

BEYOND RENNUEVA

TRANSFORMING QUINTANA ROO

Leadership in Action Report • 2026

A circular plastic collection system for Cancún - designed around hotels, local communities and tourism.



Green Collection Point concept from the Beyond Rennueva presentation.

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Executive Summary

Beyond Rennueva is a proposed expansion of Rennueva's recycling model into Cancún and the wider state of Quintana Roo. The project was developed as part of a Leadership in Action programme and focuses on a practical way to collect recyclable plastic from hotels, tourists and local residents without requiring businesses to completely redesign their existing waste systems.

Rennueva was established in 2014 to address a gap in Mexico's recycling system, particularly through the recycling of expanded polystyrene using new technology and processes. Our project builds on that same approach: identify a gap, design a realistic system around it, and create value from material that would

otherwise be discarded. The proposed model combines Green Collection Points, hotel partnerships, warehouse storage, transport to processing facilities, recycled product development and a Beyond Rennueva certification scheme.

The goal is not to replace existing waste management in Quintana Roo. Instead, the proposal focuses on a small but recoverable plastic stream and creates a simple route for that material to move from consumers to Rennueva and eventually back into useful products.



1. Context and the Problem

Quintana Roo is a state in south-eastern Mexico with an economy that is heavily dependent on tourism. Cancún in particular has experienced rapid economic development, but this growth has also placed pressure on the natural environment and waste management systems.

The project presentation identified several key figures that shaped our approach. Approximately 22,500 kg of waste is produced in Quintana Roo daily, 82% of waste goes to landfill and only 11% is recycled. Tourist demand adds further pressure to landfill capacity, while some waste from Cancún can end up in the ocean or underground river systems such as cenotes.

The public collection system also faces high demand. As a result, many businesses use private companies and contractors to collect their waste. This means that Rennueva cannot simply enter the region and attempt to replace the existing system. A more realistic strategy is to work alongside it and focus specifically on recyclable plastic that can be diverted from landfill.

Quintana Roo has already introduced measures to address waste. The presentation references the Circular Economy Law 2019, updated in 2026, which mandates waste management, producer responsibility and more sustainable management practices. The state has also introduced restrictions on single-use plastics and has seen more public-private sustainability partnerships, including initiatives such as the TUI Cancún Zero Waste programme.

This context led to the central project question: how can Rennueva expand into Cancún in a way that is useful to businesses, manageable at pilot scale and compatible with existing sustainability programmes?

THE PROBLEM

PLASTIC WASTE

Cancún and Quintana Roo generate more waste per capita than many other parts of México, much of which isn't recycled and instead goes to landfills.

The public collection system faces high demands and pressures, so many businesses use their own private companies and contractors to collect waste.

LANDFILLS

Operated by a mix of public and private organizations.

Tourist demand exceeds the capacity for landfills, and much of the waste from Cancún ends up in the ocean or underground rivers (Cenotes).

WHAT IS QUINTANA ROO DOING ABOUT THIS ISSUE?

Steps Quintana Roo has taken steps in recent years:

- Circular Economy Law 2019 (Updated 2026) mandates waste management, producer responsibility and sustainable management
- Banning single use plastics in 2019
- More private/public sustainability partnerships such as TUI's Cancun Zero Waste program

22,500

KG ON AVG PRODUCED
IN QUINTANA ROO DAILY

82%

GOES TO A
LANDFILL

11%

IS RECYCLED

The problem: waste, landfill and recycling figures used to frame the proposal.

2. Our Solution: Green Collection Points

Our main proposal is the Green Collection Point. Many businesses in Quintana Roo already have their own sustainability programmes, so we did not want to design a system that required radical changes to hotel operations. Instead, the Green Collection Point is intended to fit into what hotels are already doing.

A Green Collection Point is a small public-facing waste collection station placed in strategic locations such as hotel lobbies, restaurants and other areas open to guests and local residents. The collection point would allow people to separate accepted plastic types into clear categories before Rennueva arranges regular collection.

The scale of the proposed system is deliberately limited. Rennueva would only be dealing with approximately 1% of the total waste generated, with an estimated 4.5-6 kg of plastic collected per hotel per day. This is important because the project is not designed to compete with SIRE SOL or comprehensive municipal waste management. Instead, it targets a smaller recyclable stream that can be aggregated across a network of hotels.

The collection point itself would take up no more than approximately 1 m². This makes it easier to place in high-visibility areas without disrupting hotel operations. It also creates a visible sustainability feature for guests.

Businesses that participate could also receive a "Beyond Rennueva" certificate. The physical collection point itself would be free to host, while the certification would provide a potential revenue stream for Rennueva and give businesses a visible way to demonstrate their environmental commitment.

OUR SOLUTION

WHAT DO WE WANT TO DO?

Many businesses in Quintana Roo already have their own sustainability programs.

Rennueva needs to offer a service that would fit into their pre-existing initiatives, rather than one that requires radical changes.

Also, Rennueva will only be dealing with approximately **1%** of waste generated so we cannot compete with the large state owned waste management company (SIRESOL).

