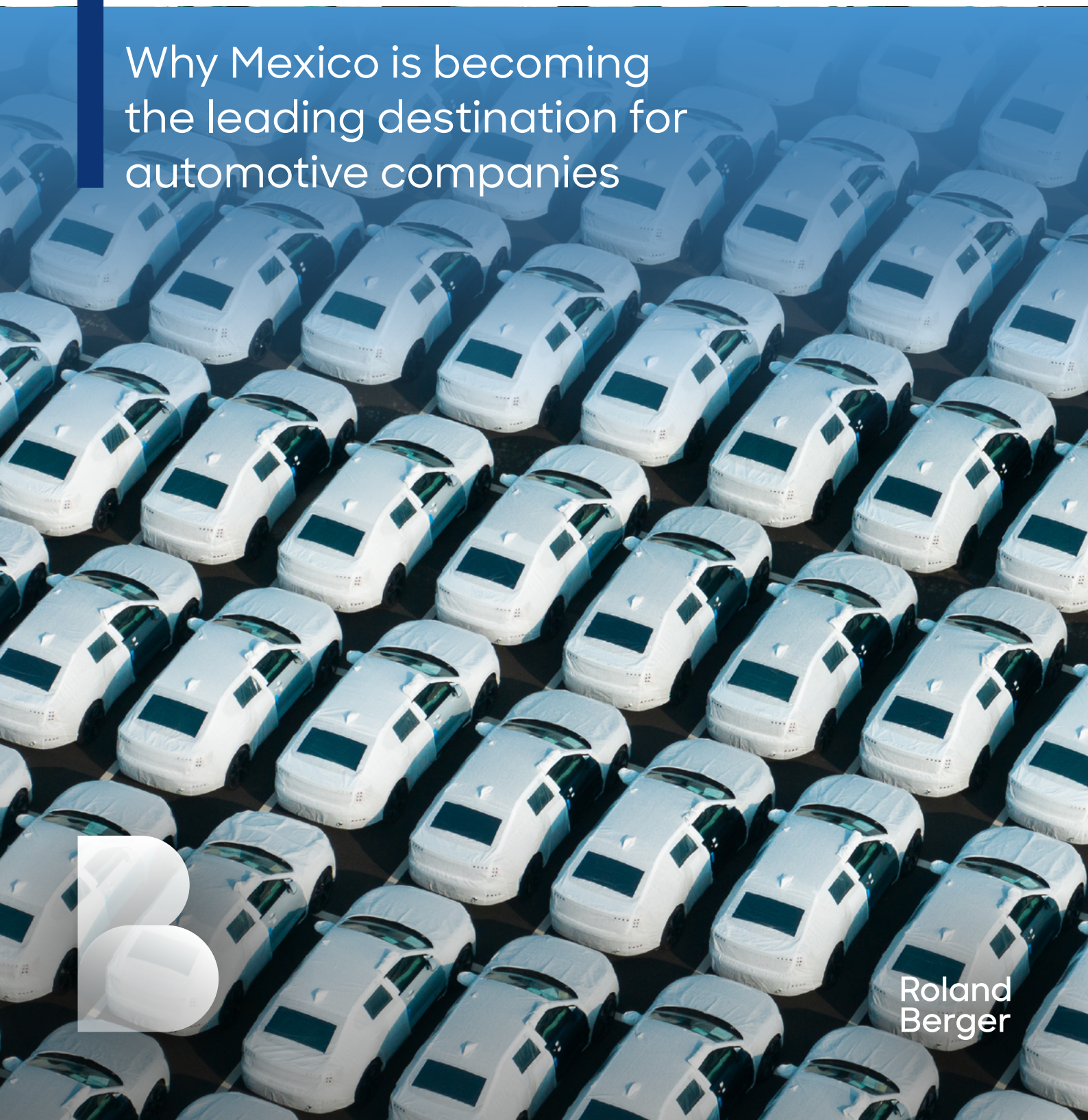
REPORT

Navigate the nearshoring process

Why Mexico is becoming the leading destination for automotive companies



Roland Berger

Management summary

Higher uncertainty, growing geopolitical risks and increased material costs in recent years have led automotive and other manufacturers to shift production and engage suppliers closer to their end markets. Mexico is a prime candidate for this nearshoring.

The country received USD 43.9 billion in foreign direct investment (FDI) in 2023, placing it in the top 15 receiving countries globally. It has overtaken China in terms of FDI outflows from the US, receiving almost USD 10 billion in 2022.

Labor, energy and transport costs are also significantly lower than in rival nearshoring countries, with Mexico offering a 35 % total landed-cost advantage over China. In addition, the country benefits from its close proximity to US markets, lower transport risks, a strong automotive supplier base and incentives under US and North American free-trade agreements.

A survey conducted by Roland Berger in 2023 of managers at US and Mexican automotive OEMs and suppliers found that 78 % of respondents have conducted, are conducting or are assessing nearshoring to Mexico.

While the study finds that there is a good case for nearshoring any automotive component to Mexico, certain components have a stronger case. These include components with high import value to the US, a solid existing supplier base and opportunities for cost reduction, such as wiring, chassis and body structures. Survey respondents cited assembly operations as the best fit for nearshoring to Mexico.

Companies considering migrating manufacturing to Mexico must consider several factors to ensure successful execution. These include efficiently navigating bureaucracy, mitigating security risks, adapting to cultural differences, access to a capable supply base, ensuring cost-competitive production and availability of key resources. In addition, a detailed assessment of setup and operating costs, incentives, and other operational factors are key to a comprehensive nearshoring feasibility analysis.

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Introduction: Nearshoring - coming to a place near you

For decades the engine behind the world's economy, globalization has suffered several heavy geopolitical blows in recent years. First, the US-China trade dispute led to a fall in US imports from China, while increasing imports from other countries such as Canada and Mexico. Second, the Covid-19 pandemic caused significant supply problems, with widespread disruption in supply chains and resultant shortages of goods. And lately, the war in Ukraine has caused energy and material prices to soar, impacting supply chain costs due to the high proportion of global production in Russia and Ukraine. Access to other important commodities, such as palladium, nickel and platinum, has also become more difficult.

In order to mitigate these events and avoid new supply problems, large companies are reassessing their global production footprint. Today, rather than unfettered globalization, the trend is toward nearshoring, whereby firms diversify manufacturing bases and move them closer to major markets, especially the US and China.

In this report, we assess nearshoring in Mexico, with a focus on automotive companies. First, we look at how the country competes in general socio-economic terms against rival countries, such as China. Next, using results from our exclusive survey of US and Mexican automotive managers, we look at the advantages Mexico offers for manufacturers - particularly automotive OEMs and suppliers. Lastly, we outline the opportunities for automotive companies and six key factors for success.

