HOSPITALITY AND TOURISM OPERATIONS RESEARCH PROJECT

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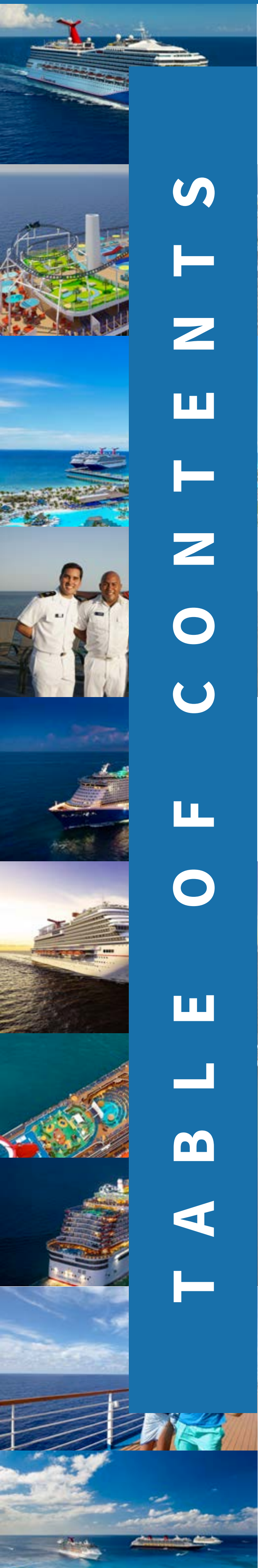

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I. EXECUTIVE SUMMARY

Description of Service

Carnival Cruise Line (CCL) is a leading global cruise company dedicated to finding **innovative** and **sustainable** ways to deliver memorable vacations and build borderless connections. Founded in 1972 by Ted Arison, CCL revolutionized the cruise industry with a vision of making luxurious vacations **accessible** to everyone, not just the wealthy. Today, Carnival is still guided by this goal and has welcomed over **100 million guests**, making it the first cruise line to achieve this milestone. CCL is the largest cruise line within Carnival Corporation, accounting for approximately 30% of the corporation's total ship count.

Our Purpose

Our team aims to **analyze customer feedback** and knowledge of Carnival Cruise Line's operations to develop a **corporate social responsibility (CSR)** strategy that aligns customer feedback and company values.

Research Methods

1 SEPT - NOV 2025
PRELIMINARY

- CCL Website/SEC Report
- Competitor CSR Initiatives
- Sustainability Report
- CSR Programs in Hospitality

2 OCT- DEC 2025
PRIMARY

- Customer Surveys
- Employee Surveys
- Interviewed Dominica Native
- Interviewed customers

3 NOV - JAN 2026
SUPPLEMENTARY

- Business Consultant
- Met w/ Sustainability Specialist
- Met w/ CSR expert
- Met w/ ecotourism expert
- Analyzed academic articles

Findings and Conclusions of Research

FINDINGS	CONCLUSIONS
Lacking rigor in sustainability plan	Passive sustainability operations
Ethical practices are inconsistent and weak	Injured stakeholder trust
Under coverage of important communities in philanthropic efforts	Inadequate philanthropy
Reduced economic support to port communities	Negative impact on ports

Plan Objectives

From our research findings, our team developed the following objectives to outline our goals and ambitions for improving CCL's corporate social responsibility.

- **Accelerate Decarboization**
- **Strengthen Governance**
- **Expand Charitable Outreach**
- **Support Port Communities**

Proposed Strategic Plan

Our team organized our strategic plan under the mnemonic **PORT**, which stands for **Protect, Oversea, Render, and Target**. It is through this comprehensive plan that we will bring corporate social responsibility initiatives to CCL.

PROTECT OUR PLANET

- 1.1 Orbisk Food Waste Management
- 1.2 Eniram Speed 3.0
- 1.3 HVAC & Lighting
- 1.4 Eco-Traveler Membership Program

"OVERSEA" ETHICAL OPERATIONS

- 2.1 CSR Report
- 2.2 Workforce Development
- 2.3 Real Me App Development

RENDER SUPPORT TO OUR COMMUNITIES

- 3.1 Caribbean with Purpose
- 3.2 Marine Life Research

TARGET LOCAL ECONOMIES

- 4.1 Local Economic Impact Commitment (LEIC) Program

Proposed Key Metrics

ABOVE **60%** — **Net Promoter Score**
Measure of customer loyalty and perception.

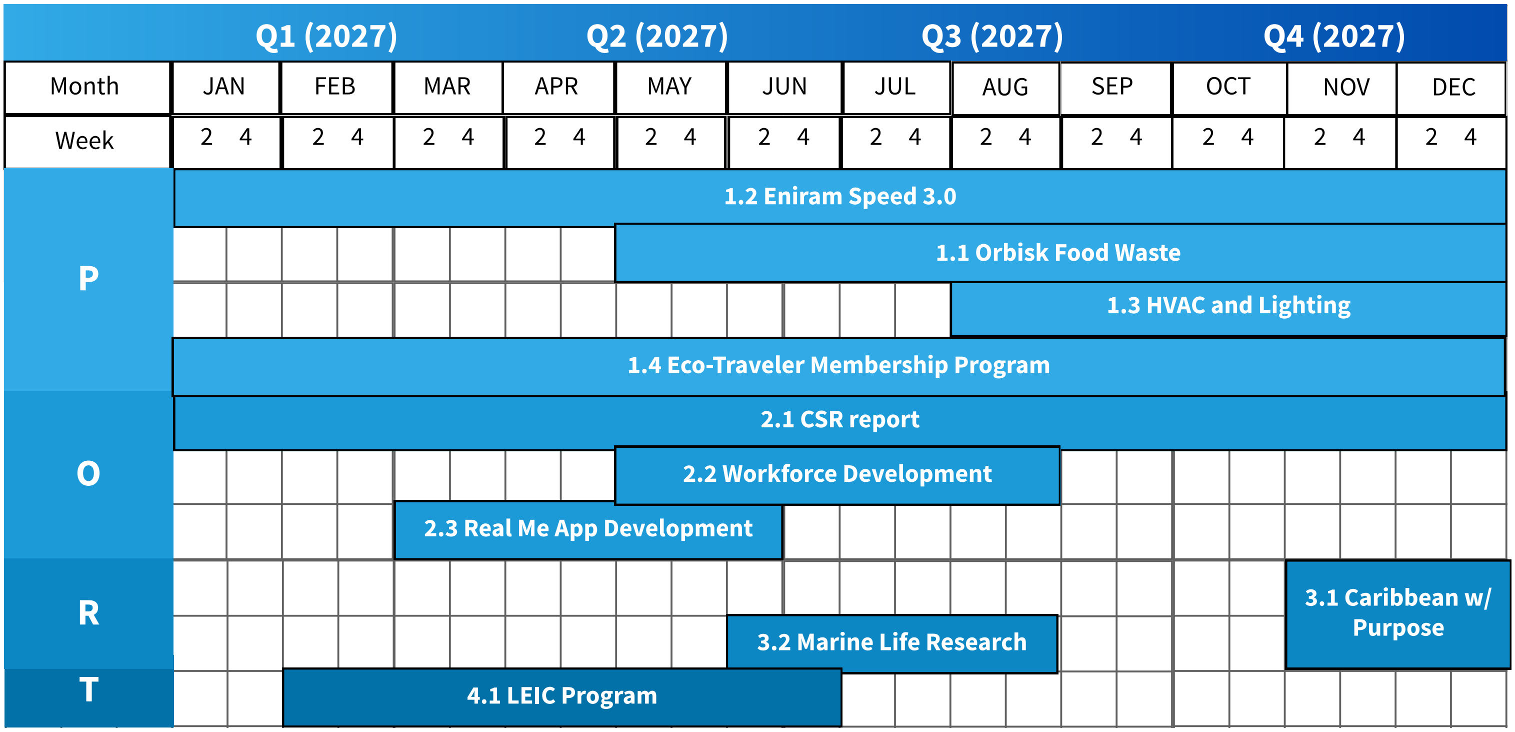
ABOVE **80%** — **Customer Satisfaction Index**
Measures four values and satisfaction.

Other Notable Specific PORT Metrics

1.1 Orbisk Food Waste	≥25%	Food Waste Reduction
2.1 CSR Report	>6%	Fuel Usage Reduction
3.2 Marine Life Research	>50%	Passenger Engagement Rate
4.1 LEIC Program	>2K	Local Dollars Spent

Proposed PORT Timeline

The timeline of our **PORT** plan spans four fiscal quarters, starting in January 2027 and ending in December 2027. PORT also utilizes a pilot schedule by integrating some PORT initiatives across 5 of CCL's ships.



