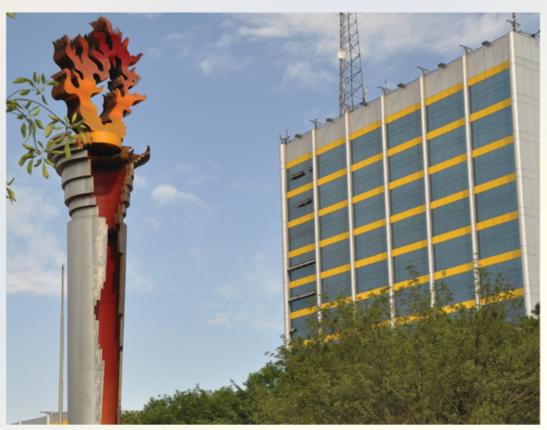


Universidad Autónoma de Nuevo León

Fostering Social Responsability and R&D paves the way to achieve international recognition













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Innovation for knowledge-based growth

Mexico is bouncing back from the crisis, thanks to sound economic management and solid fundamentals. Nowhere is better placed than Monterrey, capital of Nuevo León State. A traditional center for high-quality manufacturing with world-class companies and a strong work ethic, Monterrey has adopted a "triple helix" strategy to drive innovation and investment via clusters and logistics.



The best place to do business in Mexico

Just a couple of hours from the U.S. border, with a great manufacturing tradition, top universities and a high standard of living, Monterrey is raising the bar for competitiveness. Could "designed in Mexico" become as common as "made in China"?

n the beginning, there were ironworks and hot, thirsty smelters who needed a cold beer. So next came the brewery. Beer needs a bottle, though, so then came the glassworks, and then a bottle-cap factory, and thus the first industrial groups took shape a century ago and made Monterrey the heartland of Mexican manufacturing.

But if Monterrey and Nuevo León offer the world one lesson, it is that success doesn't come easily—it's the consequence of hard work by a dynamic, committed private sector. Cemex and Femsa may be global pace setters, but they share humble origins in a city where strong, family-run businesses are the backbone. Many, like U-calli, Coflex and Iconn, have grown greatly but remain under second- and third-generation family control. Others, like Gruma, Banorte and Axtel, blend the best of family commitment with the rigor of a public listing.

But always, Monterrey's business leaders boast qualifications from world-class universities, some in Monterrey itself. And they maintain an unrivaled tradition for giving back to the community through education, health, the arts and public service

At the national level, the country is winning its tough battle against drug trafficking and is pushing ahead with painful but essential economic, fiscal and educational reforms under President Enrique Peña Nieto, who took office a year ago. Monopolies are being challenged in telecommunications and energy.

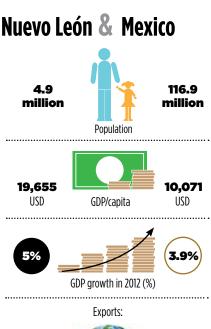
Noting these new directions, U.S. President Barack Obama made an early visit. And despite a sluggish economy in 2013, the International Monetary Fund was upbeat: "Growth is projected to recover gradually and return to 3 percent in 2014, as manufacturing picks up on the back of a recovery in U.S. demand, public spending regains momentum, and ongoing structural reforms begin to bear fruit," the IMF's World Economic Outlook said in October 2013.

"It's useful to look at what Mexico has gotten right, despite its problems," *New York Times* columnist Thomas L. Friedman wrote after visiting this year. "Monterrey has tens of thousands of poor living in shantytowns. They've been there for decades. What is new, though, is that this city, Mexico's Silicon Valley, now also has a critical mass of young, confident innovators trying to solve Mexico's problems by leveraging technology and globalization."

Human capital is a great strength. "For a long time now, Nuevo León has produced workers with the skills the market needs at all levels, from machine operators to executives," said Tomas Gonzalez Sada, CEO of Cydsa, a family conglomerate in chemicals and fibers.

But Monterrey has also taken some knocks. Long known as an "island of calm" within Mexico, Monterrey folks were shocked when violence from the federal government's war against drug cartels spilled over into their city. In a way, Nuevo León was a victim of its own success: efficient transportation and proximity to the U.S. border made it an easy target. But Monterrey people are doers rather than talkers: they got together and helped restore the peace (see page 4).





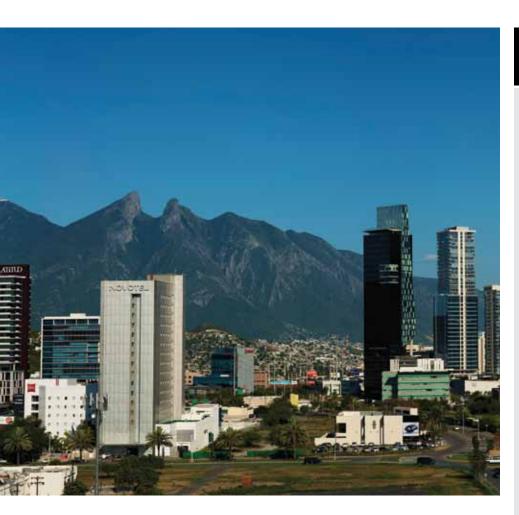
Billion USD

Exports:

318

Billion USD

(Source: Secretariat of economic development; 2012 data)



Nuevo León is transitioning to a knowledge-based economy, still making things but increasingly adding know-how, design and innovation. The state leads Mexico in productivity, patent registration, business creation and adults with higher education.

"Traditionally, Nuevo León does not compete against other places in Mexico; we compete against the United States, China and India," said Rolando Zubirán, state undersecretary of foreign investment and international commerce. Already Nuevo León exports more than a third of its GDP, and both the product per capita and the rate of economic growth are almost twice the national average.

Caterpillar is building a US\$500 million precision-components factory near Monterrey, and Mondelez, the owner of Kraft and Cadbury, announced investments of US\$600 million. Total investment in Nuevo León was almost US\$3 billion in 2012, and even more in 2013.

The state's development strategy is focused on education and "triple helix" integration between government, business and academia, promoting clusters and improving logistics; Interpuerto Monterrey is a major new customs-bonded intermodal dry port that will link directly with U.S. rail networks and could attract US\$2 billion of investment. "It's a great project that will transform Mexico," said Alberto Santos, CEO of Empresa Santos, while Raúl Gutiérrez, co-CEO of Deacero, stressed the importance of "working together with foreign companies and developing pubic policies to substitute imports competitively," for example in auto parts.

So, where does Monterrey go, now that it has world-class companies exporting globally? Simple: it leverages educational strengths, drives innovation and goes even further. As this Special Report shows, Monterrey businessmen are still rolling up their sleeves—they reckon there's a lot more to achieve.

The men who shaped MONTERREY





Alberto Santos de Hoyos

Eugenio Garza Sada

Modern Monterrey is the product of generations of talent, hard work and philanthropy. Thousands have played their part, but two names stand out and serve to illustrate the spirit that is Nuevo León.
Eugenio Garza Sada (1892–1973) and Alberto Santos de Hoyos (1941–2013) lived at least a generation apart, but they were united in their drive to build powerful companies and give back to the community.

In 1890, Garza's father, Isaac Garza Garza, founded Cervecería Cuauhtémoc, a beer company, together with his brothers-in-law from the Muguerza family. By the time Garza joined in 1917, the group already had its own bottle factory.

Garza succeeded his father and built the group into a major conglomerate that included FEMSA, one of the world's largest Coca-Cola bottlers. FEMSA merged with Heineken in 2010, giving global exposure to brands such as Bohemia, Sol, Dos Equis, Tecate and Carta Blanca. But Garza left another great legacy by founding the Monterrey Institute of Technology, which is closely modeled on his alma mater, the Massachusetts Institute of Technology. Santos graduated from Monterrey Tec and built up Gamesa, the firm created by his father and uncles in the 1920s to make cookies and pasta, until it was taken over by PepsiCo in 1990. Today Gamesa is Mexico's largest cookie producer, exporting throughout the Americas. Santos expanded the family businesses into sugar and car sales, creating Ingenios Santos and Automotriz Santos, and developed a successful real estate business that shaped much of San Pedro Garza García municipality. Santos also served as a federal congressman and senator and was widely known for his philanthropy, helping to create the Mexican Health Foundation and pioneering a form of partnership with smallholders that brought prosperity to poor rural areas.

The Alberto Santos de Hoyos Prize today recognizes individuals who have contributed to the community through their generosity, service to others, commitment, humanity, social awareness and leadership.



ALBERTO GARZA SANTOS

CEO, Promotora Ambiental (PASA)

"Throughout Mexico, the private sector is on the cutting edge of environmental protection. Private companies have a solid pro-environment image. Above all, the industrial sector has been anxious to employ proper practices. Nuevo León sets the standard in Mexico for environmental management. It has the most efficient water treatment company in the nation, and the best system for solid waste management is also here. Here in Nuevo León, we have recycling plants and generate electricity from bio-gas. PASA is the biggest waste treatment company in Mexico, and it's here in Nuevo León. The third-largest company is also from here. But our generation did not start from scratch. Previous generations were already environmentalists and were doing things: they had their water treatment plants and their recycling ventures. And they did this not because they were forced to by law, but because of common sense."