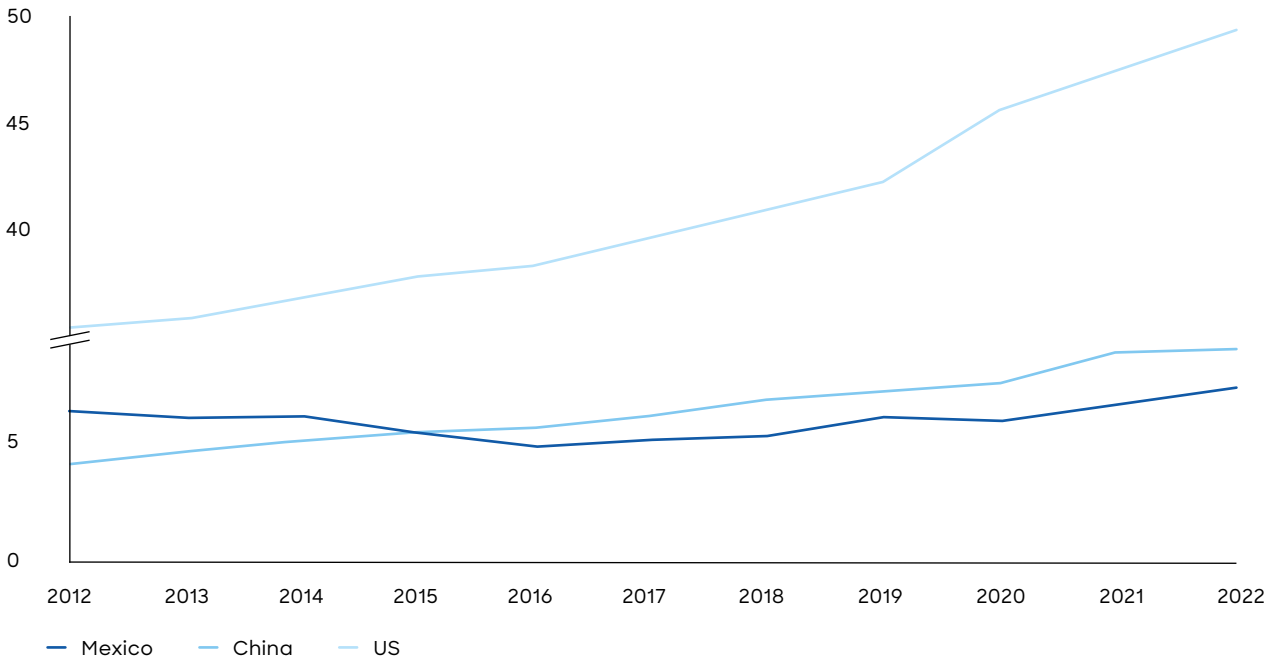
1 Why Mexico? The country offers significant competitive advantages

Mexico is a prime nearshoring target. While already a favored destination due to its ready access to US markets, interest in the country is spiking as global manufacturers seek to shift operations from more expensive locations, such as China. The reasons for this are clear. Mexico is a robust democracy with a healthy market economy that shares similar cultural values with the West. It is also open to trade, especially with the US, having signed 12 free-trade agreements involving more than 50 countries. Its labor market is dynamic, with a high percentage of the population in work and workers putting in some of the longest hours among OECD countries. Its proximity to the US also offers low transportation costs and transit times.

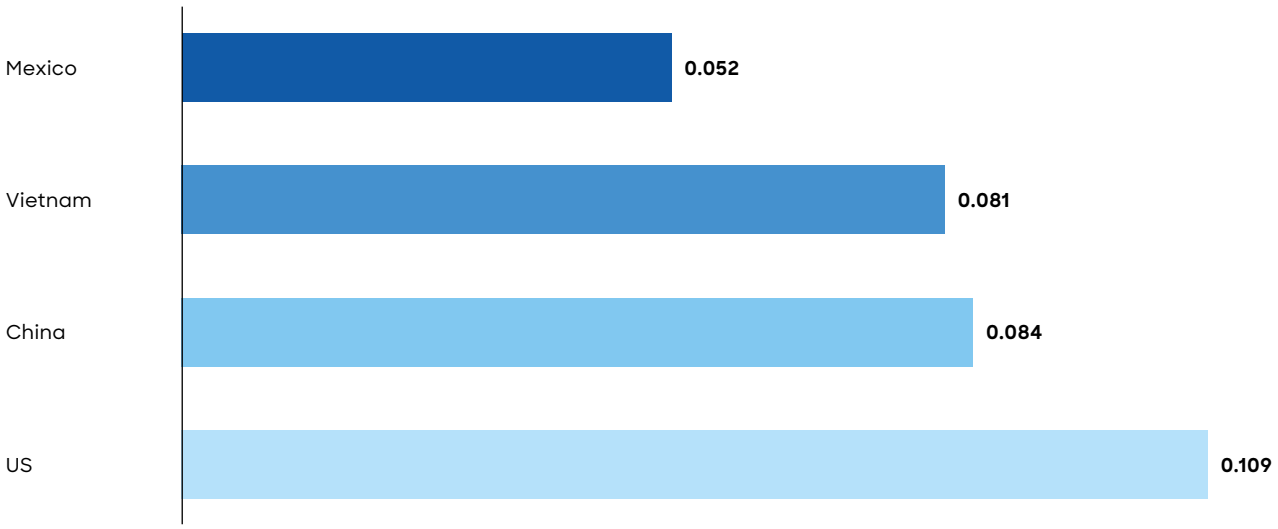
The country also compares favorably against other nearshoring target countries. Nominal hourly wages, for example, are below those in China and electricity costs are around two-thirds of the costs in China and Vietnam. ▶ A

A Better value: Mexico has significantly lower wage and electricity costs than the US or China

Nominal hourly wages, 2012–2022 [USD]



