NEW YORK SUSTAINABLE FREIGHT CORRIDOR

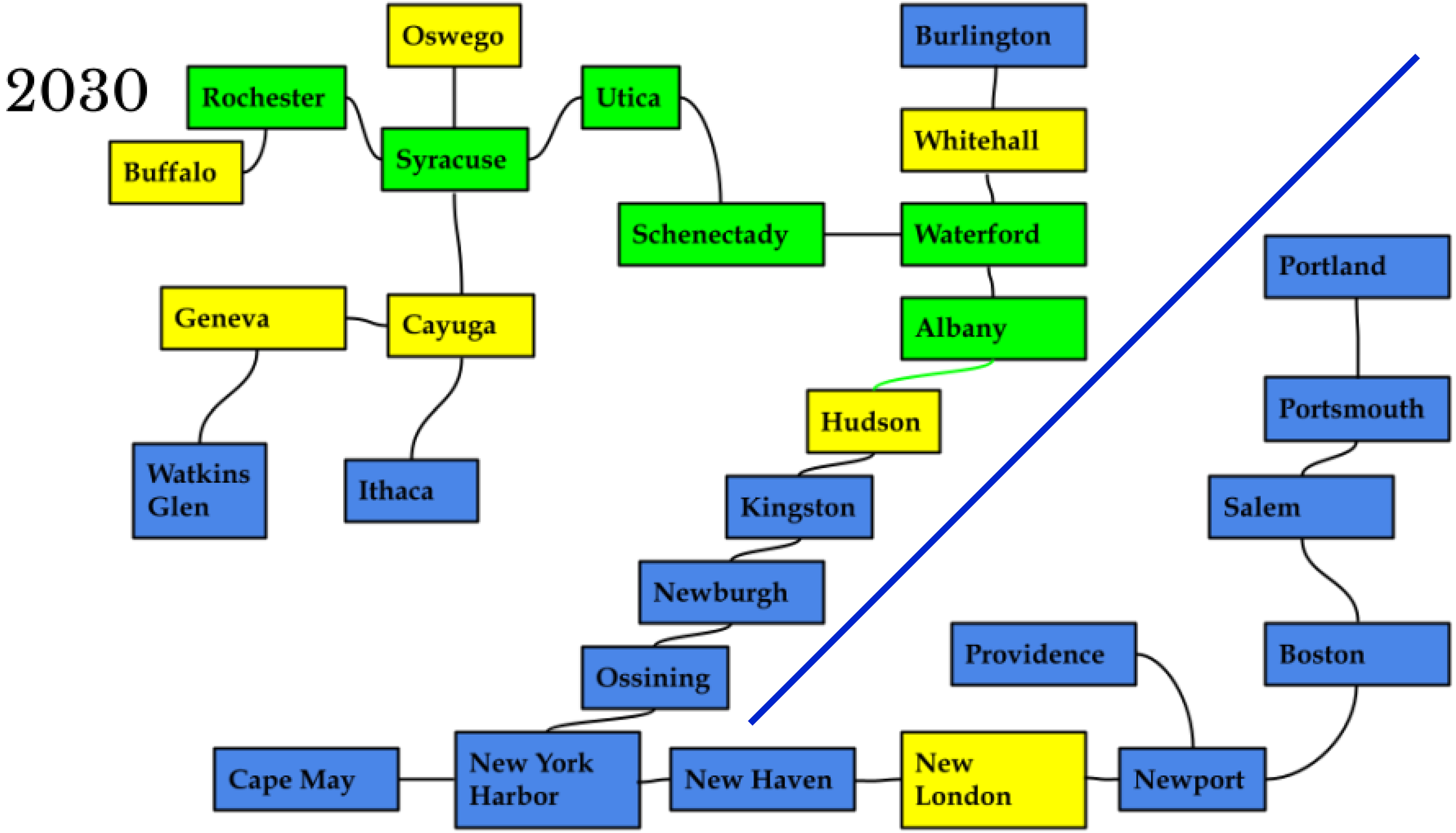
The Center for
Post Carbon Logistics

Steven Woods
Director of Research and Development



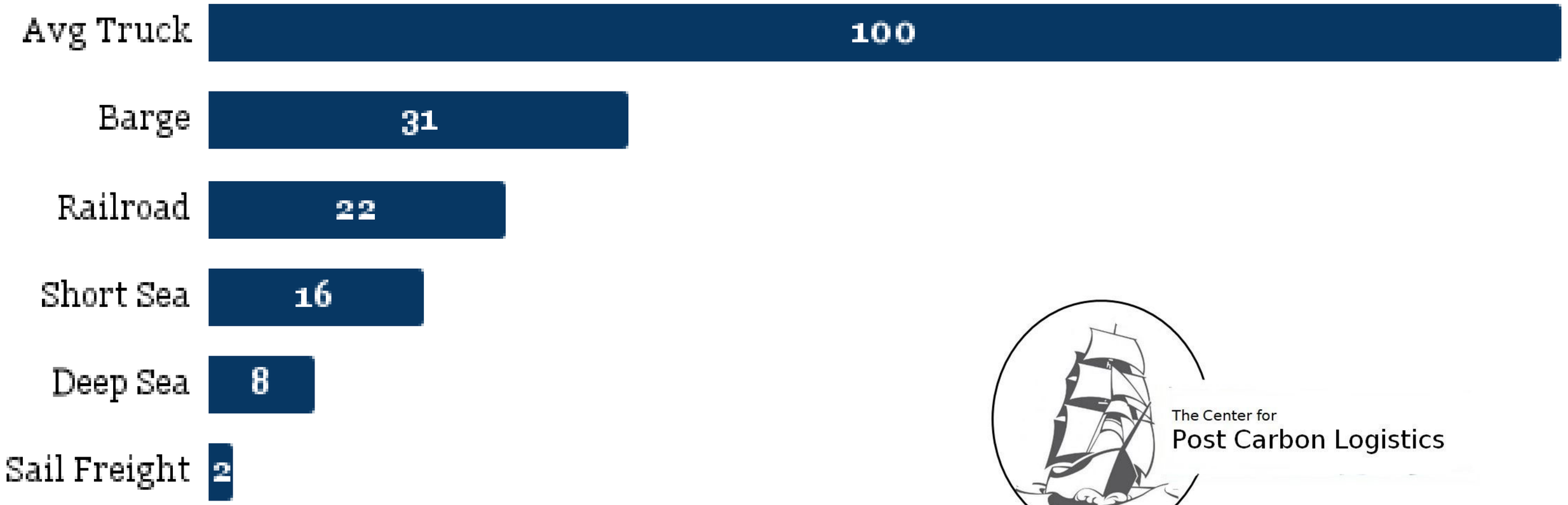
The Center for
Post Carbon Logistics

The Center For Post Carbon Logistics Engineers, Educates, & Advocates For Small Ports And Small Vessels To Revive Sustainable Short Sea Shipping In The US.


2030
Oswego
Rochester
Utica
Buffalo
Syracuse
Schenectady
Burlington
Whitehall
Waterford
Albany
Geneva
Cayuga
Watkins Glen
Ithaca
Hudson
Kingston
Newburgh
Ossining
Cape May
New York Harbor
New Haven
New London
Providence
Newport
Portland
Portsmouth
Salem
Boston

Relative Emissions From Transportation

Vehicle efficiency in grams CO_2 per Tonne-Kilometer.



The Center for
Post Carbon Logistics

Sail Freight Business Model Canvas

Key Partners

Port Authorities

Longshore Labor

Drayage Providers

Seafarers

Coast Guard

Local/State Government

Cargo Brokers (when available)

Key Activities

Sailing Vessel Operations

Logistics Coordination

