

A long pier extends into the ocean at dusk. The pier is illuminated with numerous warm yellow and white lights, and some buildings on the pier have colorful neon signs. The lights reflect on the dark water of the ocean. The sky is a deep blue with some light clouds.

# Santa Cruz Wharf & Memios Environmental Technologies

A model for sustainability in Waste Management

## THE OPPORTUNITY TO MODEL CHANGE WHILE SOLVING PROBLEMS

Presented by:

**Memios Environmental Technologies**

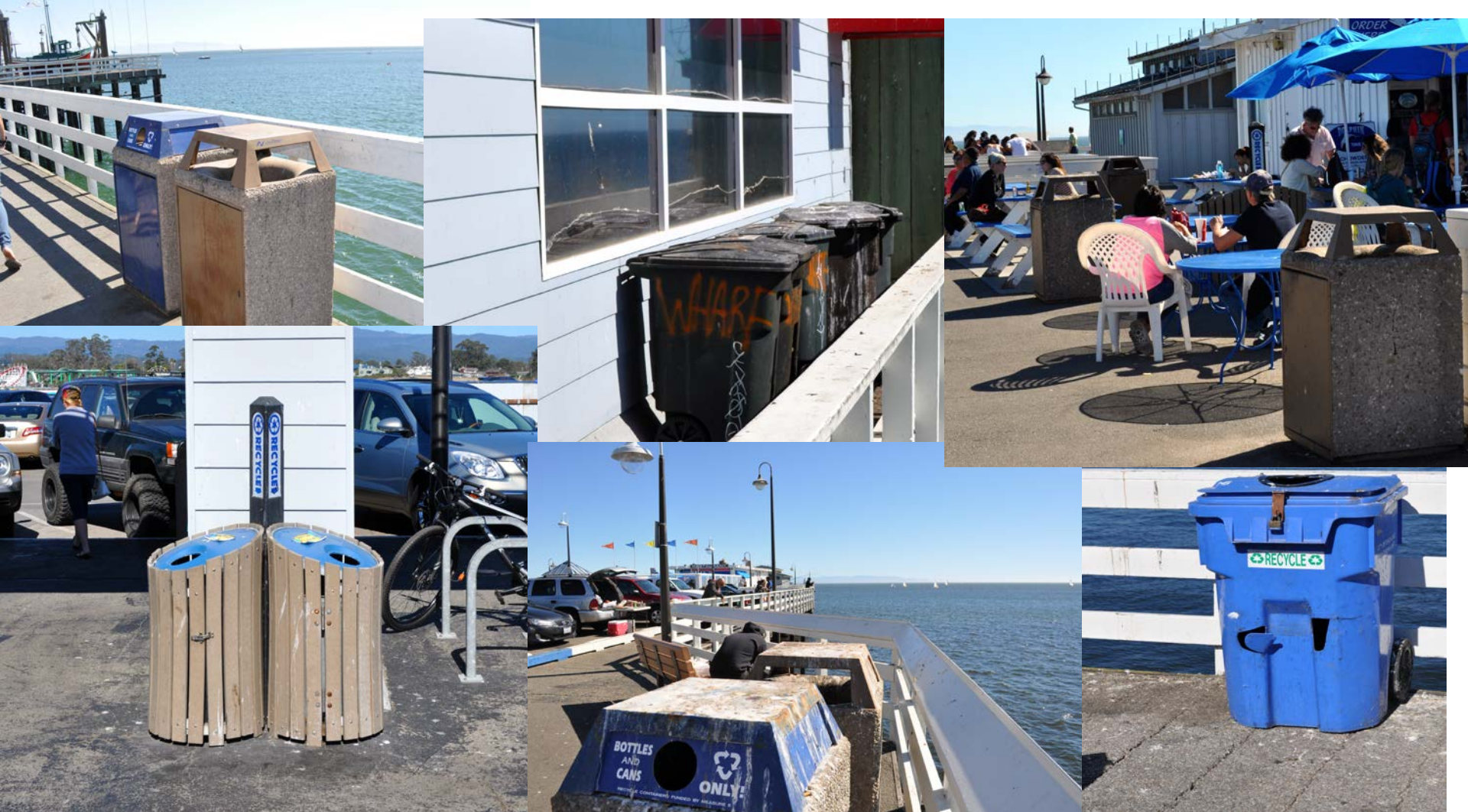
Daniel A. McKenzie, CEO



## BETTER USE OF INFRASTRUCTURE

**Problem:** Garbage collection areas are dirty, take up valuable space, heavy truck collection results in damage to Infrastructure, high ongoing expense and the further risk of liabilities.