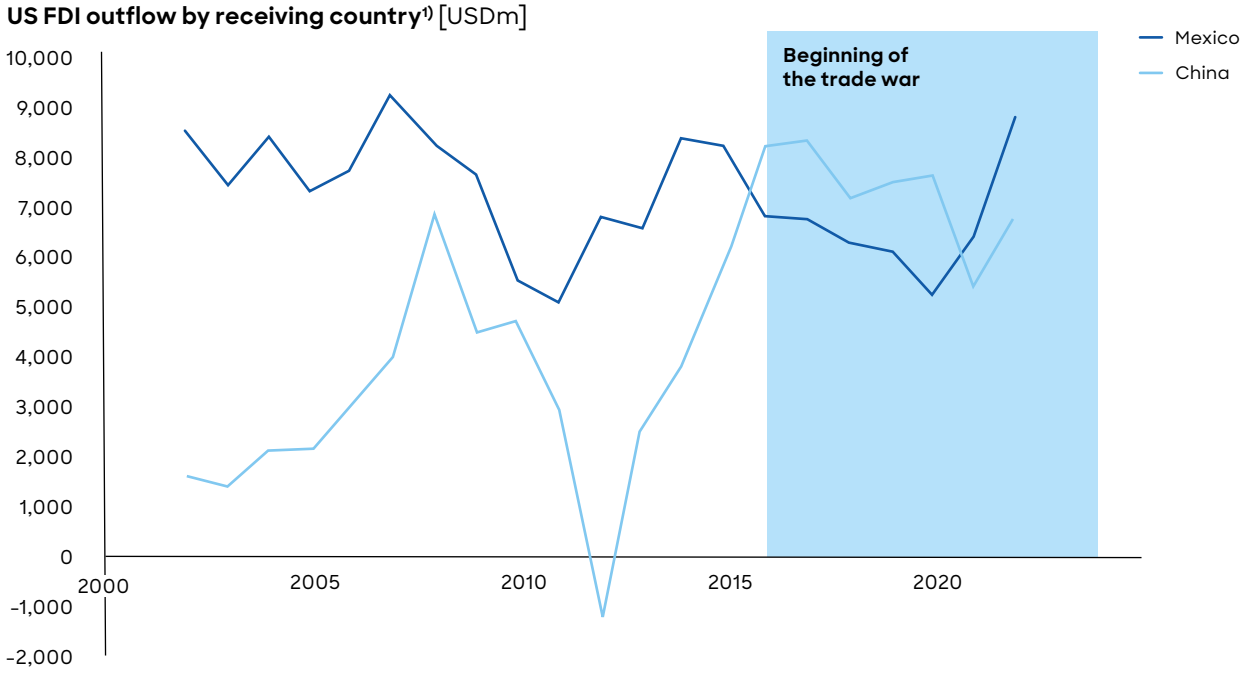
Average price of 1 kWh by country, 2021 [USD]



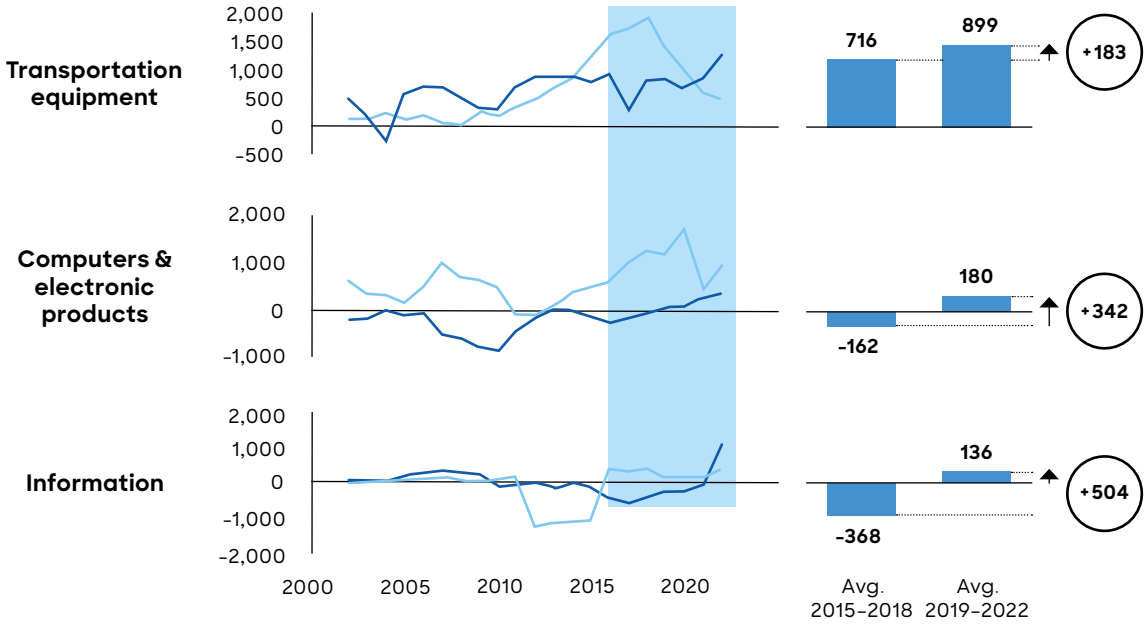
Source: Oxford Economics

B More investment: Since 2020, US FDI outflows to Mexico have surged and surpassed those of China

US FDI outflow by receiving country[1] [USDm]



Sectoral US FDI outflow by receiving country[1] [USDm]



1) The data shows a four-year rolling average in order to balance the volatile nature of FDI flow data

Source: US Bureau of Economic Analysis

In addition, foreign direct investment (FDI) in the country is surging. The country received USD 43.9 billion in FDI in 2023, placing it in the top 15 receiving countries globally, and making it one of only four countries in the G20 to increase FDI inflows compared with 2022. Mexico has also overtaken China as an investment destination for US businesses, with annual US FDI outflows to the country approaching USD 10 billion. The number of greenfield projects is rising just as fast. These increased from 486 in 2022 to 500 in 2023. Both the number of greenfield projects and the volume of FDI inflows are expected to reach historical highs in 2024, according to preliminary data from the US Bureau of Economic Analysis (BEA). ▶B

Interest in the country as a nearshoring location is also at a record high, making it a hot topic. The number of US news stories about the subject jumped by around 600% between early 2022 and late 2023, from around 50 publications per month to 350. The Inter-American Development Bank believes increased nearshoring activity could result in Mexico adding an additional USD 35.8 billion in annual exports, out of a total of USD 78 billion for Latin America.

Mexico does, however, face challenges. There are well-publicized security concerns, with influential drug cartels, as well as a high level of corruption – the country ranks 126 out of 180 in Transparency International's Corruption Perceptions Index. In addition, public services are poor and demand for industrial space outstrips supply. The country also has a weak track record on nearshoring – for example, missing an opportunity to maximize the potential of the North American Free Trade Agreement (NAFTA).

Overall, however, Mexico is an attractive nearshoring option with near-unrivaled access to US markets.

"Nearshoring will speed up in 2024; in the first three months of 2024 there had already been 73 new FDI announcements for USD 31 billion, therefore it is expected that FDI in 2024 would be substantially higher than in 2023 with the largest share of it being new projects."

Oscar Silva Eguibar, Partner, Roland Berger Mexico

2

It pays to manufacture in Mexico: Costs are less than in China – and the gap is growing

Mexico is particularly attractive as a manufacturing hub. As well as the wider benefits outlined above, the country compares favorably when it comes to more specific manufacturing indicators – especially for the automotive industry. Indeed, the country is now outcompeting once-dominant China in many aspects. The results of our survey, conducted in 2023 among US and Mexican automotive industry managers (65 % US, 32 % Mexican, 59 % Tier 1 and Tier 2 suppliers, 38 % OEMs), reflect this. When asked from which country they expect most nearshoring in Mexico to come from, 68 % of respondents named China as their first choice. The US was next at 32 % followed by Europe (24 %), the rest of Asia (22 %) and South America (5 %).

