



# TIJUANA: NORTH AMERICA'S MEDICAL DEVICE MANUFACTURING CAPITAL



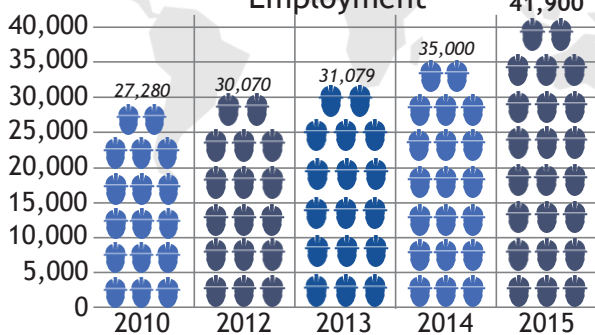


# TIJUANA: NORTH AMERICA'S MEDICAL DEVICE MANUFACTURING CAPITAL

## WHY MEXICO AND WHY TIJUANA? THE EXPERTS AGREE...

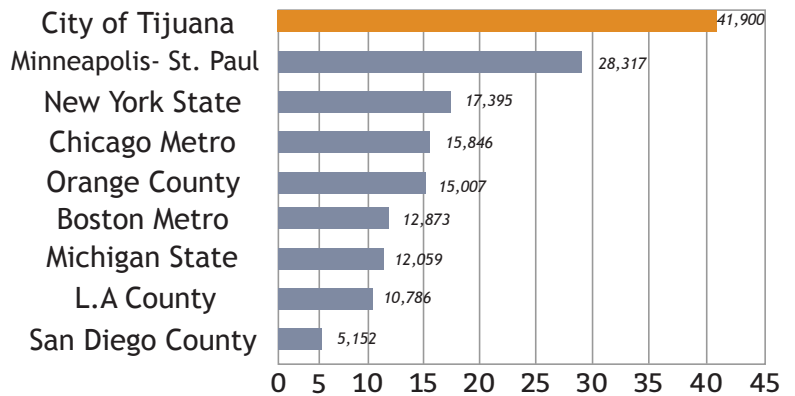
Tijuana leads in employment levels amongst all other medical device manufacturing regions of North America.

### Tijuana's Medical Device Manufacturing Employment



Tijuana EDC Independent Survey/Baja California Medical Device Cluster

### 2014/2015 Medical Device Manufacturing Employment



Tijuana EDC Independent Survey/ U.S. Bureau of Labor Statistics Quarterly Census of employment and Wages, 2014, NAICS

**Wide range of products** including thermometers, IV sets, infusion pumps orthopedics, lenses, pacemakers and stent systems

**Nearshore location** to the U.S with quick logistical access to the West Coast and adjacent to several major int'l. seaports and airports

**44 medical device firms**

Companies **certified** under ISO/ ISO 13485/ FDA or other standards and regulations

Over **18.7% cost advantage** compared to U.S (KPMG 2014)

## ACCESS TO CUSTOMERS AND SUPPLIERS



The Tijuana-San Diego Bio Border comprises:

- 2 border crossings
- 3 international airports
- 1 binational airport terminal
- 2 specialized marine ports
- Rail links



# MEXICO'S MEDICAL DEVICE MANUFACTURING CENTER: TIJUANA



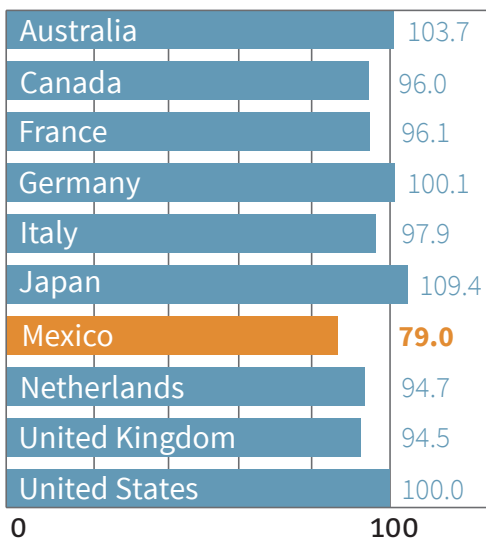
“Tijuana welcomes income investment and has created a mechanism to make it relatively easy to set up a business. Phase 2 medical manufacturing has opened a facility in Tijuana and it could not have been smoother.”  
-Adam Prime (CEO phase 2)

