

Willapa Bay Ferry Feasibility Study

A Catalyst for Economic Development
and Growth in Pacific County

March 4, 2024

1133912

GAIL FORCE

Team Overview



University of Washington – Foster School of Business 1st Year MBA Students



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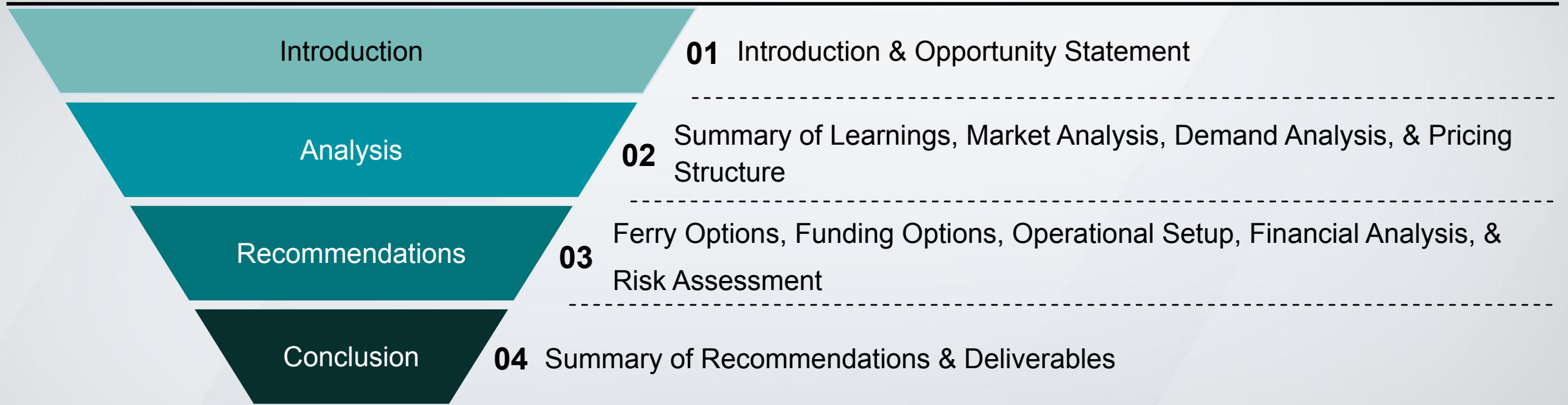


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Agenda



Next Steps

Opportunity Statement

Bike and Pedestrian Ferry Service at Willapa Bay


- **Market Opportunity:** Connect residents and boost tourism in Pacific County.
- **Feasibility Study Targets:**

01

Market Potential 


- Evaluate Tourism Impact

02

Operation Setup 

- Ferry Options & Setup

03

Financial Overview 

- Assess Viability

04

Risk Assessment 

- Identify Implementation Challenges

Overview

Main Assumptions

- The ferry is proposed to operate from May to October.
- Grants are proposed for funding.
- Phase-wise implementation.
- The ferry is predicted to breakeven by year 4.
- The proposed ferry model will be used.



Recommendation

YES! A Ferry System in Willapa Bay IS Feasible!



Case Study Analysis

Bald Head Island Ferry

- Implement tiered pricing.
- Enhanced amenities.
- Offer premium parking.



Cumberland Island Ferry

- Offer special local pricing.
- Provide round-trip bookings.
- Introduce e-bike reservations.



Lake Chelan, Lady of the Lakes

- Highlight scenic route.
- Offer multiple boat options.
- Incorporate fun events.



Case Study Analysis

Kitsap Fast Ferries

- Provide frequent departures.
- Implement online booking.
- Offer diverse fare options.

King County Water Taxis

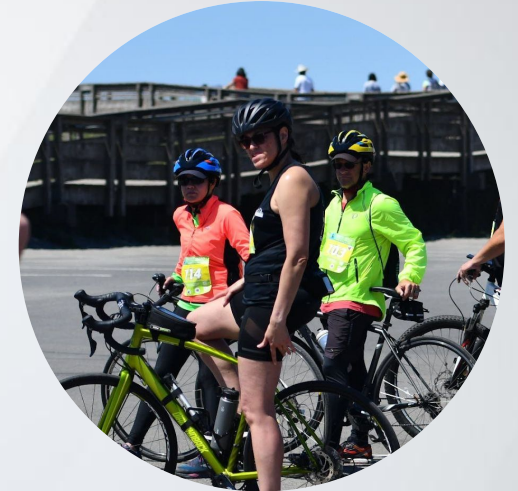
- Utilize integrated fare systems.
- Offer parking facilities.
- Provide real-time updates

Mackinac Island Ferry

- Customize ticketing packages.
- Enhance connectivity.
- Implement event-based marketing



Visitor (Customer) Personas



Peninsula Crusaders

Active Golden Couple

2 Adults

Age: 68 & 65

6 – Day Stay, Vacation Rental

Repeat Visitors

Wanderlust Nomad

Solo Traveler

1 Adult

Age: 28

2 – Day Stay; Hotel

1st Time Visitor

Shoreline Squad

Small Family with Kids

2 Adults; 2 Children

Ages: 40, 38, 8, & 6

5 –Day Stay; Airbnb

Repeat Visitors

Coastal Crew

Adventurous Friends

3 Adults

Ages: 31, 33, & 34

2-Day (Passing Through);
Camping

1st Time Visitors

Visitor Persona | Peninsula Crusaders (*Active Golden Couple*)



Bob (63) and Carol (63)

San Francisco, CA

Married

Retirees

6 – Day Stay, Vacation Rental

Repeat Visitors

Purpose of Visit

- Bob and Carol are interested in hiking, biking, birdwatching, and other outdoor activities available in the Long Beach Peninsula area.

Brand Audit

- They represent 59.3% of respondents that travel in a party of two.

Ferry Outlook

- They view taking a ferry as a leisurely way to travel, enjoying the scenic views and fresh sea air as part of their active vacation.

Marketing Approach

- Emphasize the relaxation aspects of the ferry journey while highlighting the nearby parks, nature reserves, and outdoor attractions along the route.