So what's driving the manufacturing shift to Mexico? While geopolitics are a factor, cost is also playing a major role. Relative to China, which is still viewed as a low-cost manufacturing hub, Mexico offers significant savings. For example, in 2022, it had a 35 % total landed-cost advantage over China.

Lower labor costs in manufacturing make up a large part of this. Hourly rates in Mexico are 30 % less than in China, with the gap expected to widen through 2030. Labor is also cheaper than in rival nearshoring countries such as Malaysia. ▶ C

Costs are also lower when it comes to freight, especially if goods are headed to nearby US markets. For example, the cost of shipping a 40-foot container from Mexico to the US is 56 % less than transporting it from East Asia. It also takes 20 fewer days. In addition, 90 % of freight from Mexico to the US travels by ground transport, which further reduces cost, logistics and supply chain complexity.

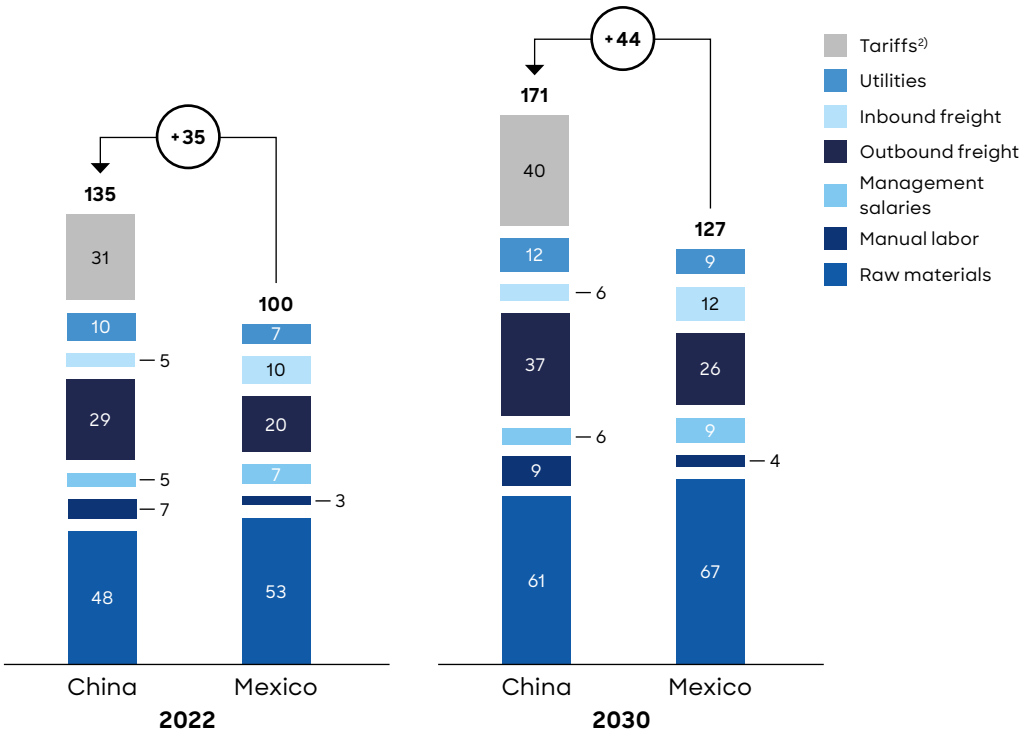
By 2030, the cost discrepancy between China and Mexico is only projected to grow, reaching a 45 % overall difference. The increase stems primarily from increased projected tariff costs, but also growing outbound freight costs and manual-labor wages.

In addition to cost differences, Mexico is one of the only large manufacturing hubs that will see an increase in the working-age population through to 2050, with 8 % expected growth from 2022 to 2050.

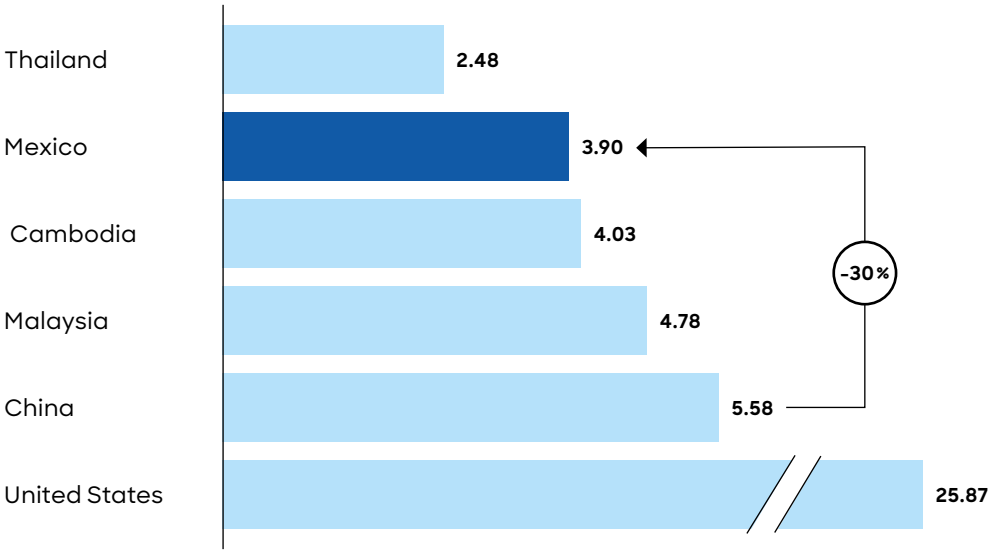
C Competitive manufacturing costs: Mexico has a 35 % (and growing) landed-cost advantage over China

Landed cost and labor cost comparison

Landed-cost comparison[1] [100 = cost in Mexico in 2022]



Manufacturing hourly rate for selected countries [USD]