As more options exist for offshore and nearshore manufacturing, it's also useful to note that **Mexico was ranked as one of the lowest-cost countries** among fourteen analyzed by KPMG in their 2014 Competitive Alternatives study. This study evaluated the “impact of 26 significant business cost components that are most likely to vary by location”, finding that **Mexico provided medical device manufacturers with more than 18.7% cost advantage compared to the U.S.**, as well as significant cost advantages compared to other global locations with only slightly higher costs than China, but significantly lower than even Brazil.

Tijuana is also only minutes from Downtown San Diego, and (with nearly 1.7 million residents) it's the second-largest city on the West Coast of North America. The next few pages are meant to provide a fact-based introduction to help potential investors understand why in 2015, **Tijuana is not only still the number one city in Mexico for the number of nearshore, maquiladora (IMMEX) manufacturing companies, but also a leading city on the frontiers of medical device manufacturing.**

In today's highly competitive (and regulated) environment, it can sometimes come as a surprise that **the quality, IP protections, lower-cost and logistical benefits of the City of Tijuana have allowed it to grow the largest concentration of medical device manufacturing employment in North America.**

## 2014 Business Cost Index



(KPMG 2014)

[www.TijuanaEDC.org](http://www.TijuanaEDC.org) / [contact@tijuanaedc.org](mailto:contact@tijuanaedc.org)



# A GROWING CLUSTER OF MEDICAL DEVICE FIRMS

Over the past 5 years Tijuana Medical Device Industry has created over **14,500** new jobs, reaching a growth of **10.6%** in the sector.

As of Q2-2015, there were **at least 44 medical device manufacturers operating in Tijuana**, making a wide range of high and low-tech products including: dentures, electronic thermometers, hemodialysis components, infusion pumps, IV administration sets, lenses, nebulizers, orthopedic braces, oximeters, pacemakers, stents, surgical kits and equipment, urinary catheters, wheelchairs, x-ray film marking systems, and much more. While most of these companies are stand-alone subsidiaries, there are also **at least 14 medical device contract manufacturers**, as well as companies using shelter maquiladora services. Nowadays, Tijuana leads in **employment levels** amongst all other medical device manufacturing regions of North America – **with over 41,900 employees in 2015**.





# WHY MEXICO AND WHY TIJUANA? THE EXPERTS AGREE

“I HAVE BEEN INVOLVED WITH THREE GLOBAL COMPANIES ALL OVER THE WORLD. AT THE END OF THE DAY, TIJUANA IS ONE OF THE BEST OPTIONS FOR QUALITY, SERVICE AND COST, NOT TO MENTION A PRIME LOCATION.”



**Medtronic**

-GERARDO DE LA CONCHA  
(VP OPERATIONS MEXICO MEDTRONIC MEXICO)

This force of globalization is, in fact, why the U.S. FDA has established 10 overseas offices to foster better international oversight and collaboration, including one in Mexico.

While many regions market themselves as possible locations for globally-expanding companies, no other international city offers the unique combination of:

- Presence of leading Medical Device firms and contract manufacturers
- A trained, quality-conscious and highly bilingual workforce - in a low union, business-friendly environment
- Strong intellectual property-rights protections guaranteed via NAFTA, TRIPS, and other Free Trade Agreements
- Savings with lower-cost, just-in-time production capabilities and experience
- Medtronic Inc., one of the top companies in medical device manufacturing, operates its second largest plant in Tijuana since 1970 with over 10,000 employees.

# ACCESS TO CUSTOMERS & SUPPLIERS

Just-in-time production isn't just a theoretical concept for Tijuana's medical device companies - it's a real, strategic logistical benefit that allows many of the city's manufacturers to not only reduce or avoid inventories, but also to ship finished product into the U.S. market in as little as a few hours.



Export: Tijuana is geographically located just 15 minutes from downtown San Diego, California.