Visitor Persona | Wanderlust Nomad (*Solo Traveler*)



Alex (28)

Seattle, WA

Single

Freelance Creative

2 – Day Stay; Hotel

1st Time Visitor

Purpose of Visit

- Alex is interested in cultural experiences, local cuisine, and exploring off-the-beaten-path destinations.
-

Brand Audit

- She represents the 8.6% of the visitors who are solo travelers.
-

Ferry Outlook

- She sees taking a ferry as an opportunity for solitude and reflection, embracing the journey and disconnecting from the hustle and bustle of daily life.
-

Marketing Approach

- Promote ferry travel as a peaceful and scenic journey, perfect for solo adventurers seeking a moment of tranquility.

Visitor Persona | Shoreline Squad (*Small Family with Kids*)



The Johnsons:

Mark (40), Emily (38)

Olivia (8), Ethan (6)

Portland, OR

**Family with Married
Professionals**

5 –Day Stay; Airbnb

Repeat Visitors

Purpose of Visit

- The Johnsons are interested in exploring a mix of outdoor adventures and family-friendly attractions.

Brand Audit

- They represent 22.2% of respondents who indicated that they were traveling with children.

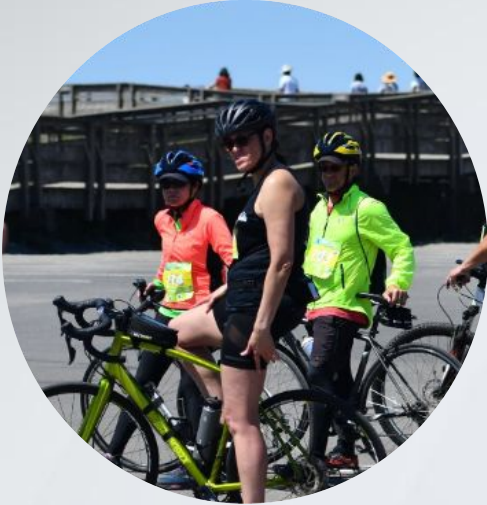
Ferry Outlook

- The Johnsons see taking a ferry as an exciting part of their family adventure, providing Olivia and Ethan with a mini-cruise experience while Mark and Emily enjoy the scenic views and bonding time.

Marketing Approach

- Highlight the spacious and comfortable seating arrangements, family-friendly atmosphere, and the opportunity for children to observe the marine and bird life, emphasizing the ferry journey as immersive part of their vacation experience.

Visitor Persona | Coastal Crew (*Adventurous Friends*)



**Sara (31), Ben (33), & Sam
(34)**

Seattle, WA

Friends

Young Professionals

**2-Day (Passing Through);
Camping**

1st Time Visitors

Purpose of Visit

- These friends are interested in destinations offering scenic bike trails, challenging routes, and opportunities for outdoor recreation.

Brand Audit

- They represent the 8.6% of respondents who comprise of parties of three.

Ferry Outlook

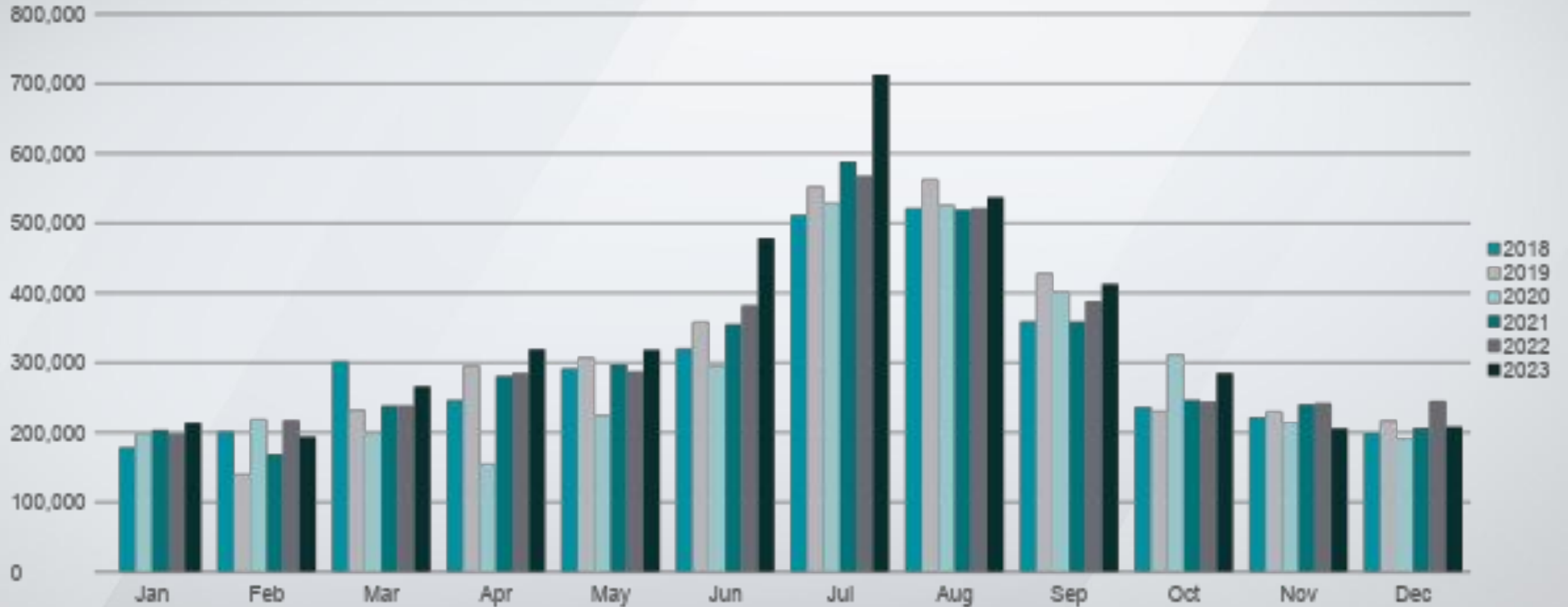
- They see the ferry as an exciting prelude to their biking adventure, providing a unique mode of transportation and an opportunity to scope out potential routes.

