring have been installed in the north of the country, especially in Monterrey.

"We are very excited because we practically have 20% growth compared to 2021," he added.

Top 3 cities in Mexico, by industrial demand







Monterrey takes the lead in the race towards e-mobility



Invest Monterrey hosts E-Mobility summit in Monterrey

MONTERREY, NUEVO LEÓN, MÉXICO

During the 'Invest Monterrey Business Talks: E-Mobility' event, it became clear that Monterrey has become one of the most important epicenters in North America in the transformation of the automotive industry to electromobility.

The event brought together important personalities from the public, private and academic sectors to discuss the local, national and international automotive industry at the ITESM Business School, with the presence of the Secretary of Economy of Nuevo Leon, Ivan Rivas Rodriguez.

Representatives from local automotive companies such as Nemak, Metalsa and Katcon, as well as foreign companies with important presence in the state such as ZF, International Navistar, Preh, Bridgestone and KIA, attended the event.





The event was hosted by Andrés Ochoa-Bünsow, Chairman of the Board of Invest Monterrey, alongside Héctor Tijerina, Executive Director of Invest Monterrey.

"Projects that involve the development and application of technologies are the ones we seek to attract for Nuevo Leon. We have to look to the future," mentioned Nuevo Leon's Secretary of Economy, Ivan Rivas.

Francisco González, President of Industria Nacional de Autopartes, participated as a speaker at the event and highlighted the attractiveness of the state of Nuevo Leon for transnational auto parts companies that decide to establish operations in Mexico. "Nuevo Leon had an excellent participation in the foreign direct investment that came to Mexico from the auto parts sector in 2021, with 36.9%, occupying the first place nationally."

Alberto de Icaza, Head of External Affairs in Mexico for ZF Group, shared with the audience the history of the multinational automotive technology company and its successful presence in Mexico, being the German company that has generated the most jobs in the country.

He also showed with great excitement the timeline planned for the development of the ZF campus in Monterrey. "Currently the plans for our operations in Monterrey consist of multidivisional and multifunctional facilities; a manufacturing plant for hightech electronic and safety devices; our first multidivisional research and development center; as well as an office that will centralize multiple functions for the company in one location (...) With this project we are seeking to contribute to the new generation of mobility that is being developed in Monterrey."

Manuel Montoya, General Director of the Nuevo Leon Automotive Cluster, moderated a panel comprised of three successful companies from Nuevo Leon that have become transnationals and are currently reconfiguring their operations to meet the new demand for electromobility solutions.

Ramiro Montero, Director of Manufacturing and Product Development at Nemak, David Fernández, Vice President of Strategic Planning at Metalsa, and Eduardo Turner, Director of New Business at Katcon, presented the technological advances in production processes related to the transformation that the automotive industry is undergoing in Mexico and how they have had to adapt quickly to

these changes in order to maintain the competitiveness of their companies.

"One of the most important assets that the state has to carry out this transformation is its people, it's what differentiates us from the rest of the country; their skills, the desire to transcend and move forward," said Eduardo Turner.

To close the event, Dr. José Zozaya, President of the Mexican Association of the Automotive Industry, shared the panorama that the automotive industry has experienced around the world, the challenges it has faced in recent years, mainly related to the disruption in global supply chains. He also highlighted the importance of Mexico's export model. "It is important to highlight Mexico's relevance in the automotive industry worldwide; we currently rank fifth in light vehicle exports and seventh in vehicle manufacturing. Just over 32% of Mexican exports correspond to the automotive sector," said Dr. Zozaya.

"The best way to attract more productive investment that involves technological transformation processes is to promote existing investment. Mexico, and in this case Nuevo Leon, should be promoted even more as the ideal destination for this type of projects. We have all the necessary tools to attract them," said Dr. Zozaya.

At the end of the conference, a networking event was held among the attendees, Invest Monterrey associates had the opportunity to interact with representatives of automotive organizations.

Watch the full event at Invest Monterrey



E-Mobility: The answer to transportation sustainability

Francisco González, President of INA (Auto parts National Industry)

Mexico's auto parts industry is composed by more than two thousand companies working on supplying high-quality components to the main OEM's in North America. The country is home to 26 R&D centers with more than 15,680 engineers working around the clock to innovate and create better solutions.

All in all, the automotive industry has created more than two million jobs in the country.

Some highlights of the automotive industry in Mexico:

4th largest producer of auto parts in the world, now surpassing Germany.

1st mian exporter of auto parts to the US.

7th world producer of light vehicles.

4th exporter of light, cargo and passenger vehicles.

4th world producer of heavy vehicles.

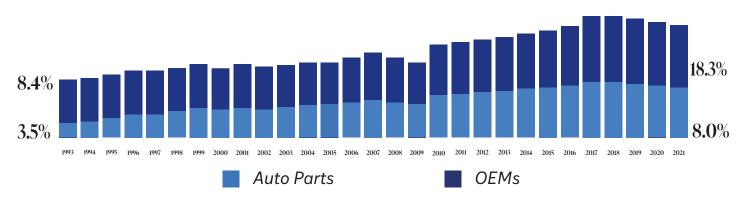
1st exporter of heavy vehicles.

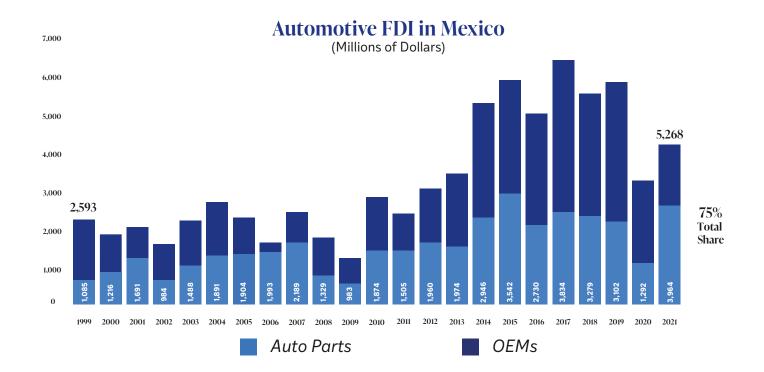
1st generator of foreign direct investment in Mexico.



Evolution of Manufacturing GDP in Mexico

(Automotive and Auto Parts Industry)





In terms of gross domestic product (GDP), the auto parts industry now represents 8% of the whole automotive GDP in Mexico, more than doubling what was registered more than 20 years ago in 1993, when it only represented a mere 3.5%.

The importance of the auto parts industry for the attraction of foreign direct investment (FDI) in Mexico is undeniable. Last year, in 2021, the auto parts industry represented a whopping 75% of the total automotive FDI received by Mexico.

Mexico is a world power in terms of automotive exports. According to official data, in 2021 Mexico took the fourth place worldwide with more than \$100 billion dollars of exports, surpassing China and just behind the United States.

