

# Washington State Ferries 2040 Long Range Plan

## Technical and Policy Advisory Group

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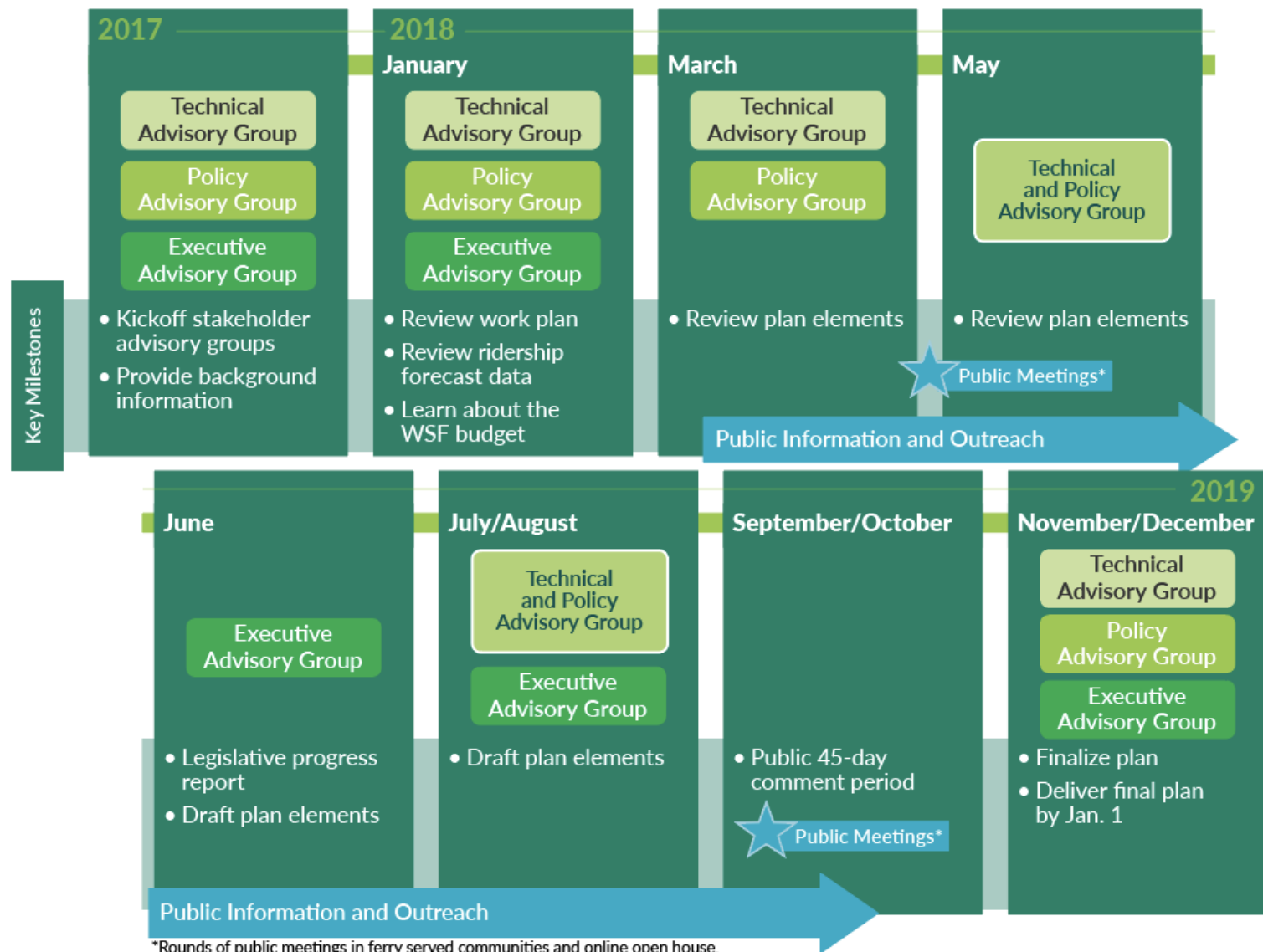
Hadley Roderio, Strategic Communications Manager