Marketing Approach

- Promote the ferry as a convenient and practical way to access new biking trails and destinations, emphasizing the ease of bringing their bikes onboard and seamlessly continuing their biking adventure upon arrival.

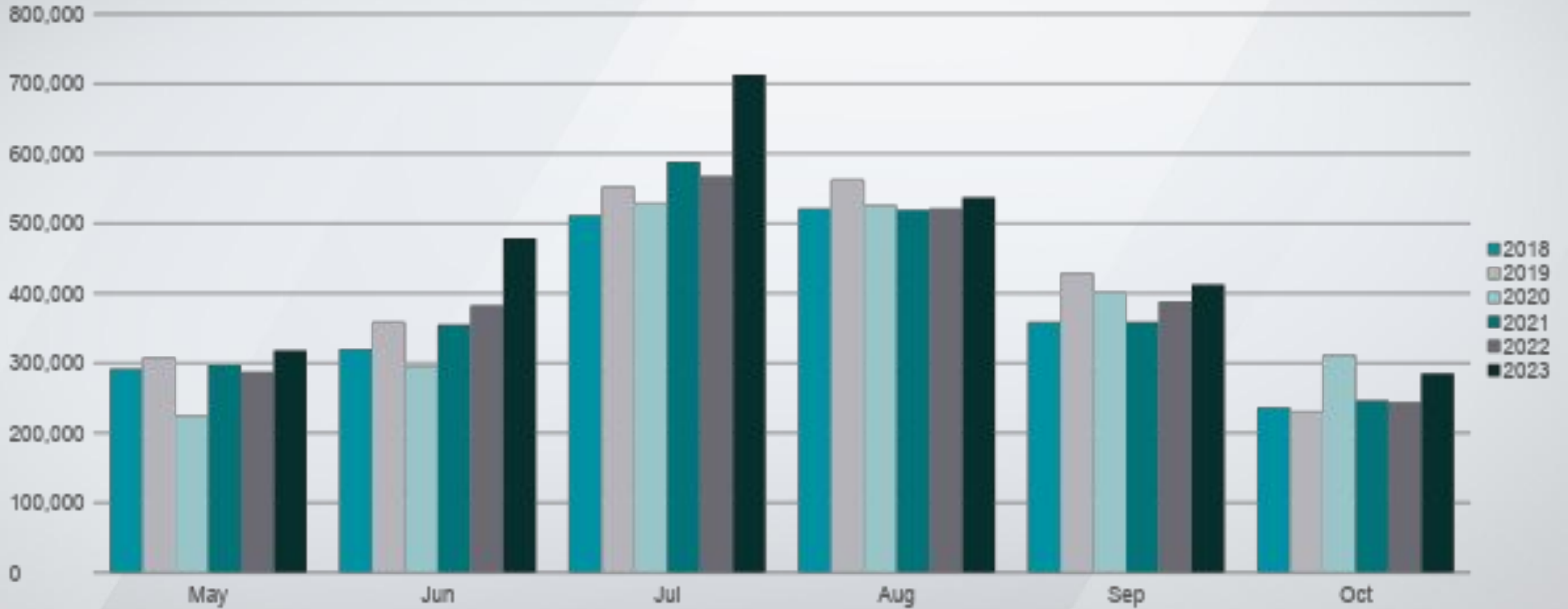
Demand Analysis | Historical Monthly Visitor Volumes

January – December (2018 – 2023)



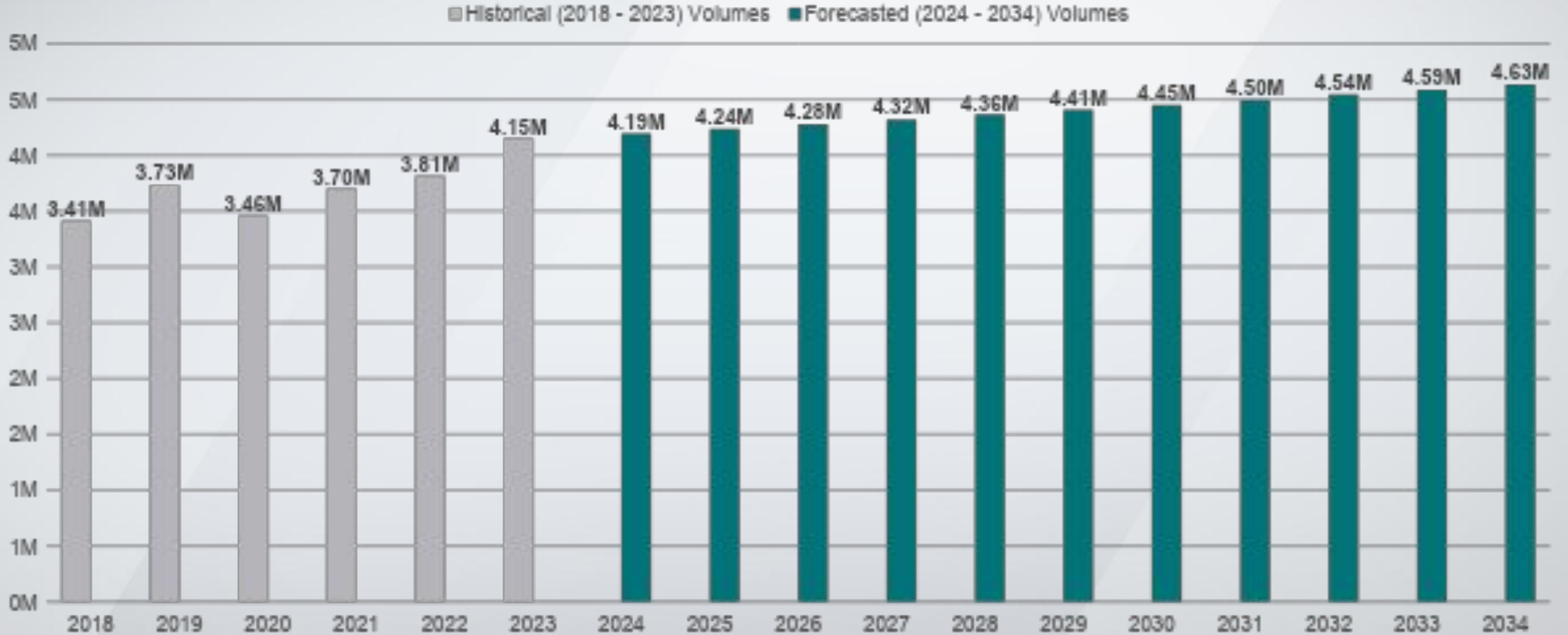
Demand Analysis | Historical Monthly Visitor Volumes