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Companies operating in Tijuana are both easy to access for corporate communications and control, and access to transportation infrastructure (medical device products can be trucked to anywhere in the U.S. within one- to five-days) (with global or time-sensitive shipments flown from SAN, LAX, SNA, TIJ and other cargo airports to customers in only hours).

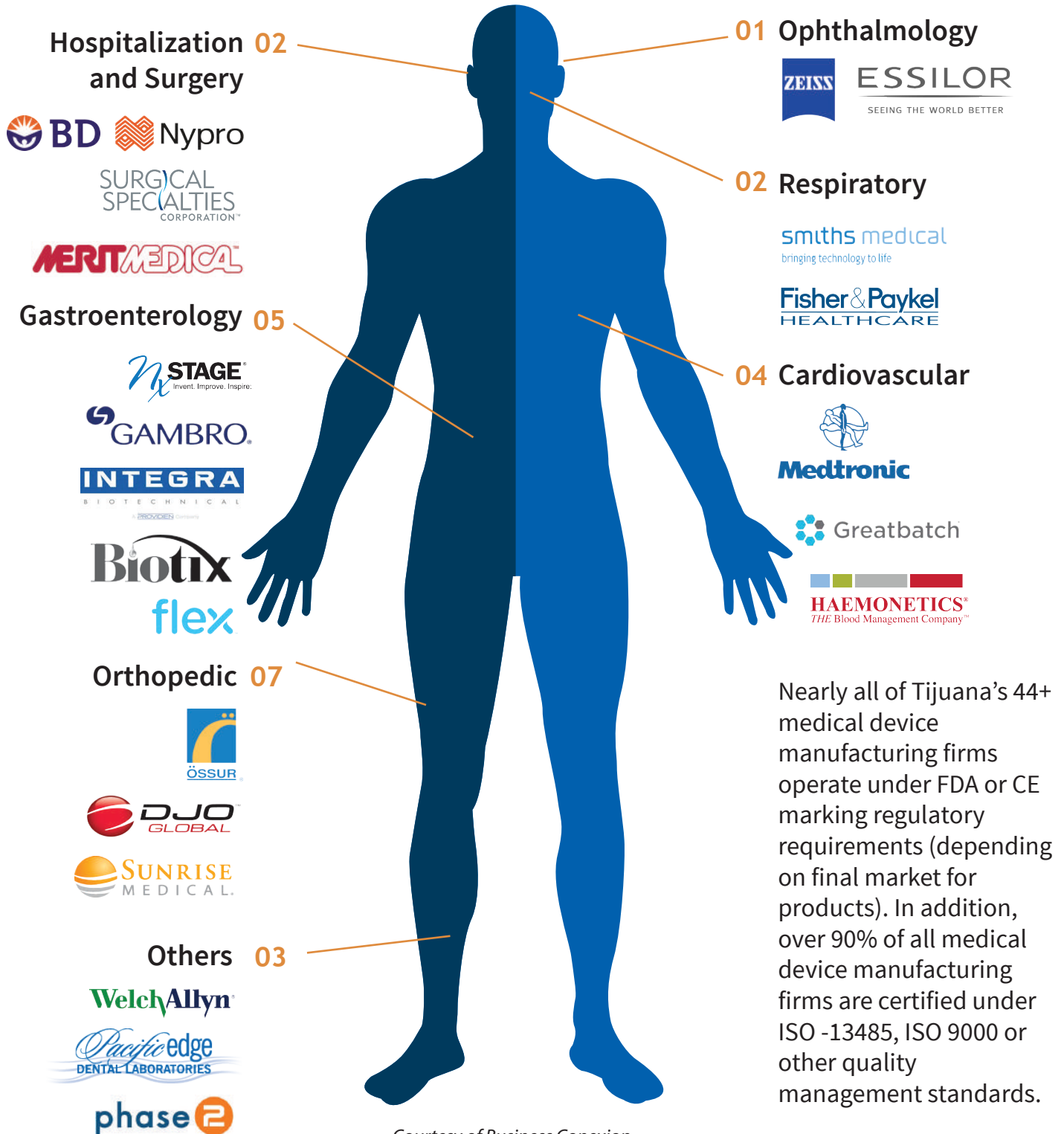


Import: Great access isn't just about geographic proximity - it's also what medical device manufacturers get with their suppliers.