The forecast for the production of auto parts in Mexico couldn't be any better. Almost \$102 billion dollars will be produced in 2022, which is more than any other year before. We are way past the problems that the COVID-19 pandemic created in 2020, something that not many of industries can say.

In 2021, Monterrey took the first place in the participation by state of FDI in the auto parts sector, representing 36.9% of the national total. This figure is specially astonishing when taking into account that Guanajuato, the second place, represents only 13.8%.

Top Automotive Exporters 2021

(Millions of US Dollars)



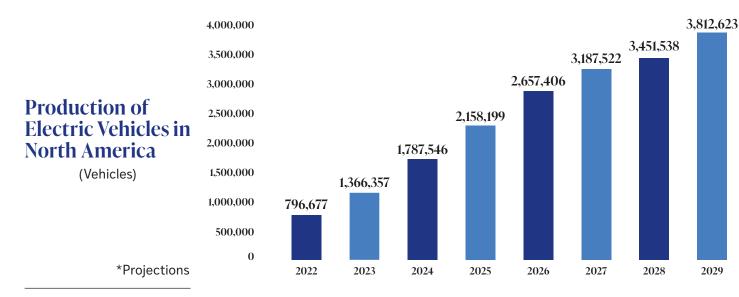
E-Mobility in North America

The "big three" in the e-mobility industry in America are the United States with 32 electric vehicle facilities, Canada with 4, and Mexico with 8. Mexico is in a very good position in this regard as its existing plants, as well as those that will undoubtedly be established in the future, will allow it to continue being a main player in the e-mobility industry.

The trend for electric vehicle production in North America has a very good forecast, with statistics projecting that it will continue to increase exponentially in the coming years. It's expected that by 2029, the number of electric vehicles produced annually will rise up to 3,800,000 units, a figure almost 5 times larger than the one expected at the end of this year (790,000).

Participation by State of FDI in the Auto Parts Industry, 2021

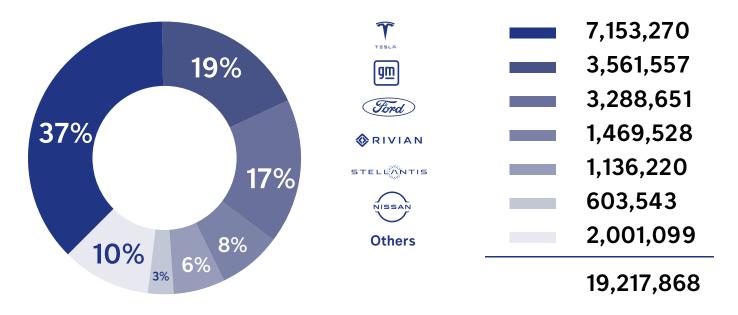
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2029

Production of Electric Vehicles in North America, 2022-2029

(Vehicles)



Source: National Auto Parts Industry (INA)



The Future of the Automotive Industry

José Zozaya, President of AMIA (Mexican Association for the Automotive Industry)

FUTURE AUTOMOTIVE TRENDS

There are 4 main trends that are transforming the global automotive industry: Connectivity, Autonomy, Shared Mobility and Electrification.

Connectivity allows vehicles to share a variety of data properties from several sensors, delivering comprehensive information on the vehicle and its surroundings.

Autonomy will improve efficiency and road safety by minimizing or eliminating human error.

Shared Mobility translates to less private vehicles on the road that will reduce carbon emissions and traffic congestion.

Electrification will help to cut CO2 emissions and dependence on fossil fuels

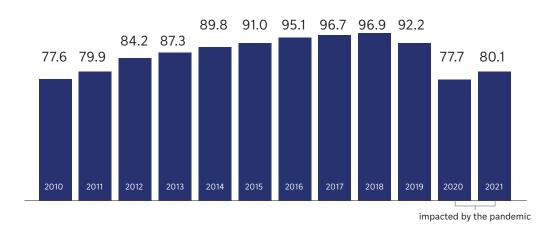


These trends can be directly linked with the usage of renewable energies, reduction of the carbon footprint and electromobility. More and more companies and countries are deciding to migrate to these new technologies, not only to avoid being left behind, but also to adhere to the objectives set by the UN. Many countries have already decreed that in the years to come, the sale of internal combustion vehicles will not be allowed, so OEMs have been preparing for this transition.



World vehicle production

(million units)



5th

32%

7th

4th

18.3%

In order to be more competitive, OEMs and suppliers will require digital and intelligent factories with:

- Greater flexibility in production needs
- Efficient use of resources and process integration
- Use of monitoring equipment and technologies
- Agile and real-time interaction between machines, software and individuals



Relevance of the Mexican Automotive Industry (2021)

1St Currency Attractor
Trade balance suplus of 85 billion US
dollars

World exporter of light vehicles (2020)

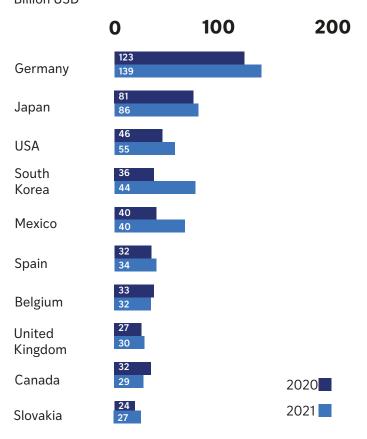
Of manufacturing exports are automotive products

Vehicle manufacturer in the world 1st in Latin America

World exporter of auto parts 1st supplier to the Unites States Market

Its contribution to manufacturing GDP 3.5% of total GDP $\,$

Top 10 World light vehicle exportersBillion USD



The future transport system will be much more complex, with multiple players, technologies and direct linkages to the energy system. It will involve moving into new, smarter sources of energy, modes of transport and physical and technological infrastructure.

The automotive industry, specifically in Mexico, plays an important role in the economy. Mexico alone ranks 7th worldwide in vehicle manufacturing, and 5th in light vehicle exports. This industry contributes 18.3% of the manufacturing GDP. 12 states in the country are home to 37 manufacturing facilities of light vehicles, engines, and transmissions under 13 different brand names. Given the importance and relevance of this industry, it is essential that countries begin to migrate towards these trends and gradually transform the industry.