Receiving Cargo Deliveries

Customer Communications

Key Resources

Sail Freight Vessel

Skilled/Credentialed Crew

Warehousing Space

Docking Space

Cargo Handling Gear

Value Propositions

Scope 1/3 Emissions Reduction

Cost Stabilization/Reduction

Product/Brand Differentiation

Climate Action Credentials

ESG Rating Enhancement

Product Co-Creation

Customer Relationship

Cargo Owners

Consignees

Co-Creators

Co-Branders

Channel

Journalists

Co-Advertisement

Website / Social Media

Direct Labeling

Customer Segments

Business Owners

Co-Creators

Co-Branders

Archipelago: Government Transport Agencies

Cost Structure

CAPITAL COSTS:

Ship Construction
5-Year Refits

FIXED COSTS:

Insurance
Maintenance
Marina/Slip Fees

VOYAGE COSTS:

Crew Wages
Provisioning
Port/Slip Fees
Longshore Fees
Fuel Costs

Revenue Stream

Freight Revenue: Tonnage & Parcel Rates
Co-Branded & Co-Created Goods
Advertisement & Sponsorship Revenues

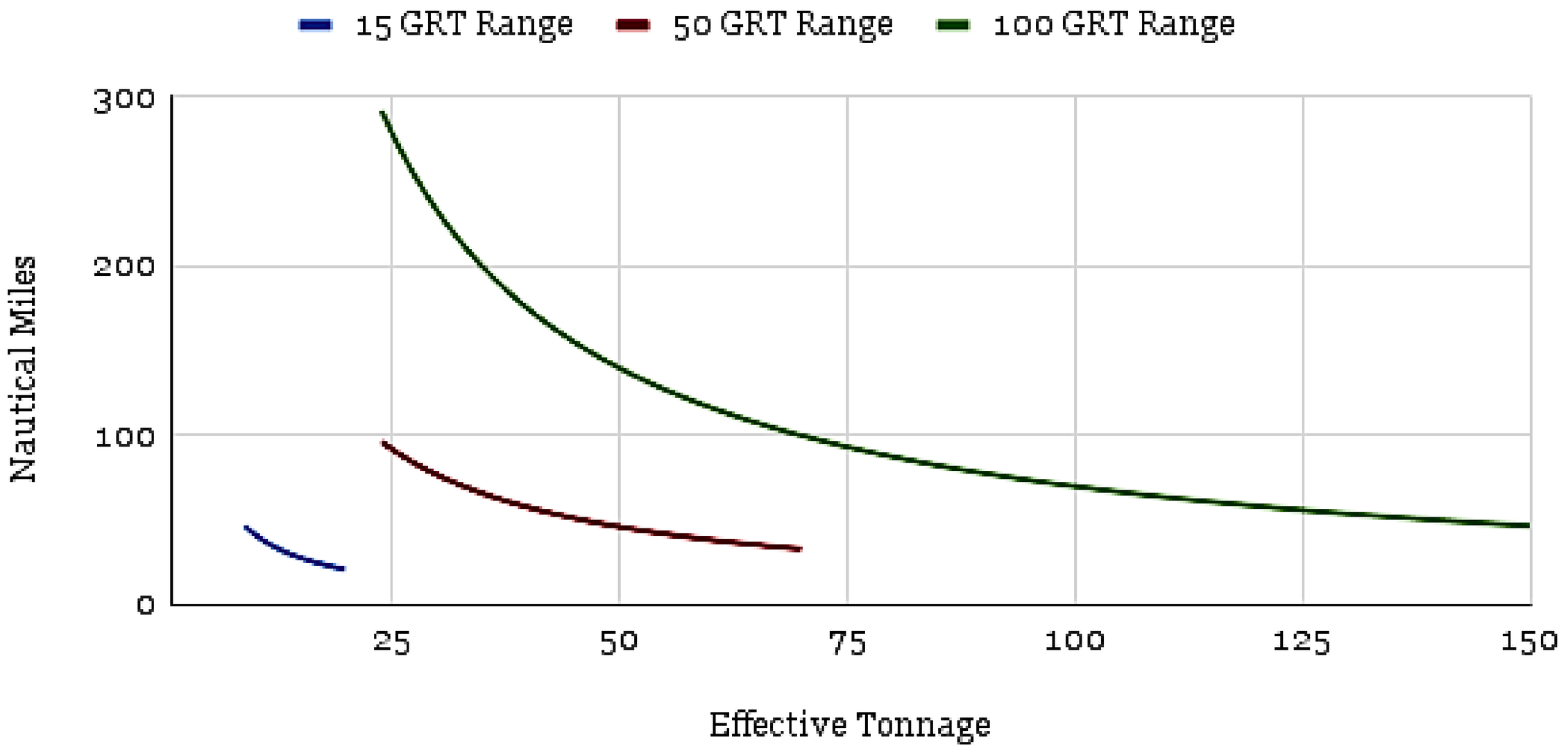
Where possible favor long-term contracts for cargo over spot-market cargo.