MONTERREY HAS SUFFERED FROM A BAD ECONOMY AND DRUG-RELATED VIOLENCE. NOW THAT THINGS ARE IMPROVING, THE NEXT TASK IS TO REBRAND THE CITY.



Caring for a city's image is often relegated to public bureaucrats or an advertising company. Not so in Monterrey, where businessmen have a long tradition of rolling up their sleeves and doing what's necessary. Local business and academic leaders will be in New York in March at Monterrey Investment Outreach—an event conceived, planned and led by the private sector. Even competitors are working together to tell the world that their city is pulling through its problems and is open for business. It's the first time that Monterrey's top companies have done anything of the kind. "Now that we're recovering, we need to make our strengths evident," said José Antonio Torre Medina of Monterrey Tec. "We don't want to communicate dreams, but to show what the city really is."



Making Monterrey safe again

Monterrey is winning its battle against drug-related violence thanks to groundbreaking cooperation between the private sector and all levels of government. Cutting-edge telecommunications are helping.

onterrey is a wonderful city with an excellent standard of living. Old colonial history rubs shoulders with ultramodern malls, handicrafts markets, restaurants and parks. In the distance lie verdant mountains. But in recent years, Monterrey has had to grapple with the spillover from Mexico's violent drug problems. Lying so close to the U.S. border, and enjoying good logistics, Nuevo León has tended to suffer as a route for trafficking. This led to a wave of street violence and carjackings. The solution has come through intense cooperation between local companies and the government, with innovative structures to encourage the participation of thousands of citizens.

"They say that necessity is the mother of invention," said Patrick Kane Zambrano, an MBA graduate of Stanford University who has worked for seven years at McKinsey & Co. "In 2010, more than 80 percent of citizens said they felt insecure, nine out of ten did not trust local authorities, and there was a generalized fear of participating to bring about change." The solution was to create the Center for Citizen Integration (CIC), a not-for-profit organization now supported by more than 30 private-sector sponsors.

CIC leverages modern communications technologies—Google and Twitter are among the sponsors—to help citizens report anything suspicious. "We aim to prevent crime through an active base of

citizens reporting and sharing their perceptions on their surroundings; it can be anything from broken streetlights to a theft in progress," Kane said. "It's a nearreal-time stream of conversations about what's taking place across the city." All this information is stored and analyzed to detect patterns and indicate cost-effective strategies and solutions. There is also a team of volunteer lawyers and psychologists available to help crime victims and encourage them to overcome their distrust of authorities enough to come forward and file formal complaints.

Local businessmen also gave money and managerial know-how to help build a new police force, using lie-detector tests to weed out corrupt cops. Higher pay, safe housing, good training and modern equipment are all contributing to winning back public confidence. Carjackings and killings are now down sharply from their crisis levels

"The first step forward is always to acknowledge problems," said Mauricio Doehner, corporate affairs VP at Cemex, one of CIC's early supporters. "We thought everything was working well, but then we realized that as a society we were being passive. So in three years, the state and federal governments and society in general made an effort to actively co-participate instead of staying at home saying, Well, that is something the government should fix."

INVESTMENT OUTREACH





The Monterrey Investment Outreach 2014 by Peninsula Press will bring together Mexican business leaders from its most competitive manufacturing center, Nuevo León and its capital city Monterrey, as well as senior state and federal government representatives. Our premier gathering in New York, focusing on local projects and flagship companies, will attract over 200 c-level executives from leading organizations in banking and finance, manufacturing, heavy industry, ICT, logistics, high tech incubation and infrastructure development.

For further information please contact:

info@peninsula-press.com

To register please visit:

www.monterreyinvestmentoutreach.com

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Politicians say...

What's turned Monterrey around? Smart policies to fight crime and reposition the city as a 21st-century knowledge-based economy—plus "triple helix" cooperation with universities and business.



Rolando Zubirán,

Undersecretary of Foreign Investment and International Commerce, NL

Sustaining Nuevo León's growth and development requires a four-pronged strategy. First is clusterization of major industries like the automotive sector, to coordinate and integrate development and investment within the triple helix. Next, we must focus on education to become a knowledge-based economy; 48 percent of Nuevo León's budget goes to education, and 6,000 engineers graduate each year. We must be the base of the national supply chain: the state produces 11 percent of Mexico's manufactured goods and 8 percent of GDP with 4 percent of the population. And we must be a logistic hub: Nuevo León has a strategic location; the key is efficiency, because 80 percent of Mexico's manufactured exports to the United States pass through Nuevo León.



I have always sought a social model that implies a common denominator: solidarity between private initiative, civil institutions and religious institutions, with the interdependency of all branches of government. I believe in free education for all, built on three pillars. The first is a commitment to teaching professionals to guide them through the process of educational reform that is now taking place at a federal level. Second, students must be aware of the quality of their teachers and the fact that Nuevo León is the Mexican capital of quality education. Finally, parents will have access to "parenting schools" where they'll understand the challenges of parenting and learn how to be good parents while being productive in their daily lives.



Ildefonso Guajardo Minister of Economy, Mexico

Two-thirds of Mexico's economic growth comes from exports, which are mostly manufactured goods. In 2012, Mexican exports totaled US\$371 billion, with manufactured goods accounting for 80 percent—or US\$302 billion. That was

48 percent more than [the rest of] Latin America and the Caribbean together. Nuevo León correctly foresaw the need to transform itself in order to grow, and now it has one of the country's most dynamic and integrated business environments, as evidenced by the Research & Technology Innovation Park. This

has reinforced Nuevo León as a leader in patents, accounting for 13 percent of all patents requested in Mexico in 2012, and it helps attract investments to the state that this year alone will be around US\$3 billion, from world-class companies such as Mondelez, Lego and the Techint Group.



Rodrigo Medina,

Governor, NL

Foreign investment in Nuevo León translates into employment, and the state generates 11 percent of all jobs created in Mexico. We are having a year (2013) of record foreign investment—more than US\$3 billion. This makes Nuevo León the leader in foreign investment and economic development. But we want more than that; we're working for better jobs for our people. Even when the security situation was at its worst, international investment in Nuevo León didn't drop off, it just grew slower. With the "insecurity index" now down by 70 percent, foreign investment has been growing exponentially. Around 80 percent of American companies in Monterrey have been growing. We have the highest productivity index in the country. Recent studies show that our workers—employees and businessmen—are 4 percent more productive than the rest of the nation.



Something I remember well is a comment by [New York Times columnist] Thomas Friedman in a [February 2013] article he wrote in which he mentioned the case of an American who was invited to visit Nuevo León. I don't remember if it was for an event or a conference, but he decided not to come because of a warning by the U.S. State Department. But Friedman decided to make the trip; he visited the Research & Innovation Technology Park (PIIT), which is the largest in Latin America, the most important in Latin America, with research centers, and which is one of the bets being made by the state government. Friedman's visit resulted in this article, in which he describes Nuevo León as being at the heart of the Mexican resurgence.

Businessmen say...

What's turned Monterrey around? A traditional work ethic and dynamic companies that believe in corporate citizenship—plus "triple helix" cooperation with universities and government.



Salomón Marcuschamer

Javer

My father used to say that Mexico is a country with an incredible spring: anyone who bets against it always loses. I have lived through three or four crises and we have always overcome them. We came out stronger, and we learned. My personal experience in two of those crises was that I felt like a dog that was run over, licking its wounds. But I moved forward and so did the country. Mexico, with its 120 million inhabitants, is like a watermelon; wherever you put the knife in, you will get juice, because it is a country that needs many things. It demands housing, services, communication, everything. Only those people who do not want to work do not prosper. The culture of effort, of excellence, is rooted in Monterrey, and people like working.



Tomas Gonzalez Sada CYDSA

The expectation of [economic] growth is also a challenge, because we need to make sure that the benefits can be sustainable. But companies in Nuevo León incorporated social and environmental responsibility into their business proposals long before sustainable development became such a worldwide trend. In the case of Cydsa, for example, in addition to adhering to the strictest international environmental standards, several of our programs and projects focus on improving the working conditions of our employees and neighboring communities. There's a perception that things are going well, but it must be backed up by evidence of improvements to people's quality of life. It starts with a new approach by the government at all levels.



Jose Antonio Fernandez Carbajal

Femsa

Mexico is in the midst of a political transition. I say this with optimism, because I feel that the public and private sectors are committed to the transformation of the country. We are at a point where we have to prove to everybody that each step toward transformation can add value for our economy and society. We have to consider the effort that the federal government has made in its initiatives; it has taken a step forward to transform a situation that has dragged on for many years. This should free us from the mistakes of the past and lead the country toward faster growth and greater welfare in the future. The benefits won't come overnight, but without a doubt they are going to change the stagnation we have experienced for so many years. Today we support the federal legislators; we expect them to put the national interest before any political party's interest.