July 19, 2018

# Agenda

- Welcome and introductions
- Progress report to Legislature
- Review Draft Plan elements
  - Reliable service
  - Manage growth
- Lunch break
- Review remaining Draft Plan elements
  - Customer experience
  - Sustainable and resilient system
  - Budget and investment needs
- Discuss fall community engagement plan
- Next steps

# Timeline

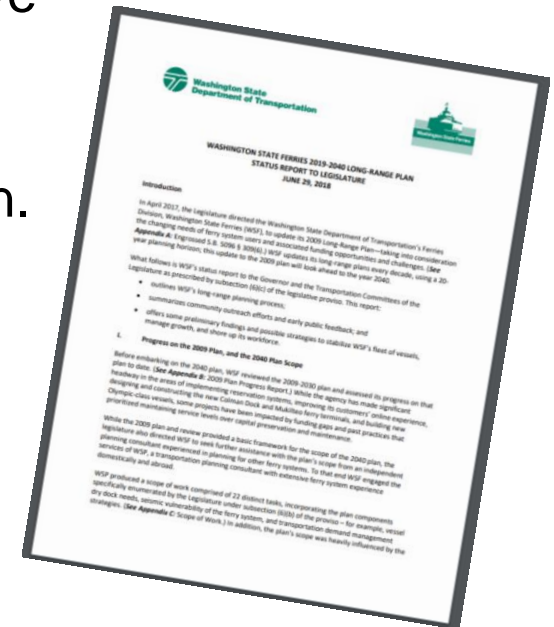


\*Rounds of public meetings in ferry served communities and online open house.

# Progress report to Legislature

## Preliminary findings and strategies:

- Near term: Stabilize the fleet by building five new vessels.
- Implement technology and adaptive management strategies to ease congestion.
  - Expand reservations.
  - Leverage vessel replacements to increase capacity.
  - Invest in technology to enhance customer experience.
- Invest in workforce development to ensure system reliability for future generations.
- Establish training and mentorship program.