Sponsorship presents opportunity which must be balanced against greenwashing risk

Business Model Canvas template developed by Business Model Foundry, 2010. Used under Creative Commons Attribution-Share Alike 3.0 License.

Economic Range of Sail Freighters By Tonnage

Range given by Effective Tonnage within break-even range at $250/ton.



FIVE FORCES MODEL: COST STABILIZATION

CUSTOMER SEGMENTS:

- Business - to - Business Sales
- Direct - to - Consumer Sales
- All Non - Hazardous Cargo
- Price Variation Sensitive Businesses

SUPPLIER POWER
VARIABLE

Seafarer & Longshore Unions
Port Authorities
Shipyards

NEW ENTRANTS
LOW THREAT

High CAPEX
Limited Market
Incumbent Advantages

INDUSTRY RIVALRY

SUBSTITUTES
SIGNIFICANT THREAT

Coastal: Trucking, Aviation
Archipelago: Trucking & Ferries
Oceanic: Conventional Shipping

HIGH THREAT: Electric Trucking

BUYER POWER
MODERATE

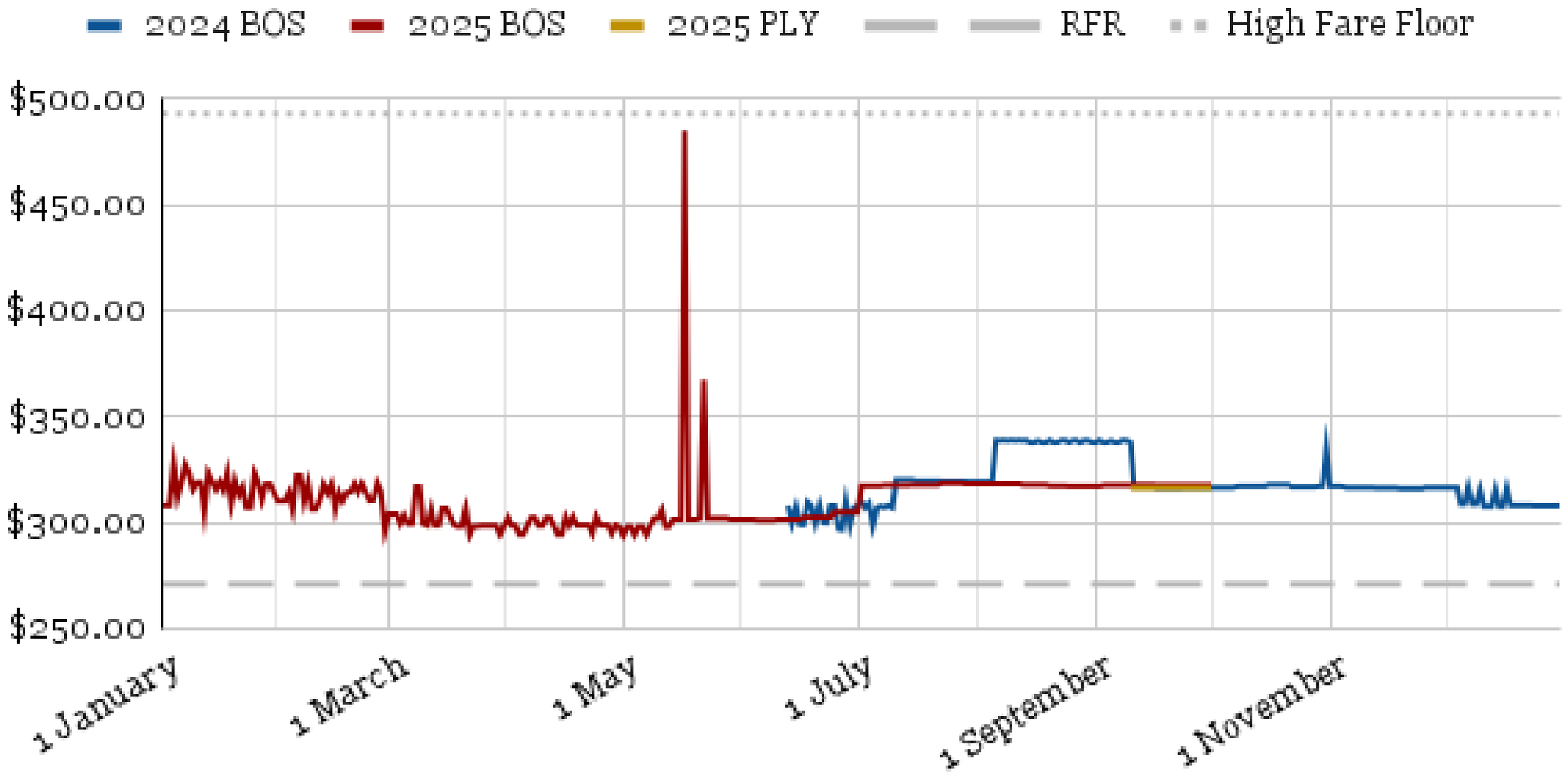
Customer Switching Costs
Coastal/Oceanic: Many Substitutes
Archipelago: Limited Substitutes
Price Sensitivity
Drayage Concerns

STRATEGY STATEMENT:

"Provide predictably and competitively priced, reliable service between ports for all types of freight and cargo owners using the free power of the wind ."