4.5 - 6 KG OF PLASTIC WASTE COLLECTED DAILY PER HOTEL

HOW? GREEN COLLECTION POINTS

The solution we have developed are called “**Green Collection Points**”

These are small waste collection stations that will be placed in strategic locations such as hotel lobbies, restaurants and others that are open to the general public.

The public will be able to drop off their plastic waste into separated categories (PET, HDPE, LDPE) and then Rennueva will collect the waste on a regular basis.

Businesses that have these collection points will also be able to receive a “Beyond Rennueva” certificate demonstrating their environmental credibility.

Our solution: the Green Collection Point model and the proposed collection scale per hotel.

3. Pilot Hotel Network and Materials Collected

The proposed pilot uses 11 hotels in the Cancún tourist area. Together, these hotels have a maximum capacity of approximately 12,248 guests and an estimated maximum plastic collection capacity of 64.3 kg per day.

The pilot is designed around plastics that Rennueva already accepts and processes. These include #1 PET, #2 HDPE, #4 LDPE, #5 PP, #6 PS / EPS and #7 other accepted plastics. For hotel guests, these categories translate into familiar items such as water bottles, shampoo and toiletry bottles, food containers, takeaway cups, plastic bags, cutlery and straws.

This is important because the scheme needs to be easy to understand. Rather than asking guests to learn an entirely new recycling system, the collection point can use clear labels and examples of everyday hotel waste. The project therefore links the recycling categories directly to products that guests are likely to use during a stay. This makes participation more intuitive and reduces the amount of explanation required from hotel staff.



Accepted plastics, hotel product examples and proposed pilot statistics.

4. Logistics and Collection Process

Once plastic is placed in a Green Collection Point, it enters a clear collection and transport process. The first stage is collection from the participating hotel. Two collection options are proposed. A business can deliver the collected plastic directly using its own staff and transport, or it can pay Rennueva to collect the material and bring it to a warehouse.

The project identified four possible warehouse locations in Cancún, with Warehouse 1 and Warehouse 4 considered the main storage points for the pilot. The presentation also notes an existing partnership with Vasos y Bolsas El Che warehouses, which could provide storage during the early stages of the project.

At the warehouse, the material would be checked, consolidated and prepared for onward transport. The project does not rely on full processing at the Cancún warehouse. Instead, the plastic would initially be transported by Convermex to processing facilities in Puebla or Mexico City.

Convermex is important to the logistics model because it already transports plastic and other materials along major routes in Mexico. Using an existing transport network makes the pilot more realistic than creating an entirely new long-distance logistics system from the start.

At the processing facility, the plastic can be sorted, shredded and converted into recycled plastic pellets. These pellets can then be used to manufacture new products. The long-term ambition is to move more of this process back into Quintana Roo so that plastic collected in the region can eventually be processed and manufactured into products locally. This would create a stronger circular economy model and keep more economic value within the state.



Logistics map and collection route from hotels to storage and processing.

5. Why Businesses and Communities Would Participate

The proposal was designed to create a clear reason for both businesses and local communities to participate. For hotels and other businesses, the Green Collection Point has several advantages. It requires limited space, does not require major changes to existing sustainability policies and gives businesses a visible environmental initiative that guests can see. Participation is optional for both the business and the guest, and Rennueva would manage the recycling process after collection.

The Beyond Rennueva certificate adds another incentive. It gives participating businesses a way to demonstrate their commitment to circular economy principles and environmental responsibility. The presentation also links this to the Federal Circular Economy Law 2026, which is expected to become mandatory from 2027, creating an opportunity for businesses to implement relevant practices early.

For local communities, the benefit is more direct: less recyclable plastic being sent to landfill or entering the environment. The project aims to reduce the amount of waste that can break down into microplastics and contribute to pollution.

The proposal also offers businesses another option alongside companies such as SIRESOL. Instead of treating recycling as a completely separate cost, businesses could redirect some of their existing waste-management resources toward delivering recyclable plastic to Rennueva or paying for collection.

