

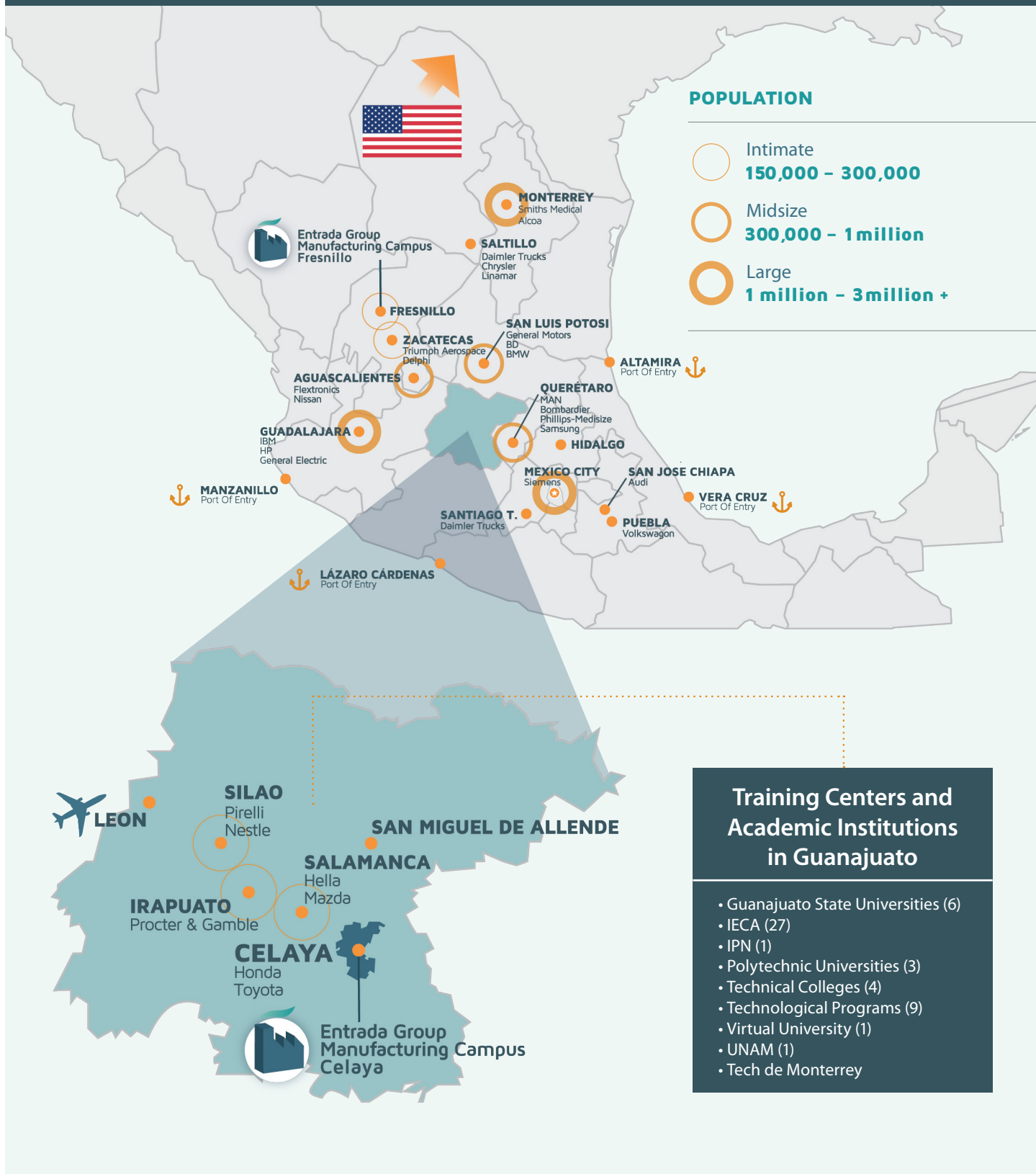
## Boomtown: How Celaya, Guanajuato Became Mexico's Manufacturing Powerhouse