**Solution:** By investing in modern waste infrastructure, existing infrastructure lasts longer, precious real estate is saved  
Operating expenses become savings and the human environment becomes better.



## FROM THE PROBLEM, CREATE THE SOLUTION

**Problem:** Waste is produced faster than it can be hauled off, numerous waste receptacles are needed.

**Solution:** Eliminate the use of fossil fuels to collect waste, eliminate waste truck emissions.

**Collect waste 80% more efficiently, without consuming fossil fuels, recover energy from waste as a renewable fuel source and save capital, manpower, and real estate in the process.**



***ECONOMICALLY FEASIBLE***



***ENVIRONMENTALLY BENEFICIAL***

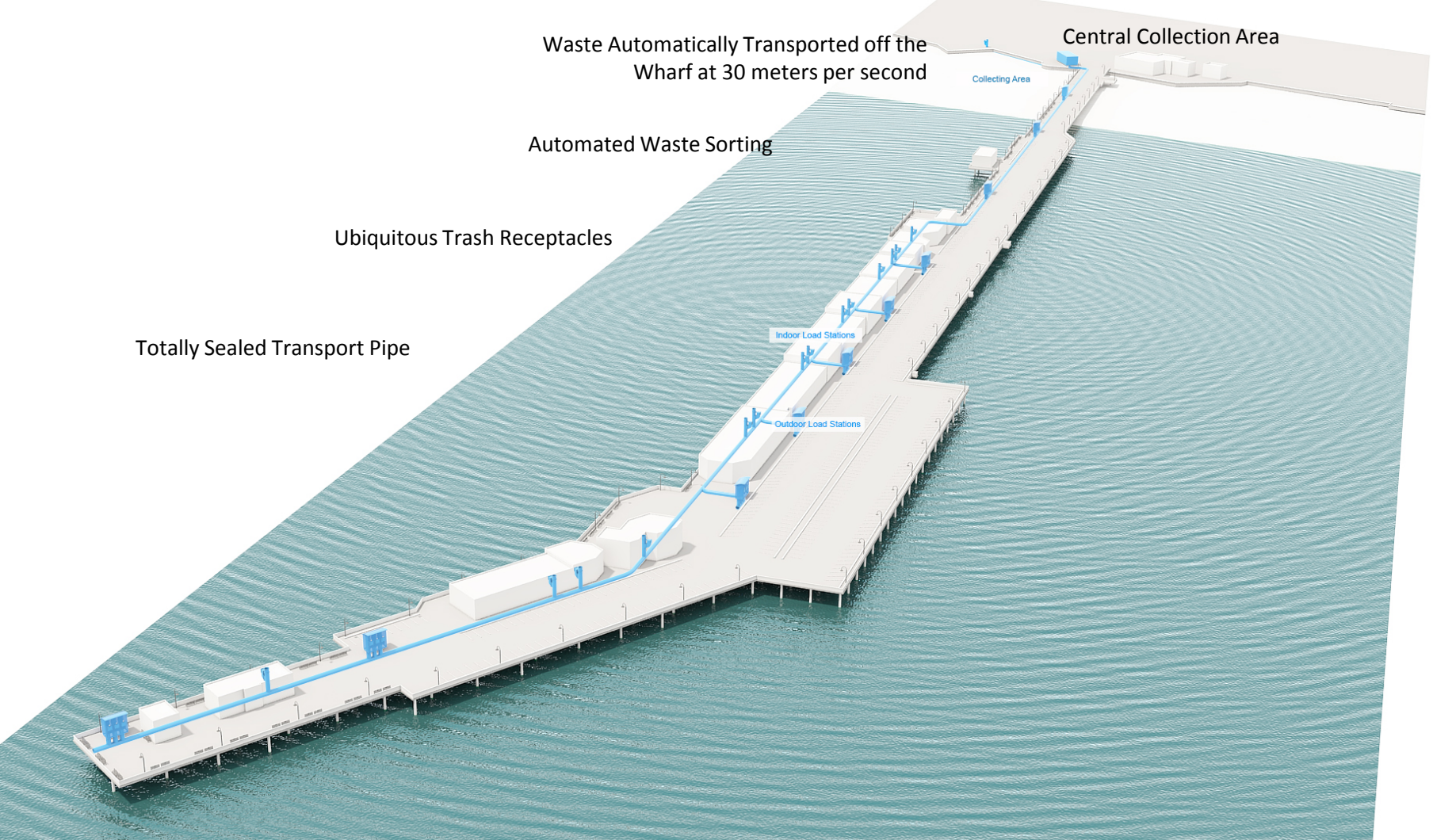


***SOCIALLY RESPONSIBLE***

## TRIPLE BOTTOM LINE BENEFIT

**Problem:** Conventional waste collection is antiquated, waste receptacles are labor intensive with unpredictable loads

**Solution:** This solution is so efficient, that through savings on waste collection, electricity generation, and the sale of recyclables the benefits pay for the technology



Waste Automatically Transported off the Wharf at 30 meters per second

Central Collection Area

Automated Waste Sorting

Ubiquitous Trash Receptacles

Totally Sealed Transport Pipe

Indoor Load Stations

Outdoor Load Stations