# Reliable service



# Manage growth



# Customer experience

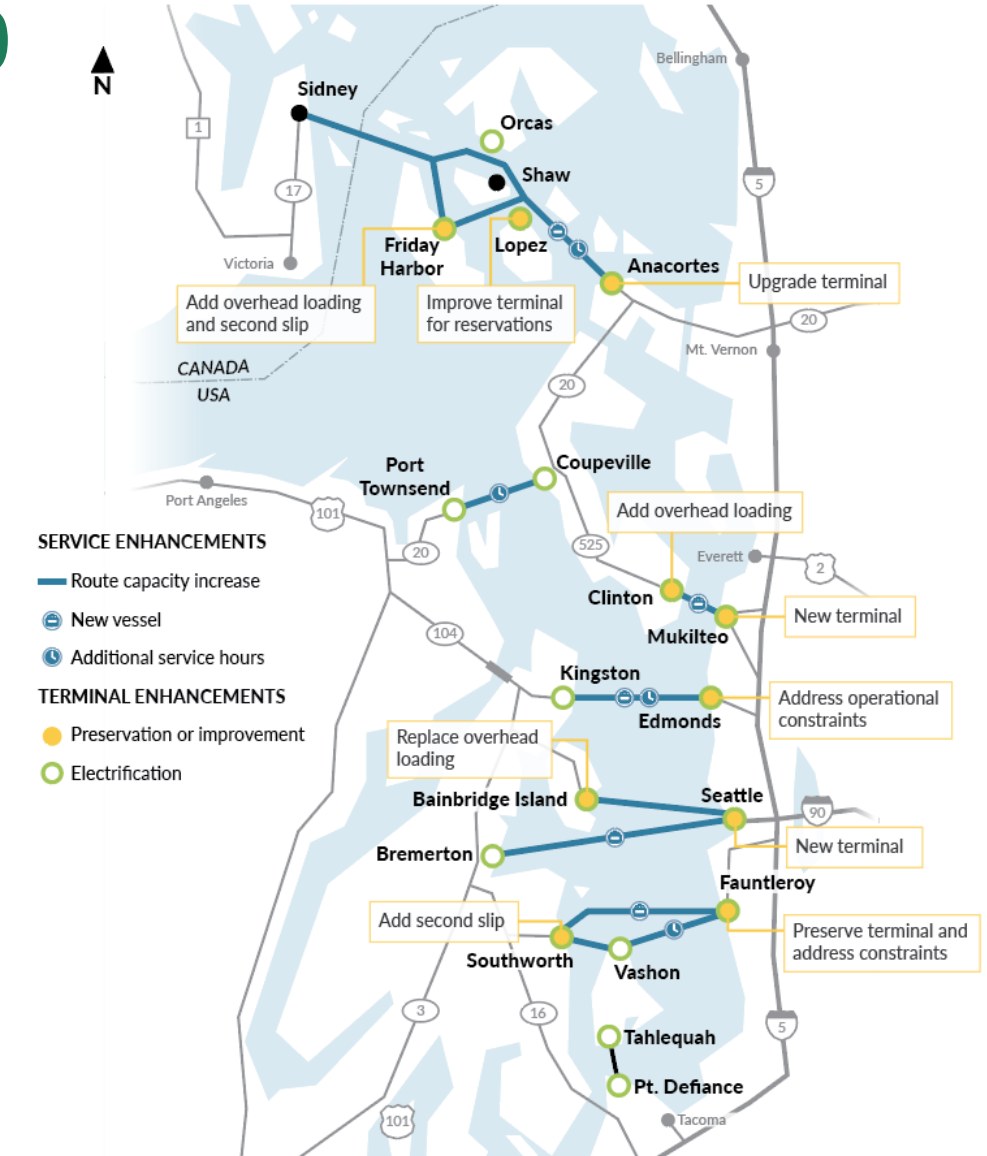


# Sustainability and resilience



**Draft  
Plan**

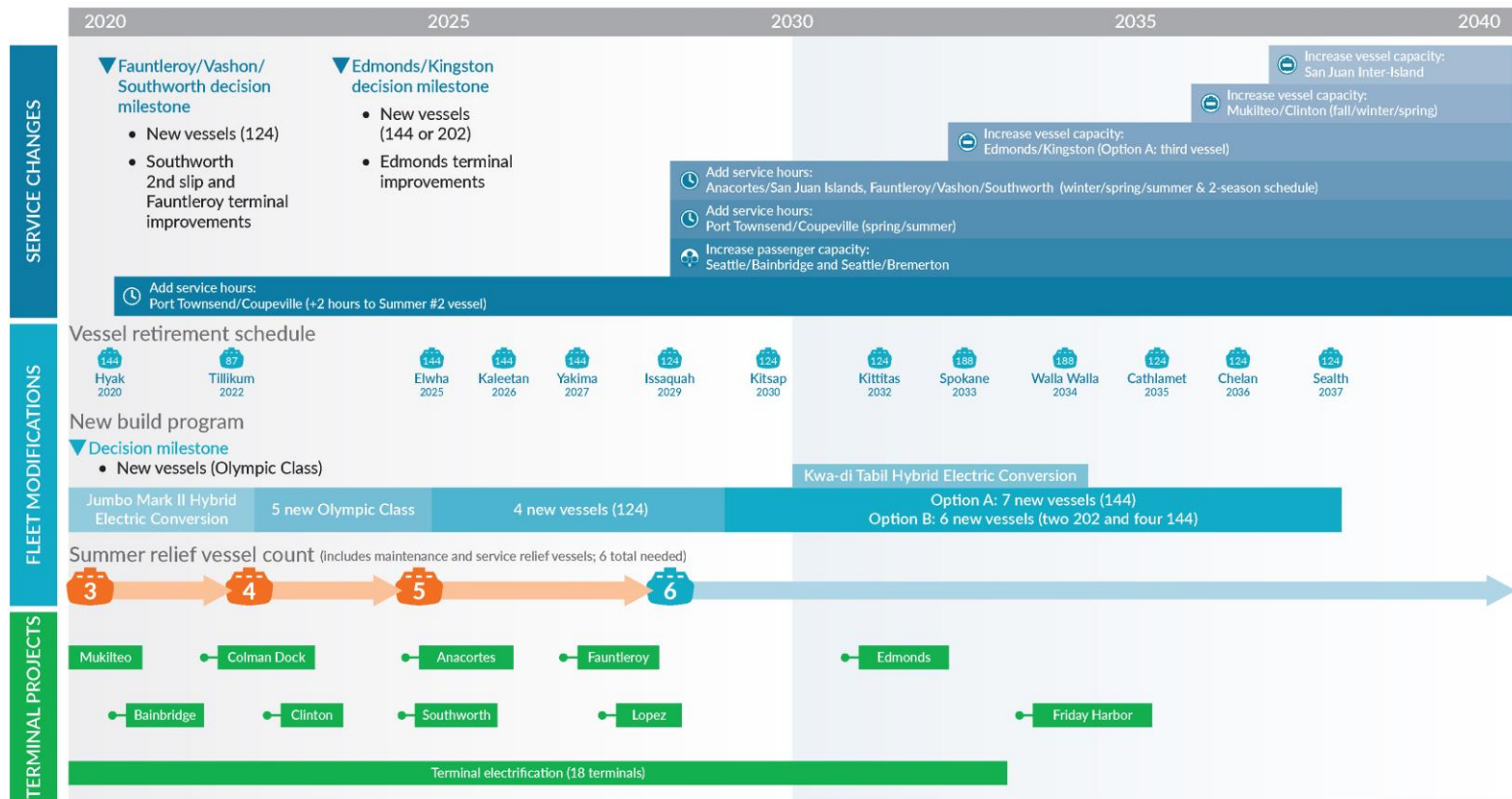
# Service and terminal enhancements by 2040



# Draft plan implementation timeline

## Draft plan implementation timeline

DRAFT July 2018



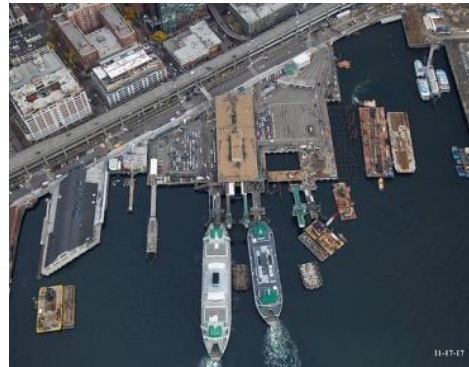
# Questions?



# Reliable service—Stabilize the system to maintain reliable service through 2040.

## Draft Plan recommendations:

- Stabilize the fleet by building new vessels.
- Maintain and improve terminal efficiency.
- Develop workforce.