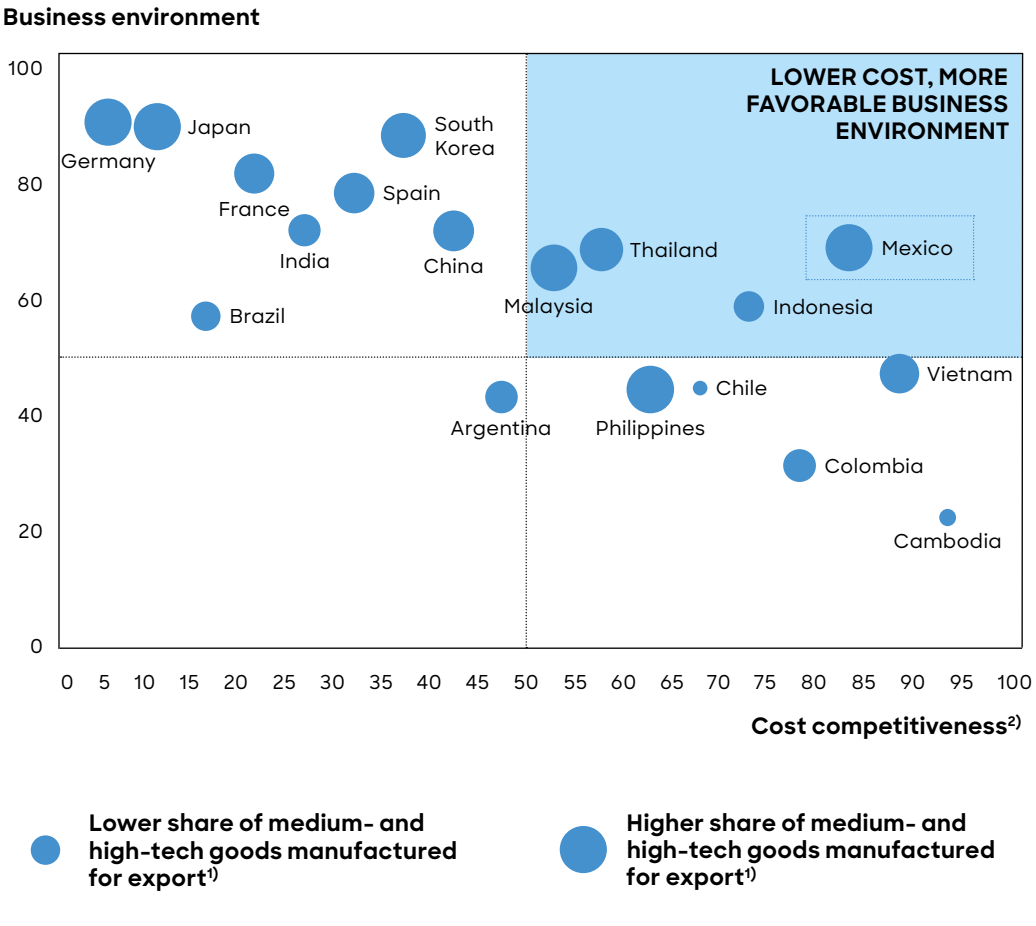
1) Analysis is done using cost breakdown of brake pads
2) Tariffs are applied after a 10 % profit margin is considered

Source: US Bureau of Economic Analysis, US Census Bureau Foreign Trade Division, IHS Markit, ERI Economic Research Institute, US Bureau of Labor Statistics, desk research, Harmonized Tariff Schedule, Roland Berger

3 The case for automotive: Mexico's proximity to the US is its stand-out advantage

Mexico is a particularly attractive nearshoring proposition for automotive OEMs and suppliers. On top of having low labor and logistics costs, the country is a prime candidate for the auto industry because of its well-disposed business environment, stable supplier base and increasingly resilient supply chains. In addition, US FDI outflows to Mexico in the automotive and related sectors have consistently increased over the past few years as a result – at the expense of outflows to China. ▶ D

D Positive positioning: Mexico stands out in the automotive sector due to its low costs and favorable business environment
Business environment and cost competitiveness matrix in the auto sector for shortlisted countries



1) Medium- and high-tech manufactured exports, as share of total manufactured exports;
2) Cost competitiveness score in the auto sector for each country is calculated using five dimensions (labor, logistics cost, corporate tax rate, utility rates and tariffs) and ranked in a continuum;
3) Business environment includes 3 dimensions: political and economic stability, infrastructure and auto supplier base

Source: World Bank, United Nations Industrial Development Organization, Roland Berger

Mexico's close proximity to the US only enhances its appeal to automakers. The benefits of its short-range supply chain include:

Quality improvements: Close proximity helps to improve collaboration between suppliers and OEMs and means both can more easily address quality issues throughout the program life cycle

Cost control: Streamlining of material planning and inventory management is easier, and shorter supply chains mean shorter lead times and buffers, and smaller inventories

Supply chain visibility: There is greater cooperation and visibility in both directions of the supply chain, and the threat of margin erosion is reduced

Sustainability: Shorter supply chains have a positive effect on CO_2 footprints, supporting corporate decarbonization and environmental goals.

In addition to proximity, recent US regulation is also boosting Mexico's attractiveness for automotive companies.

Under the United States-Mexico-Canada Agreement (USMCA), automotive OEMs must certify that 75 % of their steel and aluminum is from Canada, Mexico or the US to qualify for duty-free trade. This is up from 62.5 % under NAFTA. In addition, lithium-ion batteries (cells, modules and packs) are now required to be manufactured within USMCA signatory countries for vehicles to qualify for free trade within the region.

The US's recent Inflation Reduction Act (IRA) is also having a big impact. The IRA offers a USD 7,500 subsidy (clean vehicle credit) on electric vehicles that meet requirements for critical materials and battery component content. This includes a requirement that final assembly is completed in North America. Additionally, the IRA offers an advanced manufacturing production tax credit to incentivize the localization of battery manufacturing and supply chains of battery materials within the US or its free-trade partners (which include Mexico).

Furthermore, regulation such as Section 301 of the Trade Act, and other legislation currently under discussion, may benefit Mexico by imposing additional tariffs on products and materials coming from China.

> **"We expect that regulation and policies aimed to detach US-China commercial ties will continue to increase in the following years, regardless of the outcome of USA presidential elections."**
>
> Oscar Silva Eguibar, Partner, Roland Berger Mexico

4 The trend to Mexico: More and more automotive OEMs and suppliers are investing

Mexico already has a track record of supplying light vehicles and automotive parts to the US. It has been the leader in both categories over the past decade, and has also grown its share at the expense of competitors such as Canada and China.

This trend is now accelerating. Given Mexico's growing attractiveness as a manufacturing hub, several major automotive OEMs and suppliers have recently announced significant new or expanded production in Mexico. Examples include GM's USD 1 billion investment to convert its Ramos Arizpe plant to produce electric vehicles (EVs); Tesla's similarly sized investment in a new factory in Monterrey; BMW's USD 872 million investment to begin building electric vehicles (EVs) at its plant in San Luis Potosí; Volkswagen's USD 764 million investment (over three years) into its Puebla factory; and the ZF Group's USD 245 million investment to expand its plant in Querétaro.

The big automotive players are not alone. Our survey found that 78 % of respondents have conducted, are conducting or are assessing nearshoring alternatives in Mexico. Minimizing costs of production was the most-cited consideration in deciding to nearshore (81 %), while cost-related items (logistics, labor and tariffs) were the three most important factors in decisions to nearshore. The existence of a capable supply base was also a key factor. ▶ E

In this context, it is not surprising that in the next few years, vehicle production growth in Mexico is expected to outpace US and overall North American production, based on data from IHS Markit. Mexican production is projected to grow at a CAGR of 4.3 % between 2021 and 2029, while the overall figure for North America is 3.0 %.