Proposed Budget

The PORT plan carries a **$29,817,160 implementation cost** and a **$6,353,660 yearly recurring cost**. The budget was calculated across the four channels of PORT:

$21,384,500

$6,601,100

$1,289,500

$542,060

(Year One Implementation)

Year 3 Cost
$42,524,480
Year 3 Revenue
$84,336,660
Year 3 ROI
98%

3 Year Summary					
Year	Annual Expenses	Cumulative Expenses	Annual Revenue	Cumulative Revenue	ROI(%)
1	$29,817,160	$29,817,160	$26,185,220	$26,185,220	-12%
2	$6,353,660	$36,170,820	$28,112,220	$54,297,440	50%
3	$6,353,660	$42,524,480	$30,039,220	84,336,660	98%

II. INTRODUCTION

A. Description of the Business or Organization

Carnival Headquarters in Miami Florida

Carnival Cruise Line (CCL) is a leading global cruise company dedicated to finding innovative and sustainable ways to deliver memorable vacations and build borderless connections. Founded in 1972 by Ted Arison, CCL revolutionized the cruise industry with a vision of making **luxurious vacations accessible to everyone**, not just the wealthy. Today, Carnival is still governed by this goal and has sailed **over 100 million guests,** making it the first cruise line to do so. CCL is the largest cruise line under Carnival Corporation, making up 30% of the corporation's total ship count. The other lines under the Carnival Corporation are Princess, P&O Cruises, and other smaller lines.

Carnival is governed by their six core values: **Speak Up, Respect & Protect, Empower, Improve, Listen & Learn, and Communicate**. It is these non-negotiable beliefs and behaviors that define who Carnival is and dictate how it operates.

Annual Passengers
4.5 Million

Employees
48,000

Number of Ships
29

Carnival is known for its fun, **party-like atmosphere**. CCL ships are packed with entertainment and activities that suit their young and old customers. CCL offers water parks and slides, comedy clubs, live music, and games, all while docking in beautiful countries around the world. With strong kids' and teen programs, CCL is allowing for multigenerational travel. This type of fun, action-packed maritime travel attracts around **20% of the world's cruise passengers**.

Financially, in 2024, Carnival Corporation's full-year revenue hit an all-time high of **$25 billion**, which is **over 15 percent higher than the prior year.** The corporation also yielded a full-year operating income of **$1.9 billion, over 80 percent higher than the prior year**. In 2024, both new-to-cruise and repeat guests were up double-digit percentages, and CCL continues to attract new cruise guests as it works to increase awareness and consideration for cruise travel globally. With 31% of cruisers being first-timers from 2024 to 2025, the new cruisers have shown to be a growing customer segment. Carnival has drawn in this group through programs to enhance entertainment and dining, which appeal to those seeking a relaxing getaway.

NEW TO CARNIVAL: Celebration Key

New to Carnival in 2025, Carnival Corporation opened Celebration Key, a new exclusive destination on the south side of **Grand Bahama Island**. This private Carnival island will feature the Caribbean's largest freshwater lagoons, over 1.5 miles of white sand beach, the world's largest swing and swim-up bar, and the world's largest sandcastle.

B. Description of the target market (demographics and psychographics)

To better understand how to improve Carnival's corporate social responsibility and overall operations, we have segmented the **primary** and **secondary target markets** of Carnival Cruise Lines.

Primary Target Market:

Our research has identified **families with children** as CCL's primary target market. With most adults falling in the range from 30-54, the average age of a Carnival customer is **46 years old.** These customers are often middle-class to upper-middle-class, with a household income of **$50,000+.** CCL's family customers choose Carnival as its all-inclusive nature leads to simplified budgeting, planning, and ease of travel, which is essential to families looking to step away from their commitments and have fun. Carnival caters to and nurtures this sector of cruisers through **family-centric onboard infrastructure** such as waterparks, pools, and sports courts, as well as adult-focused amenities such as the spas, bars, and restaurants.

Mock-up Profile - Selene & Kai River

- Household Income: $110,000
- Mid-40s, Selene works in healthcare administration, and Tom is a construction worker
- Live in Sarasota, Florida
- Use drink packages and Kids' Clubs

Secondary Target Market:

Carnival Cruise Line's secondary target market is **older adults aged 55-75**, mostly semi-retired or retired, with an average income of **$60,000 to $140,000.** Their **schedule flexibility** allows them to travel longer or more frequently, and they are often from urban or suburban areas with access to cruise ports. This demographic prioritizes convenience, **relaxation**, and affordability when traveling. Carnival Cruise Line offers a customizable, structured experience for guests to enjoy at their own pace. Cruises require minimal planning, and the **predictability** of both onboard offerings and medical care makes Carnival an appealing choice for these older adults.

Mock-up Profile - Ariel & Caspian Cruz

- Fully retired couple, aged 67 and 68
- Stable income of $75,000
- Live near Boston, MA
- Loyal cruisers who want to engage in social and cultural activities

C. Overview of the business or organization's current business strategy relating to corporate social responsibility initiatives

Currently, Carnival lacks an explicit corporate social responsibility plan. That said, Carnival is governed by the core values of "protect, respect, and improve," which do lend themselves to programs and goals of a CSR nature. Our team has highlighted some key programs and goals that follow the CSR framework below.

ENVIRONMENTAL RESPONSIBILITY

CCL implements various environmental initiatives across its fleet of ships. Most notable are their **Less Left Over** and **Every Drop Counts** programs, which focus on reducing waste and water conservation, respectively. CCL hopes to achieve a 40% reduction in carbon intensity by 2030 (relative to a 2008 baseline).

ETHICAL RESPONSIBILITY

CCL operates under the broader Carnival Corporation **Code of Business Conduct and Ethics**. This is implemented through onboard training, crew/guest safety protocols, and supplier standards. The execution is largely the responsibility of the onboard leadership. CCL hopes to continue to reduce the annual rate of guest and crew work-related injuries through 2030.

PHILANTHROPIC RESPONSIBILITY

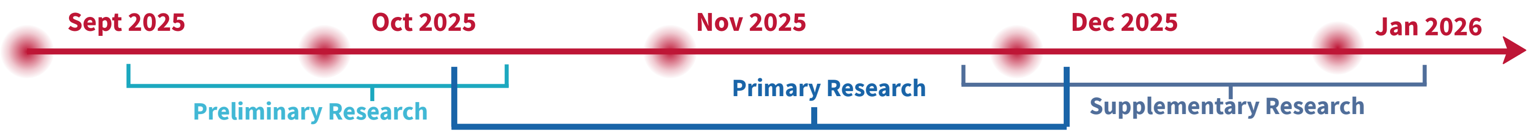
To actively benefit society, CCL works through the **Carnival Foundation** to support a broad spectrum of organizations, primarily education and human needs, that positively impact thousands of youths and families each year. By 2030, CCL hopes to build stronger community relationships in homeports and destinations through formal employee volunteering programs and in-kind donation targets.

ECONOMIC RESPONSIBILITY

CCL plays a direct role in the economies of the ports and destinations it visits. They support local businesses through **purchases, excursion partnerships, and job opportunities.** By 2030, Carnival aims to have formal "Sustainable Tourism" agreements with its top destinations. These agreements focus on capacity management (preventing overcrowding that hurts local infrastructure) and ensuring a higher percentage of guest spend stays with local tour operators.

A. Description and rationale of research methodologies selected to conduct the research study

Our research plan was conducted in three phases: **Preliminary**, **Primary**, and **Supplementary**. This research identified **shortcomings** and **improvement opportunities** in Carnival Cruise Line's current CSR initiatives.



PHASE I : PRELIMINARY RESEARCH		
Research Method	**Description**	**Rationale**
1. **Explored** the CCL Corporate Website, SEC Report, and online reviews.	Dissected the sections of the **Carnival Corporation & PLC Website** and reviewed the **SEC Report**.	To gain an understanding of CCL's **values**, **goals**, company structure, **finances**, and current CSR policies.
2. **Analyzed** CCL's 2024 Sustainability and ESG Report.	Reviewed and analyzed Carnival's online reports, which contain its **sustainability goals** and **initiatives**.	To gather insight into **corporate commitments**, progress, and transparency through **standardized data**.
3. **Reviewed** CSR initiatives of competitor companies.	Performed a **competitive analysis of** Royal Caribbean Cruise Line, Norwegian Cruise Line, and Disney Cruise Line's CSR initiatives.	To gauge the strengths within the cruise industry's **leading corporations** as well as identify where CCL is behind **industry standards**.
4. **Examined** successful CSR programs in hospitality/tourism.	Analyzed hotels, airlines, and other hospitality sectors by **investigating published CSR reports** and industry best-practice guidelines.	To identify proven and effective **strategies that may be adapted** to fit CCL and ensure proposed strategies are aligned with **evolving expectations**.
PHASE II : PRIMARY RESEARCH		
1. **Surveyed** past and present CCL customers.	Released a **10 question survey** (3 rating, 6 MCQ, 1 open-response) to Carnival cruisers on Carnival Facebook pages. The survey received 24 responses.	To gain **direct insight** into customer perceptions, experiences, and expectations; to identify areas for improvement while aligning with **customer values**.
2. **Surveyed** past and present CCL employees.	Released an **8 question survey** (7 rating, 1 open-response) to Carnival Employees. The survey recieved 21 responses.	To identify s**trengths** and **weaknesses of internal practices** and understand operational barriers and systemic issues.
3. **Interviewed** CCL customers.	Conducted a **45-minute interview** with **3 Carnival Cruise Line customers** to discuss their experiences and opinions on CCL.	To understand what customers value, what **concerns** them, and how their **opinions** can inform Carnival's CSR action and practices.
4. **Interviewed** Dominica native, Maurice DuBois Sr.	Conducted a **45-minute interview** with a **native** of the Caribbean island of **Dominica** who knows the impact of the cruise industry on Caribbean countries.	To evaluate the positive and negative **impact** that CCL and other cruises have on Carribean **port communities**.