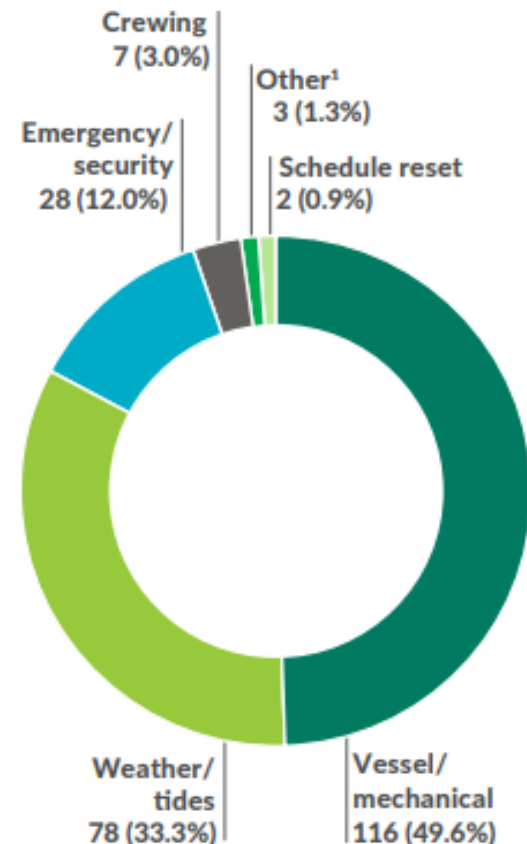


# Reliable service—Replace aging vessels to maintain reliable service.

## Draft Plan recommendations:

- Near-term:
  - Build five new vessels.
- Long-term:
  - Comprehensive construction program.
- Review policies:
  - Vessel lifespan
  - Contracting restrictions
  - Vessel procurement processes
  - Performance measures

## Top reasons for service cancellation:



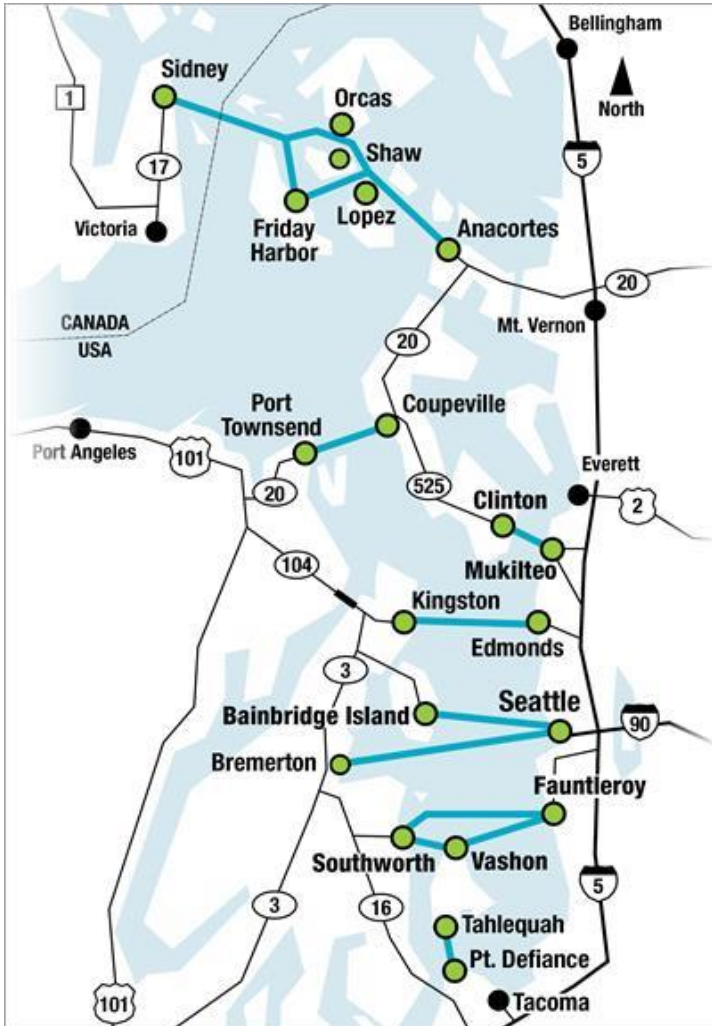
# Reliable service—Invest in new vessels to maintain reliable service.

## Draft Plan recommendations:

- Build new vessels to provide reliable service during scheduled maintenance and allow for needed maintenance time.
- Plan more time for maintenance.
- Enhance service when relief fleet is complete.