Provincetown Inbound Freight Rates

2000 lb, 64 c.ft pallet carried LTL. RFR for 15 GRT Schooner.



FIVE FORCES MODEL: COST LEADER

CUSTOMER SEGMENTS:

- Business-to-Business Sales
- Direct-to-Consumer Sales
- All Non-Hazardous Cargo
- Price Sensitive Businesses

SUPPLIER POWER
VARIABLE

Seafarer & Longshore Unions
Port Authorities
Shipyards

NEW ENTRANTS
MODERATE THREAT

High CAPEX
Incumbent Advantages

INDUSTRY RIVALRY

SUBSTITUTES
LOW THREAT

Coastal: Trucking, Aviation
Archipelago: Trucking & Ferries
Oceanic: Conventional Shipping

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BUYER POWER
MODERATE

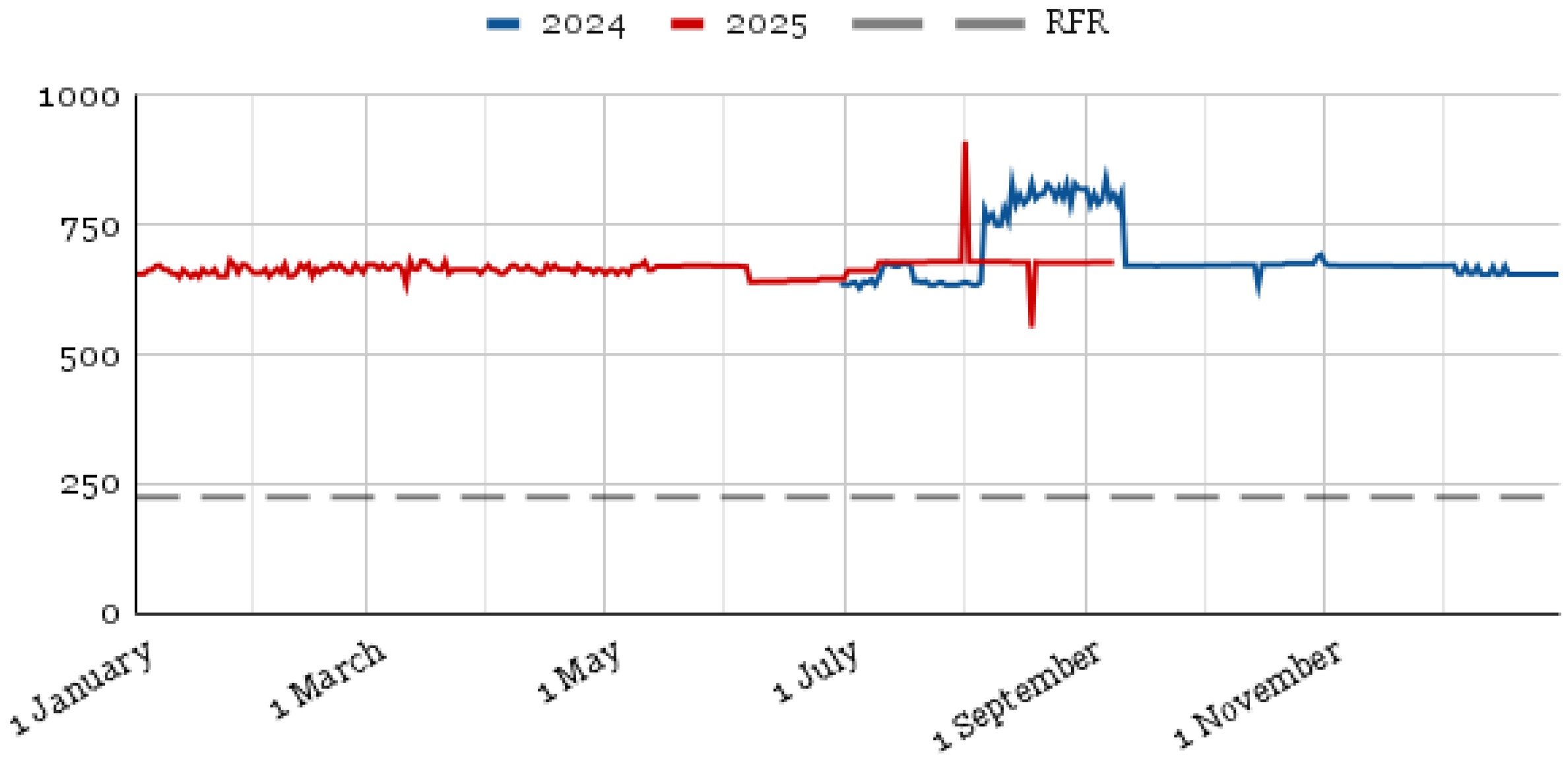
Customer Switching Costs
Many Substitutes
Price Sensitivity
Drayage Concerns

STRATEGY STATEMENT:

"Provide high-quality, low cost transportation services across the service area by employing the freely available power of the wind instead of unreliably priced fossil fuels."