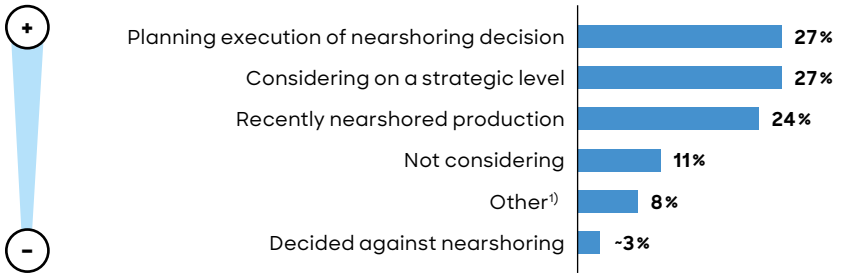
"In 2023, Mexico manufactured 3.8 million vehicles, 14 % more vehicles than in 2022, already surpassing 2019 levels. Production in 2024 is expected to surpass the 4 million mark with first-quarter statistics backing up this trend."

Oscar Silva Eguibar, Partner, Roland Berger Mexico

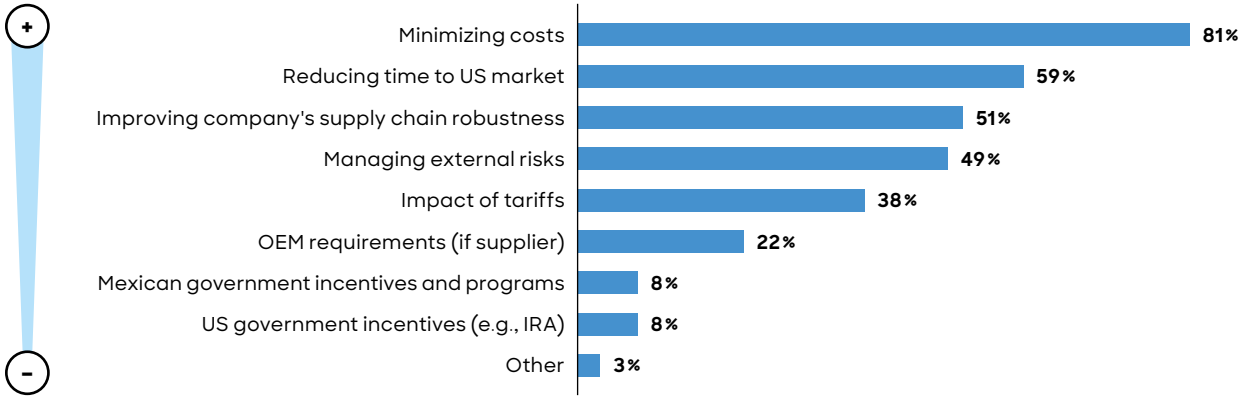
E On the move: A majority of surveyed automotive companies are planning to nearshore to Mexico

Survey responses – Nearshoring activities and key drivers

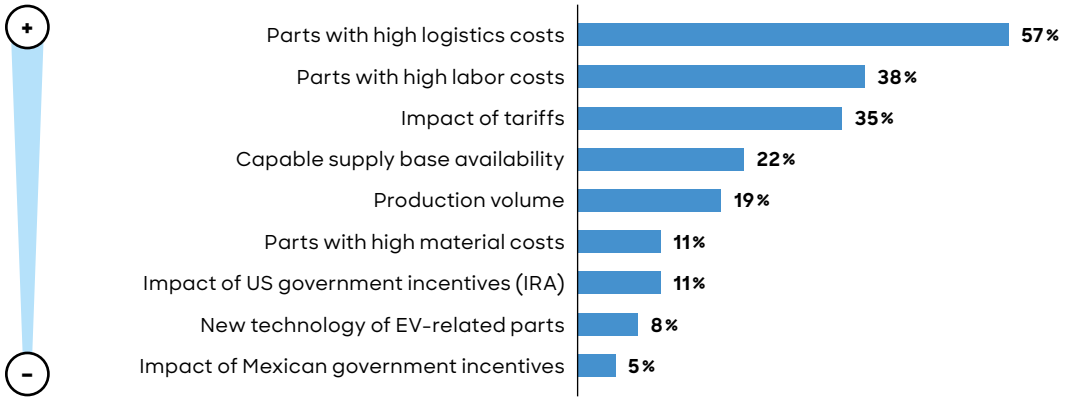
At which stage of nearshoring planning to Mexico is your company? [% of respondents]



What are the key reasons behind deciding to nearshore automotive parts to Mexico? [% of respondents][2]



When deciding to nearshore automotive parts, what are the most important factors? [% of respondents][3]



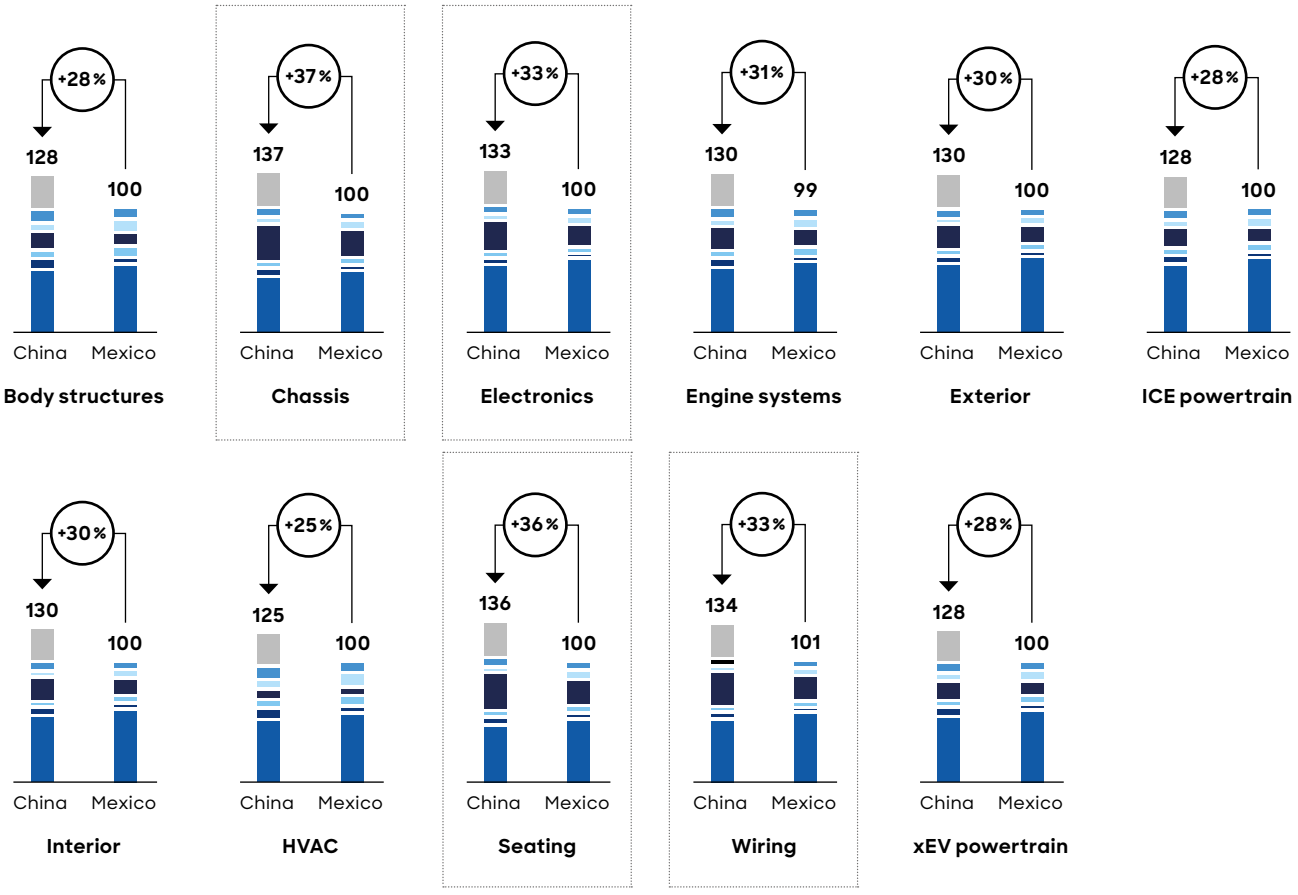
1) Respondents that preferred not to answer or have other strategic nearshoring considerations
2) Respondents could select multiple options – percentage total will be more than 100 %
3) Indicates respondents listing the factor as most important (5 on a 1–5 scale); respondents could select multiple options – percentage total will be more than 100 %