*Vicente Fox was President of Mexico from December 2000 to November 2006. Today, many believe one of Fox's greatest legacies to be the growth of the area running roughly from Leon in the north to Celaya in the south, in the state of Guanajuato. Mexico's Highway 45 cuts through this verdant valley in central Mexico, called the Bajío, which is one of the greatest economic successes of the NAFTA era.*

*How did this stretch of the country, traditionally home to the mining and agricultural industries, transform in a decade to become Mexico's manufacturing epicenter and attractor of billions of dollars in foreign direct investment (FDI)? Fox administration policies encouraging growth and FDI were important, to be sure. But what other advantages does Guanajuato, and its economic epicenter Celaya, offer international manufacturers? What draws dozens of household-name corporations from General Motors and Volkswagen to Procter & Gamble and General Electric to this compact strip of Mexico's heartland? It turns out to be a uniquely Mexican story. (text continues on page 3)*



## GUANAJUATO: A STATE OF GROWTH



(...text continues from page 1)

## In The Beginning

Prior to ascending to the Presidency, Vicente Fox was Governor of the state of Guanajuato, home to a portion of the Bajío valley and Highway 45, from 1995 to 1999. The former Coca-Cola executive's policies were instrumental in transforming Guanajuato into Mexico's fifth most-productive state<sup>1</sup>, emphasizing exports, economic growth and attraction of FDI. But the approach didn't start with Fox.

Unlike near-border Mexican states (Baja California, Chihuahua), Guanajuato did not focus on developing low-value-add assembly plants to support American automakers in the 1970s and 1980s. Rather, the state took a long-term view, on the heels of NAFTA's implementation in the early 1990s that spanned across the terms of several different governors.

Fox's predecessor as Governor, Carlos Medina, formulated the 21st Century Guanajuato program in 1992, aiming to strengthen the state's road infrastructure and logistics, to attract automakers. General Motors became the state's most important anchor tenant in 1995, opening its new plant in the city of Silao<sup>2</sup>.

From that point, the growth was explosive. By 2008, after Fox had completed his tenure first as Governor of Guanajuato and then President of Mexico, Guanajuato's auto cluster included more than 80 companies. In the years since, Mazda, Honda, Pirelli and Volkswagen have all joined the ranks of manufacturers producing in the state.

"In 2004 we had \$200 million in exports," says Ricardo Alaniz, director of Concamin, the Bajío region's confederation of business chambers. "In 2017 we had exports worth \$24 billion. That's a big difference. Now Guanajuato is known all over the world because of its automotive industry."<sup>3</sup>

GM was the OEM that got it all started.

## General Motors: A Powerful Legacy in Mexico and in Guanajuato

GM opened its first factory in Mexico in 1935, assembling trucks in the capital from parts imported from the US. GM added three engine and vehicle plants in the 1960s and 1970s. The new plants, like similar

## GUANAJUATO'S AUTO SECTOR BY THE NUMBERS



**850,000**  
cars and light trucks  
produced annually

**...75%** of which are exported



Over **170** Tier One suppliers  
that produces tires, bumpers,  
axles and other components

Auto-parts companies employ  
over **80,000** people;  
another **20,000** people are  
employed at assembly plants



**\$24 billion**  
per year in auto  
exports

Source: Oxford Business Group, 2019

factories built by Ford and Chrysler, assembled vehicles for Mexico's domestic market.

It wasn't until the late 1970s, in response to a Mexican law that encouraged international manufacturers to produce goods in the country tax-free, that GM looked at Mexico differently. "GM began to see Mexico as a supplier for its U.S. vehicle assembly plants, and in the 1980s built an entire parts industry here," said Arnulfo Arteaga, a Mexico City professor who studies the auto industry. "Now, Delphi's Mexican plants basically turn out parts once produced in the United States."<sup>4</sup>

Fast forward to today. In 2019, GM became Mexico's largest auto producer, topping Nissan, according to the Automotive News Data Center. GM built 834,414 vehicles in Mexico in 2018, an increase of 3.6 percent.<sup>5</sup> GM isn't alone of course. Colgate-Palmolive, Hino, Honda, Mazda, Pirelli, Procter & Gamble and Volkswagen are among the big-

<sup>1</sup> Permanent Mission of Mexico to the United Nations, 2012; Vicente Fox Quesada biography

<sup>2</sup> Source: Oxford Business Group, 2019: "Guanajuato's automotive industry creates jobs and spurs development in education," 2019.