PHASE III : SUPPLEMENTARY RESEARCH		
Research Method	**Description**	**Rationale**
1. **Met** with business consultant for integration strategy and opinion.	Coordinated a meeting with **Iain Michel of Seven22 Advising**. Discussed our strategic plan and used his expertise in **business development and strategy** to assess our proposal for CSR.	To gain valuable opinions from an experienced professional and better **comprehend the practical application** of the plan.
2. **Met** with sustainability specialist to discuss environmental strategy.	Consulted with **Jenna Peabody**, an **Energy Programs Outreach Specialist** for the Arlington County Government.	To discuss the implementation of sustainable fuel systems and other **environmentally conscious technologies**.
3. **Met** with a product sustainability expert to discuss CSR solutions.	Conversed with **Dave Duncan**, the **Vice President of Sustainability and Analyst Relations at PTC** (a leading company in software solutions) and the leader of PTC's corporate social responsibility program.	To examine **innovation areas** for CCL and validate the conceptual strategies with operational and social impact.
4. **Met** with an entrepreneur in ecotourism.	Consulted **Annie Combs**, the **CEO of ECPC Travel**. ECPC Travel is an "eco- concious, people-centered" travel agency dedicated to making tourism equitable.	To discuss sustainable tourism and how **ECPC's conscious travel practices can be adopted into CCL**.
5. **Analyzed** scholarly articles on CSR and cruise responsibilities.	Studied **academic sources** and **industry publications** focused on cruise CSR through environmental impact, labor practices, and corporate accountability.	To establish a strong foundation of **evidence-based insights** on the **theoretical/practical dimensions of CSR.**

B. Process used to conduct the selected research methods

September 12, 2025 - October 15, 2025 | Our **Preliminary Research** began on **September 12th** with our team's exploration of the CCL corporate website and SEC Report. This helped us gain a fundamental understanding of Carnival's operations and core values. We then progressed to examine their 2024 Sustainability Report to attain insights into their key programs. On **September 30th**, we performed a competitive analysis of CCL's top competitors, focusing on CSR and ESG initiatives to gain an understanding of cruise industry standards regarding social governance. Lastly, on **October 27th**, we examined successful CSR programs under the broader hospitality and tourism industry, like that of *TripAdvisor, Hilton*, and the *Accor Group*, to learn how the broader industry is approaching corporate social responsibility.

October 15, 2025 - December 5, 2025 | Our **Primary Research** began on **October 15, 2025,** with the conduction of a CCL customer survey. This survey assessed customer opinions on Carnival's environmental, ethical, philanthropic, and economic impact on the world. We contacted these customers by reaching out to the **Carnival customer Facebook groups**, and we received **24 responses**. Then, on **November 5th**, we released an 8-question survey to Carnival employees whom we contacted through LinkedIn. This survey asked about Carnival as an employer and about their perspective on the company. Then, on **November 21st**, our team conducted interviews with **three past CCL customers** to discuss, in detail, their experience as well as identify core values that could shape and inform a CSR report. To conclude this phase, we interviewed Maurice DuBois Sr, a former resident of Dominica, to discuss the impact of the cruise industry on Caribbean countries.

November 13, 2025 - January 16, 2025 | Our **Supplementary Research** began on **November 13th** with a meeting with Jenna Peabody, the Energy Program Outreach Specialist for the Arlington County Government, to discuss the implementation of fuel-saving technology and the feasibility of other large sustainable technologies. Then, we analysed articles on CSR and recent Carnival Cruise Line news. On **December 10th**, we met with business consultant Iain Michel to discuss our proposed plan and assess the logistics of the recommendations within. On **January 9th,** we met with Dave Duncan to discuss official CSR reporting. Lastly, on **January 16th,** we conducted a meeting with Annie Combs, CEO of ECPC, to discuss eco-tourism and new sustainable travel practices.

A. Findings of the research study

Our preliminary, primary, and secondary research methods provided our team with valuable insight into Carnival Cruise Line's business. We then organized and consolidated those findings into **four main key issues.**

1. LACKING RIGOR IN SUSTAINABILITY PLAN

1A. Liquified Natural Gas (LNG) as a means to accomplish net-zero greenhouse gas emission

As a member of the **Cruise Line International Association** (CLIA), Carnival, along with all other members of CLIA, has pledged to pursue net-zero greenhouse gas emissions from ship operations by 2050. To accomplish this goal, CCL now operates **10** liquefied natural gas (LNG)-capable ships, with more planned through 2033. LNG results in lower sulfur oxide, nitrogen oxide, and particulate emissions than conventional marine fuels. Though still a fossil fuel, **LNG is a pragmatic step towards decarbonization until zero-carbon fuels like green hydrogen, methanol, or ammonia become viable**. Yet recent studies have shown that LNG is not as superior to Diesel as advertised. This is due to numerous complications, such as **methane-leaking supply chains** and high energy costs of transport and liquefaction of gas. For these reasons, Carnival has been criticized for its reliance on LNG. LNG offers near-term emissions benefits, but its long-term climate credentials are debated. This leads many to believe CCL needs a more aggressive investment in truly zero-carbon fuels to keep up with other companies. This opinion was highlighted in our customer interviews, with all participants expressing **discontent** with LNG as a solution to reducing carbon emissions. For some customers, this discontent develops into guilt regarding the harm they are inflicting on the environment, resulting in an increase in customer attrition.

RADAR COMPETITOR ANALYSIS

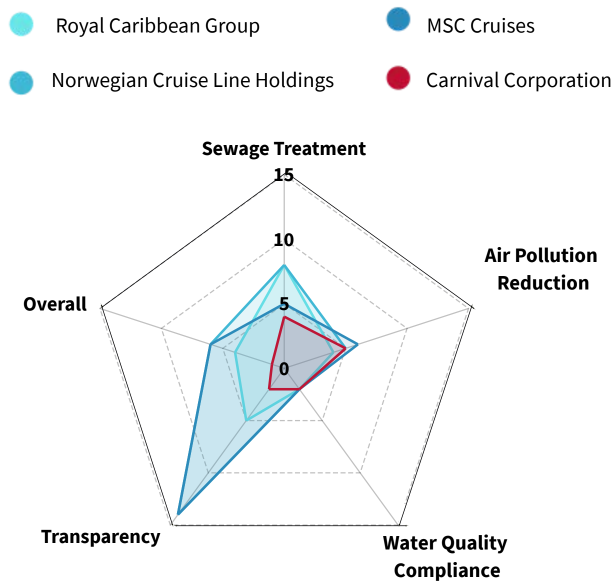
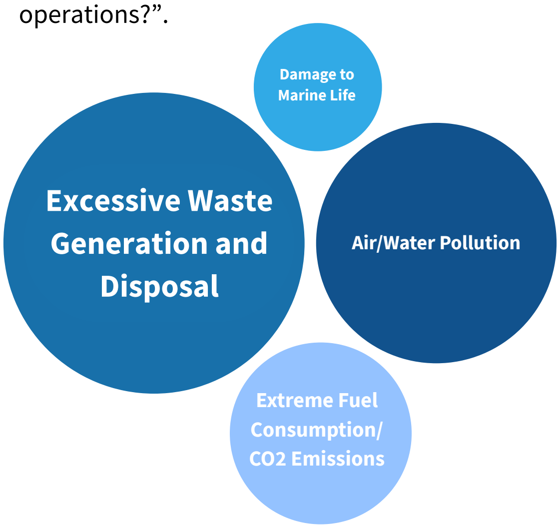


Figure 1A. A comparison of CCL's profile scores to competitors according to the Friends of Earth Organization.

1B. Carnival requires stricter rules and enforcement for pollution standards and practices.

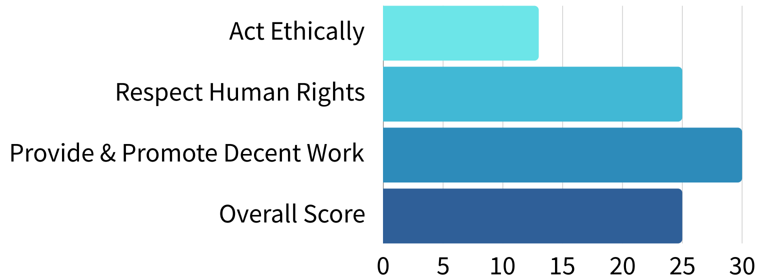
Figure 2B.
Survey response distribution to the question, "What is your primary environmental concern about CCL operations?".



In our preliminary research, a spokesperson revealed that **passengers, on average, generate 1.3 pounds of food waste per day**. These high volumes of waste carry **high operational costs**. Carnival has attempted to address this through the implementation of a **three-pronged approach** to reduce food waste by 30%, consisting of portion adjustments, donation programs, and experimental biodigester technology that decomposes food into liquid. Our survey revealed that **45.8%** for CCL customers, their primary environmental concern is waste generation and disposal. Employee surveys indicated a 2.5/5 rating for confidence in the enforcement of environmental policies, showing that Carnival employees have little trust in CCL's environmental integrity and accountability. So, both stakeholders and employees desire a more measurable way to assess the success of Carnival in meeting their environmental responsibility.