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Tijuana's existing medical device companies already take advantage of a well-developed network of suppliers - many of them in Southern California and the Southwest United States.

# TIJUANA'S MEDICAL DEVICE MANUFACTURING FIRMS



Nearly all of Tijuana's 44+ medical device manufacturing firms operate under FDA or CE marking regulatory requirements (depending on final market for products). In addition, over 90% of all medical device manufacturing firms are certified under ISO -13485, ISO 9000 or other quality management standards.

Courtesy of Business Conexion



# A THRIVING BINATIONAL BIO BORDER

TIJUANA

41,900 + Medical Device  
mfg employees

Bilingual multi-cultural  
talent pool

Robust  
manufacturing base

Cost-effective  
location

High mix-Low  
volume

SAN  
DIEGO

U.S. 4th Life Sciences  
technology hub

42,000 + Life Sciences  
employees

Venture capital

Applied biotech

Innovation

*The City of Tijuana is part of the Cali Baja Bi-National Mega-Region and because it's composed of San Diego, Imperial Valley and Baja California, it is home to more than 800 companies operating in the biotech industry.*

Industry synergies have also led to a growing number of at least 14 medical device contract manufacturers, the formation of the 25+ member public-private Medical Device Cluster of the California's and other opportunities connecting life sciences firms and research institutions in the Cali-Baja Mega Region and throughout Southern California. As Tijuana becomes better known as North America's capital for the medical device manufacturing industry, it's not hard to imagine that the Tijuana-San Diego Bio Border will continue to evolve, and remain a prime location for life sciences-related manufacturing and development for decades to come.



**TIJUANA  
EDC**

Is a private non-profit organization dedicated to facilitating the soft landing of manufacturing operations in Tijuana, Mexico and the CaliBaja Mega-Region.

## TIJUANA EDC SERVICES



Advisory Services



Site Selection



Business Services  
One-Stop-Shop



Government  
Liaison



Initial Recruiting

To learn more, come visit us at the first Gold LEED-certified building in Northwest Mexico – home to the Tijuana EDC.



## REFERENCES

- ▶ US regional data derived from Crossborder Group analysis of 2014 NAICS-based employment data from U.S. Bureau of Labor Statistics' Quarterly Census of Employment and Wages (<http://www.bls.gov/cew/data.htm>) accessed June 2015. County- and State-level data for NAICS codes 325413, 333314, 334510,334516, 334517, 339112, 339113, 339114, and 339115 was aggregated to measure "medical device manufacturing" industry employment in each area in the US. Data from Tijuana based on Crossborder Group survey of 34 medical device firms in Tijuana, plus employment estimates for 7 firms; data for Chicago Metro region based on 2014 BLS CES data for NAICS codes 325413, 333314, 334510,334516, 334517, and 3391.
- ▶ INEGI firm data for Industria manufacturera, maquiladora y de servicios de exportación (IMMEX) industry, accessed June 2015 (<http://ow.ly/buiEb>)
- ▶ Research by Crossborder Group of FDA medical device database, interviews with company representatives, and Baja California's Medical Device Cluster trade group (<http://www.industriamedica.org/>).
- ▶ Tijuana medical device industry survey of 47 firms (34 complete responses) performed by Crossborder Group (May-June 2015). Company representatives verified approximate average employment over previous 60 days (to avoid seasonal variations).
- ▶ Quotation from July. 2014, PHASE2 newsletter <http://www.plasticstoday.com/articles/how-phase-two-medical-manufacturing-learned-stop-worrying-love-tijuana-140811>
- ▶ "Competitive Alternatives: KPMG's Guide to International Business Location - 2014 Edition", p. 24-25 (<http://www.competitivealternatives.com/>).
- ▶ Cost estimate based on average US and Tijuana manufacturing industry wages; source: the Tijuana EDC.



**TijuanaEDC.org**  
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