May – October (2018 – 2023)



Demand Analysis | 10 – Year Forecast of Annual Visitor Volumes

Assumption: Conservative Year Over Year Growth Rate of 1%



Demand Analysis | 10 Year – Forecasted Monthly Ferry Ridership

Assumption: Conservative proportion of Ferry Ridership = 1.5% of Forecasted Visitor Volumes

Year	May	Jun	Jul	Aug	Sep	Oct
2025	4,875	7,322	10,902	8,221	6,320	4,364
2026	4,924	7,395	11,011	8,304	6,383	4,408
2027	4,973	7,469	11,121	8,387	6,447	4,452
2028	5,023	7,544	11,233	8,471	6,511	4,496
2029	5,073	7,619	11,345	8,555	6,576	4,541
2030	5,124	7,695	11,458	8,641	6,642	4,587
2031	5,175	7,772	11,573	8,727	6,708	4,632
2032	5,227	7,850	11,689	8,815	6,775	4,679
2033	5,279	7,928	11,806	8,903	6,843	4,726
2034	5,332	8,008	11,924	8,992	6,912	4,773

Demand Analysis | 10 – Year Forecasted Daily Ferry Ridership

Assumption: Ferry operates approximately 26 days per month (6 days per week with Tuesdays off)

Year	May	Jun	Jul	Aug	Sep	Oct
2025	188	282	419	316	243	168
2026	189	284	424	319	245	170
2027	191	287	428	323	248	171
2028	193	290	432	326	250	173
2029	195	293	436	329	253	175
2030	197	296	441	332	255	176
2031	199	299	445	336	258	178
2032	201	302	450	339	261	180
2033	203	305	454	342	263	182
2034	205	308	459	346	266	184

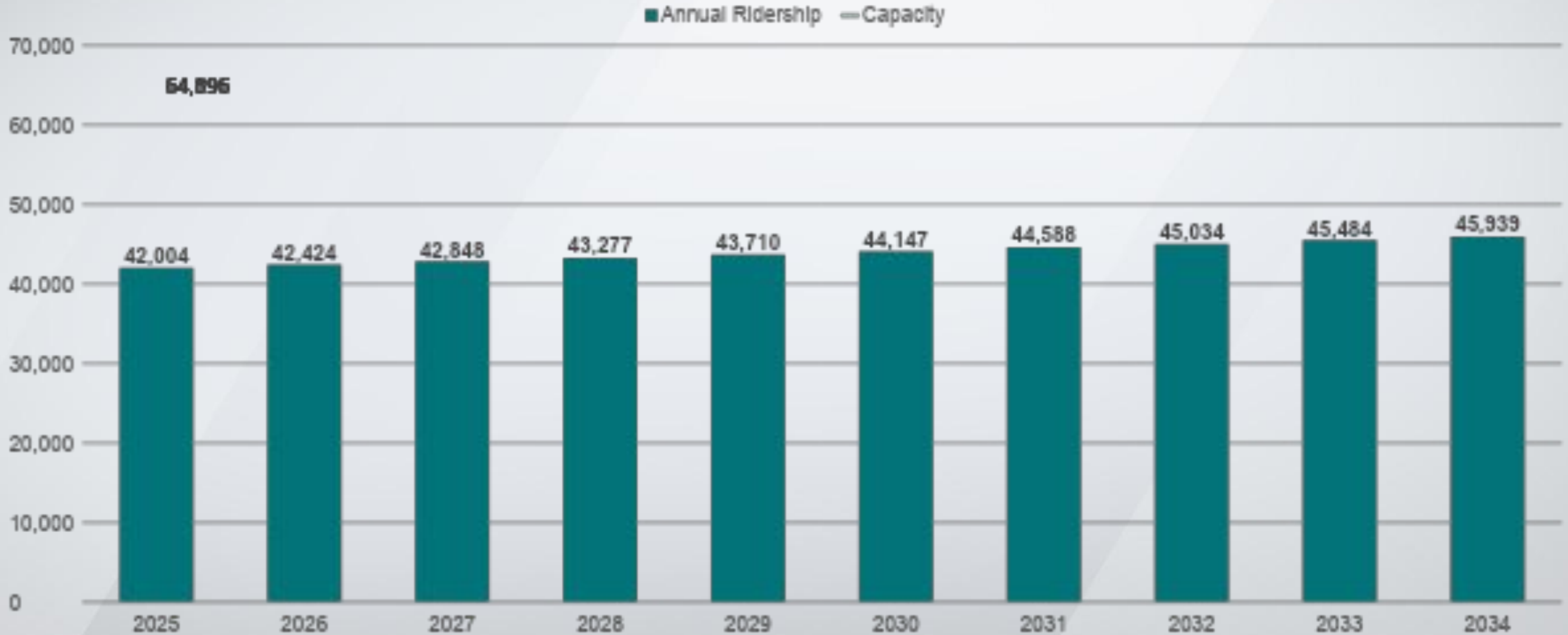
Demand Analysis | 10 – Year Forecasted Ferry Load Capacity