2. ETHICAL PRACTICES ARE INCONSISTENT AND WEAK

2A. Carnival Cruise Line lacks transparency and line-level reporting for stakeholder verification.



CCL scores according to the World Benchmarking Alliance.

Our preliminary research revealed significant transparency and governance issues within CCL's ethical framework. On the World Benchmarking Alliance, Carnival Corporation scored a 0.5 out of 4 on the "Act Ethically" dimension, with poor performance in data privacy, anti-corruption, and tax practices. This raises concerns about CCL operations because line-level policies are largely shaped by the parent company, leading to **inherited governance gaps** and **inconsistent enforcement practices** for the cruise line. Furthermore, our supplementary research, which compared Carnival to other competitors, revealed that Royal Caribbean has an **independent** board-level Ethics and Compliance Committee and quantitative ESG metrics. Carnival is likely unable to develop an independent Committee due to corporate control, but it can **gain specificity in ESG metrics**. Overall, customers have no way to verify Carnival's CSR progress, decreasing external and internal stakeholder trust.

2B. Employees are aware of existing policies but need stronger training and clearer processes.

Crew members are frontline employees; their behavior and their actions while handling issues shape customers' trust and perception. CCL employee survey responses indicate that employees know policies exist, but do not feel confident in the **details** of those policies. They also mentioned that stronger, more frequent training and policy overview would help the crew handle conflicts more confidently. Additionally, while Carnival provides stable employment, and **76% employee respondents** to our survey stated that they have **good overall well-being** onboard, around half of those surveyed stated that they would like a clearer process that determines compensation and rest-time enforcement, so that Carnival is also committed to the **worker experience**.

2C. Onboard crime and violations are often addressed only after becoming publicly visible.

Carnival Cruise Line Violations since 2000	
Top 5 Primary Offense Types	**Penalty Total**
Oil Spill (2)	$49,000,000
Environmental Violation (8)	$23,341,500
Privacy Violation (3)	$10,416,666
Wage and Hour Violation (2)	$6,291,100
Americans with Disabilities Act (1)	$405,000

The U.S. Department of Transportation reports that for **consecutive months**, Carnival has had a higher number of alleged crimes and safety incidents than any other cruise line. Carnival refuses to acknowledge its reputation for violence, often overstating the fleet size to **downplay** the number of crimes. In our customer interviews, they all stated that **safety is a priority when picking a cruise for travel.** Carnival does have a formal security process: regular security inspections, monitoring systems, and a hotline for reports. Carnival still retains a mixed record of incidents. The employees surveyed confirmed that incidents are frequently inadequately addressed and often **only handled when they become visible to passengers**. A notable example is the **"Poop Cruise"** scandal, which involved a 5-day power outage. Later, reports showed that several Carnival ships had repeated mechanical issues, addressed only only after the publicized emergency. The regulatory violations, combined with the more recent environmental incidents, like in 2023 when a ship emitted 2.55 million tons of CO_2, and Carnival Magic discharged a toxic mix of pollutants from scrubbers into the ocean near Grand Turk, have led to **public scrutiny.**

3. UNDERCOVERAGE OF IMPORTANT COMMUNITIES IN PHILANTHROPIC EFFORTS

3A. Carnival focuses its philanthropic efforts on too small a population

Philanthropic practices of Carnival focus on Miami initiatives, neglecting the port communities that CCL is so dependent on. Several donation programs send money to Caribbean countries, but they focus primarily on natural disaster relief. This is important, yet the cruise industry also has an obligation to help **establish community improvement** beyond just disaster relief. This observation was reinforced through our customer interviews. In these interviews, when asked about philanthropic matters, CCL customers said they wanted to see a **broader population** benefitting from the Carnival Foundation, particularly those in the Caribbean.

Unaware of philanthropic efforts

3B. Customers are not aware of philanthropic outreach

87% of customers who responded to our team's survey said that they were "completely unaware of CCL's philanthropic efforts". This shows a **weakness** in the Carnival Foundation's philanthropic strategy. To improve business outcomes through customer perception, CCL customers must know how Carnival is supporting communities. Awareness would **enhance brand reputation, increase customer loyalty and willingness to pay, and support competitive differentiation**.

4. REDUCED ECONOMIC SUPPORT TO PORT COMMUNITIES

4A. Decreasing Local Investment

Within the cruise industry, there is a **growing trend** of private islands owned and operated by the cruise line itself. CCL is following this trend with the creation of **Celebration Key,** a 65-acre development on Grand Bahama Island. This $600 million endeavor opened its first phase in July 2025 and has an estimated profit of $150 million in the first year. Though economically beneficial to CCL, it **harms the economies of local communities,** which are heavily reliant on tourists from Carnival's ships. Port communities make money from **six primary channels**: passengers' spending in ports, land contracts, local job creation, taxes from cruise-related activities, ship maintenance, and cruise line purchases. The use of private islands cuts into these previously reliable revenue streams. From our interview with Maurice Dubois Sr, a Caribbean native, we learned that **local sentiment** is anxious about what this means for their economies.

15.1% of jobs are created by tourism

11.4% of GDP is due to tourism

4B. Varying relationships with local suppliers

From our analysis of CCL's **Responsible Sourcing Policy**, we determined that the majority of CCL's ship procurements are supplied by global or regional distributors near CCL's homeport, Miami. These large distributors ensure the consistent quality and quantity required for a large fleet. Carnival uses **local sourcing** for products and services that are practical for short-turnaround port calls. This includes perishable goods (fresh produce, fish, etc.), local specialities (regional beverages or foods), and shore excursions. CCL has an **obligation** to support and use these local suppliers, as it will strengthen local economies and reduce the environmental impact of transporting goods across the globe. Carnival is stepping into this obligation as seen through the contract with the Port of Seattle Commission. In 2024, Carnival Corporation signed a 10-year berthing agreement to support the Port's path to achieve net-zero emissions and boost the economic impact of cruises in that region through sourcing supplies from small, local, and disadvantaged suppliers in the Seattle region.

B. Conclusions based on the findings

From our research findings, we developed **four main conclusions**, centered around the **pillars of CSR**.

PASSIVE SUSTAINABILITY OPERATIONS

Carnival's environmental practices carry significant economic, ecological, and reputational risks; current initiatives like biodigesters and LNG exist, but are not enough. To **stay competitive and avoid compliance shock** with ever-changing environmental policy, Carnival must move to stronger, **more aggressive measures.**

INJURED STAKEHOLDER TRUST

Carnival Cruise Line faces gaps in line-level ethical responsibility, characterized by unclear policies, a lack of developmental training, and a **reactive approach to incident enforcement**. These critical issues confirm that the **internal ethical structure is too weak** to protect both the brand's reputation and stakeholder trust.

INADEQUATE PHILANTHROPY

CCL's **philanthropic efforts are not known by customers**, and this means CCL is not maximizing the impact that a company's charitable efforts have on customer perception and loyalty. Furthermore, customers want to see a **larger demographic** of people benefiting from the Carnival Foundation, with a focus on long-term socioeconomic development in Caribbean port communities

NEGATIVE IMPACT ON PORTS

Our research uncovers that Carnival Cruise Line's economic CSR **lacks in delivery for equitable community value**, despite its **strong macroeconomic footprint**. Major cruise corporations like Carnival frame their efforts towards efficiency and profit growth, rather than an **actual commitment** to reinvesting in the regions it serves.

V. PROPOSED STRATEGIC PLAN

A. Objectives and rationale of the proposed strategic plan

The primary objective of our strategic plan is to create **corporate social responsibility initiatives** as well as an **ongoing CSR plan** that aligns with the values of the CCL company and its customers. To further clarify our goal we have identified the following objectives that set the **framework for our strategic plan**.

OBJECTIVE	RATIONALE	DESCRIPTION
1. **Accelerate Decarbonization**	Carnival's reliance on LNG and limited long-term carbon strategies raise environmental concerns. *Derived from Conclusion 1*	To combat environmental impact, invest in green fuels, expand energy efficiency, and enhance waste management. ***Short-Term Benefit:*** *Reduced emissions* ***Long-Term Benefit:*** *Climate leadership and alignment*
2. **Strengthen Governance**	Governance gaps and inconsistent policy enforcement undermine ethics and stakeholder confidence. *Derived from Conclusion 2*	To improve accountability, implement line-level reporting, enhanced employee training, and proactive incident management. ***Short-Term Benefit:*** *Stronger compliance* ***Long-Term Benefit:*** *Stakeholder trust*
3. **Expand Charitable Outreach**	Philanthropic focus is limited, not visible, operations reduce revenue for local communities and hurt ecosystems. *Derived from Conclusion 3*	To help undo operational damage, support port communities, and increase philanthropic visibility. ***Short-Term Benefit:*** *Community engagement* ***Long-Term Benefit:*** *Visible goodwill*
4. **Support Port Economies**	Carnival has a responsibility to support the economies of their port communities. *Derived from Conclusion 4*	To support socioeconomic growth in the Caribbean by increasing spending in port cities. ***Short-Term Benefit:*** *Boost port economies* ***Long-Term Benefit:*** *Strengthened community ties*

B. Proposed activities and timelines

PROTECT OUR PLANET

Activity 1.1: AI Food Waste Monitoring with Orbisk AI-Powered Actions

ADDRESSES KEY FINDING 1B

Description: To reduce food waste and create a new pathway for the Less Left Over initiative, our team proposes the use of **Orbisk**, a leading company in technological solutions to food waste. Orbisk is an **AI-powered system** designed for commercial kitchens. They utilize smart scales, AI camera/computer vision, and data processing and reporting to track, measure, and analyze food waste automatically. Traditional scales are unable to deliver stable readings at sea, so Orbisk has developed a **motion-resistant** AI model that determines weight with pinpoint accuracy, eliminating the need for a scale.