## THE TECHNOLOGY SOLUTION

**Problem:** Truck traffic, waste compactor containers, numerous waste receptacles.

**Solution:** The solution is a self-supportive system that collects waste automatically, cleanly, continuously and efficiently immediately making an impact on reducing fossil fuel emissions, eliminating the need for waste trucks, and related compactor containers on the wharf.

A long pier extending into the ocean at dusk, illuminated by numerous lights. The sky is a deep blue with some clouds. The lights on the pier reflect on the water's surface.

# Santa Cruz Wharf

A model for sustainability in Waste Management

## BENEFITS OF THE TECHNOLOGY TO THE WHARF

<b>Problems:</b> Damage to the wharf from heavy vehicle traffic cost	=	<b>\$200,000/year</b>
Loss of parking spaces (12)	=	<b>\$50,000 – 160,000/yr in peak season alone</b>
Manual collection of waste from pedestrian bins	=	<b>\$100,000/year (estimated)</b>
Electrical & Gas Budget	=	<b><u>\$32,000/year</u></b>
		<b>\$382,000 – 492,000/year</b>



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## YOUR PROJECT AT A GLIMPSE

**Solution:** Installation of Memios *CleanStream*<sup>TM</sup> automated waste collection system

**Benefits -** Eliminate heavy truck traffic on wharf

Eliminate compactor/containers – returning ~12 parking spaces & revenues

Eliminate costly manual pedestrian garbage pick-up



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## TOTALLY SEALED PIPE NETWORK INSTALL IS FAST AND EASY

**Problem:** Heavy Truck Traffic weighs on the physical structure of the wharf requiring expensive maintenance

**Solution:** Install a sealed pipe network underneath the wharf to whisk away all waste types quietly, safely and securely virtually eliminating the need for truck traffic on the wharf