Cemex



Once again, Monterrey has proved its resiliency, thanks to its hard-working people, a firm commitment to improving our international competitiveness and significant progress in strengthening the rule of law and an overall culture of lawfulness. We have learned that a sustained, comprehensive effort is key, and we will keep on working to secure our progress so that our city and our country continue to prosper.



Ricardo Martín Bringas

Soriana

Monterrey has always been known for its robust and vigorous economy, which has clear industrial strengths. These attract investments that are important for both the region and the country. The city has the necessary infrastructure to connect easily by land and air with major cities in Mexico and the United States. I would also stress the competitive manpower—the strong commitment of Monterrey people, and their great qualities as professionals. They show the same tenacity as the city itself. These qualities attract companies from all over the world, and in Monterrey they find a good platform to do business. And, of course, we have great universities. So we should look at Monterrey's competitive advantage in an integrated way—all these things matter.



Q&A



Jesús Áncer Rector Universidad Autónoma de Nuevo León

What drives UANL?

Our 2020 vision is to offer quality without straying from the path of social responsibility. The university was founded in 1943 as an instrument for social change, and we provide 80,000 scholarships per semester (within a total of 153,000 students). We are the university that grants the largest number of scholarships; it is a social commitment. Also, our foundation helps us with a part of the funding to give these students not just the tuition cost but also enough money to live on, to be self-sufficient in terms of transportation and food.

This vision of the role of the university in society really seems to permeate everything that UANL does.

Well, we are a public institution and we have state and federal budget financing so social commitment is very important to us. It is very important that we provide education with fairness, with independence. Regardless of your social status or your religion, you have the chance to go to school.

You're also a great proponent of the "triple helix" concept, promoting relations between the university, industry and the government.

Right; academia works with the government and companies to provide students with the correct skills to succeed in every sphere. Nuevo León's greatest companies are on our main consulting board and discuss the skills needed to develop the economy, while the international consulting board provides input to improve the quality of education and make it respond to international standards.

What are the impacts of this?

UANL is very strong in terms of research centers; we have more than 532 researchers and more than 300 permanent research programs, and we create patents. Some of our research areas are at PIIT, the Research & Innovation Technology Park, and PIIT is a place where knowledge has an impact because it is aimed at a company and the needs of that company.

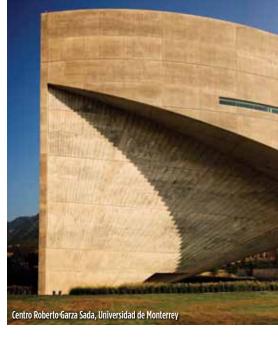
Education Is Key

Monterrey has more than thirty universities, at least one of which regularly ranks among the ten best in Latin America and offers joint degree programs with top U.S. institutions.

Education isn't just a successful part of the economy in Nuevo León—it's also a key driver behind several other dynamic and important sectors. Not only are Monterrey's universities good, and striving to get better, but they have a clear vision of their social responsibility and absolutely no compunction about working closely with government and the private sector to help boost economic growth. This contrasts sharply with the ideological standoffishness that has held back faculty-factory cooperation in some other parts of Latin America

First, the figures: Nuevo León invests more in education than any other Mexican state. There are 102 universities and higher learning institutions, and no less than 60 percent of the platform is bilingual, thanks to proximity to the United States. These institutions graduate 6,000 engineers each year, plus some 11,000 technical operators in "high school plus three" courses. This gives Nuevo León the country's highest percentage of people over the age of 18 with a professional education—not to mention a fantastic foundation for manufacturing in skilled engineering sectors such as household appliances, aerospace and auto parts.

One striking example of how universities are integrated into the economic life of their community is the automotive sector. Three leading institutions—Universidad de Monterrey (UDEM), Universidad Autónoma de Nuevo León (UANL) and Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM), better known as Monterrey Tec—work together with auto parts companies to promote in-



vestment, in particular to expand the supply chain.

Monterrey universities are also distinguished by their international outlook. UANL, for example, has a foundation that raises funds to send between 700 and 800 students abroad to study, with plans in place to double that number. This international outlook extends to language. Even students in the pre-university high school classes have access to programs in English, French, Italian, German and Chinese. UANL also seeks to add cutting-edge courses in new areas such as digital media, animation, IT security and geophysical engineering. A publicly funded institution, UANL boasts Mexico's only World Trade Center franchise and provides consultancy to more than 2,500 small and medium companies.

Other institutions share a similar focus on the family companies and small businesses that are a major feature of the local economy. UDEM estimates that perhaps half of its nearly 12,000 students come from either a family-business background or a family where at least one parent works in business. There are special courses on family businesses, and there's even a family business center that brings together local professors and experts from Spain who work to understand the functioning of family enterprises. And just a couple of years ago, UDEM created a center for excellence in corporate governance.

International approval

In its latest economic survey of Mexico, published in 2013, the Organization for



Economic Cooperation and Development (OECD) noted that the country still has some way to go in improving education, but it gave high marks for effort and progress.

"Educational achievement is considerably below the OECD average, but has been gaining ground in the past decade, while education quality measures have been increasing at a moderate pace," the OECD said. "This is particularly impressive given that nearly all students from the age of 4 to 14 are now in school."

The OECD report referred to the country as a whole, not specifically the state of Nuevo León, which has significantly better education levels and outcomes. In 2011, according to the state secretariat for education, Nuevo León registered 97.8 percent literacy, for example, against a national level of 92.4 percent. Preschool enrollment was 85.3 percent in Nuevo León against 80.9 percent nationally. And high school dropout rates were also better, at 4.4 percent against 6 percent.

According to the OECD, Mexico needs continued effort in reforming teaching and school leadership, system funding, and curricula, as well as evaluation and assessment strategies, but the organization welcomed new legislation from the federal government. "The law passed in January of [2013] is an important step, and should make the system for hiring, evaluating and promoting teachers more professional, as it dispenses with the discretionary criteria that have sometimes allowed teaching positions to be bought or inherited."

→ MEET THE DEAN

The vision and strategies of key players in Nuevo León's vibrant educational sector. We ask how they are building their institutions, and where they are headed.



Salvador Alva Gómez Rector, Monterrey Tec System

Innovation & Leadership

FORMER PEPSICO LATIN AMERICA PRESIDENT PRIZES INNOVATION AND AN INTERNATIONAL OUTLOOK

How do you see the role of universities in society?

Higher education institutions play a key role in social development. It's generally understood that universities invest continuously in an asset that provides an extraordinary return on this investment: our students. For 70 years Monterrey Tec has gone through a process of continuous innovation to achieve continually greater returns on this investment by satisfying the educational demands that are created by social, economic, scientific, labor and technological changes.

Can Monterrey Tec help rebuild the identity and well-being of the city whose name it carries?

We recently launched an urban citizenship initiative to create synergies among all members of our community and to promote a city-wide transformation into a more dynamic, attractive and aspirational place to live.

Your university produces many business and civic leaders and decision maker. How do you see this role?

We seek to transform our students into agents of global change. Our institution provides a unique educational model that educates students to be citizens with ethical and human-centered values. It's an international outlook with a strong entrepreneurial culture. We promote growth through research, new educational models and social activities, not just within Monterrey Tec but also with our community and international partners. Our motto is "Education that transforms lives."



Antonio José Dieck Assad Rector, Universidad de Monterrey

High-tech driver

PhD INDUSTRIAL ENGINEER
SEES COMMUNITY INVOLVEMENT
AS PART OF THE PATH TO
EXCELLENCE

You were working on UDEM's 2020 Vision even before you became rector in 2009. What does this involve?

The three main pillars of the 2020 Vision are an academic culture of excellence, service-oriented holistic education and sustainable educational infrastructure. We are aware that there is a valuable education offer in the region, but our DNA is different and that's what distinguishes us. We began designing an integral system. It is already working, and we have made great progress.

UDEM is a privately funded university, but you place great stress on relations with the community. Why is that?

The university is not an island in the community. I usually tell colleagues that this is an organization from, for and [directed] to the community. We come from the community. We may be a private college, but our resources are public, because they come from the public. We're not called a public university because we don't have government resources, but we are grateful for the trust of parents and organizations that work with us and give us their resources, as contributors and benefactors that help us do large projects.

And your vision, for your students?

We care about what we do with students so they become valuable members of society—technical trainers, engineers, lawyers, accountants, financiers, doctors and the like. We want to go from "made in Mexico" to "designed in Mexico."

Monterrey: International City of Knowledge



Jaime
Parada
Director of PIIT

DREAMING BIG

R&D INVESTMENT IS NO ACCIDENT; IT'S A KEY PART OF THE LOCAL DEVELOPMENT STRATEGY

"The culture of the significance of research, innovation and postgraduate courses is already present in the lives and minds of businessmen."