Mexican Manufacturing GDP, by industry

Industries	2011	2021
Food	23.0%	21.2%
Automotive	14.0%	18.3%
Computer and Peripheral Equipment	6.9%	8.8%
Primary Metal	8.4%	7.1%
Beverage and Tobacco Product	5.5%	6.3%
Chemical	9.7%	5.6%

Average annual growth (2011 - 2021) 1.4% 1.6% 3.6% Total GDP Manufacturing Automotive

GDP

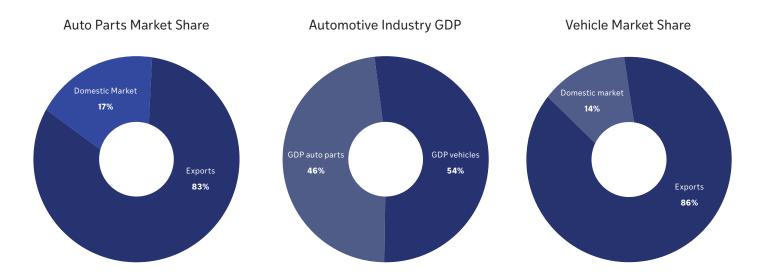


Light Vehicles, Engines, and Transmissions Manufacturing Facilities

Industry GDP



Automotive Industry productive structure: The export model

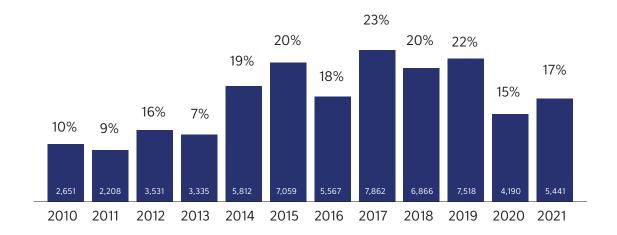


The whole automotive industry is facing complicated challenges, but also brought up important solutions in order to move forward and accelerate its modernization. In order to maintain competitiveness, a legal framework with the required legal provisions should be created, as well as invest in infrastructure that will expand the EV charging network with 5G technology. Two key aspects that should also be considered to advance are the implementation of fiscal and non-fiscal incentives for consumption and production of EV, as well as educate consumers with basic and specialized information that would incentivise the usage of low CO2 vehicles.



FDI in Mexico for Automotive Industry, 2010 - 2021

(Million US dlls. & percentage of total FDI)



Source: Mexican Association of the Automotive Industry (AMIA)

Driven Claut Innovation Center

The automotive industry, which serves as an engine of macroeconomic growth, stability, and technical advancement in both established and emerging nations, is a pillar of the global economy.

Emerging economies in the three main macroregions of Europe, North America, and Asia have seen a surge in production and employment since the start of the twenty-first century.

The Mexican economy heavily relies on artificial intelligence, which has been developed for more than a century. According to the National Institute of Statistics and Geography, the automotive industry now accounts for 19.4% of the manufacturing GDP in Mexico and 3.6% of overall GDP. Also, 33% of manufacturing exports are made up of automobiles.

The establishment of the Automotive Center for Technological and Talent Development, also known as the DRIVEN CLAUT Innovation Center, with an investment of two million dollars and the cooperation of businesses like Caterpillar, Grupo Quimmco, John Deere, Metalsa, Nemak, and the Nuevo Leon Automotive Cluster is one of the initiatives taken in Mexico to improve competitiveness in the area of production (CLAUT).

The DRIVEN CLAUT Innovation Center, which is housed in the Center for Innovation, Research and Development in Engineering and Technology of the UANL, located in the Research and Technological Innovation Park (PIIT), consists of a laboratory outfitted with design and computer simulation tools to cover the areas of manufacturing. This center's areas of focus are the collaborative innovation environment and the identification of global talent.

In addition to other vehicle dynamics laboratories that are a part of the UANL, DRIVEN offers workstations with cutting-edge technology that can model automotive components in 3D and other software that is used to simulate various elements and evaluate them in various schemes. The goal of the partnership between this group and CLAUT is to





Invest Monterrey wraps up a successful business mission to South Korea

The Government of Monterrey and Invest Monterrey led a business mission to South Korea, having a week full of opportunities to showcase why Monterrey is the best place to live and do business in Mexico.

The delegation was headed by Zaira Sáenz, Director of Investment of the Government of Monterrey, and Héctor Tijerina, Executive Director of Invest Monterrey, along-side representatives from the private sector and members of Invest Monterrey: Kiu Ji Park (Citius AG), Sofia Flores (Terraregia), Daniela Silva (Interpuerto Monterrey), Aaron Vera (Finsa), Humberto Esqueda (Intercam), and Rogelio Soto (Prodensa).



Investment Promotion Seminar in Seoul, South Korea

Kicking off the main activities of the business mission in South Korea, Invest Monterrey successfully organized the investment promotion seminar "Doing Business in Mexico: Monterrey | Nuevo Leon" in Seoul, alongside the Government of Monterrey, Deloitte, and our partners that were part of the delegation.

The event was headed by Bruno Figueroa, Mexican Ambassador to the Republic of Korea, Zaira Sáenz, Director of Investment of Monterrey, and Héctor Tijerina, Executive Director of Invest Monterrey.

The more than 70 attendees representing Korean companies from different industries had the opportunity to hear information from experts in fields like real estate, finance, human resources, and much more from Invest Monterrey's partners Citius AG, Intercam, Interpuerto Monterrey, Finsa, Prodensa, and Terraregia, tailored specifically towards the interests of the Korean companies.

"This seminar was an invaluable stage for promoting Monterrey to many Korean companies that are currently considering the possibility of expanding their operations to North America. Monterrey is the leading recipient of Korean



investment in Mexico," said Héctor Tijerina, Executive Director of Invest Monterrey. "We're bringing our greatest strengths right to their doorstep at Seoul."

After the seminar, the Monterrey delegation held a networking event with dozens of Korean companies to discuss in more detail their potential investment projects.

Korea Auto Industry & Global TransporTech Show

Invest Monterrey had a special booth to promote Monterrey at the Korea Auto Industry & Global TransporTech Show.

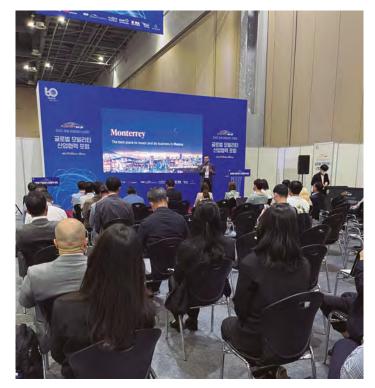
The KOA-GTT is Korea's biggest automotive-related exhibition with the highest number of participants, attracting a high share of international participants.

"The Korea Auto Industry & Global TransporTech Show offers an ideal environment to form new business relationships for the Monterrey automotive industry and to expand its network, which will facilitate new and better business opportunities," said Héctor Tijerina, Executive Director of Invest Monterrey. "Our participation is especially important due to the existing presence of Korean automotive OEMs and Tier 1 manufacturers in Monterrey, making it a target for more investments from other companies. We're here to spread the message that Monterrey is wide open for business".

During the event, Zaira Sáenz, Director of Investment of Monterrey, and Héctor Tijerina, Executive Director of Invest Monterrey, had the opportunity to participate on a business seminar for Korean auto parts manufacturers, showcasing Monterrey's strengths and why automotive companies should consider it the most attractive destination for doing business in North America.

Monterrey has the strongest automotive industry in Mexico, with more than 280 companies, 5 OEMs, dozens of Tier 1s, and has positioned itself as the favorite destination for E-Mobility technology manufacturers.