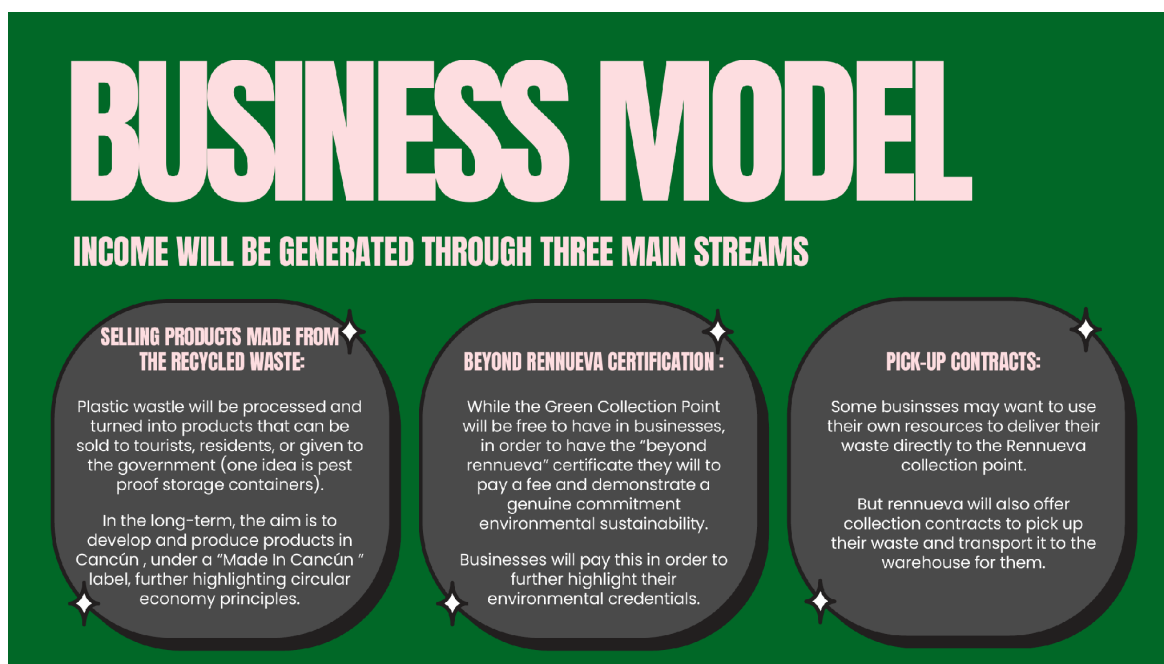
6. Business Model

The proposed business model has three main income streams. The first is selling products made from recycled plastic. Plastic collected through the scheme can be processed into material for new products sold to tourists, residents or potentially supplied to government or community partners. In the long term, the project proposes a “Made in Cancún” label to reinforce the circular economy story and local identity of the products.

The second revenue stream is Beyond Rennueva certification. The Green Collection Point itself would be free for a business to host, but participating businesses could pay a fee for certification. This would allow them to highlight their environmental credentials while creating recurring income for Rennueva.

The third revenue stream is pick-up contracts. Some businesses may prefer to use their own transport to deliver plastic, while others may pay Rennueva to collect the waste directly and move it to the warehouse.

The major expense categories identified in the presentation are storage, transport and labour. Costs include bins and storage materials, trucks or vans, fuel and maintenance, transport by Convermex, collection and processing staff, protective equipment, outreach, marketing, partnership development and office resources.



The three proposed revenue streams within the Beyond Rennueva business model.

7. Product Development

A key part of the project is moving beyond simply collecting and selling raw recycled plastic. Product development gives the material additional value and creates a stronger connection between recycling, tourism and local communities.

Pest-Proof Storage Containers

The first concept is pest-proof storage containers made from recycled plastic. These are intended as practical household products for local residents, particularly in a tropical climate where safe food storage can be important. The concept is designed to create a useful, durable product rather than a purely decorative recycled item.

Mayan God Statues

The second concept is recycled-plastic Mayan god statues. These were explored as culturally significant products that could connect local heritage, tourism and recycled material. The concept aims to support cultural pride and potentially create economic opportunities through production and sales.

Keychains and Magnets

The third concept is keychains and magnets. These are compact tourist souvenirs made from recycled plastic. They are easy to carry, affordable, suitable for hotel gift shops and local businesses, and can

incorporate regional motifs and designs. Their small size also makes them practical products for a tourist-focused market. Together, these product ideas demonstrate how plastic collected through the scheme could return to the local economy as useful or memorable objects.

8. Marketing: Captain Cancún

To give the project a recognisable public identity, we developed Captain Cancún as the face of the Beyond Rennueva movement. Captain Cancún is presented as a guardian of Quintana Roo, inspired by Maya mythology. The character is chosen by Chaak, the god of rain and water, and Yum Kaax, associated with the forest and wild things, to protect the region from a modern threat: plastic waste.

The purpose of the character is not to create a traditional corporate logo. Instead, Captain Cancún is intended to be a local, community-facing icon that can make the campaign easier to remember and engage with.

The character could appear at hotel Green Collection Point launches, Beyond Rennueva certificate ceremonies, beach clean-ups, school recycling events, product launches and on social media. Captain Cancún could also appear on keychains, magnets and other recycled tourist merchandise. This gives the wider project a consistent identity across business engagement, community events, education and product development.



Captain Cancún: the proposed community-facing identity for the Beyond Rennueva movement.

Conclusion

Beyond Rennueva is designed as a practical pilot rather than a complete replacement for existing waste management in Cancún. The model focuses on one manageable stream of recyclable plastic, collects it through visible Green Collection Points, consolidates material across a hotel network, uses existing warehousing and transport partnerships, and turns the recovered plastic into new products.

The strength of the proposal is that each part supports the others. Hotels gain a simple sustainability initiative and certification. Guests and local residents gain an easy way to recycle. Rennueva gains new collection, certification and product opportunities. Communities benefit from reduced plastic waste and the potential for more local circular-economy activity.

The long-term aim is to move beyond landfill, beyond single-use thinking and beyond sustainability as a purely corporate message. Instead, the project proposes a system in which plastic is collected, reused and turned into value within the region.

**The ambition is not simply to expand Rennueva into Cancún.
It is to go Beyond Rennueva.**