<sup>3</sup> Source: ibid.

<sup>4</sup> New York Times: "A 20-Year G.M. Parts Migration To Mexico," June 24, 1998.

<sup>5</sup> AutoNews: "GM now top producer in Mexico as industry output declines," January 28, 2019

name multinationals that have facilities in the state. In 2020, Toyota will open a \$700 million plant in Apaseo el Grande, employing 2,000 workers.

There are several key factors drawing global producers like GM, Toyota and American Axle to Guanajuato. One of them is the high quality of the labor force

## Productive and Abundant Talent

Attracting billions of dollars of investment from a variety of sectors as well as from companies large and small wouldn't be possible in Guanajuato without a capable, well-trained and elastic workforce (see table below, "Guanajuato's Population and Workforce Figures"). Successive administrations recognized the importance of committing resources to education, technical training, public-private partnerships and continuous improvement of the labor force.

"One thing that distinguishes Guanajuato from other states is its skilled workforce," Raul Noriega, deputy minister of innovation of Guanajuato, told Oxford Business Group in a 2018 report. "In the 1990s the government started making a plan for the long term, creating institutions to train technicians and engineers." Guanajuato established IECA, its State Job Training Institute (IECA in Spanish or ACE in English), to prepare students for technical jobs. This long-view approach mirrored the state's philosophy toward expansion and FDI attraction

overall, giving Guanajuato a leg up on other states of Mexico, not to mention alternatives in Latin and South America.

In addition to universities and technical training institutes (whether two- or 4-year programs), Guanajuato has built relationships with key employers, developing numerous customized public-private training and technical education programs to help further prepare the workforce. To make these programs as relevant to the industry as possible, Guanajuato's state government has been receptive to input from the private sector. *(text continues on page 6)*



***Now Guanajuato is known  
all over the world because  
of its automotive industry***



**Ricardo Alaniz**  
Director, Concamin  
(Bajío, Mexico)

## GUANAJUATO'S POPULATION AND WORKFORCE FIGURES

*The state is Mexico's sixth most populous, with over 6 million people. Guanajuato's residents are...*

### Urban



Just under **40%** of residents live in cities of over 100,000 people

### Young



Median age of **24** (vs. 26 for Mexico overall).  
**64.5%** residents are of working age.

### Manufacturing Minded



Over **627,430** people employed in industrial manufacturing (**24%** of the workforce)

### Technically Oriented



**150** technical schools with 131,815 students

## Entrada Group's Celaya Story of Origin

In 2003 Entrada Group launched its first manufacturing campus in Fresnillo, Zacatecas. The area wasn't an obvious choice for manufacturing, having traditionally been home to farming and the mining sector. But Entrada's decision to situate in Zacatecas proved to be a fruitful one, as production costs in Mexico's border states continued to spike and midsize manufacturers, in particular, sought alternatives.

Around 2014, with the Zacatecas manufacturing campus running successfully and undergoing strong growth, Entrada's leadership decided to establish a second manufacturing campus to support clients with different production needs that would require a more educated, technical labor force to support more sophisticated processes.



Download our Celaya Fact Sheet (or browse the Resources on our website)  
<https://www.entradagroup.com/resources/advanced-manufacturing-space/>

### EXTENSIVE SITE SELECTION

Initially, Entrada looked far and wide outside of Mexico, scouting locations in Nicaragua, Honduras, Costa Rica, El Salvador and Brazil. Entrada's multiyear, in-depth analyses evaluated a range of factors including labor force, real estate, training and professional development, supply chain, political, environmental and lifestyle.