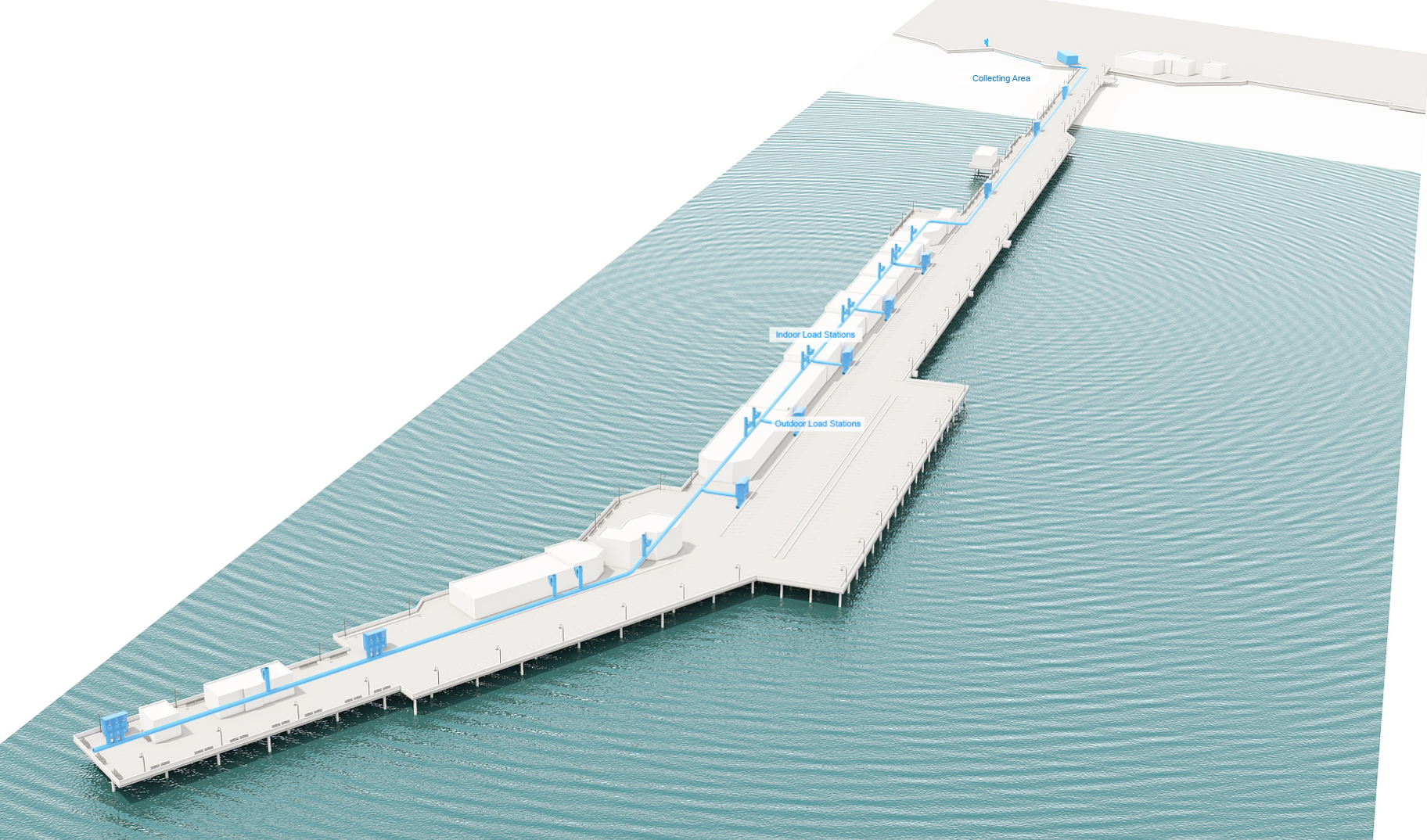




## MULTIPLE WASTE CONTAINER SOLUTIONS

**Problem:** Businesses, Pedestrians, Fisherman, etc. all use **different systems for disposing of waste** which must then be compacted and removed from the wharf