A chef uses Orbisk Technology

Rationale: On September 23, 2025, CCL announced its partnership with Orbisk to help Carnival chefs optimize service and **enhance operational precision** on Carnival's 2024 Ship, Carnival Firenze. Our team plans to expand this and reduce food waste by bringing Orbisk's cutting-edge technology to the pilot ships**.** On Carnival Firenze, Orbisk technology has helped the culinary teams **align prep to per-person demand** 10% more accurately. By bringing this technology to another ship, our team will help reduce waste and meet Objective 1.

Activity 1.2: Optimze Energy Use with Wartsila: Eniram Speed 3.0 — **ADDRESSES KEY FINDING 1A**

CCL's Speed Profile Dashboard

Description: To reduce fuel consumption and emissions, Carnival will adopt Eniram Speed 3.0. Speed 3.0 uses advanced technology to factor in prevailing weather and sea conditions, weather forecasts, required engine loads, speed, and emission restrictions to **compute the best speed profile and route**. After the voyage, Speed 3.0 allows for **post-voyage benchmarking** and **performance analysis** that compares actual energy consumption to the expected performance, which enables continuous improvement and monitoring.

Rationale: This will allow Carnival ship operators to lower the ship's energy consumption and **save fuel costs**. This makes travel more efficient and will help Carnival arrive **"net-zero"** while reducing expenditure on fuel. Carnival already utilizes some of Wartsila's technology through its testing of Eniram Trim on Carnival's Costa Atlantic ship, which uses **real-time sensors** to measure and calculate trim. CCL must continue to adopt new navigation technology to further its decarbonization goals.

Activity 1.3 Demand-Based HVAC / Occupancy-Based Lighting — **ADDRESSES KEY FINDING 1A**

Description: To adjust CCL's **energy usage based on needs** rather than a constant flow, Carnival can retrofit its ships with HVAC controls and a keycard switch module for lighting control. Maritime engineering shows that on large cruise ships, **ventilation accounts for roughly 30% of energy use**; implementing demand-based HVAC systems such as HVACON can reduce that consumption by up to a third. By integrating these with Illumra lighting systems in cabins and occupancy-activated lighting with motion sensors in hallways, crew spaces, and certain public areas, ensures that lights operate only when needed, without compromising passenger comfort. The initiative would begin as a pilot retrofit on a select ship, accompanied by crew training and monitoring for long-term sustainability and effectiveness.

Rationale: Carnival's high energy consumption from HVAC and lighting systems contributes to sustainability underperformance, which is a visible concern to stakeholders. Investing in energy efficiency on ships will directly reduce electricity use and carbon dioxide output, addressing **growing customer preference** for **sustainable travel options**. The quantifiable improvements will enhance **brand loyalty** and **differentiation** in the cruise market.

CCL's Mockup Key Switch Module

CCL's HVAC System Dashboard

Activity 1.4 Eco-Traveler Membership Program — **ADDRESSES KEY FINDING 1A**

Description: The PORT Plan introduces the Eco-Traveler seal, a new membership rewards program earned through customers' engagement with a network of environmentally and socially responsible excursions established by a **strategic partnership between CCL** and **ECPC Travel**. ECPC (Eco-Conscious, People-Centered) Travel is an emerging leader in ecotourism devoted to organizing trips that benefit both the environment and the local communities. ECPC has created a network of locally owned hospitality and tourism businesses around the world that **prioritize environmental protection** and connect travelers and large travel institutions, like Carnival, to these businesses. This allows travelers to mitigate their environmental impact and abide by their values while satisfying their desire to travel.

Example of Eco-Excursion; Travelers explore a cave

ECPC has generated an extensive **database** over the last five years that details thousands of businesses and communities that are committed to sustainable tourism practices. These companies are selected through an **intense vetting process** where they are subject to **private audits** and **consultations** by ECPC. By partnering with ECPC, Carnival Cruise Line will license this dataset and plan excursions around these already established, eco-conscious businesses. These excursions would include private tours with locals, immersion in nature, and other **intimate travel experiences**.

Currently, Carnival's members are organized into Red (upon sign-up), Gold (from 10,000 stars), Platinum (from 50,000 stars), and Diamond (from 100,000 stars). This initiative establishes an "Eco-Traveler" seal that customers earn in **addition** to their Carnival status.

CCL customers progress through four levels of "Eco-Traveler" by **earning stars in the following ways:**

- Attending an Eco-Excursion as verified by ECPC
- Purchasing "Carnival Credits" to offset their carbon emissions. These credits will be offered to customers in the form of excursions where customers plant trees or purchase solar energy to offset their environmental impact. Purchasing these credits expedites a person to the Orca level.

LEVEL 1 Starfish	Dolphin LEVEL 2
• from 1 eco-excursion to 5 eco-excursions in one year	• 6 eco-excursions to 10 eco-excursions in one year
LEVEL 4 Orca	**Sea Turtle LEVEL 3**
• 11 eco-excursions to 15 eco-excursions in one year	• 15+ eco-excursions in one year • acquiring Carnival Credits

Levels of Eco-Traveler Status

Rationale*:* The Eco-Traveler membership addresses the growing **"cruise guilt"** some customers experience by allowing them to act on their environmental concerns. In this way, customer values and Carnival can mutually benefit from each other. **57% of modern travelers actively seek and book sustainable options**, and so this program enters this market. Also, by licensing ECPC's verified providers, CCL is able to deliver the **authentic** and **unique experiences cruisers crave**. Overall, this initiative enhances customers' experience, drives higher referral rates, and secures long-term loyalty of the **eco-conscious demographic** while drawing out the sustainability concerns amongst existing customers.

O "OVERSEA" ETHICAL OPERATIONS

Activity 2.1 CSR Reporting for Transparency

ADDRESSES KEY FINDING 2A & 2C

Description: Carnival Cruise Line will implement a line-level CSR reporting program, independent from Carnival Corporation, by adopting **Insight Software** for data-driven reporting. The system **centralizes data collection** from all ships for an auditable, transparent, and scalable reporting system that will track ethics, compliance, sustainability **metrics**, and **social indicators**. Reports would be made in a **three-tiered structure**: **monthly** internal reports for immediate performance correction, **quarterly** governance updates for stakeholders to see incremental improvements, and an **annual** comprehensive shareholder report.

Rationale: This would be a proactive approach that directly targets the gaps in **line-level transparency and ethical oversight.** CCL has faced **criticism for inconsistent ethical action**, which has contributed to a negative public perception. **Greater disclosure** benefits companies through enhanced reputation, positive market reactions, and **reduced firm, operational, and regulatory risk.** Carnival will not only strengthen its internal practices but also meet stakeholder expectations while creating **measurable reputational and economic value**.

Activity 2.2 Enhanced Employee Training and Clear Ethical Process

ADDRESSES KEY FINDING 2B

DEVELOPMENT PLAN
CREW ETHICAL RESOLUTION & ACCOUNTABILITY

Employee Name: Thomas James — Start Date: 09/01/2027
Current Position: Crew Member — End Date: 09/01/2030

INITIATIVE	GOAL	DEADLINE
Fleet-Wide Conflict Resolution	Gain decision making skills.	09/01/2030
Scenario-Based Simulation Program	Increase confidence and consistency.	01/01/2029
Standardized Incident Reporting	Ensure compliance with standardized reporting.	12/01/2027
Compensation Determination	Reduce inconsistent compensation.	05/01/2028
Rest -Time Management	Support employee health and regulations.	02/01/2028

AIMED SKILS
- Critical Thinking
- Customer Relations
- Conflict - Resolution

METRICS FOR SUCCESS
- Monthly Progress Surveys
- Mentor Checks
- Course Completion

Description: Implement a mandatory, comprehensive **conflict-resolution training program** for all shipboard personnel, supported by clear, written **standard operating procedures** for incident reporting, compensation determination processes, and rest-time enforcement. Include scenario-based **simulations** to reinforce learning and periodic mandatory refresher models to sustain a culture of accountability across the fleet and **build employee and guest confidence**.

Rationale: Carnival employees are aware of existing policies but **lack confidence** in enforcement and require clarity on procedures. This iniative will adresss the lack of transparency which has led to line-level employees being blamed for systemic ethical failures. Strengthening training while **standardizing processes** will effectively address gaps in ethical accountability and conflict resolution. It aligns with best practices in decent work, health and safety, and human rights while promoting consistent application across the fleet.