South Korea as a key trade partner for Monterrey

Monterrey is second to none as a recipient of South Korean Foreign Direct Investment. In fact, in 2015, 2016, 2018, 2019, and 2020 Monterrey was the #1 recipient of Korean FDI in the country, representing 42% of the total Korean investment received by Mexico.

Since the arrival of LG and KIA, multiple Tier 1 suppliers have come along with these OEMs. Korean investment in Monterrey promises a bright future.

Some facts about Korean investments in Monterrey (Nuevo Leon) include:

- Monterrey (Nuevo Leon) has received \$2.48 billion US dollars of Korean FDI since 1999, more than any other destination in Mexico.
- Monterrey leads the country with 243 Korean companies.
- South Korea is the second largest investor in Monterrey.

"Our business mission to South Korea was a huge success. It answers the need to take advantage of the great business relationship that South Korea and Monterrey have built. During this week, we saw more interest than what we expected from Korean companies looking to establish operations in North America." said Héctor Tijerina, Executive Director of Invest Monterrey.

Monterrey will host the first 'Mobility of the Future' trade show

During the event 'Industrial Transformation Mexico', Samuel García Sepúlveda, State Governor of Nuevo Leon; Bernd Rohde, CEO of Hannover Fairs Mexico; Iván Rivas, Minister of Economy of Nuevo Leon; and Rodrigo Fernández, CAINTRA's President, announced the launch of the "Mobility of the Future event, which will take place in June 2023 right here in Monterrey, Nuevo Leon, Mexico.

This brand-new event will welcome the mobility industry of the future to Monterrey with an annual summit dedicated to e-mobility, smart transportation, and renewable energy vehicles.

Invest Monterrey will participate as a strategic ally to the event, alongside organizations such as Monterrey's Automotive Cluster, Nuevo Leon 4.0, the Monterrey Conventions, and the Visitors Bureau.

"This agreement will bring the largest e-mobility event in America right here to Monterrey, Nuevo Leon," highlighted State Governor Samuel García, "The event comes at a key moment for the state's mobility because our administration is betting on e-mobility through large electric mass public transportation infrastructure projects".

Bernd Rohde emphasized that "today the world is moving decisively towards mobility. In order to achieve the goal of having fully interconnected and sustainable smart cities, the infrastructure that interconnects this new form of mobility will be crucial. With this event, we hope to accelerate the transfer of technology and knowledge necessary to become fully involved in the e-mobility of the future."

With the objective of strengthening Monterrey's position as an international hub for smart mobility, the "Mobility of the Future" trade show will seek to boost investment in advanced technology projects, streamline road interconnection, and improve the connectivity and experience of sustainable public transportation in Mexico and Latin America.

When asked about this, German consultant Thomas Michael Hogg, Director of TMH Consulting & Investment Group, explained that "98 percent of vehicle production in North America will be electrified within the next 10 to 12 years. This sector is driving an unprecedented revolution worldwide, allowing countries and regions to generate ecosystems in terms of technology, manufacturing, infrastructure, and services. Through this new Mobility of the Future' platform, Nuevo Leon wants to focus its strategy on value-added industries and achieve sustainable development by setting the capital Monterrey as a city of the future."



Multi-material toolbox for cost-effective, scalable EV battery enclosure design

As automakers dive more deeply into the electric vehicle (EV) market, fabricators and Tier 1 suppliers continue to come up with composite solutions for protective battery enclosures. One company taking a multi-material, flexible approach to this design is automotive Tier 1 supplier Katcon (Monterrey, Mexico).

Katcon was established in 1993 as a joint venture with General Motors Mexico (which later spun off into Delphi Automotive) and focused on exhaust systems and catalytic converters for the automotive industry. In the early 2000s, Katcon expanded, consolidating all of Delphi's exhaust systems businesses in North America. Eventually, Katcon would also acquire Delphi's global exhaust business, currently operating 11 manufacturing sites and five tech centers, in eight countries.

"Katcon is a family owned business founded by my father 30 years ago. Overnight, it went from being a Mexican, North America-only company to a global business," says Eduardo Turner, new ventures director at Katcon Global. "Now, we are a world-class Tier 1 supplier in the automotive and transportation industry."

Over the past several years, Katcon has made efforts to diversify its capabilities beyond exhaust systems, including thermal insulation and, most recently, advanced composites technologies.

Turner explains, "We decided to invest in an Advanced Materials division five or six years ago primarily because we have a front row seat to the evolvement of the automotive industry, and we started seeing shifts both toward lightweight vehicles and toward electrification, which itself implies a need for lightweight, more complex modern materials and solutions for the industry."

At the same time, the company has also been evolving from solely a manufacturing company to offer more engineering and design services. This combination led Katcon to identify EV battery enclosures as its initial focus for entering the automotive composites market. "We wanted to provide our customers with value-add solutions, rather than just welding or providing manufactured products," Turner says. "Battery enclosures are complex, structurally integral parts that bond well with the problem-solving, engineering and design capabilities we have built over the past decade."

In late 2020, Katcon began working with engineering partner Forward Engineering North America LLC (Royal Oak, Mich., U.S.) on its own battery enclosure solutions.



With this concept in hand, Katcon is now working with OEMs to tailor the solution it has come up with to specific applications, with anticipated volumes of up to 120,000 units per year. There are three types of customers that Katcon is working with to commercialize its battery enclosures, Turner says: Automakers looking to transition their internal combustion engine (ICE) vehicles to EVs, newer EV-native automakers and startups working in emerging markets like EV delivery vehicles or buses.

"In the end, we have a toolbox of materials, technology and know-how," Armendariz says. "The generic concept was built to meet a range of existing requirements, and shows how we can use different materials made with different processes joined together by different joining methods, the combination of which is a big part of why this solution works."

Monterrey to supply Tesla with EV auto parts

NUEVO LEON'S MINISTER OF ECONOMY, IVÁN RIVAS, REVEALED THAT AT LEAST 10 NEW COMPANIES HAVE ALREADY ESTABLISHED IN MONTERREY JUST FOR TESLA; ESTIMATES THAT THERE WILL BE RECORD FDI BY THE END OF THE YEAR.

After the wave of investments coming to Monterrey, one of the highlights is that of Austin-based Tesla's decision on making Monterrey its supply center for the manufacture of its electric vehicles.

In a recent interview for Milenio-Multimedios, Nuevo Leon's Minister of Economy revealed that the company has asked for its suppliers to be established in Monterrey, Nuevo Leon.

"There are already 10 suppliers established here, manufacturing different components such as the computer (Quanta Computer), sensors, seats, harnesses, plastic parts, or even the aluminum chassis that holds the battery," said Rivas.

He remarked that this is only the beginning, because Tesla continues to promote Monterrey as a base for its suppliers. "This will have a multiplying effect, shaping Nuevo Leon as an electromobility hub", he said.