Many states and cities try to promote innovation, but with mixed results. Why has Nuevo León been so successful?

The first step was passing a law to encourage knowledge and technology innovation. In 2005 we created the Institute of Innovation and Technology Transference, a public body responsible for science, technology and innovation programs and policies. And the institute has a 25-year program, which is not usual in countries like Mexico with six-year planning horizons, like government terms. We also realized that university students need places to work, otherwise the only destination for our young people will be Canada, the U.S. or Europe.

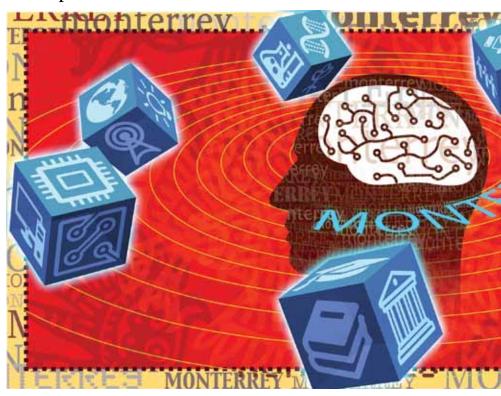
What was the solution?

With complete intellectual honesty, we recognized that Nuevo León needed research centers, and we facilitated the conditions to carry this out. We currently have 85 research centers in the state; there are 50 in university campuses and 33 in the PIIT, the Research & Innovation Technology Park.

And now other places are copying you.

I am glad that I dream about developing big, ambitious projects that generate national pride, because Mexico needs that. Mexicans are always looking for icons of success; too often there is a feeling of defeat. It makes me extremely happy that other states are copying what we are doing here because it means they believe it is a good practice to follow. Yucatán is constructing a 500-hectare park, Chihuahua will build two parks, and two are planned in Hermosillo.

Government, universities and business working together: the "triple helix" in action.



decade ago, Monterrey's city fathers took a visionary step. No longer could the city rely only on its traditional strength in manufacturing, despite the boost from the North America Free Trade Agreement (NAFTA) that opened up the U.S. and Canadian markets. With uncommon perspicacity, they saw the growing threat from cheap Asian labor and decided that Monterrey had to evolve from an industrial to a knowledge-based economy.

Today, that vision—expressed as the Monterrey International City of Knowledge Program—represents a key differential for attracting investment, at the same time that the country is opening up its telecommunications sector to greater competition and foreign investment.

In Monterrey, the Research & Innovation Technology Park (PIIT) has 33 company and university research centers, with more planned. Investments

are around US\$400 million, mainly from private companies and universities. Current and future areas of interest include IT, nano-materials, biotechnology and renewable energy.

Leading local universities now rub shoulders with the University of Texas at Austin, which opened a branch of its Center for Global Innovation and Entrepreneurship at PIIT. Government research labs are also present, but perhaps the most interesting facet of PIIT is the growing presence of private companies—mainly Mexican, but also foreigners, including Motorola, PepsiCo and Schneider Electric, a German specialist in energy management. There's also an incubator for software start-ups. Over one thousand people are involved in research, including support staff.

"They're working together, discovering the future, transforming ideas into products and new businesses and helping



Numbers tell the tale: Nuevo León has more than 1,300 companies with ISO-9000 and ISO-14001 certification. It also registers more patents than any other Mexican state.



In 2007, the IDB's Korean Technology Fund was so impressed with Monterrey's quest to become a knowledge-based city that it granted money to help plan the 2008–2015 phase.



Nuevo León businessmen incorporate innovation into their culture as a lifestyle," said Jaime Parada Ávila, the director of PIIT, who holds a Ph.D. in engineering from Sheffield University in England and was director general of Mexico's National Science and Technology Council. Investment comes from a variety of sources and includes venture capital to help transform ideas into marketable realities.

Many new and established high-tech companies in Mexico are set to receive a boost with a landmark constitutional reform of the telecommunications section, signed this June by President Enrique Peña Nieto. Detailed enabling legislation is due in six months. Monterrey-based Axtel has been campaigning for years to create a level playing field, with CEO Tomás Milmo Santos fighting in Mexico's supreme court against discriminatory pricing policies by the market leader. This and similar court cases helped topple the old

monopolies. Analysts said changes should allow foreign ownership of up to 100 percent in much of the telecoms sector and up to 49 percent in broadcasting; faster transition to digital TV; permission for concessionaires to offer various services; asymmetric regulation to reduce market dominance; and a second national fiberoptics backbone. Run by an independent public-private partnership, it will enforce equal access. "This is very interesting," Milmo Santos said of the new backbone. "It will enable us to compete."

The Monterrey International City of Knowledge program is overseen by the Nuevo León Institute of Innovation and Technology Transfer—I²T²—which organizes sectorial clusters to promote economic development (see page 13). There's also cooperation with universities or agencies in the United States, Germany, Spain and South Korea, plus multilateral institutions including the InterAmerican Development Bank.

Universities are enthusiastic. "We have an engineering research center at PIIT; we are creating a nanotoxicology center and we plan to create a data center," said Jesús Áncer, rector of Universidad Autónoma. "This has given us the chance to relate to companies and to create an important synergy. It's a place where my graduates have job opportunities and where professional practice and development occur."

For Universidad de Monterrey, the technology park offered the chance to create an innovative research center called Abre, dedicated to improving packaging. "We concluded that there was a large market with great needs in this area, because almost all manufacturing companies in the region have to subcontract or less usually develop their own packaging materials and products," explained Rector Antonio José Dieck Assad. Abre can handle all that, with innovation and greater efficiency.





TOMÁS MILMO SANTOS

CEO, Axtel

Axtel was the first landline competitor in Monterrey for Mexico's giant Telmex. "From 1994 until 1999, we fine-tuned our business plan, attracting private investors and technology partners," said founder Tomás Milmo Santos, a graduate of Stanford University in business economics. "But primarily, we waited for authorities to launch spectrum auctions and grant respective local services concessions. We quickly realized it wasn't going to be a level playing field for new entrants."

Today Axtel still awaits the expected creation of a fully open and competitive telecoms market, but more than US\$3 billion of investments have made it the country's second-largest fixed-line and long-distance operator, with 12,200 km of fiber-optic cabling and what it describes as Mexico's most advanced broadband service.



BLANCA TREVIÑO DE VEGA

CEO, SOFTEK

Hailed by Fortune magazine in October 2007 as one of four "rising stars" and by *Forbes* magazine this year as "the face of Mexico's principal technology industry," the cofounder of Softek has been its CEO and president since 2000. "We were just kids and we could dream," Treviño said, recalling the company's 1982 origins. "Some friends and I wanted to have a global company, to serve major corporations at the top of the pyramid. So Softek was born with this vision and the idea of providing value for these clients—to improve their competitiveness." Today the company has 30 offices around the world, with 10 Global Delivery Centers in the U.S., Mexico, China, Brazil, Argentina, Spain and India, and it describes itself as "the creator and a leader of the nearshore industry."



Monterrey's new generation of business leaders blend strong family tradition and work ethic with cuttingedge skills acquired at top universities.



ALBERTO SANTOS BOESCH INGENIOS SANTOS

Ingenios Santos is a third-generation family business with roots in a home-bake business. "My grandfather started selling cookies to his neighbors before he came to Monterrey and set up Gamesa," said Santos Boesch, who is now building on the family tradition.

Gamesa became a major player under his father, Alberto Santos de Hoyos, who then sold most of it to PepsiCo in 1990 in a landmark deal between a local company and a global giant. But Santos de Hoyos held onto and expanded the family's sugar interests. "My father always had this thing for industry, and he bought sugar mills to supply the cookie production. When he sold Gamesa, he kept the mills. We bought more in 1996 and today have five, in San Luis Potosí, Veracruz, Jalisco and Michoacán.

Now Santos Boesch sees a 21st-century future in alternative energy, if and when Mexican legislation permits. He recently visited Brazil, the world leader in sugarcane-based bioethanol, to see the latest technologies in action: "Sugar is the basis of many things that are central to sustainability, like energy co-generation, ethanol and medicines."

YOUNG ENTREPRENEURS WILL BOOST THE LEGACY

Often, family companies find they need to bring in outside professional management once the founders retire, because succeeding generations lack the interest or competence to carry on. Not so in Nuevo León, where many companies remain in family hands while professionalizing their management thanks to the strong business-oriented tradition of local families and universities. And as new generations of highly trained entrepreneurs come along, so new companies are being formed—not least in the financial sector, where there is always room for new players with a new vision. It helps make Monterrey the center of Mexico's most dynamic business region.



MANUEL RIVERO ZAMBRANO COO. BANREGIO

Banregio is a fast-growing, mid-sized bank that's turning in an excellent performance since going public around the middle of 2011.