Activity 2.3 Real Me App Remodeling: Accessibility & Language Inclusion **ADDRESSES KEY FINDING 2C**

Description: Our team proposes the addition of a Real Me sector to the most used Carnival customer app, Carnival HUB. This Real Me app **remodeling** will support minority customers in handling **language and disability barriers** for the duration of their stay. CCL's international nature means that many Carnival customers are non-native English speakers. Furthermore, 13% of cruisers are over the age of 70 and may struggle with mobility. To support these customers, the app remodeling will include the addition of detailed ship and deck maps.

The Real Me App **includes the following features**:

- Clearly detailed maps that highlight accessibility features such as elevators and escalators
- Feedback and rating surveys provide an outlet for cruisers to rate and detail their experiences navigating the ship
- Speech-to-text and text-to-speech technology to translate as needed
- Essential safety videos in multiple languages

Rationale: The Real Me initiative **enhances guest care and inclusivity** by supporting cruisers who might experience obstacles on board Carnival's ships. By having language and accessibility resources available on the app, CCL is improving the Carnival experience for its customers. By digitalizing their accessibility plan, we are giving customers **privacy** on what could be sensitive information and demonstrating Carnival's **commitment to DEI**, human rights, and equitable guest treatment.

Carnival HUB App with Real Me App Remodeling

R E N D E R   S U P P O R T   T O   C O M M U N I T I E S

Activity 3.1 Sponsorship of Caribbean With Purpose **ADDRESSES KEY FINDING 3A**

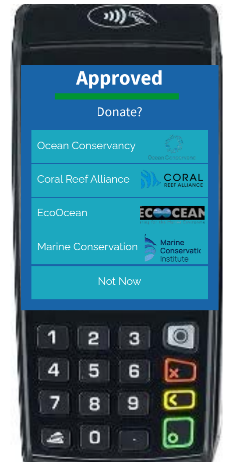
Countries currently benefiting from Caribbean with Purpose

Description: Caribbean With Purpose is a non-profit organization that strives to **combat illiteracy** by **partnering with local communities and schools** to support the progression of reading and academic achievement among students. They use a **customized approach** for each area and begin with access to books and literacy resources, followed by continuing professional development for educators, merit programs and awards, and access to technological tools. With Carnival's sponsorship, they will be able to help more children and improve the Caribbean by **educating the rising population**.

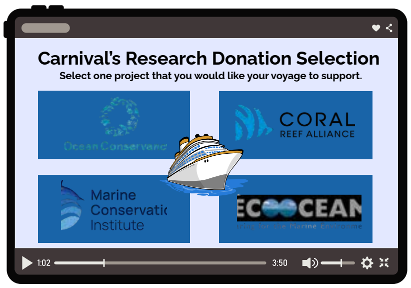
Rationale: From our customer survey responses, it was clear that Carnival customers want to **support Caribbean countries**. By supporting **education and literacy** in the Caribbean islands, Carnival is helping these countries develop and better themselves. Supporting youth education is one of the core values of the Carnival Foundation and, therefore, will integrate well with their current charitable efforts.

Activity 3.2 Fund research for marine life protection

ADDRESSES KEY FINDING 3B



Description:
CCL can establish a Marine-Life Research and Conservation Partnership Program where each ship allocates funds to support **reputable non-profits** focused on marine life, coral reef preservation, and habitat restoration. Ships will provide data collection platforms to aid research. Passengers will have the option to choose from several vetted and reputable projects during their voyage to donate to, as the **donation prompts appear in app-based excursions and at checkout points** for purchases onboard. Passengers will be able to select a single project for Carnival to fund, and the project with the most **votes** by the end of the voyage will be selected for a **ship-based donation**. To increase visibility and feasibility, Carnival will **select 10 voyages** for each of the **29 ships annually** for the donation.



Rationale: CCL's operations have a **direct impact on marine ecosystems**, and investing in research is essential to mitigating these effects. Funding marine-life conservation will actively demonstrate corporate responsibility and allow **passengers to participate** by choosing projects to support. This will engage stakeholders, increase brand loyalty, and show that Carnival values the environment and customers' values.

TARGET LOCAL GROWTH

Activity 4.1 Fleetwide Local Economic Impact Commitment (LEIC) Program

ADDRESSES KEY FINDING 4A & 4C

Description: Our PORT plan establishes the Local Economic Impact Commitment Program to benefit and improve the local economies of Caribbean destination ports. This program supports initiatives in Dominica, Curaçao, St. Lucia, and The Bahamas to stimulate economic growth. With a "**Port and Prosper Partnership**" for each country, this network of programs across the Caribbean will connect Carnival to local businesses. Carnival will establish partnerships with **10 local businesses** in each of the 4 port countries. Local businesses will apply for the Port and Prosper Partnership, and Carnival leadership will decide which 10 businesses to sign a year-long contract with. This year-long contract promises **discounts/vouchers to local businesses**. The discounts and vouchers will incentivize customers to explore the port cities and spend in their stores, and the locally operated excursions will provide jobs and customers to local businesses. Notably, the Port and Prosper Partnership supports year-long contracts, which will create vendor rotation ability and ensure broad community benefits. The LEIC Program will be tracked through an impact dashboard that will track local dollars spent, vendors contracted, jobs supported, and community excursions funded. This information will be accessible on the annual CSR report.


PORT VOUCHER
Roseau Port and Prosper

Authorized Date: April 20-26 2027 — Start Date: 04/20/27
10% off from the following stores... — End Date: 04/26/25

DINING	SHOPPING	EXCURSIONS
Pearl's Cuisine	Dazzle Me	Khatts Tours
Plantain Restaurant	Dons & Divas	Extreme Dominica
Starline Ital Kitchen	Bisoux De CoCo	Kool Dominica Tours
The Great Old House	Island Chic Boutique	Antours
Lacou Melrsose House	Trina's Closet	Island Style Charters

Example Voucher Sheet for Roseau Port and Prosper Initiative

Rationale: CCL has a responsibility to support the countries that it visits, especially when those countries are struggling economically. For example, Dominica is one of the least prosperous Caribbean countries that Carnival Cruise Line visits. With a per capita GDP of 10,405.3 US dollars, Dominica, and with other countries benefiting from this LEIC program and is struggling. This is an opportunity for Carnival to show its **dedication to port communities** by **encouraging customer spending in ports**. This is an especially prevalent issue as the establishment of private islands like Celebration Key is **reducing previously reliable revenue streams** to ports.

C. Proposed metrics or key performance indicators to measure plan effectiveness

To evaluate the effectiveness of our initiatives, we have developed the following key metrics that are associated with each initiative. These metrics will allow us to **quantify** and **track** the internal and external success of PORT. An **excellent**, **satisfactory**, and **poor value** is given for each metric to establish levels of satisfaction before implementation. We hope to see every initiative scoring in the excellent category by year three.

TABLE #: PORT ACTIVITY KEY PERFORMANCE INDICATORS

ACTIVITY	*METRIC INDICATOR*	*DESCRIPTION*	*EXCELLENT*	*SATISFACTORY*	*POOR*
1.1 Orbisk Food Waste	**Food Waste Reduction Rate**	Track and compare food waste pre and post-implementation	≥25% reduction	25-10% reduction	<10% reduction
1.2 Eniram Speed 3.0	**Fuel Usage**	Track and compare fuel usage	>6% reduction	2-5% reduction	<2% reduction
1.3 HVAC and Lighting	**Energy Intensity per Passenger-Day**	Track overall load efficiency and kWH consumed	< 29 kWH per passenger per day	30-35 kWh	>35 kWh
1.4 Eco-Tourism Membership	**Sustainable Shift Rate**	Track percentage of shore excursion revenue that transitions from standard to eco-tours	>30%	30%-20%	<20%
2.1 CSR report	**Reporting Coverage**	Track engagement rate	>15% of people on the Carnival Website	10-15%	<10%
2.2 Workforce Development	**Training Completion and Employee Satisfaction**	Track employees completing training and survey-based score	≥ 95% completion ≥ 85% positive responses	80-94% completion 65-84% positive responses	<80% completion <65% positive responses
	Compliance Rate	Track compliance and minor incidents	0 major incidents	1-2 minor incidents	≥ 3 incidents
2.3 Real Me App Development	**Customer Ratings on Navigation Experience**	Track customer satisfaction on new features with survey-based scores	Average score of 90% or greater	Average score between 70%-90%	Average score less than 70%
3.1 Carribean with Purpose	**Track Reach of Online Content**	Track the number of customers that view related content	>100,000 people	50,000 - 99,999 people	<50,000 people
3.2 Marine Life Research	**Passenger Engagement Rate**	Track passengers participating in donation options	≥ 50% of passenger participation	30-49% participation	<30% participation
4.1 LEIC Program	**Local Dollars Spent**	Track use of Port & Prosper vouchers to calculate money spent in ports.	>$20,000 spent in vouchers	Between $10,000 and $20,000 spent in vouchers	<$10,000 spent in vouchers

General Key Performance Indicators (KPIs)

Our team will also evaluate PORT based on the generic, and not initiative-specific, KPIs of **Net Promoter Score** and **Customer Satisfaction Index**. These metrics will allow CCL to further evaluate their customers' perceptions and use that information to better PORT and Carnival Cruise Line as a whole.