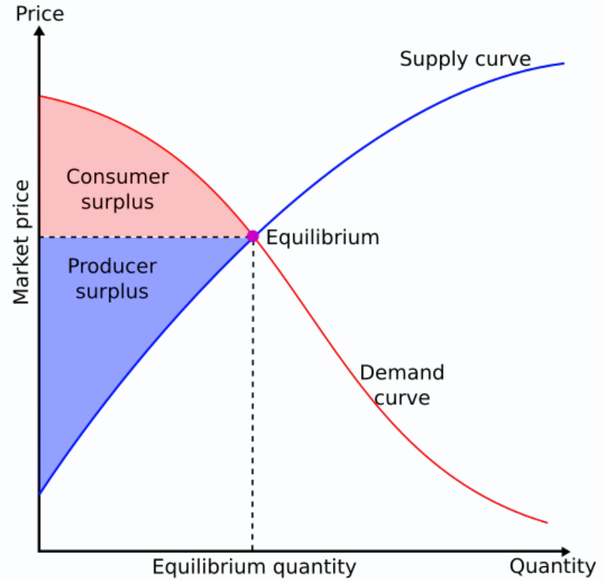
Annual Ferry Rate, New Bedford-Vineyard Haven

2000 lb, 64 Cu Ft Pallet of Malt shipped Less-than Truck Load. RFR for 100 GRT



Route Comparison Model

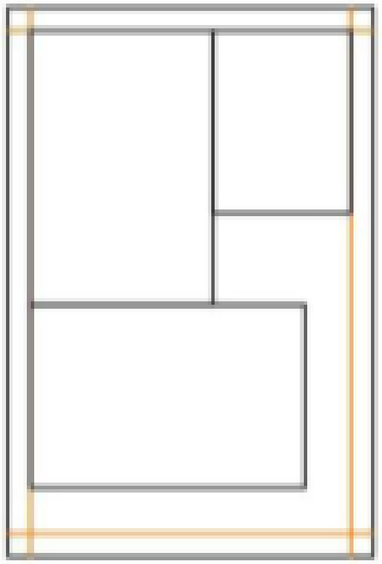
- Crew Pay set at $ 300 per Day = $ 78,000 annually
- $ 50 -60 per ton over Required Freight Rate gives gross margin
- Short distance, high volume, cost leader, Jones Act routes
- Increased Consumer Surplus as indicator of route viability

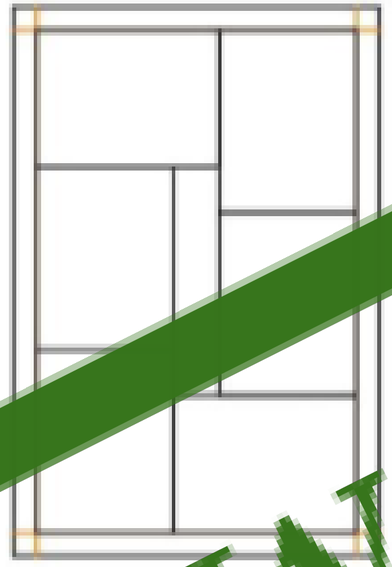


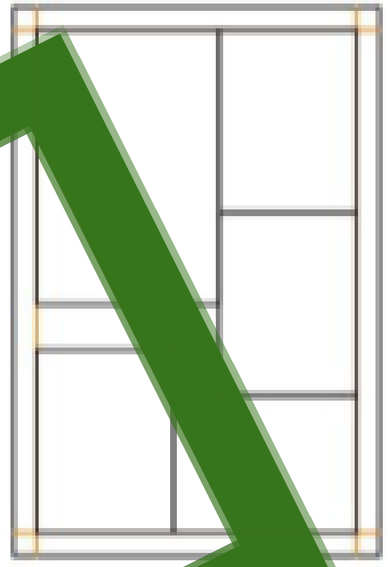
Route	Vessel	t/Day	Miles	Ships	Competition	RFR	CO2e Tonnes
Boston Provincetown	100 GRT	168	49	5	$ 313.14	**$ 108.04**	**503**
Boston NYC	TradeSailer	4,500	234	1	$ 244	**$ 98.34**	**1,071**
NYC Trash Contract	Windfeeder	6,000	12	29	$ 133	**$ 50.12**	**42,520**

How Do We Get There?