Assumption: Ferry has a capacity of 48 seats

Year	May	Jun	Jul	Aug	Sep	Oct
2025	65%	59%	87%	66%	51%	58%
2026	66%	59%	88%	67%	51%	59%
2027	66%	60%	89%	67%	52%	59%
2028	67%	60%	90%	68%	52%	60%
2029	68%	61%	91%	69%	53%	61%
2030	68%	62%	92%	69%	53%	61%
2031	69%	62%	93%	70%	54%	62%
2032	70%	63%	94%	71%	54%	62%
2033	70%	64%	95%	71%	55%	63%
2034	71%	64%	96%	72%	55%	64%

Demand Analysis | 10 – Year Forecast of Annual Ferry Ridership

May – October (2025 – 2034)



Product Offering | Proposed Ferry Ticket Pricing Structure

Customer Segment	Adult	Child	Family
Adult Tourist	\$ 28		
Tourist Family (Adult + At Least 1 Child)	\$ 21	\$ 12	\$ 33

Adult Ticket 25% Off



Brand Audit Data	Weight
Visitors <u>NOT</u> Traveling with Kids	77.8%
Visitors Traveling with Kids	22.2%



Customer Segment	Seat
Adult Tourist Ticket	\$ 28.00
Average Family Ticket	\$ 16.50
Average Ticket Price	\$ 25.45

Product Offering | Proposed Ferry Ticket Pricing

Proposed Pricing Structure		Per Seat	Year	Annual Volume	After-Tax Revenue
Ticket Fare	\$	25.45	2025	42,004	\$ 1,068,880
Sales Tax (8.1%)	\$	2.06	2026	42,424	\$ 1,079,568
Face Value Ticket Price	\$	27.51	2027	42,848	\$ 1,090,364
			2028	43,277	\$ 1,101,268
			2029	43,710	\$ 1,112,280
			2030	44,147	\$ 1,123,403
			2031	44,588	\$ 1,134,637
			2032	45,034	\$ 1,145,984
			2033	45,484	\$ 1,157,443
			2034	45,939	\$ 1,169,018

Comparable Ferries

	Vessel Type	Construction	Horsepower	Capacity	Length (ft)	Breadth (ft)	Draft (ft)
Bald Head Island Ferry	Ferry	Aluminum	1,280	150	72	22.5	4.2
Lake Chelan							
Lady of the Lake II	Ferry	Steel	960	350	100	24	5
Lady Express	Ferry	Aluminum	2,160	150	64.5	21	5
Lady Cat	Ferry	Fiberglass	1,600	36	51	17	5
Kitsap Fast Ferry	Ferry	Steel	5,000	1,200	301.5	78.5	15.8
Mackinac Island							
Marquette II	Ferry	Aluminum	3,420	330	74	24	6
Radisson	Ferry	Aluminum	3,600	317	77	24	8
Cadillac	Ferry	Aluminum	1,700	150	64.7	22	7.7

The Search for the Ferry



Oversized Vessel

- Potential future option, but not high enough quality



Overpriced Vessel

- Potential future luxury option, but we need to wait for better profitability



Slow Vessel

- Operational inefficiency with tight schedule each day

> 48 Passenger Vessel

- 50 x 15 x 5
- Fiberglass boat originally designed for sightseeing
- 23 knots cruise speed





➤ Comfortable Seating

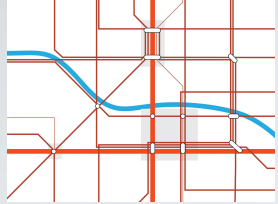
- Covered indoor area for sightseeing
- Room for ADA-compliant modifications

➤ Cyclist Accommodation

- Room on front or back of cabin for rack installation
- Facilitating cyclists travel from South Bend to Nahcotta with their bikes or vice versa



Funding a Ferry for Pacific County Connection



Regional Mobility Grant

Supports local efforts to improve connectivity between counties and regional population centers: trip reduction programs, shift to high efficiency modes, first and last mile connection.



Tribal Transit Mobility

Support from WA Climate Commitment Act: reducing climate pollution, creating jobs, and improving public transit. Federally recognized tribes are eligible.



Tribal Collaboration

Partnering with the Chinook and Shoalwater tribes to fund and maintain the ferry: start up funds, mooring the boat, driving business.

Schedule: May – October*



<https://www.wta.org/water-trails/willapa-bay-trail/>

Route Segment	Amount of Time (hr.)	Time (PDT) - Start	Time (PDT) - Finish	Diesel Fuel (gal)
Tokeland - Load	0.25	6:45 AM	7:00 AM	0.16
Leg #1	0.77	7:00 AM	7:50 AM	39.03
Nahcotta - Unload + Load	0.50	7:50 AM	8:20 AM	0.32
Leg #2	0.77	8:20 AM	9:10 AM	39.03
Tokeland - Unload + Load	0.50	9:10 AM	9:40 AM	0.32
Leg #3	0.45	9:40 AM	10:10 AM	22.50
South Bend - Unload + Load	0.50	10:10 AM	10:40 AM	0.32
Leg #4	0.45	10:40 AM	11:10 AM	22.50
Tokeland - Unload + Load	0.50	11:10 AM	11:40 AM	0.32
Leg #5	0.77	11:40 AM	12:30 PM	39.03
Nahcotta - Unload + Load	0.50	12:30 PM	1:00 PM	0.32
Leg #6	0.77	1:00 PM	1:50 PM	39.03
Tokeland - Unload + Load	0.50	1:50 PM	2:20 PM	0.32
Leg #7	0.45	2:20 PM	2:50 PM	22.50
South Bend - Unload + Load	0.50	2:50 PM	3:20 PM	0.32
Leg #8	0.45	3:20 PM	3:50 PM	22.50
Tokeland - Unload + Load	0.50	3:50 PM	4:20 PM	0.32
Leg #9	0.77	4:20 PM	5:10 PM	39.03
Nahcotta - Unload + Load	0.50	5:10 PM	5:40 PM	0.32
Leg #10	0.77	5:40 PM	6:30 PM	39.03
Tokeland - Unload	0.25	6:30 PM	6:45 PM	0.16
Total	11.43	12.0vessel hours		327.38

*Note: All 10 legs from June through September; 6 legs (#1, #2, #3, #4, #9, and #10) in May and October.

