



CIRCULAR ECONOMY

Ecosystem in Mexico



PRESENTED BY

Commercial Office of
Israel to Mexico



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Executive Summary

The following report was written by the Commercial Office of Israel to Mexico to provide an overview of the circular ecosystem in Mexico. With the information presented in this report, you will be able to obtain a vision prior to the establishment of business in Mexico, with examples of companies and public institutions that will be able to guide you regarding the best practices to be carried out for a successful establishment of business in the country. Likewise, to expand your business in Mexico, in case that you are already operating here. For further information beyond what is stated in this report, as well as questions or connections between the companies, organizations and conferences listed in this report, please contact Estefanía Wood which is in charge on the sectors of Cleantech, Water, Agriculture, Mining and Foodtech

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1.The Israel Economic Mission in México

The Israel Economic Mission is based in Mexico City and represents the Foreign Trade Administration of the Ministry of Economy and Industry of Israel. Our objective is to promote, improve, and facilitate trade and investment in a wide variety of sectors between Mexico and Israel. We work to develop strategic bilateral partnerships, identifying new attractive opportunities in business and G2G bilateral trade between Mexico and Israel. We are doing so via B2B meetings, business seminars, delegations, exhibitions, and other services.

1.1The Team



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2. General information about Mexico and Mexico's business culture

Official Name:	Estados Unidos Mexicanos (México)
Capital:	Mexico City
Currency:	Mexican Peso (1 USD = 19.87 MXN)
Population:	128,649,565 (July 2020 est.)
Administrative divisions:	32 states (estados, singular - estado); Aguascalientes, Baja California, Baja California Sur, Campeche, Chiapas, Chihuahua, Coahuila, Colima, Ciudad de Mexico, Durango, Guanajuato, Guerrero, Hidalgo, Jalisco, Mexico, Michoacan, Morelos, Nayarit, Nuevo Leon, Oaxaca, Puebla, Queretaro, Quintana Roo, San Luis Potosi, Sinaloa, Sonora, Tabasco, Tamaulipas, Tlaxcala, Veracruz, Yucatan, Zacatecas.
Government	Federal Presidential Constitutional Republic
President	Andrés Manuel López Obrador
Official Language:	Spanish



2.1 Major Cities

- Mexico City
- Tijuana, Baja California
- Leon, Guanajuato
- Puebla, Puebla
- Juarez, Chihuahua
- Guadalajara, Jalisco
- Monterrey, Nuevo León

Mexico is the largest importer and exporter in Latin America and is the second-largest economy in LATAM after Brazil.

2.2 Business Communication

Mexican business-culture prefer face-to-face methods of communication, as they find it critical in determining potential partners' character, level of trust, and compatibility.

Business Etiquette: do's and don'ts:

- **Presentation:** Although before scheduling the call the Commercial Trade Officer sent your information (presentation, one pager, etc.) that you provided on your ERM request, it is important to have a short and precise power point presentation about your product or service. For Mexican companies, a previous experience in other markets is very important. Especially in the United States, European union and Latin America. In case you do have such an experience, please emphasize it.
- **Read about the local company before:** Make some research, look for the person profile in LinkedIn and such.
- **Know your goals in the local market:** It's important that you provide clear information about what you are expecting from your local partners, sales, strategic plan, if you already have some distributors in the market, approximately how much they are selling, etc.
- **Importation issues:** it is considerable to know the HS code of your product, packaging for the importation and if there is any Mexican-local regulation relevant.
- **Additional information:** it is always attractive for the local company to know if you are willing to give training, marketing percentage, free samples, or pilots, before closing a deal.

- **Be friendly:** In Mexican business culture, a direct, unmediated, pleasant and respectful relationship is very important, long before doing business. It is important not to go straight to business, before conducting a small talk. It can be viewed as a rude behavior. DON'T make them feel rushed or undervalued.
- **Accurate information:** If you don't know an answer about a question been asked during the call, it's better to apologize and send the information later via email, instead of providing misinformation, that can mislead or affect the meeting adversely.

Mexican business-people do not like to say "No". It's important to be hyper-aware of body language and other non-verbal cues to avoid miscommunications. If you push the Mexican business-people, they could stop answering you.

Be careful in how you are doing business. Business in Mexico takes time to close and longer when everything is by mail and calls.



3.What is circular economy?

Circular economy is a new production and consumption model that guarantees sustainable growth over time. The model promotes the optimization of resources, the reduction in the consumption of raw materials, and the use of waste by recycling them or giving them a new life to turn them into new products.

The objective of circular economy is to make the most of the material resources available to us by extending the life cycle of products. The idea arises from imitating nature, where everything has value and waste becomes a new resource. In this way, a balance between progress and sustainability is achieved.