- Efficient Cargo Handling
- Ports
- Ships
- Crew



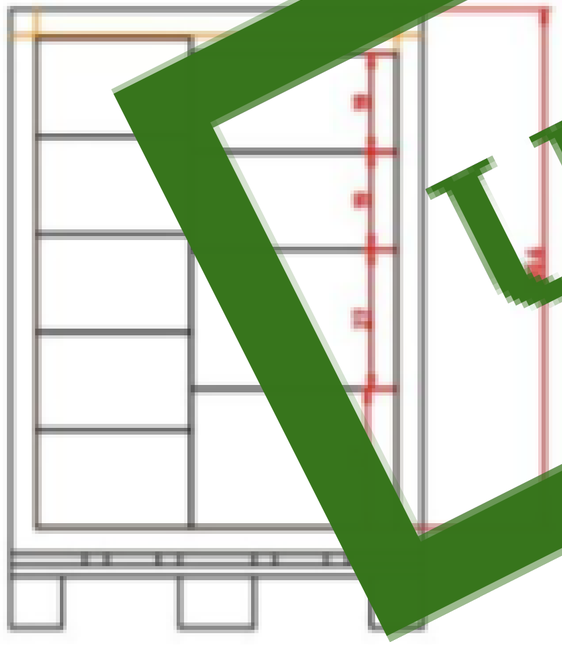




1 x 40x60
4 x 40x30

6 x 40x60
6 x 40x30
cooling space in center

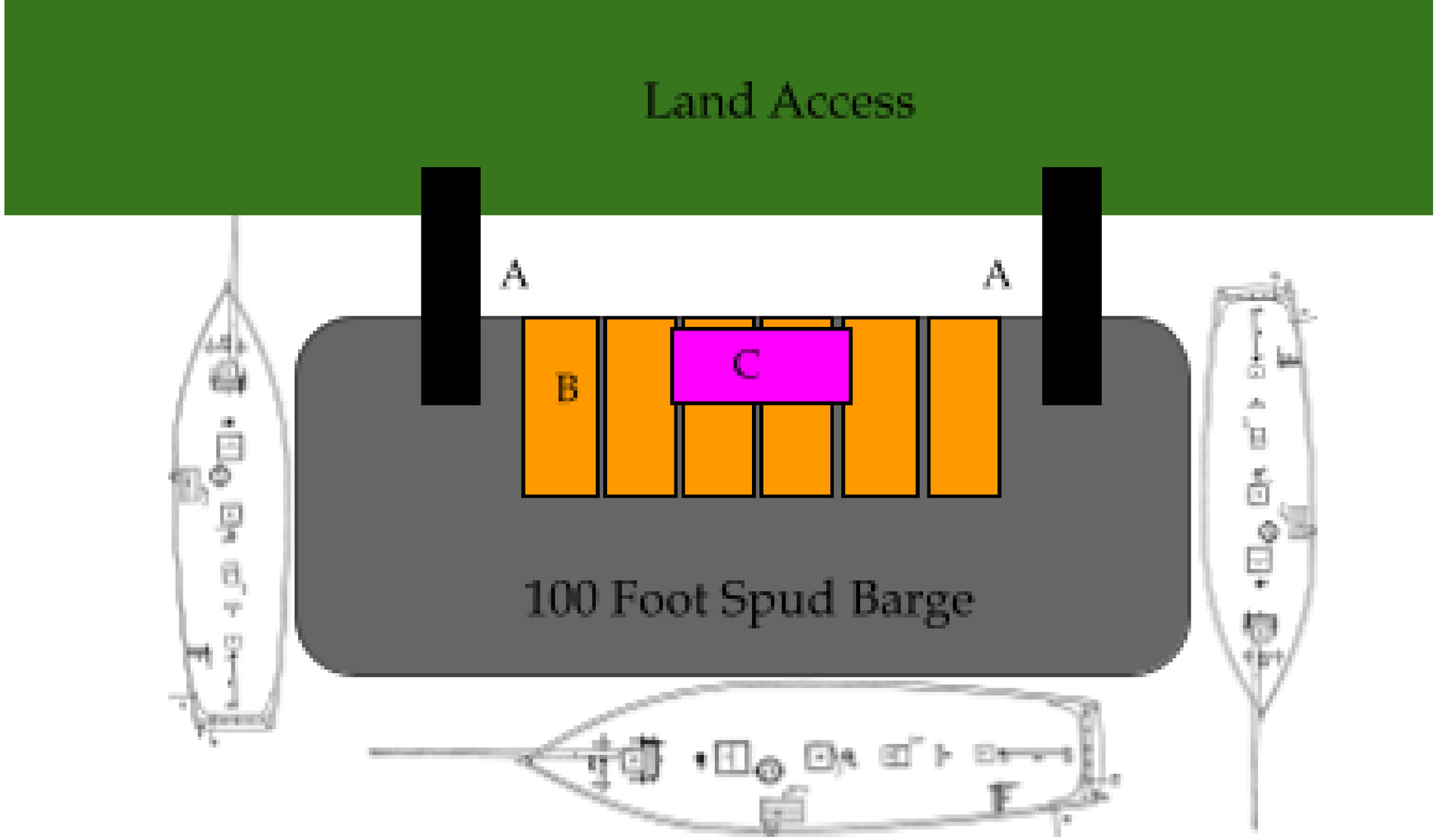
40x60
4 x 40x30



Sketches of c her system
based u aro system
5mm insulation d would be build with 45mm
6 towers of 40x30 v xes allos a central cooling tower.
This could be f and then cool slowly to maintain
emperature in the box.