Each was ruled out for one or more shortcoming (insufficient export culture, lack of skilled talent, environmental and political risks, etc.). Yet through this extensive research, Entrada developed a better understanding of the needs of midsize manufacturers employing more sophisticated processes. Such companies rely

heavily on a more educated workforce with greater technical acumen, require access to ongoing professional development for the workforce and, crucially, must be close to their customers (and future customers) in a logistically well-connected area.

Across all those criteria, Celaya, Guanajuato was head and shoulders above any other option. And, best of all, a Celaya manufacturing campus would enable Entrada to bring to the table more than two decades of experience working in Mexico and mastering the raft of general and administrative support required to run a large and successful manufacturing operation in the country.

Entrada broke ground on its \$50 million, 60-acre (24 hectare) Celaya manufacturing campus in March of 2015, before welcoming its inaugural tenant, Plastomer Corporation, to the facility later that year. Since then, Entrada has added a second client in Celaya (Lumitex, a US-headquartered lighting technology integrator) and will soon commence construction of a new facility in Celaya, to support anticipated client expansion.

As Entrada's growth reinforces, Celaya has come a long way from its early days as a distribution center for parts for the automotive and agricultural industries.



## Public-Private Partnerships

To cite one real-world example, Siemens recently announced a multiyear learning program in conjunction with IECA. Under this initiative, 5,000 engineering students hailing from 25 institutes of higher education across the state will receive customized training on a range of Siemens technologies and products, including computer-aided design, computer-assisted manufacturing, PCB design, Siemens NX and others. The program also includes “train-the-trainer” elements, in which engineering teachers will also learn about Siemens tools and processes that comprise Industry 4.0, to better educate the next generation of Mexico’s engineers and technicians.<sup>6</sup>

Unique programs such as these (Toyota, GKN, Honda and Kentworth are among the long list of other companies partnering on training initiatives with the state) are thriving across the state, in conjunction with the Ministry of Innovation of Guanajuato, IECA and other bodies to optimize training, preparedness and job opportunities, especially for young people.

These public-private partnerships in Guanajuato have had a strong multiplying effect too. They attract new diverse international companies to invest in more new plants and facilities, further resulting in new partnerships and training programs to support ongoing expansion.

## Well Connected

A central manufacturing location is meaningless without a tightly linked network in and out. Just as Guanajuato’s policy makers invested in education and workforce development, they also committed to improvements to and investment in modern infrastructure, anticipating the future needs of manufacturers and investors.

An excellent rail network, international airports in Silao and Querétaro to facilitate executive visits, a dry port and a network of motorways serve manufacturers who need to get parts, people, materials and finished goods in and out. “Guanajuato has been very smart about combining public and private investment to build the infrastructure that the state’s auto cluster requires to stay competitive and compete with other parts of the globe,” says Santiago Villanueva, CEO of Grupo Vise, a local construction firm, in an interview with Oxford Business Group.

At the same time, while a regional supply base is in place, Guanajuato (like Mexico overall) has room to improve with respect to its network of suppliers beneath the OEM and Tier One level. Midsized international manufacturers have largely filled this gap, and opportunities remain for small-to-midsized producers that still lack a Mexico production footprint.