Source: Roland Berger nearshoring survey (conducted March 2023), Roland Berger

5 Opportunities: The best-fit automotive sectors to nearshore to Mexico

It's clear that Mexico is an attractive proposition for automotive OEMs and suppliers. But some vehicle components are a better fit for nearshoring in the country than others. This is largely due to the relative share of cost factors for different parts. According to our survey respondents, systems with a high share of labor and logistics costs, such as assembly operations (cited by 70 % of respondents), wiring (49 %) and chassis (46 %), are the most viable for nearshoring. The top three were followed by battery components (43 %), electronics and seating (41 % each) and powertrains (ICE 32 %, EV 27 %).

F The best parts: Chassis, seating, electronics and wiring systems have the greatest potential cost gains when comparing nearshoring in Mexico against China
Landed-cost comparison for select automotive systems, Mexico vs. China (2022)



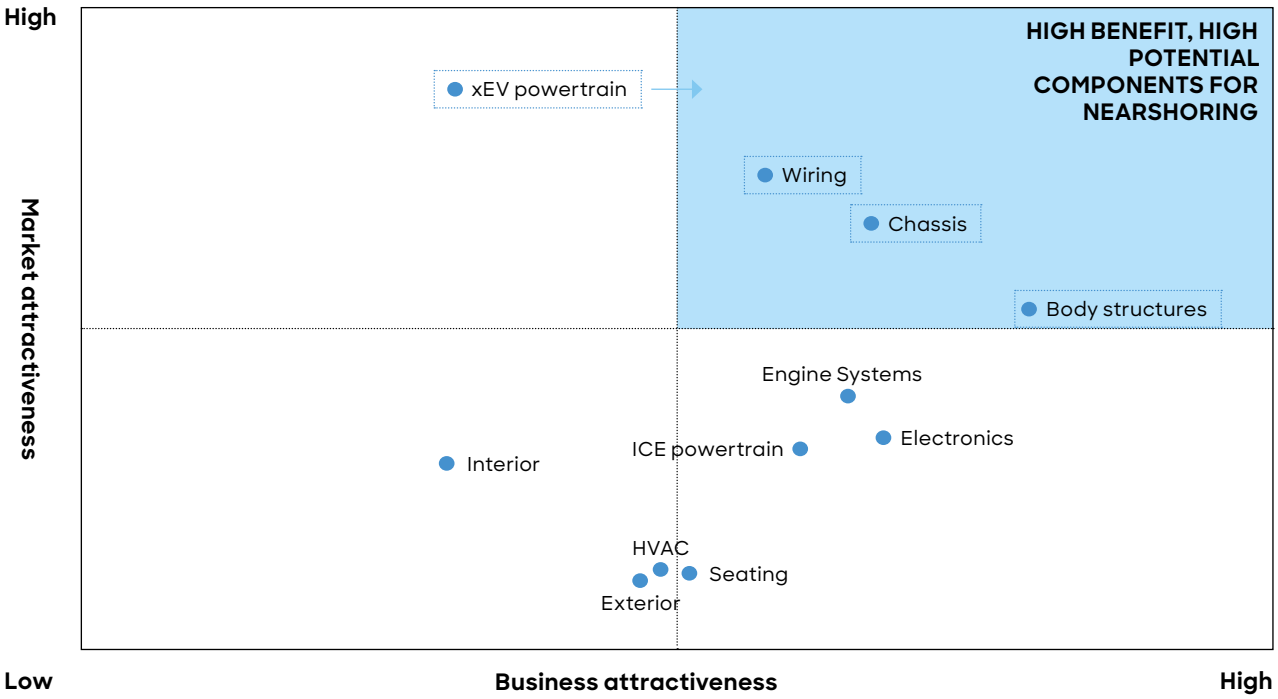
1) Tariffs are applied after a 10 % profit margin is considered

Source: US Bureau of Economic Analysis, US Census Bureau Foreign Trade Division, IHS Markit, ERI Economic Research Institute, US Bureau of Labor Statistics, desk research, Harmonized Tariff Schedule, Roland Berger

While automotive manufacturers may have preferences when it comes to nearshoring certain systems, they will make savings on most components if they relocate production from China to Mexico. Chassis, seating, electronics and wiring show the highest potential gains if they were to be nearshored from China, but savings extend to many other systems, including EV powertrains and engines. The savings are mainly the result of the widening gap in labor and transport costs between China and Mexico, as well as the increased tariffs placed on Chinese components. ▶F

Mexico's solid existing supply base enhances the benefit of these savings, and announcements of new investments, such as those by GM, Tesla and others mentioned earlier in this report, further stimulate the supplier base. In addition, with EV production expected to increase sixfold by 2029, electrification will further drive suppliers to the country. EV parts are therefore likely to move into the "high benefit, high potential" category for nearshoring components in the near future. ▶G

G **Best bets: Overall, wiring and chassis are the most attractive components to nearshore today, with xEV powertrains having significant potential**
Overview of automotive systems nearshoring framework[1)]