	Fleet size	Planned maintenance weeks
Existing policy	22	8
<b>Long Range Plan recommendation</b>	<b>26</b>	<b>12</b>

# Reliable service—Preserve and improve terminals to enhance safety and operations.



## Draft Plan recommendations:

- Improve dwell time and reduce operational conflicts.
- Enhance multimodal connections.
- Add electric vessel charging and infrastructure.
- Establish dwell time performance measures.

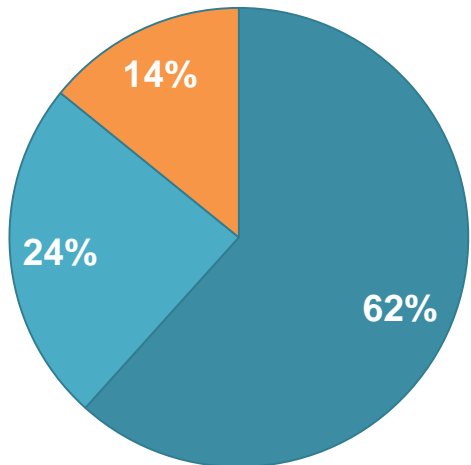
# Reliable service—Invest in attracting, retaining, and developing workforce.

## Draft Plan recommendations:

- Develop program to retain, recruit, train, and mentor staff.
- Update salary survey to reflect market conditions.

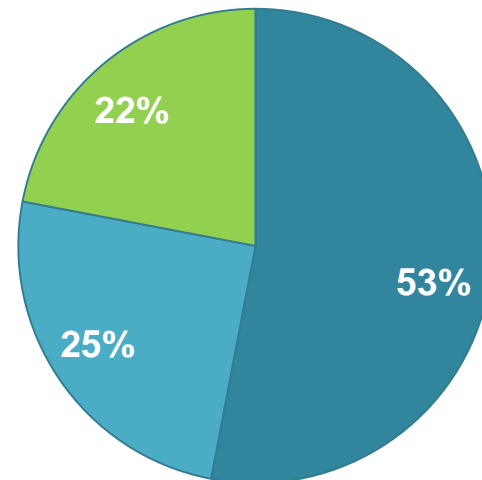
**Deck officers eligible to retire within five years**

■ Master   ■ Chief Mate   ■ Second Mate



**Engineers eligible to retire within five years**

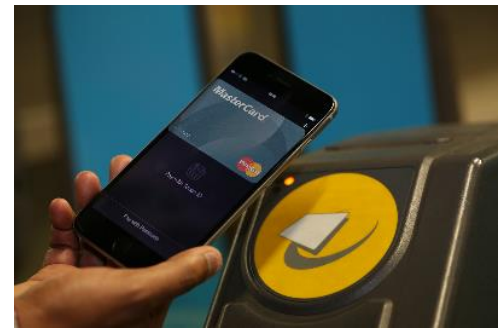
■ Chief Engineer   ■ Asst Engineer   ■ Other



# Manage growth—Invest in technology and adjust schedules to spread demand and encourage walk-on riders.

## Draft Plan recommendations:

- Promote walking and biking to improve efficiency.
- Use technology to measure vehicle wait time.
- Evaluate expanding reservations.
- Further consider pricing demand management.
- Policy:
  - Add passenger level of service.
  - Measure space available for reservations.
  - Add wait time performance measure.