Ports

Nahcotta

Port of Peninsula

- 11 miles to/from downtown Long Beach
- Can be integrated into Pacific County bus routes and Long Beach Summer Trolley schedules
- Requires additional dredging per NOAA 18504 (3-4 ft deep)
- Recommended Facilities: electric car and bike charging stations

Tokeland

Port of Willapa Harbor: Tokeland Marina

- 3 miles to/from Shoalwater Bay Casino
- Can be integrated into Tokeland Shopper Shuttle
- Envisioned based of operations for the ferry service per schedule
- Ample parking for visitors
- Recommended Facilities: electric car and bike charging stations

South

Bend

City of South Bend's Recreational Dock/Ramp

- 0 miles to/from downtown South Bend
- Small parking lot; Bendiksen Landing could help alleviate future parking woes
- Dock can accommodate vessel without dredging, but requires ADA upgrades
- Recommended Facilities: restrooms, electric car and bike charging stations

South

Bend

Port of Willapa Harbor: Bendiksen Landing

- 1 mile to/from downtown South Bend
- Excluded from ferry schedule due to proximity to recreational dock downtown
- Can be developed for passenger parking with a summer trolley service to/from downtown South Bend
- Recommended Facilities: restrooms, electric car and bike charging stations

Financial Analysis

Revenue

Ferry Tickets

Additional Service Onboard

Parking

Tourism Business

Cost

Ferry Purchase

Operational Cost

Maintenance Cost

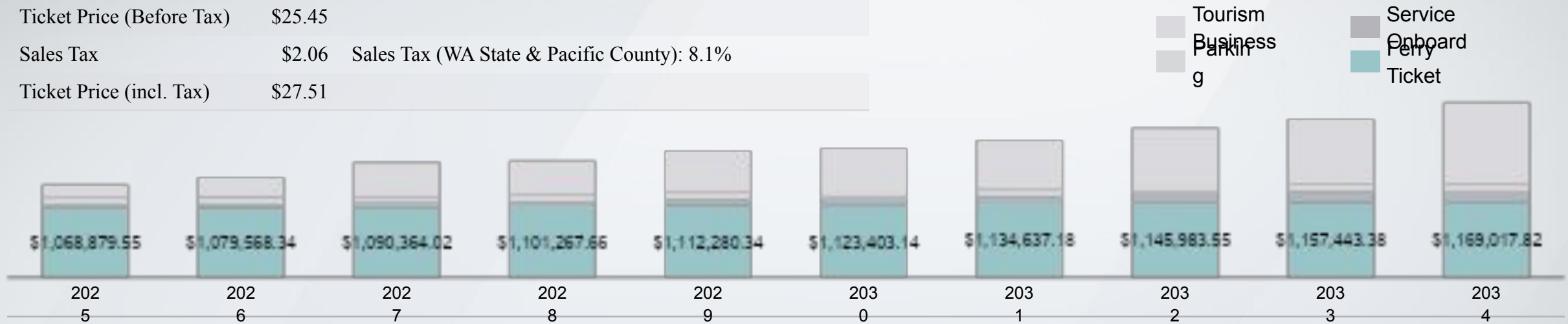
Administration Cost (SG&A)



Financial Analysis | Revenue

Pricing

Ticket Price (Before Tax)	\$25.45	
Sales Tax	\$2.06	Sales Tax (WA State & Pacific County): 8.1%
Ticket Price (incl. Tax)	\$27.51	



Revenue from Ticket Sales

	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
	(Yr. 1)	(Yr. 2)	(Yr. 3)	(Yr. 4)	(Yr. 5)	(Yr. 6)	(Yr. 7)	(Yr. 8)	(Yr. 9)	(Yr. 10)
Forecasted Annual Ridership Volume	42,004	42,424	42,848	43,277	43,710	44,147	44,588	45,034	45,484	45,939
Average Ticket Price	\$25.45 / Trip (Before Tax)									
Annual Revenue	\$1,068,880	\$1,079,568	\$1,090,364	\$1,101,268	\$1,112,280	\$1,123,403	\$1,134,637	\$1,145,984	\$1,157,443	\$1,169,018

Financial Analysis | Fixed Costs

Ferry Cost

Ferry	\$ 250,000	
Federal Yacht Import Tax (One-time)	\$ 3,750	https://breezecustoms.com/blog/importing-into-the-united-states/how-to-import-a-boat-into-the-us/
WA State Use Tax (One-time)	\$ 20,250	Use tax Washington Department of Revenue
USCG Overseas Inspection Fee	\$ 4,595	CGD 91-030, 60 FR 13563, Mar. 13, 1995, as amended by USCG-2013-0671, 78 FR 60144, Sept. 30, 2013
Shipping & Retrofitting	\$ 125,000	*Assuming 50% of Ferry Cost
IT cost	\$ 100,000	*Scaled down from reference from bald head island

Financial Analysis | Variable Costs

Operation Setup

Operating Days / Week	6	* Tuesday Off
Operating Days / Month	26	* May-Oct

Fuel Cost

	Jan-Apr	May (Off-Peak)	Jun (Peak)	Jul (Peak)	Aug (Peak)	Sep (Peak)	Oct (Off-Peak)	Nov-Dec
Trips/Day	-	6	10	10	10	10	6	-
Fuel Cost/Day	-	\$ 1013.61	\$1636.9	\$1636.9	\$1636.9	\$1636.9	\$1013.61	-
Fuel Cost/Month	-	\$26,354	\$42,559	\$42,559	\$42,559	\$42,559	\$26,354	-
Annual Total	\$222,945							

Labor Cost

	Role		Annual Salary	Adjusted Salary		Annual Salary	
Seasonal Crew	- Licensed Captain	2x	\$ 61,960	\$ 30,980		- General Manager	1x \$ 84,000
	- Ship Engineer	1x	\$ 60,450	\$ 30,225	Back	- Finance	1x \$ 80,000
	- Crew Member	2x	\$ 37,640	\$ 18,820	Office	- Sales & Marketing	1x \$ 70,000
	- Customer Support	2x	\$ 37,640	\$ 18,820		- IT	1x \$ 60,000
Annual Total	\$392,845						