"We're not interested in market share; we're interested in quality and being profitable," said Rivero Zambrano, a graduate in financial administration from Monterrey Tec and one of the masterminds behind the repositioning of the 18-year-old bank, Monterrey's third largest. Certainly, the market approves. By the end of October 2013 the stock price had more than doubled on the Mexican exchange, measured in pesos.

"As a banker, you have to be humble and understand the challenges that you, your employees and your community are facing," Rivero Zambrano said. "The monetary policy of previous governments protected economic stability... but in the last 12 years, the government has been unable to do the structural reforms we need for sustainable growth. Some economists think that if these reforms are done correctly, we could be looking at annual GDP growth of 5 percent or more. I know the government is working hard at this, but the political cost is going to be significant."



ERNESTO LÓPEZ CLARIOND
CEO BANCREA

Bancrea is a new bank, formed by a group of 10 Nuevo León investors, including various traditional local families. It received federal authorization to start operations in July 2013, with initial capital of 480 million pesos—roughly US\$37 million. The goal is to grow from an initial three branches to 12 within five years, focusing on the greater Monterrey region. López Clariond, one of the key partners in the new venture, is pushing an innovative business model that focuses on serving small and medium businesses rather than the major companies so beloved of larger, more traditional institutions. It's a customer-oriented, local-vision approach, but with cutting-edge technology and robust, conservative financial management.

"We want to return to the concept of personal customer service," López Clariond said. "It's still very difficult to obtain credit in Mexico. We have many international players and they have different operational rules, because that's how they do things in their head offices. We want to begin by making decisions locally, in the place where we see the financial need."

CLUSTARIZATION: THE ENGINE OF FUTURE GROWTH

Academia, private companies and government are cooperating to strengthen, expand and promote the state's strategic sectors.

MONTERREY Business city

he idea of promoting selected industries in the form of clusters is not unique to Nuevo León, but few cities or regions around the world have given it more thought and effort. The state now has nine clusters-automotive and auto parts, nanotechnology, aerospace industry, agrifoods, information technology, sustainable housing and renewable energy, specialized medical services, biotechnology and electrical applianceswith a central coordinating council. This selection reflects the understanding of local business and government leaders and university researchers about the areas where Nuevo León can best compete and create well-paid jobs. Each cluster brings together companies, public and private research bodies and universities.

The nanotechnology cluster, for example, was formed in 2008 with the goal of developing professional staff with appropriate skills and knowledge, attracting financing and implementing new nanotechnology business projects—there's

a nanotechnology business incubator within the PIIT technology park. Cluster members include cement giant Cemex, U.S. multinationals Owens Corning and Whirlpool, and the U.S. universities of Texas (at Austin) and Arizona State, alongside local leaders Monterrey Tec and UANL.

The specialized medical services cluster reflects a perception that Monterrey, so close to the U.S. border, has great potential for supplying certified services, including high-complexity surgery to American patients. Cluster members include leading local hospitals and universities. And the biotechnology cluster brings together giants such as Novartis and Merck Sharp & Dohme with local hospitals and universities to support the production and application of scientific and technical knowledge, and the transfer and sale of technology, to create innovative products, processes and services, and in particular to create new companies and promote economic development in the region.



Hugo Lara President, Nuevo León Clusters Council

What exactly is the Clusters Council? How does it work?

It was created last year [2012] by the state governor as a consulting council. It's a consultative body that forms the link between the nine clusters and the state's long-term economic development plan.

So is it a lobby?

Not at all. It's an association aimed at having more competitive companies in the sector. We are trying to develop a strategic plan to align all clusters in that direction.

Is there a risk of reducing competition?

No, we work with a "cooperate to compete" philosophy, but there are companies that do not join us. We have had companies competing directly with clients, and we have said that if you do not want to share your best practices, or visit plants, that's all right. It doesn't mean you cannot share anything. At the end of the day, we are all interested in sharing things such as best HR practices and energy-saving ideas.



Fernando Turner Davila CEO, Katcon

Member: Automotive cluster

"My personal opinion is that by eliminating private monopolies, making state monopolies function as private companies, focusing on industry and having a competitive exchange rate, Mexico could quickly achieve an annual growth rate in excess of 7 percent, and it could do that without major reforms. If China has been growing at more than 10 percent a year for 30 years, I don't see any reason why Mexico can't achieve 7 percent. There is no concrete reason why not. We need to invest heavily in highways and telecommunications; that's part of achieving that growth rate.

"Monterrey is easily one of the best places in the world to do business; our culture is completely pro-business. Workers have a lot of respect for their companies; my employees love their company. It's not like other countries where they're bored and just doing their job to get paid. Salaries have been growing in recent years, but even so the productivity is just amazing."



Federico Toussaint CEO, Lamosa

Member: Housing Cluster

"I think Lamosa's challenge will be globalization. I have been working here for 20 years. When I started, the company was selling US\$60 million; now we sell more than US\$800 million. My dream is to have an active participation from Argentina to Canada. We already export [to the Americas], but I believe there are big opportunities.

"We've been working on long-term sustainability in the business model. It necessarily has several fronts, not only economic development. You have to look at environmental questions and find ways of generating more value. Social development is also important. "For ceramics, one of the most important supplies is gas, and the North American region has the cheapest gas in the world. As we compete in ceramics with Europe or China, having a competitive advantage in energy [is important]. Proximity is the second significant advantage, and also knowing the behavior of the market."

→ Point of view



Mauricio Doehner

VP, Corporate Affairs, CEMEX

What's special about Monterrey as an industrial and knowledge hub?

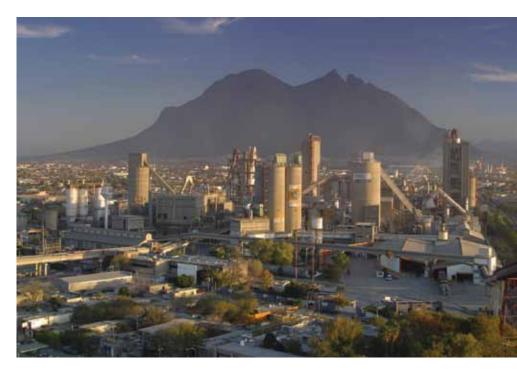
There are several factors. First, there are great universities, and they develop entrepreneurship, influencing people to take the risk of starting a new business. So, unlike other places, many new companies are created every year. Monterrey has been the cradle for key industries in the development of Mexico—cement, steel, beer, petrochemicals, flour and even telecommunications were created here. So there's a culture of business relations and hard work. Things have never been easy for Monterrey, even the weather. There are other places in the country and the world where you stretch out your hand and grab a mango, so it's not that difficult to move forward. In our case, we have always had to walk an extra mile, take an extra step. The strategic location of Monterrey is also very important. The fact that we are close to the U.S. undoubtedly helps; it's easier to attract investment. We have become a kind of international hub for investment.

Jorge Garza Montemayor

CEO Prolamsa

"We refer to luck as work"

Family firms with a strong work ethic are a foundation of modern Monterrey and Prolamsa—Productos Laminados Monterrey, SA—is a prime example. Founded in 1954 by Juan Montemayor Martinez, a local metalworker, and his son Mario, the company began by making metal door and window parts, chicken coops, bathtubs, pails and the like. One day, the story goes, a friend commented on the son's luck at having a successful business. "In my son's home," the mother replied, "we refer to luck as work, because he is up by six a.m. and finishes at midnight." Prolamsa is still a family firm, now run by CEO Jorge Garza Montemayor, but it has far outgrown the chicken coop era. Today it sells a wide variety of carbon steel tubing products through Mexico and North America. Located in Escobedo, in the north of Monterrey, the company offers as-welded Mechanical tubing, high-strength welded structural steel tubes so as a wide range of structural shapes.



Making things better

Monterrey's traditional manufacturing strength is being reinvented with copious R&D, savvy marketing, and attention to sustainability.

here's a consensus among the Nuevo León business community that their state, and particularly its capital city of Monterrey, have something special. A mixture of work ethic, a tough climate that punishes sloth, proximity to the world's biggest market and some standout universities have combined to give local manufacturing companies enviable strength. And although the talk these days is all about transformation to a knowledge-based economy, the state's bedrock competence still lies in making things. The difference is that, going forward, Monterrey plans on making them even better.

"We manufacture many products for infrastructure, and especially for highways," said Raúl Gutierrez Muguerza, joint CEO of Deacero, a major producer of wire products for the construction, domestic, industrial and agricultural markets. The company, Gutierrez explained, developed technology for a cable-based highway guardrail, to substitute for rigid sheet-metal ones: "This is very interesting; it has many advantages because it's

like an elastic band: you bounce back into your lane instead of going to the other side or jumping over. We developed the technology and took it to other countries."

The second-largest producer of steel wire mesh in the world, Deacero now has 15 production units in Mexico and exports to 20 countries. Its 14 distribution depots include Indianapolis (U.S.). Not bad for a company founded in 1952 by the father of the current CEO and a prime example of how many Monterrey firms have grown to conquer foreign markets without losing their family roots.