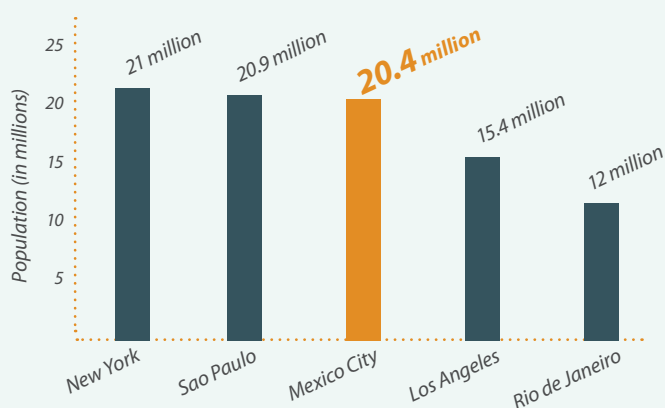
## Guanajuato: Attracting Diversity

A lot has been written about Guanajuato’s strong automotive sector. It’s true the state stands out as an appealing place for OEMs and suppliers to call home. But companies from numerous other industries also find it strategically essential to have a footprint in Guanajuato, including aerospace (Spectrum), consumer electronics (HP and Bosch) and heavy vehicles (Rheinmetall Defence and Hino) companies. Because many international employers send their most talented managers, technicians and engineers (and often their families too) to live and work in the plants across Guanajuato for the long term, it’s important that the state have all the essential trappings of home.

When evaluating cultural attractions, activities, amenities for children and family, and education, Guanajuato stands out. Size, density, urbanity and a diverse mindset all help contribute to the state’s strengths in this area.

Guanajuato itself boasts four cities of over 150,000 people: Celaya, Irapuato, Leon and Salamanca. Further, because the state is so centrally located, central Mexico’s largest and most attractive municipalities are conveniently within either commuting or recruiting distance: San Miguel de Allende (a UNESCO heritage site), Querétaro, Aguascalientes,

### MOST-POPULATED URBAN AREAS IN THE AMERICAS



Source: Demographia, “World Urban Areas” study, 2019

<sup>6</sup> IECA Guanajuato –State Training Institute “ACE Inhibitor and Siemens Train 5,000 Students in Industry 4.0”

***Guanajuato has been very smart about combining public and private investment to build the infrastructure that the state's auto cluster requires to stay competitive and compete with other parts of the globe***

**Santiago Villanueva**  
CEO, Grupo Vise  
(Guanajuato)

San Luis Potosi and, the granddaddy of them all, Mexico City, one of the most populous urban area in the Americas.

That enormous population base and diversity of lifestyle and family amenities have been instrumental in attracting a wide range of European and Asian companies, in particular, to Guanajuato, in addition to American ones.

## International Flavors

Perhaps more so than with American or Canadian companies, European and Asian OEMs and Tier One manufacturers will typically have one or several high-ranking expatriate managers within their Mexico facility. These individuals may be in Quality Assurance, Finance or a related function.

Europe and Asia are obviously farther away than the U.S. or Canada, typically resulting in more European and Asian expats living and working in Mexico for longer durations. Hence, it's important for the expat manager and his or her family to feel at home and make the stay in Mexico as comfortable as possible. In this regard, Guanajuato doesn't disappoint.

Countless schools, cultural clubs, sports teams and restaurants featuring international cuisine are scattered all around Guanajuato. These range widely and include: German, French, Austrian, American, Canadian, Italian and Japanese. It's not uncommon for a Japanese restaurant patron to be offered a menu in their native tongue, as local businesses do all they can to accommodate the high number of

expats. This international diversity results in companies from all over the world injecting their corporate culture and mindset into the region.

Culturally, one place in Guanajuato stands out: San Miguel de Allende. This colonial-era city is a UNESCO World Heritage site, in addition to placing on *Travel & Leisure's* "World's Best Cities" list. The city known to locals and expats as "San Mike" features baroque Spanish architecture, a thriving arts scene and numerous cultural festivals. It's about 50 kilometers away from Entrada Group's Celaya manufacturing campus.

## A Showcase for the Best and Brightest

The fast growth of the industrial cities and towns across Guanajuato have made it imperative for manufacturers of all size to have a presence there, from global OEMs to Tier One through Tier Three providers. Companies establishing a footprint in Guanajuato can rest assured that the many desirable lifestyle attractions draw not only foreign direct investment and expatriates, but also the cream of the crop of Mexico's talent.

Boasting a young, well-educated workforce; a central location connected by a strong logistical network; proximity to the largest urban areas in the Americas; numerous attractive cities featuring a richly diverse mix of lifestyle amenities and workers from all over the world; and countless global companies that made a substantial investment in the region, Guanajuato's future is rosy.

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