Financial Analysis | Regulatory Cost

Regulatory Cost

	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
	(Yr. 1)	(Yr. 2)	(Yr. 3)	(Yr. 4)	(Yr. 5)	(Yr. 6)	(Yr. 7)	(Yr. 8)	(Yr. 9)	(Yr. 10)
State of Washington Annual Registration Fee	\$382	\$445	\$445	\$509	\$509	\$572	\$572	\$636	\$636	\$636
State of Washington Annual Operator License Fee	\$60	\$ 35	\$35	\$40	\$40	\$45	\$45	\$50	\$50	\$ 50
U.S. Coast Guard Annual Vessel Inspection Fee	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300
Insurance	\$8,108	\$8,270	\$8,435	\$8,604	\$8,776	\$8,951	\$9,130	\$9,313	\$9,499	\$9,689
Annual Total Regulatory Cost	\$8,849	\$9,050	\$9,215	\$9,453	\$9,625	\$9,869	\$10,048	\$10,299	\$10,485	\$10,675

Financial Analysis

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Revenue	\$ -	\$ 1,068,880	\$ 1,079,568	\$ 1,090,364	\$ 1,101,268	\$ 1,112,280	\$ 1,123,403	\$ 1,134,637	\$ 1,145,984	\$ 1,157,443	\$ 1,169,018
Ferry Tickets	\$ -	\$ 1,068,880	\$ 1,079,568	\$ 1,090,364	\$ 1,101,268	\$ 1,112,280	\$ 1,123,403	\$ 1,134,637	\$ 1,145,984	\$ 1,157,443	\$ 1,169,018
Parking											
Other Rev Streams											
COGS	\$ -	\$ 702,910	\$ 716,969	\$ 731,308	\$ 745,934	\$ 760,853	\$ 776,070	\$ 791,591	\$ 807,423	\$ 823,571	\$ 840,043
Fuel		\$ 222,945	\$ 227,404	\$ 231,552	\$ 236,591	\$ 241,323	\$ 246,150	\$ 251,073	\$ 256,094	\$ 261,216	\$ 266,440
Dry Docking		\$ 18,500	\$ 18,870	\$ 19,247	\$ 19,632	\$ 20,025	\$ 20,425	\$ 20,834	\$ 21,251	\$ 21,676	\$ 22,109
Labor		\$ 461,465	\$ 470,694	\$ 480,108	\$ 489,710	\$ 499,505	\$ 509,495	\$ 519,685	\$ 530,078	\$ 540,680	\$ 551,493
Depreciation		\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360
EBIT	\$ 315,610	\$ 312,240	\$ 308,697	\$ 304,974	\$ 301,068	\$ 296,974	\$ 292,686	\$ 288,201	\$ 283,512	\$ 278,615	
Federal Business Tax	\$ 66,278	\$ 65,570	\$ 64,826	\$ 64,045	\$ 63,224	\$ 62,365	\$ 61,464	\$ 60,522	\$ 59,538	\$ 58,509	
WA B&O Tax	\$ 4,734	\$ 4,684	\$ 4,630	\$ 4,575	\$ 4,516	\$ 4,455	\$ 4,390	\$ 4,323	\$ 4,253	\$ 4,179	
EBIAT	\$ 244,598	\$ 241,986	\$ 239,240	\$ 236,355	\$ 233,328	\$ 230,155	\$ 226,832	\$ 223,366	\$ 219,722	\$ 215,927	
Net Working Capital (NWC)	\$ 175,728	\$ 179,242	\$ 182,827	\$ 186,484	\$ 190,213	\$ 194,017	\$ 197,898	\$ 201,856	\$ 205,893	\$ 210,011	\$ -
Change in NWC	\$ 175,728	\$ 3,515	\$ 3,585	\$ 3,657	\$ 3,730	\$ 3,804	\$ 3,880	\$ 3,958	\$ 4,037	\$ 4,118	\$ (210,011)
Fixed Cost											
Total CAPEX	\$ 503,595										
Ferry Cost	\$ 250,000										
Federal Yacht Import Tax (One-time)	\$ 3,750										
WA State Use Tax (One-time)	\$ 20,250										
USCG Overseas Inspection Fee	\$ 4,595										
Shipping & Retrofitting	\$ 125,000										
Water Craft Exercise Tax	\$ 1,250	\$ 1,125	\$ 1,000	\$ 875	\$ 750	\$ 625	\$ 500	\$ 375	\$ 250	\$ 125	\$ -
IT cost	\$ 100,000										
Depreciation	\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360	\$ 50,360
Depreciation of Ferry	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000
Fair Market Value of Ferry	\$ 250,000	\$ 225,000	\$ 200,000	\$ 175,000	\$ 150,000	\$ 125,000	\$ 100,000	\$ 75,000	\$ 50,000	\$ 25,000	\$ -
After-depreciation Ferry Value											
Maintenance Cost	\$ 75,000	\$ 76,500	\$ 78,030	\$ 79,591	\$ 81,182	\$ 82,806	\$ 84,462	\$ 86,151	\$ 87,874	\$ 89,632	
Regulatory Cost	\$ 8,849	\$ 9,050	\$ 9,215	\$ 9,453	\$ 9,625	\$ 9,869	\$ 10,048	\$ 10,299	\$ 10,485	\$ 10,675	
Annual Registration Fee (State of Washington)	\$ 382	\$ 445	\$ 445	\$ 509	\$ 509	\$ 572	\$ 572	\$ 636	\$ 636	\$ 636	
Annual Operator License Fee (State of Washington)	\$ 60	\$ 35	\$ 35	\$ 40	\$ 40	\$ 45	\$ 45	\$ 50	\$ 50	\$ 50	
Annual Vessel Inspection Fee (U.S. Coast Guard)	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	
Insurance	\$ 8,108	\$ 8,270	\$ 8,435	\$ 8,604	\$ 8,776	\$ 8,951	\$ 9,130	\$ 9,313	\$ 9,499	\$ 9,689	
Marketing Cost	\$ 50,000	\$ 5,000	\$ 5,100	\$ 5,202	\$ 5,306	\$ 5,412	\$ 5,520	\$ 5,631	\$ 5,743	\$ 5,858	\$ 5,975
Future Cash Flow	\$ (730,573)	\$ 201,468	\$ 197,111	\$ 192,621	\$ 187,886	\$ 183,039	\$ 177,939	\$ 172,718	\$ 167,234	\$ 161,621	\$ 370,015
Cumulative Cash Flow	\$ (730,573)	\$ (529,104)	\$ (331,993)	\$ (139,373)	\$ 48,513	\$ 231,552	\$ 409,491	\$ 587,429	\$ 764,263	\$ 940,884	\$ 1,117,299

Financial Analysis



\$731k

Initial Investment

Upfront investment required in Year 0 is \$ 730,573 based on initial assumptions taken.