Cydsa is another. Founded in 1945 in a farmhouse on the outskirts of Monterrey to produce rayon fiber for the textile industry, Cydsa today has factories in seven locations throughout Mexico and exports to more than 20 countries.

"For a long time now, Nuevo León has taken pride in training and offering a wealth of personnel, from laborers to executives, who meet the highest standards of education and training," said Tomás González Sada, Cydsa president and CEO. This has given the state an ex-







ceptionally diverse manufacturing sector. Recent growth has moved in the direction of greater added value, often adding a service element to an existing manufacturing base, González Sada explained, and the trend is likely to continue.

This fertile mixture of work ethic, respect for technology and easy access to a major foreign market has made Monterrey a surprisingly efficient springboard for internationalization. Founded in 1906 CEMEX is today one of the largest building material producers in the world, and is the biggest in the Americas—performance that is even more impressive given that Mexico is not among the world's top 10 cement producers. Just 23 percent of CEMEX's US\$15 billion in sales in 2012 came from its home market, with the U.S. and northern European markets contributing 21 percent and 28 percent, respectively.

"CEMEX is a global key player in its three main areas—cement, concrete and aggregates—but it's also a local business, so integrated solutions for clients are developed locally, and then we extrapolate what can be applied to similar markets," explained Corporate Affairs VP Mauricio Doehner. One example is "Patrimonio Hoy," a program created in Mexico for the informal urban construction sector where many potential small customers lack access to credit. They save a small weekly amount with CEMEX, then exchange it

for materials at a fixed, inflation-proof price, plus free technical advice. Often they're women, squirreling away a bit of the family budget—or preventing it disappearing on other matters—to improve their home.

"We believed there was a niche opportunity, and it's being applied in Mexico, South America and the Caribbean," Doehner said. It's grass-roots marketing knowhow by a company that, at the other end of the spectrum, is a member of Monterrey's nanotechnology cluster.

Xignux is also investing in innovation, particular in cables and transformers. "We used to need a type of oil that was very harmful to the environment; today we use organic oil," said CEO Juan Garza Herrera. "And our products used to be larger; now they're smaller, quieter and more attractive. Cables will continue being made of copper, but for everything that's around the cable, even the packaging, we can always innovate."

Lamosa, one of the world's largest producers of ceramic tiles, ceramic adhesives and sanitary ware, has pushed sustainability. It's the first Mexican ceramics producer to receive Green Square Certification from the Tile Council of North America (TCNA), recognition that the group's production processes comply with a series of sustainability requirements for raw materials extraction and use.





Juan Garza Herrera

CEO XIGNUX

"A culture of hard work"

Nuevo León has a very strong industrial sector and a culture of hard work, although it's true that the culture is changing, like the country itself. We have employees at Xignux who have been working with us for the last 45 years, but I don't believe that new generations will want to stay so long in the same company. We should teach young people to deal with globalization, with mobility. The modus operandi is different. Nuevo León has a very strong industrial sector and attracts foreign direct investment for several reasons—because it is close to the U.S., and also for the quality of its universities. The labor force is limited only by the fact that most of the population already has the skills to be working; we are not talking about an unskilled population. Today Xignux is one of the most competitive companies in Mexico; everything we produce is a world-class product. We look to every detail in the value chain in order to satisfy the client and obtain greater rates of return.



Eduardo Coronado Co-CEO Coflex

"Innovation: The new Monterrey way"

Monterrey is a city to do great business, and we see that many international companies are doing just that. Manufacturing is strong with American, Japanese and other foreign corporations operating large factories here. Americans might not be aware of it, but most of their bathroom sanitary ware is made in Nuevo León. There are many success stories of local companies as global leaders in their industries; I believe this is partly due to our skilled labor force, which supplies us with talent from assembly workers to top-level managers. Monterrey is ready for the next era and is focusing on innovation. We have the PIIT, a new science and technology park with 30 research centers, funded by the government, universities and private companies. In our case, Coflex has seven patents granted in the USA and more in other countries; we are committed to offer innovative products for the plumbing industry.

→ SPOTLIGHT



Julio Villareal Chairman and CEO, Villacero

"The global economic crisis brought great challenges; the public and private sectors must to work together." Villacero is a 100% Mexican private company headquartered in Monterrey. Mexico's leading steel distributor, it offers world-class products and services through its steel and financial businesses with a solid nationwide presence of strategically located facilities. Villacero is also an important player in NAFTA and global markets through processing, marketing, distribution and international trading operations, with presence in more than 20 countries. It recently acquired the Hamburg-based C&F International—previously Coutinho & Ferrostaal.



José Antonio Rivero Larrea CEO, Minera Autlán S.A.

"Mexico has been a mining country since the very start; it is rich and powerful in minerals. We have a strong mining culture that dates from before the Spaniards conquered us. Mexico is the main silver producer in the world. Canadian mining companies have special fiscal incentives, so they have invested a lot here and they have enjoyed great success.

Our manganese ore mines are the most important in North and Central America. The use of manganese is basically for the production of steel; we deliver it to the Mexican and North American steel industries. We are like pepper to salad; we grow side by side with the steel industry."



Raúl Gutierrez Muguerza Co-CEO, Deacero

"Deacero develops wire and steel products. The steel we make is used for construction, agriculture and industry. We have grown especially in the car sector, for which we produce many specialties, for example airbags. These are made of wire; the bag has a powder device and the plastic has wire threaded around to keep it compressed. When it explodes, the wire is destroyed, and the bag comes out. We produce wire for spark plugs, seat parts, and steering wheel reinforcements that have wire inside so they don't break. Mexico's challenge is to increase national content, which in the car industry is under 30 percent."



Mining, iron and steel: wealth today

Monterrey is today best known for its high-end manufacturing prowess, but iron and steel were historically the foundation of economic wealth, and many companies have built on that tradition.

Mining in Nuevo León dates back to the 17th century, with the discovery of lead and zinc. Currently, the Mexican Geological Service said, mining in the state is limited to nonmetallics such as gypsum, barite and limestone. But the strong traditions created when the state industrialized in the late 19th century live on, and many companies are still active in the iron and steel sector.

Minera Autlán, a publicly traded conglomerate headquartered at Garza Garcia in Monterrey, has three mines and three ferroalloy processing operations spread throughout central and eastern Mexico, although none is in Nuevo León.

"We turn our manganese into ferroalloys; this is then used to make steel," said José Antonio Rivero Larrea, the company chairman. "It's a process that requires a lot of energy; that's why we have a sister energy company where we generate a significant amount of the energy we use, and we do it in an efficient, sustainable and green way."

Rivero cautioned that planned fiscal

reforms in Mexico could hurt the mining and processing sector. Lawmakers have spoken of royalties as high as 7.5 percent of gross earnings; companies say this would inhibit expansion. "Some US\$30 billion of investment is planned for the sector in the coming years, so let's hope the government is thinking about that before approving the reform," Rivero said.

Mining is Mexico's fourth-largest contributor to GDP, behind vehicles, electronics and petroleum.

Capital costs tend to weigh heavily, inhibiting investment and leading to the export of raw materials. The government says that other parts of the planned fiscal reform will lower costs. With easier access to financing, more investments could be made in processing, adding greater value to the mining sector within Mexico.

As one of Mexico's largest steel distributors, Villacero is also looking to the promised reforms to pave the way for long-term sustainable growth. "Everyone knows that small and medium companies are the main job generators around the world," said Julio Villareal, chairman and CEO. "At Afirme Bank, the financial arm of Villacero, we work to support small and medium businesses by creating new products and services, adapting our business to their needs. We seek to capitalize their businesses and help them to grow in financially sustainable way."



Investors' infrastructure

Nuevo León plans more than US\$1 billion for infrastructure upgrading, with ample opportunities for foreign investment.

Monterrey and Nuevo León already offer excellent infrastructure, with good highway and rail connections to the U.S. market and impressive urban development. Now investments of up to US\$2 billion will provide a new Metro (subway) line, highway upgrades, improved health facilities and a major expansion of the water supply, with significant opportunities for Mexican and international companies.

Work has started on the long-awaited US\$440 million Line 3 of the Monterrey Metro. This will add 7.5 km of new track and eight stations to the existing 32-km system, which dates from 1991. Other projects include regional hospitals in Salinas Victoria and Montemorelos.

Infrastructure projects spell opportunities for a range of companies. Tubacero, for example, is boosting capacity to 850,000 tonnes a year and will build the first 118-km phase of the Los Ramones 900-km gas pipeline.

In all, Nuevo León was due to receive federal, state and municipal investments totaling 15 billion pesos—just over US\$1.1 billion—through 2013, said State Public Works Secretary Luis Gerardo Marroquín earlier in the year. That was without counting the planned Monterrey VI aqueduct, a US\$1.1 billion project

to bring five cubic meters of water per second from the Tampaón river in San Luis Potosi State. Six pumping plants will overcome a 265-meter height difference along the 378-km system. The Monterrey Water and Drainage Service, which is leading the project, said that "the aqueduct, pumping plants and water treatment plant may be built according to the DBOT [design, build, operate and transfer] scheme, with a 25-year concession for operation." It projected an internal rate of return of 16.9 percent.