Net Promotor Score

Net Promoter Score is a standard metric to evaluate customer loyalty by asking customers, “On a scale of 0-10, how likely are you to recommend us to a friend or colleague?” Their responses are classified as

- **Promoters** (9-10): Loyal, enthusiastic customers who are likely to recommend CCL
- **Passives** (7-8): Satisfied but unenthusiastic CCL customers, unlikely to promote actively
- **Detractors** (0-6): Unhappy CCL customers who may discourage others

Net Promoter Score = % Promoters - % Detractors

BENCHMARK : NPI = **+60%** by Year 3

Customer Satisfaction Index

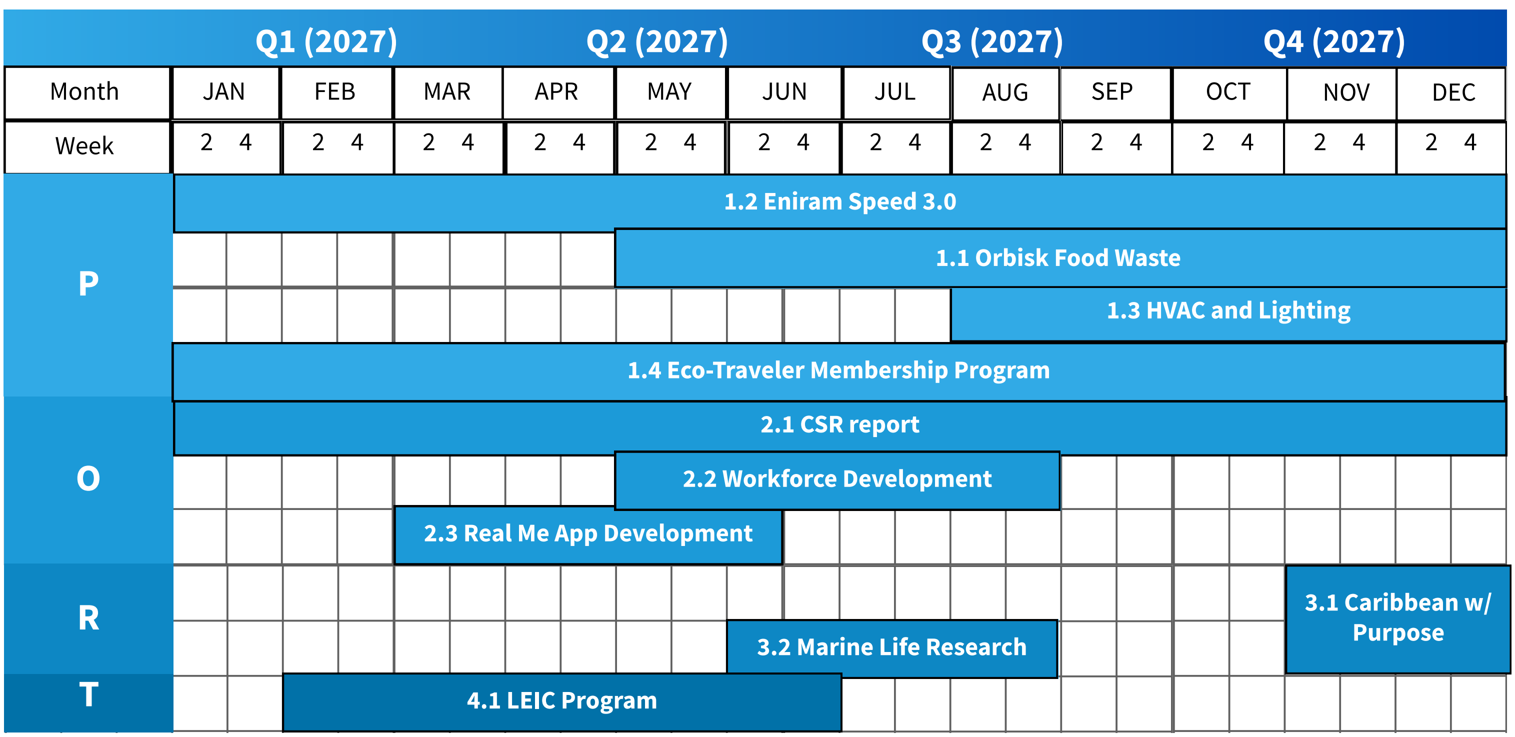
Customer Satisfaction Index is a standard metric to measure how satisfied a customer is with a company, product, or service. Our team will use CSI to measure product/service quality, value for money, customer support, and overall experience through a series of survey questions. CCL customers will rate their satisfaction on a **scale of 1-5,** and the CSI will be calculated.

Customer Satisfaction Index = (Avg. Satisfaction Score / Maximum Possible Score) x 100

BENCHMARK : CSI = +80% by Year 3

PORT Strategic Plan Timeline

PORT will be implemented over **four fiscal quarters,** starting in **January 2027** and ending in **December 2027**.



Our team has separated our initiatives to ensure that each initiative is implemented as efficiently and effectively as possible. This **initiative-centric timeline** is the optimal way to introduce our CSR initiatives to CCL and not overwhelm them with implementation. Initiatives like 1.2 Eniram Speed 3.0 and the 2.1 CSR Report are characterized by rapid and efficient implementation, as to reap the maximum benefits they must run for the longest duration of time. Our team has also determined that some of the PORT plan initiatives will be implemented through a **pilot program system** on five of CCL’s newest ships: **Carnival Celebration, Carnival Venezia, Carnival Firenze, Carnival Jubilee, and Carnival Festivale** (to be released in 2027). This will allow new technology to be tested on a smaller scale before meeting the goal of **fleetwide implementation by 2030.**

VI. PROPOSED BUDGET

The PORT plan carries a **$29,817,160 implementation cost** and a **$6,353,660 yearly recurring cost.** This may seem substantial, yet it is under 5% of CCL's 2024 net income of $627 million and falls around the industry standard for spending 2% of profit on CSR initiatives. PORT is the most expensive in its first year due to higher implementation costs that scale down over 3 years as those developmental costs decrease. The red asterisks indicate an ongoing cost.

P - Protect Our Planet =$21,384,500

1.1 Orbisk Food Waste

- Automated food waste monitor: $1,250,000
- LED Light installation: $6,000
- Software Analytics Subscription: $52,200*
- Dashboard Implementation: $75,000
- Service fee: 102,000*

Total Implementation Cost: Implementation cost x 5 (number of ships) = 1,433,200 x 5 = **$7,166,000**

1.2 Eniram Speed 3.0

- Sensor Installation: $975,000
- Interface set-up cost: $620,000
- New technology training cost: $7,000
- Service fees: $670,500*

Total Implementation Cost: Implementation cost x 5 (number of ships) = 2,272,500 x 5 = **$11,362,500**

1.3 HVAC and Lighting

- HVAC Controls Integration: $680,000 (Cost per ship)
- Lighting Occupancy Sensors: $375,000 (Cost per ship)*
- Installation & Labor: $300,000 (Cost per ship)
- Energy Maintenance Services: $545,000 (Cost per ship) *
- Keycard Switch Installation: $150,000 (Cost per ship)

Total Implementation Cost: = $2,050,000

1.4 Eco-Traveler

- ECPC Database Licensing Fee: $485,000*
- Marketing & Digital Seal Design: $90,000
- Excursion Partner Onboarding & Logistics: $120,000
- API & Rewards Integration: $115,000

Total Implementation Cost: = $810,000

O - "Oversea" Ethical Operations =$6,601,100

2.1 CSR report

- Data-Integration: $20,000 (Cost per ship) x 29 (Total Ships) = $580,000
- Project Management: $600,000 *
- InsightSoftware and License: $120,000 *
- External Audit: $400,000 *
- Training & Capacity Building: $5,000 (Cost per ship) x 29 (Total ships) = $145,000

Total Implementation Cost: $1,845,000

2.2 Employee Training/Ethical Process

- Learning Management System & Curriculum: $350,000*
- Training: (online learning & simulations): $21.30 (avg hourly pay) x 5 (hours training) = $110 (per employee) x (1,000 crew on 29 ships) = $3,190,000
- Ongoing Training & Refresher Modules: 29,000 (crew) x $21.30 (avg hourly pay) = $617,700 *
- Assessment & Development of Ethical Process: $60,000 *

Total Implementation Cost: $4,217,000

2.3 Real Me App

- App Redesign Cost (hiring App Developer and Software Engineer): $400,000
- Cyber security professional: $4,600
- Maintenance cost: 25% of initial development cost = $134,500 *

Total Implementation Cost: $539,100

R - Render Support to our Communities =$1,289,500

3.1 Caribbean with Purpose

- Annual donation of $500,000*
- Social Media Marketing and Promotion of Partnership: $4,500*

Total Implementation Cost: $504,500

3.2 Marine Life Research

- Pilot Donations per ship: $15,000 x 5 (Number of ships) = $75,000 x 10 (donations per year) = $750,000 *
- Coding Developer: $15,000 *
- Project Management (design and selection) : $30,000 *