The American company Tesla is based in Austin, Texas, and is responsible for designing, manufacturing, and selling electric vehicles, car propulsion components, solar roofs, solar photovoltaic installations, and domestic batteries.

Iván Rivas also mentioned that the vast majority of the investment received by Monterrey is from the manufacturing industry (automotive, aerospace, household appliances, metalworking, machinery and equipment, transportation, and storage), more than 75 percent.





Tesla's exclusive lane at the Port of Entry between Nuevo Leon and Texas

Tesla has managed to strike a deal with the state of Nuevo Leon to have its own lane at the US-Mexico border, which should help the company and its suppliers get across faster.

"It was a simple incentive. What we want is a crossing that's much more expedited and efficient. And maybe there will be a lane for other companies in the future like there is for Tesla", said Iván Rivas.

Tesla has several suppliers in Nuevo Leon according to Rivas, including EnFlex Corp. and Quanta Computer, Forbia French firm (Faurecia) SE, Germany's ZF Friedrichshafen AG, and APG Mexico.

Navistar is producing Latin America's first fully electric truck in Monterrey

Navistar, leading manufacturer of trucks through its brand 'International', is producing Latin America's 1st fully electric truck at its facility in Monterrey, Nuevo Leon, Mexico, their largest in the world.

The eMV (Electric MV International) truck incorporates the latest electric vehicle technology, such as a 335 horsepower direct-acting electric motor and a high-voltage battery with a capacity of 210 kilowatts, providing a range of 216 kilometers when fully charged.

The Illinois-based company has invested \$39 million dollars in Monterrey just in the last three years, totaling \$462 million dollars since its arrival in 1998.

Bernardo Valenzuela, President of Navistar Global and Mexico Operations, said that the company decided to produce this type of truck at their Monterrey facility because "we have a long-term investment in Mexico, with the talent and technology needed to develop world-class equipment."

The truck's manufacturing started in August 2021 and it is currently available for purchase in the United States, Canada and Mexico. The first units manufactured in Monterrey where delivered to the Canadian energy company ENMAX and the American truck rental company Penske.

For this project, the Illinois-based company has invested \$39 million dollars in the last three years, totaling \$462 million dollars since its arrival in Monterrey in 1998.



Five recommendations to accelerate the uptake of EVs worldwide

Maintain and adapt support for electric cars

As the electric car market matures, reliance on direct subsidies must decrease and eventually fade out. Budget-neutral feebate programs – which tax inefficient internal combustion engine vehicles to finance subsidies for low emissions or EVs purchases – can be a useful transition policy tool. Stringent vehicle efficiency and/or CO2 standards have promoted EV adoption in most leading EV markets and should be adopted by all countries seeking to hasten the transition to electromobility.

2 Kickstart the heavy-duty market

More heavy-duty electric models are available, and electric buses and trucks are becoming competitive on a total-cost-of-ownership basis across more and more applications. Policy-led deployment can help kickstart this sector. Zero emission vehicle sales mandates, purchase incentives and CO2 standards can all help speed up the transition.

Promote adoption in emerging and deloping economies

Electrification of road transport in emerging and developing economies should prioritise two/three-wheelers and urban buses, as these vehicle types are most cost competitive. Price signals and charging infrastructure availability can also help the economic case for electrification.

Expand EV infrastructure and smart grids

Governments should continue to support deployment of publicly available charging infrastructure at least until there are enough EVs on the road for an operator to sustain a charging network. Continued government support, either through regulations requiring the building out of charging stations or through fiscal policies and support, should ensure equitable access to charging for all communities to ensure that nobody is left behind in the transition. Incentivising and facilitating the installation of home chargers in existing parking spaces is important. Mandating EV charging readiness for new buildings can help. At the same time, local authorities should support the installation of chargers in existing buildings. Co-ordinated plans on grid expansion and enhancements, including digital technologies to facilitate two-way communication and pricing between EVs and grids, are needed now to ensure that EVs can become a resource for grid stability rather than a challenge.

Ensure secure, resilient and sustainable EV supply chains

Electrifying road transport requires a wide range of raw material inputs. While all stages of the supply chain must scale up, extraction and processing is particularly critical due to long lead times. Governments must leverage private investment in sustainable mining of key battery metals and ensure clear and rapid permitting procedures to avoid potential supply bottlenecks.

Innovation and alternative chemistries that require smaller amounts of critical minerals, as well as extensive battery recycling, can ease demand pressure and avoid bottlenecks. Incentivising battery "right-sizing" and the adoption of smaller cars can also decrease demand for critical metals.

Governments should strengthen cooperation between producer and consumer countries to facilitate investment, promote environmentally and socially sustainable practices, and encourage knowledge sharing. Governments should ensure traceability of key EV components and monitor progress of ambitious environmental and social development goals at every stage of battery and EV supply chains..



Questum and e.GO are assembling electric vehicles in Monterrey

THEY WILL CREATE A FLEET OF ELECTRIC COMMERCIAL CARS WITH GERMAN DESIGN AND MEXICAN MANUFACTURING.

Questum, a subsidiary of Grupo Quimmco, has scaled up its efforts in urban sustainable mobility with a focus on Mexico. For years, the company has worked together with its customers and strategic partners in the development of vehicles. Today, the Monterrey-based company has partnered with the German firm e.GO to create a fleet of electric commercial cars with German design and Mexican manufacture.

Manuel Valdés, CEO of Questum, shared that the origin of the project dates back to the collaboration with Femsa, one of its clients and strategic partners.

The CEO of Questum shared that the work vehicle would have different characteristics, such as the reduction of passenger seats, tools for the supervisor's work, among others. "We were giving shape to the concept and there we began to collaborate with e.GO".

During 2019, e.GO began with the homologation of its vehicles and the complete development of the design that is publicly known today and is even present in Mexico .

Due to the pandemic, in 2020 they had to slow down some elements and pause the importation of the first vehicles for a moment. Today, they already have vehicles in the country and are in the first phase of the project, shared the director.

"At Questum, like Quimmco, we brought our manufacturing strength and our supplier development to the table; them, this avant-garde design of an electric vehicle of low cost but of a very high quality".

"We started with cargo vehicles; however, as I progressed, Femsa told me that they had another type of fleet to electrify that was dedicated to presales and supervision in their convenience stores: it is a car that should become a work tool".



The production plant

Manuel Valdés reported that they are fine-tuning the details of the investment; however, they estimate it to be around \$50 to \$70 million . "Compared with a vehicle assembly plant, we can say that it is perhaps 10 times less than in other cases. That is one of our innovative concepts that we will talk about later".

According to their schedule, they will begin construction of the plant in 2023 and will have production capacity in 2024. The engineer Valdés explained that the location of the plant is still under evaluation. Although, as a Nuevo León company, its plan is to install the plant in the region, he stressed that Mexico has a large automotive supply and production base.