Jose María Garza Treviño, CEO of Grupo GP, a major constructor and developer, said it was essential for greater Monterrey to invest in upgrading its water supply: "All the supply sources of Monterrey come from dams; these are filled by rainwater, but we have had droughts for two years. Dams are at 25 percent of their capacity, and if it does not rain or a hurricane come in a year or two, we will be in trouble."

Without denying the need for new investment, Hector Martinez of Kalos said that "infrastructure in Monterrey is ready for any kind of challenge," while Sergio Argüelles of Finsa said businessmen were still committed to Nuevo León and its capital: "Anyone who bets on Monterrey will win."

→ SPOTLIGHT



Sergio Argüelles, CEO Finsa

"Sustainability is very important to Finsa. As a major developer of industrial parks, we have wanted to develop something different, something well planned. So there are well-established green areas, recreational areas and wide avenues. We have already developed 16 industrial parks and built approximately 7 million square meters in Mexico. For 20 years, the automotive sector has been the engine of Mexican industrialization. Some 50 percent of our activity is automotive, but we are diversified; we have worked with several aerospace companies, and we continue doing so, especially European ones that have come in."



Jose Maria Garza Treviño, CEO Grupo GP

"Public-private partnerships (PPP) or projects for provision of service (PPS) that started in England many years ago are coming to Mexico, and can be important. Just imagine if everyone had to pay for their house in cash; 80 percent of people would have no home. Governments are like that; they want to do everything in cash. The PPS law means you can build the infrastructure you need and pay it in 25 years. Concessions have existed in Spain for years, and they work. It is beginning here with roads, and we need it to be implemented at the level of urban infrastructure by cities, states and the federal government."

Hector Martinez,

Kalos

"We created Kalos to satisfy the growing demand for offices and industrial and commercial buildings from national and international firms that choose northeastern Mexico. We specialize in industrial parks, and our park at Apodaca in greater Monterrey is particularly suited to high-tech companies—it's very close to the PIIT technology park. Monterrey generally has a good level of infrastructure and offers the manpower that companies need, but we aim to go further—for example, in 2010 we decided to invest US\$1.5 million to install a natural gas backup power generator to give clients a greater degree of reliability."

→ SPOTLIGHT



Arturo Garza
CEO. Akzent Logistics

Monterrey offers significant potential as a fastgrowing industrial market and logistics hub, because this is where most rail lines and highways converge leading to and from Mexico's largest commercial partner, the United States. Nevertheless, when taking into account current infrastructure and growth potential, Monterrey has failed to take full advantage of this potential as it relates to the important logistics role it plays for the country. Interpuerto, which should have been started years ago, will help companies capitalize on burgeoning trade volumes through an ever-improving supply chain infrastructure to make Monterrey an increasingly attractive target for crossborder industrial opportunities. World-class supply chain infrastructure will help Monterrey grow as a regional and national leader.



José Manuel Contreras Lomeli

CEO, Grupo Senda

Our bus fleet serves 12 states in Mexico and 10 in the United States—we go as far as Chicago. As for Mexico, significant investments have been made in the last six years, mainly on highways between medium and large cities. Investments should continue regionally, because smaller roads also need improvement. With more than 80 years of experience, we are the leader in ground transportation services for passengers and personnel in the northeast of México giving service to over 80 million passengers per year. We have invested over two million dollars in the last two years in logistic systems to reduce empty kilometers, downtimes and improve our role structure, for the federal transportation business and even more for the personal transportation business. In addition we have Invested close to 500 million pesos in 2013 to increase and re-new our fleet and terminals.



21st-century Logistics

Major new dryport and tax-free manufacturing zone is Monterrey's trump card to succeed in the globalized economy.

quick glance at the map shows why Monterrey has such potential as a logistics hub. It's where the country's two major rail systems, Ferromex and Kansas City Southern (KCS), converge and interlink. Heading north, KCS feeds directly into the U.S. network with easy access to Houston and the Gulf Coast, then onward to Chicago and the Eastern Seaboard. Northwest out of Monterrey, the Ferromex track carries freight through El Paso to Los Angeles. And by road it's just a couple of hours via Nuevo Laredo to the U.S. I-35 leading directly to Houston.

The same road and rail networks offer access to major Mexican ports: Lazaro Cardenas and Manzanillo on the Pacific coast, and Altamira and Veracruz on the Gulf of Mexico. And, of course, due south is greater Mexico City, the largest conurbation in the Americas, with a population of 20 million.

Monterrey's privileged situation at the heart of this road-and-rail web is a consequence of Nuevo León's importance as a manufacturing region throughout the 20th century. But in the 21st, even such a strategic location must be leveraged with overall logistical efficiency to really compete in global terms. And that's where the

new Interpuerto project comes in.

Interpuerto—literally, Interport—is the brainchild of a group of Nuevo León businessmen, with government backing. Located just north of Monterrey, it will provide warehousing; specialized terminals for grains, automobiles, steel products, and petrochemicals; and an industrial park with an associated free-trade zone where companies can import, repackage, manufacture and store in a tax-free environment. There will also be facilities to pre-clear—for both customs and security—goods destined for the U.S. market, saving time at the border.

"We're bringing Mexico's northern border right into the Interpuerto," said Silvano Solís, director of the project. "And there are some very attractive tax exemptions."

The 1,350-hectare site has already secured various company commitments and organizers speak of US\$2 billion in total investments, leading to the creation of perhaps 50,000 jobs when counting direct and indirect employment.

"Unfortunately, Mexico has outdated logistics that have been neglected for years," said Solís. "What we bring to the table is a node that will connect Mexico with the world."



U.S. chains operating in Mexico include Costco, Victoria's Secret, Starbucks and Wendy's



Households earning of at least US\$50,000 per year should double to 21 percent by 2017



In smaller cities and towns, less than 50 percent of grocery purchases are in supermarkets

Modern, efficient retailing is tipped to grow

Expanding middle-class incomes and reducing informality will drive further growth in the retail sector, with richer-than-average states like Nuevo León set to benefit.

imilar to other large emerging economies, Mexico has seen exceptionally strong growth of middle-class consumption. That's even more the case in Nuevo León, where GDP per capita is almost double the national average.

A study by Business Monitor International predicts that retail sales in Mexico will rise from US\$203 billion in 2012 to US\$255 billion by 2016, representing growth of almost 5.9 percent a year. Supermarkets, hypermarkets and convenience stores could see their sales increase even faster as modern chains like sector leader Wal-Mart de México and Soriana, the largest nationally owned player, continue to expand beyond the larger cities into areas still

dominated by traditional outlets. Based in Monterrey, Soriana is now present in 208 cities, with five distinct store formats.

"The retail sector in Mexico is still characterized by the presence of the informal sector, but this represents a great opportunity for formal operators to continue growing at an aggressive pace in hundreds of locations that have not yet benefited from businesses like ours," said Soriana CEO Ricardo Martín Bringas. Planned economic reforms should help speed up the process,

Convenience retailing is gaining space against traditional formats. Iconn's very successful 7-Eleven brand has been leveraged with a chain of 24-hour gas stations called "Petro-7."

Mexican shopping habits and preferences are evolving as wealth spreads downward. More women are in the workforce, prompting a move to increased retail opening hours and the growth of convenience stores. Rising disposable income means above-average growth of spending on luxury items, designer clothing and the latest technology gadgets.

E-commerce is also gaining traction, with the market currently worth US\$6.5 billion, according to Interbrand, a consultancy, but analysts point to popular concerns about credit-card fraud, low Internet penetration and inefficient or expensive delivery systems as factors that are retarding its growth.



SORIANA

RICARDO MARTÍN BRINGAS, CEO OF A PUBLICLY TRADED 606-STORE SUPERMARKET CHAIN

"Purchasing, inventories and process optimization constitute a key area for our company's efforts to operate with the latest technology, because it permits better use of our human and material resources. It's worth mentioning that Soriana's transformation program, which is only two years old, started with a strategic rethink of the way we operate, looking to optimize all the administrative, commercial, operational and logistics processes. This cultural transformation was combined with implementing the integration of information systems, allowing us to have the necessary elements to make immediate decisions every day. We used world-class consultants to facilitate the implementation of the Enterprise Resource Planning (ERP) and SAP."



ICONN

LUIS A. CHAPA, CHAIRMAN OF THE BOARD AND CEO OF ICONN & 7ELEVEN, TRACES COMPANY ROOTS BACK ALMOST A CENTURY

"Iconn is a 100 percent Mexican company, founded 90 years ago in Monterrey. Today it operates in 17 of the 32 states in the country, with 15,500 employees. We specialize in wholesale groceries, convenience stores—including 7-Eleven—logistics and gasoline stations. From the very beginning, our company's philosophy has been based on customer service, innovation, teamwork and passion for outcome. An important characteristic of Iconn has been to be a leader in adopting the best corporate governance practice. This has allowed us to participate effectively [in the market] to achieve our goals, identify how best to manage risks, use resources carefully and maintain a strong position in the market."