3.1 What are the principles of the circular economy?

Almost everyone is familiar with the 3R rule, essential for sustainable development and preserving the environmental balance: Reduce, Reuse and Recycle. In other words, what is obtained from nature returns to it at the end of its useful life, in a cyclical and environmentally friendly manner. However, there are four other rules. These 7Rs are the steps needed to achieve a circular economy:

- **Redesign**: think and design products so that their manufacturing process consumes fewer raw materials, extends their useful life and generates less waste (or at least waste that is easier to recycle). This increases environmental protection.
- **Reduce**: change our consumption habits towards a more sustainable model. If we reduce consumption, we avoid the generation of waste, the use of raw materials and, therefore, reduce the impact on the environment.
- **Reuse**: by reusing or re-purposing products, we extend their useful life.
- **Repair**: until now, when a product broke down we tended to replace it. However, repairing it is not only more economical, but also avoids the use of new raw materials, saves energy and reduces the environmental impact.
- **Renovate**: update old objects so that they can be reused as vintage, such as furniture.
- **Recycle**: promote best practices in waste management and use what is possible as raw material for the manufacture of new products.

- Recover: give new uses to products that are going to be discarded, such as using plastic bottles to create irrigation systems, flowerpots or bird feeders.

4. Circular Economy Overview in Mexico

According to the [Ministry of Environment and Natural Resources](#) (SEMARNAT) Mexico generates more than 44 million tons of waste per year and by 20130, it is expected to generate 65 million tons. In [the National Development Plan 2019-2024](#) for Mexico, there is a section on sustainable development. However, it does not mention an action plan to achieve it.

In November 2019, Senators Ricardo Monreal Ávila and Raúl Bolaños-Cacho Cué, from the [Morena Parliamentary Group](#) and the Parliamentary Group of the [Green Ecologist Party](#) of Mexico launched an initiative for the creation of the General Law on Circular Economy, which aims to provide the country with a general regulatory framework that allows the efficient use of natural, economic and human resources to facilitate the transition to the Circular Economy (CE) model. Its objective is to recycle waste, transforming the remains from one industry into raw materials for another.

[On November 17th, 2021](#), the Plenary of the Chamber of Senators unanimously approved the General Circular Economy Law, regulating articles 4, 25, and 73 of the Constitution in matters of environmental protection, sustainable development, preservation, and restoration of ecological balance, the minute of which was sent to the Chamber of Deputies for review.

The application of this regulation will be the task of the Federal Executive, through the Ministry of Environment and Natural Resources (SEMARNAT); however, it may sign agreements with state and municipal governments to delegate the exercise of these powers and functions.

In addition, there is a [zero waste program](#) promoted by the Ministry of Environment and Natural Resources (SEMARNAT) within the framework of the national vision for sustainable management, which has as one of its principles the management of waste with a CE approach, incorporating the waste hierarchy model. The aim is to take advantage of resources through material banks for recycling, manufacturing, food banks, composting plants and energy generation.

4.1 Waste Hierarchy Model



Fig. 1. Integrated waste management with a circular economy approach. Based on data published by the National Government (2019)

4.2 Main points of the General Law of Circular Economy in Mexico (LGEC)

1. A zero-waste policy that is in accordance with the federal policy.
2. It requires the presentation of a circular economy plan; it also establishes the basis for the federation, the states and the municipalities to move towards a circular economy.
3. It promotes the policy of reuse, recycling and utilization.
4. It establishes progressive goals, which are also established in a textual manner in the transitional provisions of the law.
5. All persons engaged in the manufacture, development, production and distribution of electrical and electronic equipment are required to submit a waste management plan.
6. Incorporates educational modalities to strengthen this issue.
7. It promotes a [National Program of circular economy](#), which would be in charge of the federal executive through SEMARNAT.
8. In addition, the law contemplates waste collectors, since it promotes the human rights of informal groups of waste collectors.
9. Finally, administrative sanctions are established to guarantee compliance with the provisions of the ruling

4.3 Management Program of Integral Waste for Mexico City 2021-2025

The government of Mexico City has a priority to reduce waste generation and increase its reutilization. For this reason, within its policies and within the framework of the [Zero Garbage Action Plan](#), it has outlined the strategic guidelines aimed at reducing the amount of solid waste sent to final disposal, maximizing its recovery and valorization.

Its main objective is to outline strategies, goals and actions aimed at reducing waste generation. As well as, strengthen innovation, infrastructure and management, and increase the use to move towards a circular economy with minimal waste generation in Mexico City in the period 2021-2025.

4.3.1 Innovation

The Zero Garbage Action Plan, includes a Climate Change, Adaptation and Innovation Section composed by 9 goals.

Goal number 3 promotes the development and installation of new technologies, as well as the recovery of current operability for the treatment of waste.

4.3.2 Technology trends and opportunities

- **Management:** New technologies are required for Integrated Waste Management Data Systems.
- **Storage:** There is a need for special containers for automated load; Bins hidden in street furniture; Smart containers and Eco-points.
- **Handling technologies required:** Shredders, crushers, chippers; pulpers; pelleting and briquetting including high compaction balers.
- **Collection:** There is a need for data systems for garbage trucks with automated front, rear and side loading systems; mini rear loaders and multi-compartment vehicles
- **Sorting and recovery:** Technologies for optical multiplexer sorting systems; sorting systems by density; magnetic separation systems; trommels and screens and Conveyors are required.