Total Implementation Cost: $785,000

T - Target Local Communities $542,060

4.1 LEIC Program

- Project Manager: $95,000*
- Program staff costs = Estimated number of project employees needed x salary = 5 x 65,000 = $325,000*
- Social Media Marketing and Promotion Cost= salary of marketing professional x # of employees = 61,030 x 2= $122,060 *

Total Implementation Cost: $542,060

Total First Year Cost (including one-time inherent costs): **$29,817,160** **Yearly Cost After:** **$6,353,660**

Carnival

PAYBACK → THROUGH IMPROVING CUSTOMER RELATIONS

Revenue through Customer Acquisition

Our PORT plan generates revenue for Carnival Cruise Line due to the **generation of new customers**. A strong CSR plan and the socially responsible reputation it creates directly **motivate purchasing decisions** among consumers, especially younger, value-driven consumers. Our PORT plan publicly molds CCL into a company that is dedicated to supporting the world around it. This will attract **new cruisers** whose personal values align with those of Carnival's. Through our analysis of **climate-conscious customer patterns** and conversations with experts, we predict that PORT will attract **1,000** new customers in **year 1, 2,000** new customers in **year 2,** and **3,000** new customers in **year 3.**

1,000 (New Customers) × **$1,927** (Avg. Customer Value) = **$1,927,000** (Year One)

Revenue through strengthening Customer Loyalty

By introducing the PORT CSR plan, our team is engaging existing CCL customers and motivating them to spend more. Our plan strengthens customer loyalty by making customer feedback a central part of Carnival's decision-making. By clearly and publicly aligning CCL's core values with those of its customers, CCL is showing its dedication to its cruisers. This will nurture loyalty and trust between CCL and its customers. This newfound loyalty will create a **higher share of wallet** as engaged, loyal customers are more likely to purchase a wider variety of products and services from CCL. Stronger connections with customers also lead to customers voluntarily advertising for Carnival through referrals, which drive **organic, low-cost customer acquisition**. PORT will also allow Carnival to benefit from the **CSR halo effect**, which describes the way that strong social responsibilities positively influence the impression of all of a company's services. This halo effect will also strengthen CCL's reputation and make it more resistant to a crisis or negative publicity. To quantify this, our team estimates that 2,000 of CCL's current customers will be motivated by our PORT plan to increase spending by 20% across CCL's services. Resulting in a revenue of $4,624,800.

2,000 (Current CCL Customers) × **$1,927** (Avg. Customer Value) × **1.20** (% Increase in Avg. Spending) = **$4,624,800**

PAYBACK → BASED ON EFFICIENCIES

Orbisk will increase forecasting preparation accuracy and limit wastage associated with disposal costs.

- $1.335 Billion (Carnival Corp. Food Costs Annually) / 63 (Total Ships) = $21,290,476 (Annual Food Cost Per Ship) x 5 (Pilot Ships) = $105,952,380 (Food Cost for Pilot) x 0.095 (Projected Savings Rate) = **$10,065,476**

Eniram Speed 3.0 will reduce the largest operational expense, fuel burning, by 6% according to maritime engineering and proven use on other ships, our team used a conservative estimate of 5% for savings calculations.

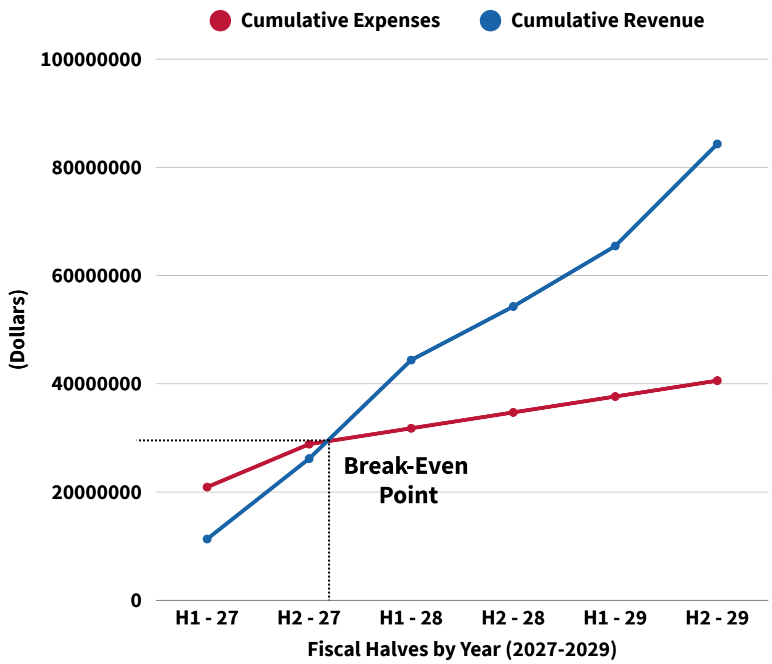
- 2.9 (MMT - Carnival Corp. Annual Fuel Consumption) x $710(/Ton) = $2,032,900,000 (Total Annual Fuel Cost)
- $2,032,900,000 (Total Annual Fuel Cost) / 63 (Total Carnival Corp. Ships) = $32,268,254 (Annual Fuel Cost Per Ship)
- $32,268,254 (Annual Fuel Cost Per Ship) x 5% (Amount Saved) x 5 (Total Ships in Pilot) = **$8,067,064**

HVAC and Smart Lighting will minimize unnecessary utility costs and reduce fuel costs per voyage.

- $32,268,254 (Annual Fuel Cost Per Ship) x 0.3 (% Used for HVAC/Lighting) x 0.15 (Projected % Saved) = **$1,452,071**

$10,065,476 (Amount saved on Orbisk) + **$8,067,064** (Amount saved on Enriam) + **$1,452,071** (Amount saved on HVAC) = **$19,584,611** (Total amount saved)

3 Year Summary					
Year	Annual Expenses	Cumulative Expenses	Annual Revenue	Cumulative Revenue	ROI(%)
1	$29,817,160	$29,817,160	$26,185,220	$26,185,220	-12%
2	$6,353,660	$36,170,820	$28,112,220	$54,297,440	50%
3	$6,353,660	$42,524,480	$30,039,220	84,336,660	98%



PORT BREAK-EVEN ANALYSIS

Return on investment is negative in the first year as the cost of implementation is high, yet this **implementation cost scales down** over three years, resulting in an ROI of 107% by the third year. As displayed by the trendline, our PORT plan breaks even in the **second fiscal half of 2027**. Also shown is how **cumulative revenue increases** at a quick rate and diverges from cumulative expenses. This quick return shows the economic validity of this plan and solidifies why PORT is the optimal plan for bringing a strong corporate social responsibility plan to Carnival Cruise Line.

VII. BIBLIOGRAPHY

"Carnival Corporation Announces Significant Sustainability Achievements." PR Newswire, 10 April 2024, https://www.prnewswire.com/news-releases/carnival-corporation-announces-significant-sustainability-achievements-302112776.html. Accessed 14 December 2025.

Chen, Nansen. "The Environmental Impact of Cruise Ships." Earth.Org, 11 August 2025, https://earth.org/the-environmental-impact-of-cruise-ships/. Accessed 14 December 2025.

Crockett, Zachary. "The economics of cruise ships." The Hustle, 15 March 2020, https://thehustle.co/the-economics-of-cruise-ships. Accessed 14 December 2025.

"The Cruise Industry's History of Environmental Violations • Friends of the Earth." Friends of the Earth, https://foe.org/cruise-history-violations/. Accessed 14 December 2025.

"Environmental Sustainability." Cruise Lines International Association, https://cruising.org/environmental-sustainability. Accessed 14 December 2025.

Kennedy, Merrit, and Greg Allen. "Carnival Cruise Lines Hit With $20 Million Penalty For Environmental Crimes." NPR, 4 June 2019, https://www.npr.org/2019/06/04/729622653/carnival-cruise-lines-hit-with-20-million-penalty-for-environmental-crimes. Accessed 14 December 2025.

"Opens $600M Celebration Key, Its Spectacular New Exclusive Destination | Carnival Cruise Line." Carnival Cruise Line, 19 July 2025, https://www.carnival-news.com/2025/07/19/carnival-cruise-line-opens-600m-celebration-key-its-spectacular-new-exclusive-destination. Accessed 14 December 2025.

Reckmann, Nadia. "What Is Corporate Social Responsibility (CSR)?" BusinessNewsDaily.com, 25 October 2024, https://www.businessnewsdaily.com/4679-corporate-social-responsibility.html. Accessed 14 December 2025.

Stobierski, Tim. "What Is Corporate Social Responsibility? 4 Types." HBS Online, 8 April 2021, https://online.hbs.edu/blog/post/types-of-corporate-social-responsibility. Accessed 14 December 2025.

"Why Is Marine Conservation Important?" Loggerhead Marinelife Center, 1 May 2025, https://marinelife.org/why-is-marine-conservation-important/. Accessed 14 December 2025.

VIII. APPENDIX

Our meeting with business consultant Iain Michel on December 10, 2025.

Our meeting with Vice President of CSR at PTC Dave Duncan on January 9, 2026.