→ GRUMA: TORTILLAS FOR THE WORLD

Gruma is the world's largest producer of corn flour and tortillas, with more than 20,000 employees and 100 plants around the world, selling in more than 100 countries. Founded in 1949 as Molinos Azteca—literally, Aztec Mills—the company is now traded on the Mexican and New York stock exchanges, with 2012 net sales of 64 billion pesos—the equivalent of just under US\$5 billion at current exchange rates.

"We feel a great responsibility as a Mexican company that, through its products, shares the flavors and traditions of our country with the world," said CEO Juan Antonio Gonzalez Moreno. "This responsibility has led us to continuously improve the quality of our products and to promote Mexican culture through our marketing campaigns and collaboration with Mexican embassies around the world, thereby also seeking to strengthen cultural roots among Mexicans. We face two challenges. The first is to consolidate the markets that we have entered and where we have competitive advantages. The other is to increase our global presence by profitably getting into new market segments and continuing to innovate and develop products."



FINANCING GROWTH

A robust financial sector, strengthened by years of turmoil, is set to grow as the economy expands.

Mexico's financial system today enjoys the resilience that can only be gained through a decades-long rollercoaster ride. Things went from boom to bust in the seventies and eighties, followed by a foreign debt crisis and repeated devaluations, then more inflation, then renewed growth and soaring trade in the early years of this century thanks to the North American Free Trade Agreement. Mexico took a particularly severe buffeting in the international financial crisis, not because of any inherent weakness in the financial system but because the high degree of trade integration with the United States magnified the impact. But sound economic policies have helped pull the country back on track. Now financial institutions are looking for robust excellent growth.

"I believe we're at a turning point, for various reasons," said Adrián Lozano Lozano, CEO of Bancrea. "For a start, the international context favors developing countries, and Mexico has a privileged situation." He also cited the agreement by the government and opposition parties to push through major reforms, the surge of new consumers coming into the market, and the demand for food, petroleum and clean drinking water.

In addition, Lozano said, Mexico today enjoys excellent economic fundamentals, with record foreign reserves and a strong financial sector.

"There's no magic wand, but I believe there's an opportunity for interesting growth through the next six or 12 years."

Many bankers tip insurance as a sector to grow. "In Mexico the penetration of the financial sector in general is low so there's a lot of potential, but specifically for insurance the penetration is very low," said Guillermo Ortiz Martinez, president of Banorte, the country's fifth-largest bank and the only major institution not owned by a foreign group. "The total number of insurance policies

sold in the country is around 3 percent of GDP, which is less than a quarter of the OECD average."

Alejandro González, CEO of Aba Seguros, agrees about the prospects. "In the residential market 96 percent of homes are not insured. There's no insurance culture in Mexico, not even in the high-end sector. The figures for car insurance are misleading but we can say that only about 30 percent to 40 percent of cars in Mexico are insured. So 60 percent to 70 percent have no coverage, not even third-party insurance. So there really are a lot of opportunities."

Investment services are another potential growth area. Carlos Bremer Gutierrez, CEO of Value Grupo Financiero, said the Mexican Stock Market's International Quotation System, introduced a couple of years ago, made it possible to invest abroad without expatriating funds. "Every day we expand the range of products that we offer," he said.



Talking finance

The financial system in Mexico faces exceptional opportunities because -apart from being very solid-it's currently undersized in relation to the economy. Private debt is just around 20 percent of GDP, although rising fast, and only some 25 percent of the population is banked. Personal credit is difficult to get and expensive, and much company credit comes from suppliers rather than banks. All this spells enormous room for growth as the promised reforms kick in.



ALEJANDRO GONZÁLEZ, CEO, Aba Seguros

Monterrey-based ABA Seguros is a leading Mexican insurance company with over half a century of experience. It became part of the ACE Group in May 2013.

ABA was focused on retail insurance services, while ACE brought expertise, infrastructure and technology that expanded our capabilities into an all-round insurance company ready to meet any industrial demand. The union between ABA and ACE thus goes to the very heart of what Monterrey is: a great market full of opportunities in the industrial sector but demanding integrated solutions, which we can now offer with the expertise of a company that operates in more than 50 countries.



CARLOS BREMER GUTIERREZ,

CEO, Value

Based in Monterrey with branches in Mexico City, Guadalajara, Chihuahua and Morelia, Value Grupo Financiero has more than 6.000 clients.

I think this is probably the best moment there's ever been for investing in Mexico. The country offers some extremely interesting opportunities—I would single out energy, agriculture, tourism and of course manufacturing. All the main variables that investors look at are very positive today, and trending in the right direction. I would argue that it's not unreasonable to rank Mexico as one of the world's three best investment options today and for the foreseeable future.



ADRIÁN LOZANO LOZANO,

CEO, Bancrea

A new bank authorized to start operations in July of 2013 with an initial three branches and a focus on the Greater Monterrey region.

As a result of Mexico's 1994 financial crisis, banks here had to apply much higher levels of capital and more stringent risk limits. It was many years of suffering and belt-tightening, but Mexican banks were ready to apply the Basel accords (a global regulatory framework for more resilient banks and banking systems) and we are creating Bancrea to apply Basel III (the most recent). At the same time, we see economies like the United States and Europe say they need 11 years to implement Basel III.

Vibrant arts and culture







ulture and the arts took off in Monterrey toward the end of the 19th century, and the city's emergence as a major center owes much to the support of prominent local families who have created and sponsored universities, theaters, galleries, museums and a host of activities. Leading institutions mirror the city's business strength by promoting excellence.

"We are not prepared to let the great talents of Monterrey people go to waste," said Liliana Melo de Sada, president of the Escuela Superior de Música y Danza, a university founded in 1977 that offers 18 degree courses in music and dance and claims Spanish tenor Plácido Domingo as its honorary president. "We do the same with engineers and other professionals, so why not the arts?"

The Monterrey Museum of Modern Art, known as Marco, is a shining example of the Nuevo León cultural scene at its best. Occupying a stunning 16,000 m² edifice created by leading Mexican architect Ricardo Legorreta, the permanent collection concentrates on paintings, sculptures and other works from Mexico and Latin America. Europe, the United States and Canada are also represented.

President Nina Zambrano makes a spe-

cial effort to reach young people. "Marco-Movil—literally, Mobile Marco—started around 10 years ago. We wanted to make art even more accessible. I used to go to schools and ask students if they had ever been in the museum; very few had. So Mercedes-Benz donated a bus, and we have been to many municipalities and shopping centers—even football matches. The bus also has small tables for creative activities. People feel intimidated in this big building; with Marco-Movil they lose their fear."

Generoso Villareal, a successful Monterrey art producer, praised the contribution of Marco to preserving culture in all of its manifestations: "Art is now very commercial, which is good, but we need to promote culture for its own sake."

Yolanda Santos de Hoyos, who helped found the Ballet de Monterrey in 1990 and remains president to this day, recalled how she worked with other citizens to create the city's own company: "We discovered a great passion for ballet in Monterrey, but after eighth grade at school the dancers had no continuity."

With 40 dancers, the company has performed in New York, Washington, Miami, Houston, Barcelona, Madrid and other cities, describing itself as "a dance company with a Latin flavor."

→ SPOTLIGHT



Nina Zambrano
President MARCO Museum

Marco's permanent collection reflects one of its goals: to promote international contemporary art with an emphasis on Latin America by bringing together the works of established artists. We have more than 100 works; mainly paintings and sculptures, but with a few installations and some graphic arts.

We also have major temporary exhibitions, both individual and collective. These bring Monterrey significant examples of Latin American and international contemporary art by showcasing a variety of techniques such as painting, sculpture, photography, graphic arts, architecture, installation and electronic art.



Yolanda Santos
President Ballet de Monterrey

We have to institutionalize the artistic venues in Monterrey to create continuity and elevate the quality of the culture on offer. It is very important in a city like Monterrey that we develop our culture, because at the end of the day, our culture is fundamental for the identity of our people. The Monterrey Ballet was created to bring culture to Monterrey and the North of Mexico. We'll go to Torreón, Monclova, Saltillo and León. We're trying to build up the culture of ballet in these places.



Liliana Melo de Sada President of La Superior

Monterrey has a rich artistic and cultural heritage. It's been almost a century since the industrial success began, and in the 1930s there was already a feeling of responsibility to support culture. People used to see Monterrey as just industry and business, but I think our businessmen have always been characterized by their philanthropic efforts, by concern for the well-being of people who work for them—health, education and culture. It was one of the first places in Mexico to have this kind of awareness.



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INVESTMENT OUTREACH