"We are thinking of Mexico in general; We will also evaluate regions in the country that may require development, that have the advantages for the entire ecosystem that the construction of a vehicle requires and that the supply chain, which plays an important role, nearby", he said.

The factory will have an efficient model and will be designed to work with advanced technology, which requires high-level jobs. In this sense, they estimate to generate around 290 new direct jobs, among which stand out profiles of software engineering, mechatronics, design, among others.

On the other hand, they estimate to generate approximately 2,000 indirect jobs related to the entire ecosystem, including supply.

He added that the total capacity of the plant can be up to 30,000 vehicles with a modular production . The initial destination of the vehicles will be, initially, Mexico; however, "we are installing everything to reach Central and South America."



Opportunities for suppliers

The company's goal is to have the largest number of suppliers in Mexico. "According to our experience in supplier development, in approximately five years, we should reach a national integration of at least 70%," said Manuel Valdés.

He explained that the main component of the vehicle is an aluminum structure, should be the starting point in the selection of suppliers. "We know that there is structural aluminum in Mexico and there are large manufacturers with a lot of capacity to do so."

The second component is the body part, which is made of thermoforming and resins; for this, "we have located several production plants and companies that will be able to do so not only in Mexico, but also in the United States."

In addition to locating, they will develop suppliers due to the volume required by the type of market and vehicles they will manufacture.

"Many times it is preferable to start developing a supplier. Surely, a company that already produces thousands of components per day will think that making 15,000 a year is very little; these types of vehicles and markets will take on a volume that will require flexibility in the suppliers".



Questum in electromobility

Questum's e-mobility division provides innovative solutions in sustainable urban mobility. It arises as a strategy to explore the electromobility market and meet the needs of the main fleets in Mexico, as well as OEM clients such as Freightliner and Isuzu.

"Right now, we are electrifying cargo trucks for cities. We have the privilege of serving companies like Femsa, supplying for their devisions such as Oxxo, Coca-Cola, Heineken, among others. Those electromobility projects are rolling in cities in Mexico".

Its electrified trucks are proving their functionality in conventional daily routines: from distribution centers to convenience or commercial centers.

"The ecosystem complements very well with us as manufacturers and other allies that, without a doubt, are accompanied by this; for example, the Automotive Cluster of Nuevo León and the same universities where we have supported ourselves to carry out truck designs and deliveries in record time".

Currently, they operate in an industrial warehouse where they carry out tailor-made solutions for all the fleets they supply. His number one capacity, the director pointed out, is to adapt to each of his needs; the second is to carry out all the engineering processes in its internal department. "We have made the adaptation of an internal combustion truck to an electric truck 100% Mexican." Third, they highlighted their production capacity, which can lead them to produce up to 250 trucks per year in a single shift.

"Electromobility has been a project in which we complement each other and make open innovation and a lot of cooperation to put Mexico at the forefront in terms of mobility. We have to start and move forward in this technological change that helps us all to have sustainable mobility", he concluded.



Schneider Electric •



Schneider Electric is a French multinational that specializes in digital automation and energy management. It's an international reference for what a successful company should be, with more than 180 years of experience, 13,000 employees in Mexico and Central America, more than 130,000 employees globally, and 190 production facilities in over 115 countries.

Looking at a company of this caliber, especially one that has transcended through the years, makes you wonder how they even do it?







Schneider Electric – a brief history

Schneider Electric's history began in France way back in 1836, establishing themselves as a steel manufacturer focused in the production of heavy machinery and armaments.

The company had their first major shift when it launched itself into the emerging electricity market in 1891, expanding their operations through Europe in the following decades.

In 1949, after World War II, the company had an in-depth restructuring that led up well into the 80's and 90's when it had a radical change, divesting from steel and shipbuilding to focus mainly on electricity.

The year 2000 marked the start of a new millenium and fittingly, through organic growth and acquisitions in new market segments, Schneider Electric started to invest in digital automation, a move that has continued up until the present.

Looking at the timeline there's one constant through the company's different eras: Progress. The company's forward-thinking nature and willingness to change itself to better fit the future are the defining characteristics that have made it as successful as it is renowned.

Schneider Electric's success in Monterrey

Mexico has been a part of Schneider Electric's successful strategy throughout the greater part of its modern history. Arriving in 1945, 76 years ago, this decision coincided with the restructuring period they were going through at the time.

Furthermore, as part of their strategy towards becoming a key player in the electricity industry they decided to invest in Monterrey in 1981, opening their first facility in the city.

As expected, this decision wasn't taken without a motive. Monterrey became one of the critical pieces in Schneider Electric's North American strategy, now employing more than 3,600 people in the city.

Despite being a multinational with presence all around the world, the company bets on the philosophy of keeping a close relationship with its market. They make use of this proximity to understand its clients needs, anticipating and adapting their solutions of automatization and digitalization for the residential and industrial markets, as well as their products for low and medium voltage.

That future-focused mentality has brought two of their most advanced projects into reality, and both of them are located right here in Monterrey.

Schnider Electric's Monterrey Digital Hub supports the company's entire operation in North America, mirroring the function of those located in Bangalore, Barcelona, Nashville, and Boston. The applications managed at the Monterrey Digital Hub help Schneider's facilities to have more efficient processes, making decisions based on the data gathered with the data architecture for the EcoStruxure platform.

The Monterrey Digital Hub's importance also lies in its role as an incubator for the next generation of local talent, supporting and promoting their growth.



The Monterrey Development & Innovation Center

The name says it all. The R&D center that once had its humble beginnings in 1999 inside one of Schneider Electric's production facilities in Monterrey is now one of the best and most important amongst the five existing in the world.

Now established in Monterrey's own Research and Technological Innovation Park (PIIT) the center has multiple innovation areas, laboratories, and a dedicated prototyping area.

All of this combined provides them with everything they need in order to develop a new product completely from scratch, from the very first stage of conceptualization up until the production of a working prototype. They can design their own products and solutions digitally to then bring them to life in the prototype workshops, testing and evaluating them to make sure they meet their customer's expectations.

More than 400 experts are currently collaborating inside this advanced center in order to bring Schneider Electric's residential and industrial clients the best and most innovative solutions. They represent Monterrey's ample supply of talented and high-skilled workforce, with more than 30% of the development center's employees having either a Master's degree or a PhD.

The key highlight of the Monterrey Development & Innovation Center is that it is home to the company's Advanced Simulation department. This area gives experts the opportunity to test their products right inside a virtual space, saving time, effort and materials needed for physical tests.

Using virtual tests also opens up the possibility of running several simulations with different parameters at the same time, making changes and adjusting the digital prototype basically on the fly in order to maximize its performance and achieve its greatest potential.

The Advanced Simulation department in Monterrey is so crucial and valuable to Schneider Electric's operation at the worldwide level, as it not only tests the local digital prototypes but also supports other R&D centers in North America and around the world.