UNDERWAY

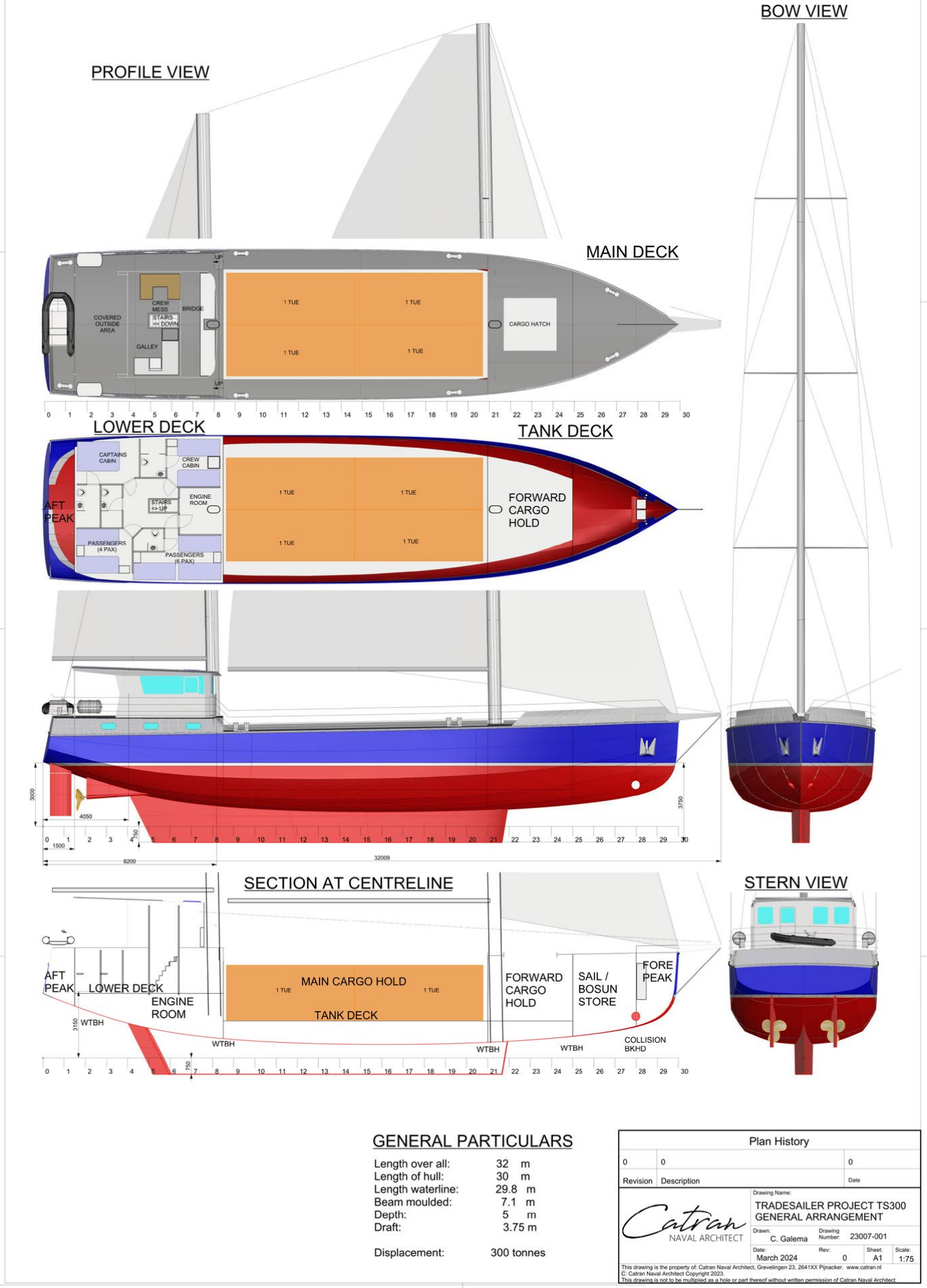
Time's Up



Proposed Layout Of 100 ft. Spud Barge Depot

A. Ramps to shore. B. 20 ft Containers welded to deck.

C. 20 ft Office Container welded on deck above other containers.



GENERAL PARTICULARS

Length over all:	32	m
Length of hull:	30	m
Length waterline:	29.8	m
Beam moulded:	7.1	m
Depth:	5	m
Draft:	3.75	m
Displacement:	300	tonnes

Plan History		
0	0	0
Revision	Description	Date

Catran NAVAL ARCHITECT

Drawing Name: TRADESAILER PROJECT TS300 GENERAL ARRANGEMENT

Drawn: C. Galema | Drawing Number: 23007-001

Date: March 2024 | Rev: 0 | Sheet: A1 | Scale: 1:75

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What Will It Cost?

Center for Post Carbon Logistics

New York Sustainable Freight Corridor

Engineering Tasks Budget

Item	Cost
Micro Container Design	*$1,000*
100 GRT Schooner Design	$50,000
Spud Barge Port Design	$25,000
Vessel Bid Process	$10,000
Spud Barge Port Bid Process	$10,000
Total Cost	**$96,000**

Education Tasks Budget

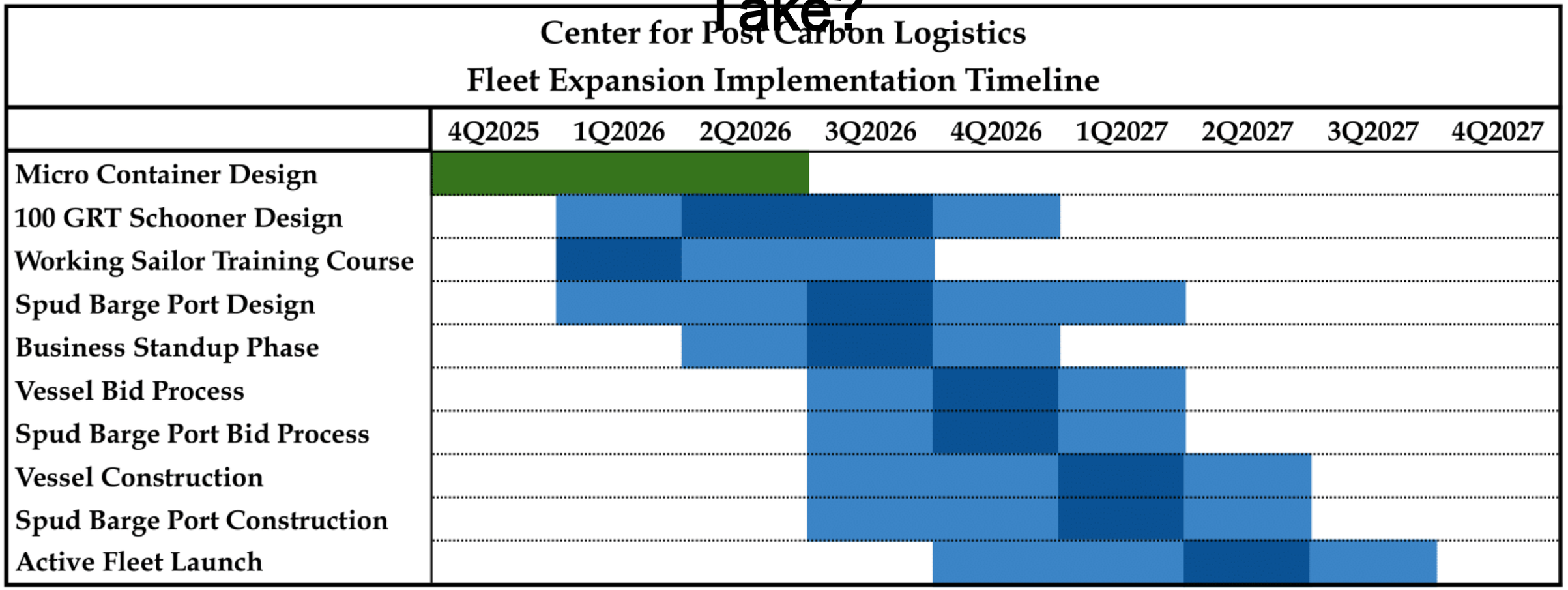
Item	Cost
Curiculum Development	$25,000
Curiculum Publication	$5,000
Collaboration Costs	$20,000
Total Cost	**$50,000**

Advocacy Tasks Budget

Item	Cost
Media Campaign	$30,000
Publication Costs	$10,000
Conference Expenses	$10,000
Total Cost	**$50,000**

Grand Total: $196,000

How Long Will It Take?