23%

IRR (Internal Rate of Return)

Internal Rate of Return for this Ferry project is 23% based on the revenue streams forecasted



4 Year

Break-even

Initial investment can be broken-even in the 4th year with the forecasted FCF.



Note: All assumptions taken in this study needs to be further clarified/verified to derive a more accurate financial evaluation.

Risks, Regulations, and Licensing



Registration and Regulations

- Register Within 15 days of Purchase
- Vessel Title Application
- Required Documents:
 - Proof of Ownership
 - Proof of Sales Tax Paid
 - Proof Insurance



Licensing and Insurance

- Annual Fees
 - United States Coast Guard Vessel Inspection
 - Washington State Vessel Registration
 - Washington State Operator License
- Mariner's Insurance
 - Insurance Cost = 2-3% of Vessel Purchase Price

Major Assumptions



Financial

- Inflation Rate: 2%
- Nominal Discount Rate: 8%
- Federal Business Tax: 21%
- WA State Sales Tax: 6.5%
- Pacific County Sales Tax: 1.6%



Operational

- Small Passenger Vessel (SPV) “T” Categorization
- Ferry goes into operation in 2025
- Months
 - May to October
 - Peak: June to September

Recommendations and Deliverables

Yes! A Ferry System at Willapa Bay is Feasible. ✓

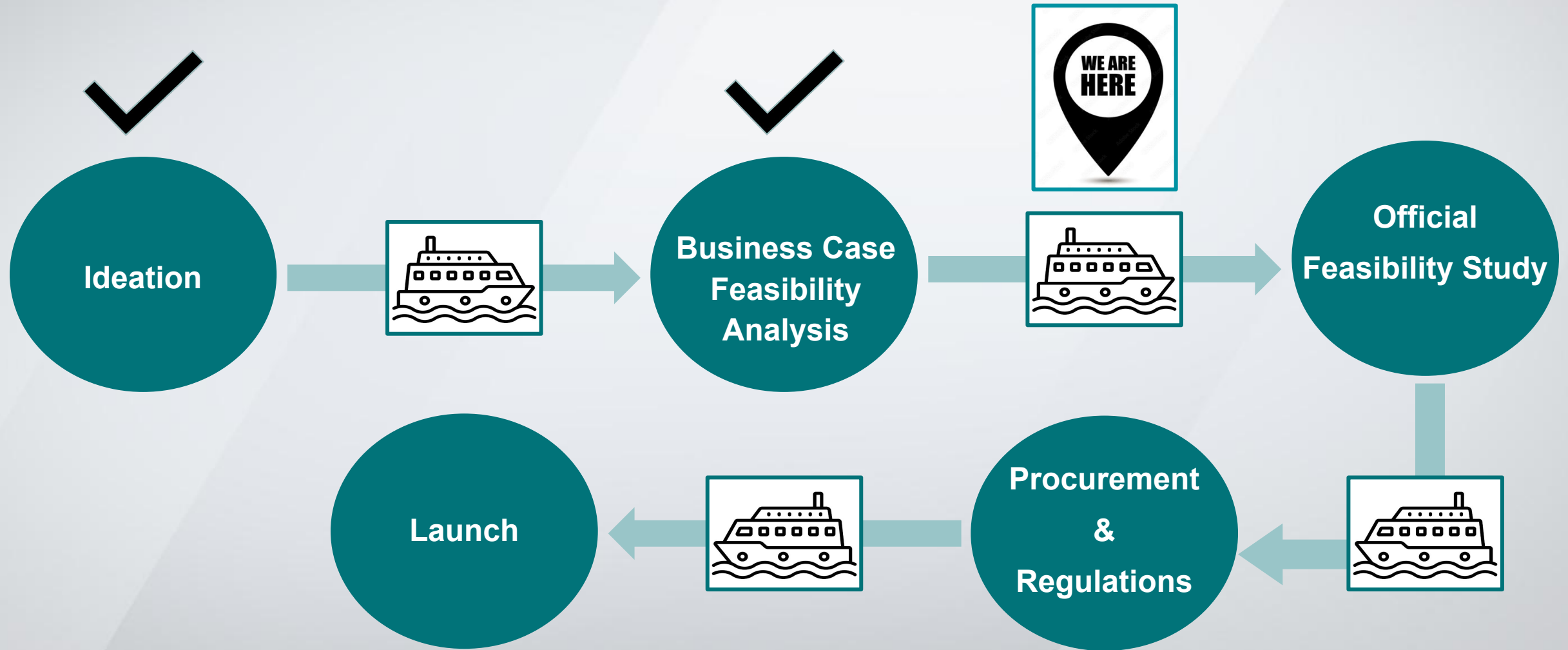
- Leverage grants for funding
- Implement phase-wise rollout plan

Final Deliverables:

- Detailed Financial Analysis (including Future Cash Flow projections)
- Detailed Feasibility Report
- Presentation outlining recommendation, major assumptions, and launch plan



Next Steps



Discussion



This image was created with the assistance of DALL-E 3.

Thank you, Sue, Kelly, and the PCEDC!

- Jasmine Douglas
- Reed Hawkins
- Vivian Huang
- Matt O'Connor
- Abineya Rajan
- Karan Sajnani



Thank



You