Schneider Electric's Monterrey Smart Factory

The company's established "Monterrey Innovation Hub" is also home to the Monterrey Smart Factory, a facility designed specifically with the latest industry 4.0 advancements in mind.

It is Schneider Electric's very first and currently the biggest smart factory in Northamerica. It boasts 6 lines of production plus a whole other line of paint and manufacturing, operating in 4 shifts with a workforce of over 1,300 employees. It currently has ISO9001, ISO14001 and ISO45000 quality certifications.

This facility combines the latest high-tech features found in the top-of-the-line facilities while also being environmentally conscious, being the first waste-free facility in Mexico, and having a 20% increase in operational efficiency paired with a 13% increase in energy efficiency.

The Smart Factory also implements Schneider Electric's EcoStruxure TM system, aiming to have their products connected to the internet of things, allowing them to monitor data remotely and in real time with the objective of using this information to develop smarter, more efficient and sustainable processes.

Schneider Electric's Monterrey Smart Factory is a reference, not only for the company but also for the world's business ecosystem, of what the facilities of tomorrow should be.



But why Monterrey?

Monterrey and Schneider Electric have made a great pair, with the city supplying everything needed for the company to succeed and pursue its further development.

To make this point crystal clear, Invest Monterrey got an exclusive opportunity to interview several key members of Schneider Electric's operations in Monterrey, and this is what they had to say as to why the company chose our city and why other companies should be interested in Monterrey too.





"We have two of the best universities in Mexico, and even Latin America, that prepare the human capital to work in a productive business environment.

I'd tell any other company to not think twice, Monterrey is the best place to source talent, while also having an excellent supply chain with such a strong network of suppliers around to support the companies."

Néstor Jiménez

Manager of Schneider Electric's Monterrey Smart Factory



"If you are looking for competent, talented people with a lot of potential, in a city with an exceptional geographic location, which also has the best educational centers for all levels, besides being one of the best cities to live in...

There is not much more to look for, Monterrey is the place."

Reynaldo Lozano

Customer Service Manager at Schneider Electric's Monterrey Smart Factory



"Monterrey has the best talent and the best universities. There are endless companies to collaborate with here.

The possibility to work with the triple helix collaboration model allows us to work with private initiatives, government, and universities in a way that allows us to innovate and move forward."

Juan Agustín Arrollo

Director of Schneider Electric's Monterrey
Development & Innovation Center

Lenovo



Lenovo's operational excellence got even stronger with the significant expansion of their manufacturing facilities in Monterrey, Mexico.

The expanded "megasite" almost doubled in size with the opening of Building 2, a 180,000-square-foot space focused on products from Lenovo's Infrastructure Solutions Group. The new building is already delivering more than 200 racks, 10,000 servers, and 52,000 options on a weekly basis, along with many other ad-hoc services, thereby adding increased value to customers. The new building adds substantial capacity that will serve customers in North America. All Lenovo data center products for North America customers are manufactured in Monterrey

This expansion enhances Lenovo's capacity for server assembly, testing and packaging. In addition, a data center test infrastructure featuring controls for dust, temperature and humidity helps improve the products' efficiency. Finally, with state-of-the-art engineering and function labs, the site will provide more value-added custom functionality to products to serve customers better.

The new expansion joins Lenovo's original building on the site, a 230,000-square-foot facility, which since 2014 has produced products for both the PC and data center businesses. Now Building 1 will focus on producing smart devices such as PCs & Tablets for both the North American markets and Lenovo customers worldwide.

The expanded site further strengthens a key competitive advantage for the company. Lenovo's truly global supply chain and manufacturing footprint includes more than 30 locations around the world that Gartner has recognized as the world's 16th best global supply chain. That competitive advantage played a key role in Lenovo successfully managing the operational challenges created by the ongoing global pandemic. By leveraging the flexible array of manufacturing sites across 10 markets, Lenovo was able to shift and expand production as needed to meet rising demand.

The expanded Monterrey manufacturing plant aligns with Lenovo's global supply chain strategy not simply by adding





capacity. The site includes a co-located development lab, which ensures close collaboration between product development and manufacturing, making sure Lenovo's innovative new products can be built and shipped efficiently. That means cutting edge technology gets into customers' hands faster.

Lenovo puts a premium on reducing its carbon footprint and the Monterrey expansion contributes as the site is planned to have solar panels on the roof that eventually will supply over one megawatt of electricity.

While the expansion has greatly improved Lenovo's ability to service customers, in the long term the site has the capability to actually grow even more when the time is right...

Kuka Home



China-based upholstery manufacturer KUKA HOME is expanding its global manufacturing footprint with a new manufacturing facility in Monterrey, Mexico. The new facility will focus on special-order stationary upholstery for the North American market. It will open with an initial 130,000 square feet of assembly and production space and 250 employees. KUKA aims to expand that to 750,000 square feet and 1,500 workers within the next five years. Initial production should be 23 to 30 truckloads a month.





"As the factory gains experience, we'll expand shipping to more dealers with more models and up to 100 truckloads a month by the end of the year," says Steve Lush, president of KUKA HOME North America. "We're looking at an ultimate capacity of around 600 truckloads a month. This will serve what we feel is a growing part of the market: special orders with fast delivery capability."

KUKA's goal with the Mexico plant is a three-week production cycle and a week to week-and-a-half transit for a total of four to five weeks' delivery to the door. While the facility will produce fabric upholstery only to start, leather production should come online by 2021. The Monterrey factory will begin production with in-line goods, but KUKA plans to develop new products exclusive to the Mexico plant by April High Point Market.

The government of Monterrey's home state, Nuevo Leon, has been very helpful in development of the new upholstery plant, from site research to assistance in the training of workers.

Separately, KUKA has purchased 45 acres north of Ho Chi Minh City where it will start construction this year on a 400,000-square-foot motion plant with room for additional growth.

Mattel



Mattel, the leading global toy company is expanding its operations in Monterrey, where they will now have their most important manufacturing hub for North America, by concentrating production from their recently-closed facilities in Montreal and Tijuana.

In this regard, the Ministry of Economy, attributed the change of perspective of the toy company to the effort made by the industrial ecosystem of the state when the announcement of the closing of operations was made.



What we did was to connect with the collaborative ecosystem, clusters, suppliers, chambers and they managed to find the solution to the problem they (Mattel) had, with this they not only decided not to leave Monterrey, but decided to consolidate projects in the city of Tijuana and Montreal in Monterrey. In addition to starting a new operation, -in their words- they are turning Monterrey into the "toy HUB" of the country and soon will be the toy HUB of all Latin America. Mattel's permanence in Monterrey has also allowed the development of a supply ecosystem around it and the companies that provides them with services has had an accelerated development in the last years.



Made in Monterrey?

Mattel intends to double the production of Barbies and Hot Wheels at their production plant to meet the market demand in the Americas, where 60% of its sales are concentrated.

The company's expansion in Monterrey represents an investment of \$500 million USD, according to the company.