1) Market attractiveness is the combination of market size and growth rate, whereas business attractiveness is the combination of cost-reduction potential and proportion of US import market unaddressed by Mexican suppliers (but enough existing import share to guarantee that there is an established supplier base already in operation)

Source: Roland Berger

6 Planning and execution: Success factors and key messages for nearshoring to Mexico

Our research suggests that Mexico is fast becoming the nearshoring destination of choice when it comes to relocating production from China or shifting closer to US markets. But the decision is not without risk. When considering nearshoring production to Mexico, six factors are consistently mentioned as key to successful planning and execution:

Navigating bureaucracy: The government has significant influence on the business environment in Mexico and working with officials will require a capable team experienced in managing bureaucratic challenges and leveraging relationships to optimize execution

Mitigating security risks: Threats posed by the presence of criminal organizations and the increasing amount of theft along the "NAFTA highway" must be properly assessed; location selection is key to minimize such risks

Adapting to cultural differences: A sound understanding of the cultural differences that exist when doing business in Mexico is critical to success

Access to a capable supply base: Having direct and close access to a large number of Tier 1 and Tier 2 auto suppliers is an essential factor in view of the limited access to exports

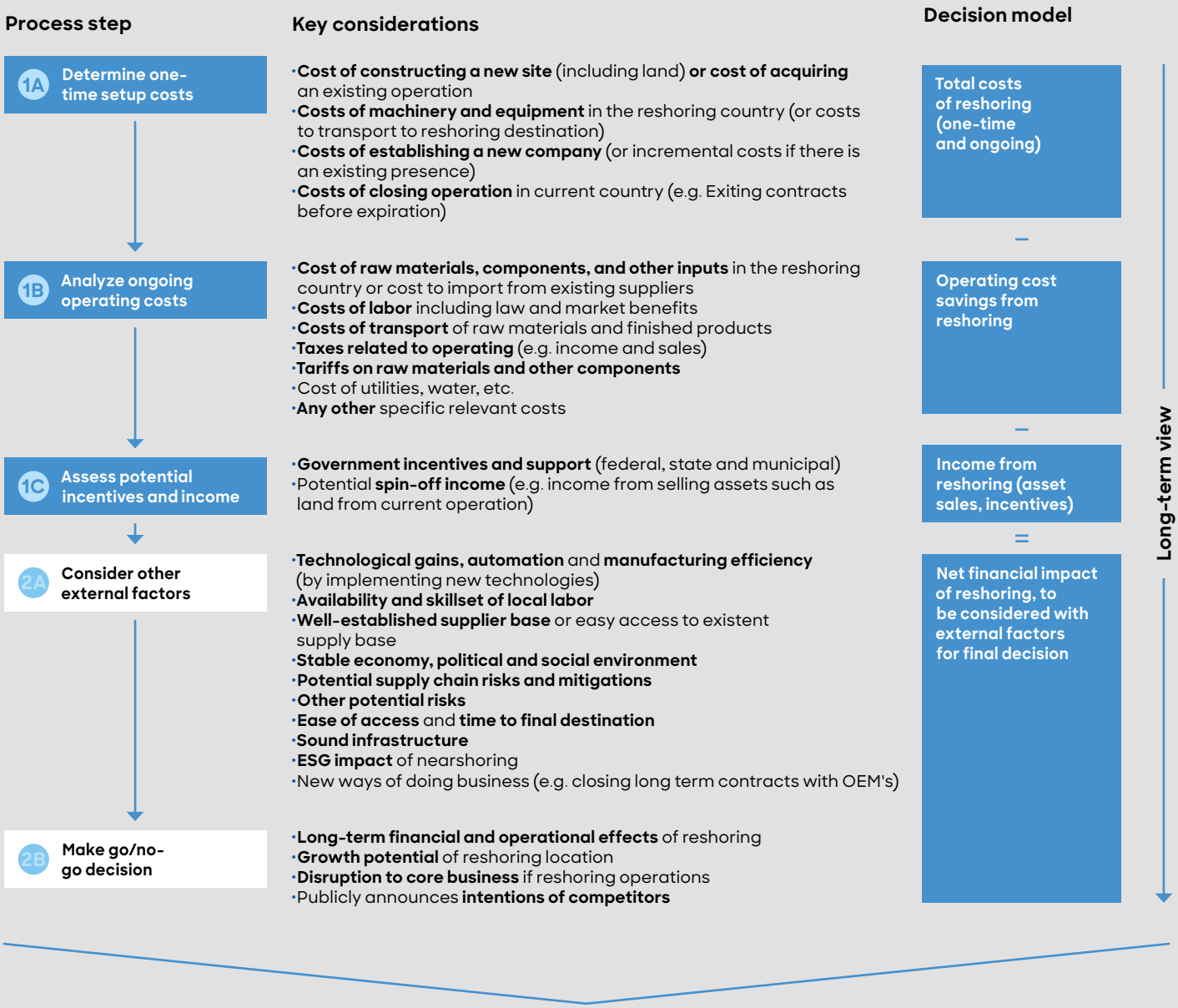
Cost-competitive production: A robust understanding of the high cost differentials throughout the country and access to low-cost utilities, labor and logistics will be key to producing cost-competitive products

Access to key resources: An ability to attract skilled labor – which varies greatly from region to region – while maintaining access to transportation networks and basic resources such as energy and water is essential.

Additional external factors such as manufacturing efficiency gains, ESG impact and potential supply chain risks should also be fully considered. Lastly, any decision to nearshore should be made based on the net financial impact, which stems from the total reshoring costs (one-time and ongoing), operating cost savings and income (asset sales, government incentives).

H Our model: Roland Berger takes a step-by-step approach to help clients navigate the nearshoring process

Nearshoring process steps and decision model



RB can support nearshoring decision-making and planning

- Market entry strategy
- Market assessment
- Due diligence
- Multi-factor site-location analysis (regional and in country)
- Production/footprint strategy
- Product complexity management
- Engineering footprint
- Supply chain excellence
- Performance Improvement
- Product cost optimization
- Next-generation manufacturing
- Nearshoring decision model

Source: Roland Berger

Key messages – and how Roland Berger can help

Our study demonstrates that migrating manufacturing closer to automotive end markets is becoming increasingly popular. While several options exist, there is a clear case for OEMs and suppliers to nearshore to Mexico. Relative to competitors, the country has several key advantages:

- Lower costs
- More resilient supply chains
- Easier-to-manage external risks
- Better proximity to the US

However, these advantages must be carefully weighed against several disadvantages:

- Overall financials
- Access to resources and labor
- Risks and potential for mitigation measures

Roland Berger can help with all of these issues and more, from the nearshoring decision to planning and execution. If your company is thinking about nearshoring to Mexico, please feel free to contact our in-country experts. We look forward to hearing from you. ▶ **H** (previous page)

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