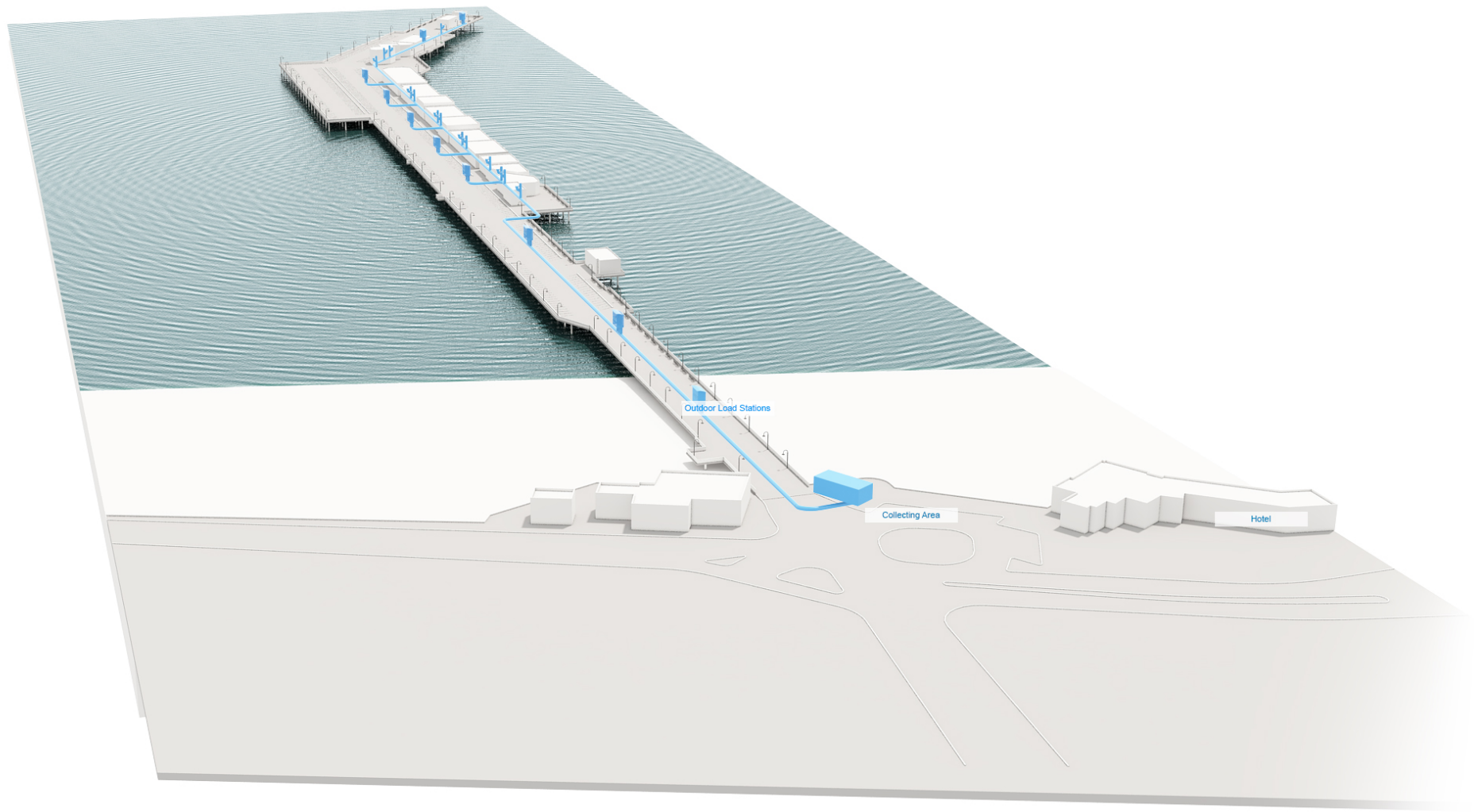
**Solution:** Connect all waste collection locations to the CleanStream™ pipe network with Memios Load Station where anyone on the wharf can easily, safely and quickly deposit all waste types (metals, glass, trash)



## WASTE IS TRANSPORTED OFF THE WHARF USING HIGH SPEED AIR

**Problem:** Valuable **parking** space is occupied by compactor containers: costing the wharf on an hourly basis

**Solution:** Because everyone on the wharf deposits their waste into the CleanStream™ System, Compactor containers be removed from the wharf's parking areas, an eye sore is removed, sanitation increases and the space can begin generating revenue again.



## WASRE TAKEN OFF THE WHARF TO CENTRAL COLLECTION AREA

**Problem:** Businesses, Pedestrians, Fisherman, etc. all use multiple trash containers for disposing of waste which must be compacted and removed from the wharf

**Solution:** Connect all waste collection locations to the CleanStream™ pipe network with Memios Load Station where anyone on the wharf can easily, safely and quickly deposit all waste types (metals, glass, trash)



## SINGLE OR MULTIPLE WASTE STREAM FRACTIONS

**Problem:** Businesses, Pedestrians, Fisherman, etc. all use multiple trash containers for disposing of waste which must be compacted and removed from the wharf

**Solution:** Connect all waste collection locations to the CleanStream™ pipe network with Memios Load Station where anyone on the wharf can easily, safely and quickly deposit all waste types (metals, glass, trash)



## QUESTIONS AND ANSWERS