- **Plastic Waste needs:** Mechanical recycling lines; Chemical recycling systems; Up-cycling technologies.
- **Construction and Demolish waste:** Integrated recycling lines and equipment: Crushers, Screens and stackers.
- **Economic Waste:** Integrated e-waste management from collection, process and recycling schemes.
- **Tire waste:** Opportunity for upcycling to produce asphalt pavement, running tracks and urban furniture.

5. Case Studies in Mexico

Although Mexico is considered a developing country, there is a clear example of the CE model in some companies.

Grupo Bimbo: The company applies three stages in its value chain; application of eco-design in their packaging, [circular economy practices](#) with suppliers (return and recycling of containers) waste reduction in their plants, recycling programs in post consumption.

Heineken: Since 2016, Heineken México has been part of the [Circular Economy 100, program led by the Ellen MacArthur Foundation](#), being the first Mexican company incorporated into the program. Renewable energies and local barley production.

Heineken bet on sustainability with an investment of 7,350 million pesos to build the seventh plant in Mexico, in which, 100% of the waste is treated or recycled, it maximizes the use of green energies, such as glass installed in the windows of the plant, which have photovoltaic cells that capture approximately 12% of the energy; the rest comes from wind energy, it also has a wastewater treatment plant, which allows the use of biogas in boilers and reuse of treated water for general cleaning services in common areas and irrigation of green areas.

Jumex: Collaborates with a sustainable distribution company with the use of reusable pallets.

Tajín: Implemented a container made of 100% recycled plastic

5.1 Business opportunities in Mexico

There are three main sectors in Mexico that present significant opportunities in bringing the sectors towards the circular economy concept, these are: Solid Waste Management; Wastewater Treatment and Waste to Energy. The solid waste management sector has two main areas that present opportunities: Municipal Solid Waste and Special Handling Waste. It is estimated that bringing the Mexican solid waste market to a more circular economy has a potential worth of 1,172 million Euros per year. In terms of the Special Handling Waste, for instance the electronic waste represents a potential of 1 billion Euro market value that could be recovered each year through introducing circular solutions. Furthermore, the increasing building materials recycling and reuse activities will require an investment of up to 180 million Euro per year to scale up the number of water recovery plants in the main 10 cities in Mexico.

6. Mexican startup's that enhance CE

Startup: Rennueva Founder: Héctor Ortiz	In 2014, this startup dedicated to the development of technology and strategies for caring for the environment was formally created. Rennueva operates a machine that allows the styrofoam to be compacted, to be sold to companies dedicated to the production of products made of plastic.
Startup: Gammakat Founder: Uwe Rolli	This Mexican company builds recycling plants that convert waste into clean energy.
Startup: Ecolana Founder: Alejandra Valdez	A digital platform that guides people interested in recycling, indicating the places where they can exchange their garbage for money, the process that a consumer must follow and the materials they receive at each collection center.

7. Events in Mexico

[Plastimagen México](#) brings together companies in the plastics industry, to create commercial alliances, exhibit the latest in innovation, technology and solutions in raw materials, equipment, machinery and services to offer tangible solutions. At the same time, the International Conference Program is carried out in conjunction with the National Plastic Association (ANIPAC) where presentations on innovation, technologies and trends in the plastic sector are given for various industries. The program brings together professionals who seek to update their knowledge and learn about technologies to face and promote the so-called Industry 4.0, solutions, additive manufacturing, circular economy and trends and new business models in the plastics sector, applied to different industries.

- **Dates:** March 8th to 11th, 2022
- **Place:** Centro Citibanamex, CDMX.

[The Green Expo 2022](#) offers new business opportunities to exhibit its products and services, now it is transformed and enriched with the creation of new pavilions belonging to segments such as: biomass, circular economy, recycling, waste, sustainable construction, eco-innovation and cogeneration. More and more businesses and production processes tend to implement technology, innovation, development, production, consumption and management aimed at a more sustainable economy. Along with this trend that extends to all types of companies, clearly sustainable businesses proliferate that occupy an increasingly prominent space in the world.

- **Dates:** September 6th to 8th, 2022
- **Place:** Centro Citibanamex, Mexico City.

[H2 Expo Hidrógeno](#): Tarsus Group, working with major players, including the Mexican Hydrogen Society and the Mexican Hydrogen Association, is launching H2 Expo Hidrógeno, to bring together all of the players involved in this burgeoning industry that has so many opportunities for helping countries, and specifically Mexico, to move towards a net zero carbon economy. This event will promote the development and use of hydrogen technologies and fuel cells.

- **Dates:** February 15th and 16th , 2022
- **Place:** Cintermex, Monterrey, N.L.

[Mexico WindPower](#) is the only event specialized in Wind Energy in the country. With 10 consecutive editions, it has established itself as the most important platform to expose and learn about the latest innovations on the exhibition floor and to train in the International Congress and Technical Program. An event organized by the Global Wind Energy Council (GWEC) and the Mexican Wind Energy Association (AMDEE), in conjunction with Tarsus Mexico.

- **Dates:** March 23rd and 24th , 2022
- **Place:** Centro Citibanamex, CDMX

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