The LEGO Group established in Monterrey in October 2008. From here, this year alone, more than 83.5 million sets were produced for sale through October 2021. More than 700 plastic injection molding machines, more than 50 decoration and assembly lines, and more than 95 packaging lines support the plant's operations.

Nancy Sanchez, Senior Vice President of LEGO Americas Operations, reported that the company is focusing on digital transformation, not only in the products they offer, but also in the processes.

For this reason, the LEGO Group acquired a company specialized in additive manufacturing with the intention of developing these competencies internally. At the Nuevo León facility, they have 3D printing machines in different areas.

"We are starting to manufacture some of thespare parts that we need in our processes; this way, we get them faster and the waiting times to obtain spare parts from Europe are speeded up."

Another example of technological implementation is in the plastic injection area. "We use smartphones and tablets to take data from the machines; this way, operators can attend to alerts in a better way."

"We invite them to the plant and get to know our standards, we give them support with the continuous improvement department, we teach them tools such as lean manufacturing, among others".

For this, they are supported by the MSME development program of Caintra, AmCham Monterrey, INDEX Nuevo León and the Tooling Cluster. LOM was part of the creation of the cluster due to its need for technicians for the development of injection molds; in the association, they share experiences and study plans.



Development of Local Suppliers

During their years of operation in Mexico, they have been able to locate 90% of their suppliers in the country, and 74% of these in the northeast region.

The vice-president shared that they are still in the process of developing suppliers in order to obtain 100% of supplies from companies established in Mexico. The support that LEGO offers its suppliers through its supplier quality department helps them to grow together with the group.

Growth and Expansions

They are currently in the process of building bridges between the automated warehouse buildings, which will reduce their emissions. Nancy Sanchez also shared that they will soon add 400 new plastic injection machines to their production, for which they plan to employ 70 qualified technicians.

Also, they already complete their new decoration and assembly building, which will enable them to increase their production by 10 percent.

Process

The process starts with the reception of different resins (ABS, polycarbonate, among others) and pigments, then they are mixed to obtain the correct color and sent to the injection machines.

Once the bricks are obtained, they are stored in boxes; when these have the right weight (maximum 25 kg), an alert is sent to the technician to place them on a conveyor to the warehouse.

"Some of the elements go to the decoration and assembly area, where we give life to the characters: we paint their face, expressions and everything we want to decorate," shared the vice president.

Every day, around 5,000 boxes are moved on a conveyor belt for more than a kilometer and a half. According to requirements, the boxes are transported to their fully automated high-bay warehouse, which has 52 levels of shelving and a capacity of up to 600,000 boxes, and has 12 cranes that enter and exit approximately 100 times per hour.

The technology allows the entire process to be automatic, and the manufacturer can adjust parameters in the warehouse from its home country in Europe.

The process continues in the pre-packing lines: from there, a certain box with elements is requested, transported by automatic belts and, by means of vibration, they are arranged to be distributed by set.

Finally, they go to the packing area, where the bags are placed in the box that the consumer sees in the store. 100% of production is exported to Dallas, in the United States, where the American Distribution Center is located.





Human Capital

The LEGO Group employs more than 4,000 people. One of the company's main values is to take care of its employees; therefore, they focus on providing a comfortable environment and openness to feedback. Every year, they conduct a motivation survey of their employees; in 2021, LOM obtained the best result of the entire group.

In addition, they have development programs in the operational area, where employees are promoted to different opportunities based on their skills, seniority, commitment and performance.

"I am an example of the development we can have in the company: I started as a quality manager and today I am senior vice president. I had the opportunity to collaborate in different positions and areas, and to develop in my career," shared Nancy Sanchez.

As part of the programs offered, they have dialogues with staff twice a year to review their development and what they want to focus on. One of the main projects they have had was the selection of their best technicians to send them to trainings in Puebla and Denmark, giving them the necessary tools to create the plastic injection molds used in the plant.



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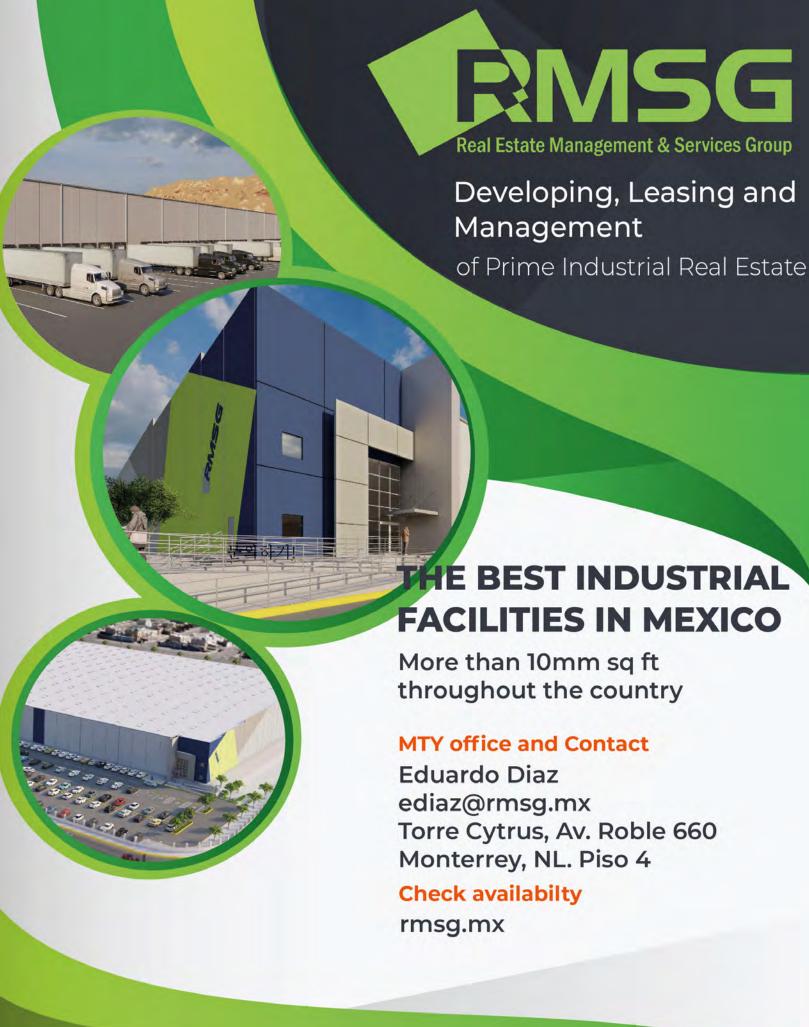
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Contenido.

Listado de inversionistas de empresas confirmadas. Ubicación exacta de cada parque industrial. Contacto del desarrollador y/o administrador del parque industrial. Principales avenidas que conducen al parque. Ubicación de las empresas en cada uno de los mapas con su giro. Contacto de las diferentes dependencias gubernamentales. Ubicación de las principales armadoras automotrices.

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