How You Can Help:

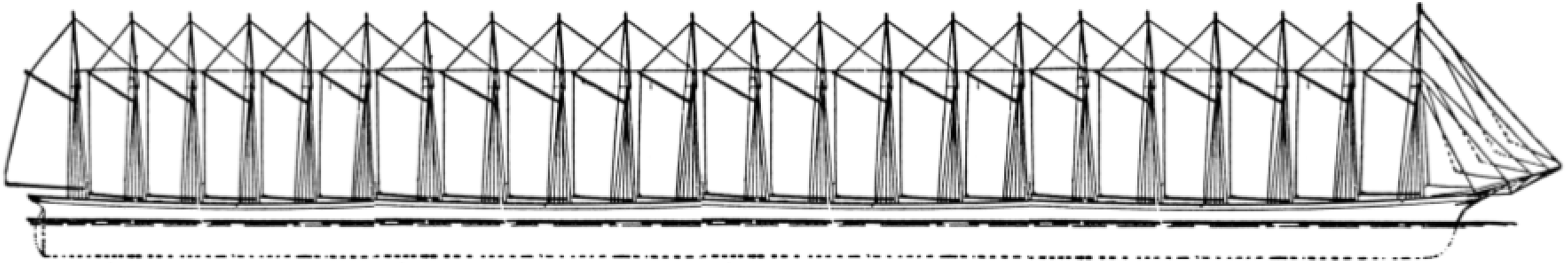
1. Become A Business Co -Founder
2. Sign Up To Become An Investor
3. Volunteer
4. Donate

www.PostCarbonLogistics.org

The Center for
Post Carbon Logistics

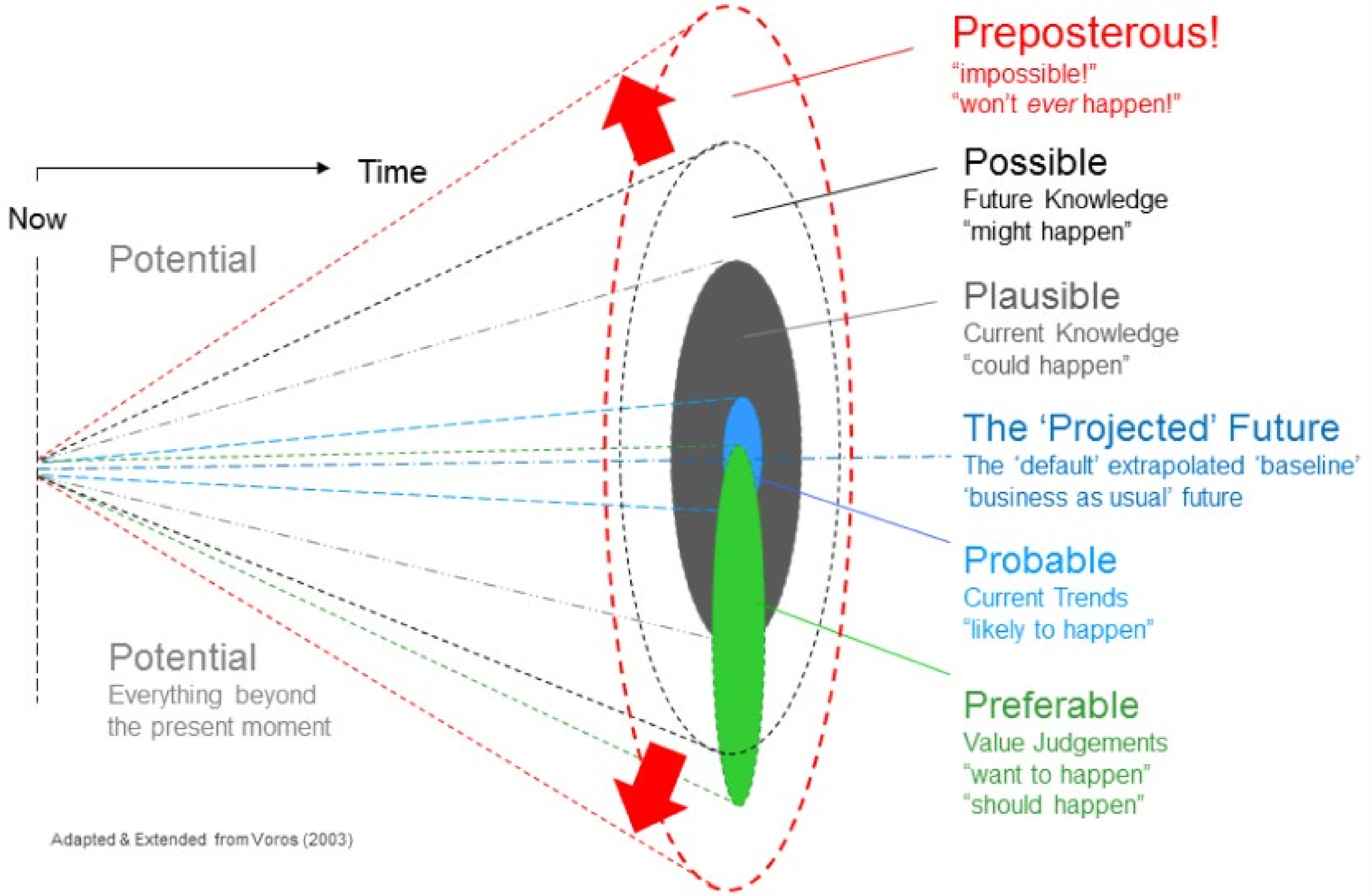
75 Breezy Hill Road
Kingston, NY 12401

SCAN ME



Questions?

Steven@PostCarbonLogistics.org


Time
Now
Potential
Potential
Everything beyond
the present moment
Preposterous!
"impossible!"
"won't *ever* happen!"
Possible
Future Knowledge
"might happen"
Plausible
Current Knowledge
"could happen"
The 'Projected' Future
The 'default' extrapolated 'baseline'
'business as usual' future
Probable
Current Trends
"likely to happen"
Preferable
Value Judgements
"want to happen"
"should happen"
Adapted & Extended from Voros (2003)