# Questions?

# Manage growth—Adjust schedules and vessel capacity to manage demand.

## Draft Plan recommendations:

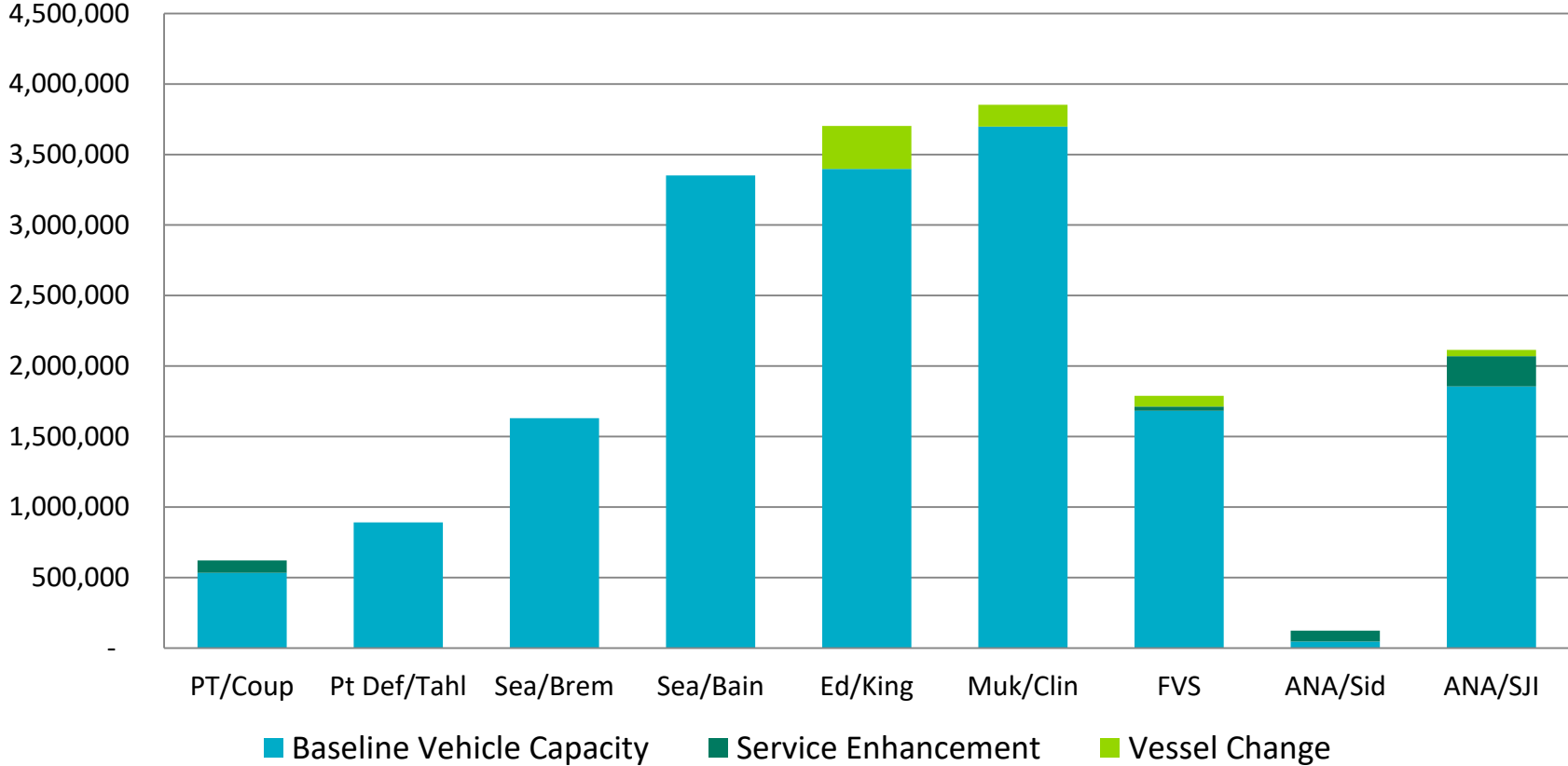
- Increase service hours.
  - Restore service hours.
  - Adopt two-season schedule.
  - Consider options for Central Sound routes.
- Strategically increase vessel capacity.





# Manage growth—Adjust schedules and vessel capacity to manage demand.

Annual Vehicle Capacity Changes\*



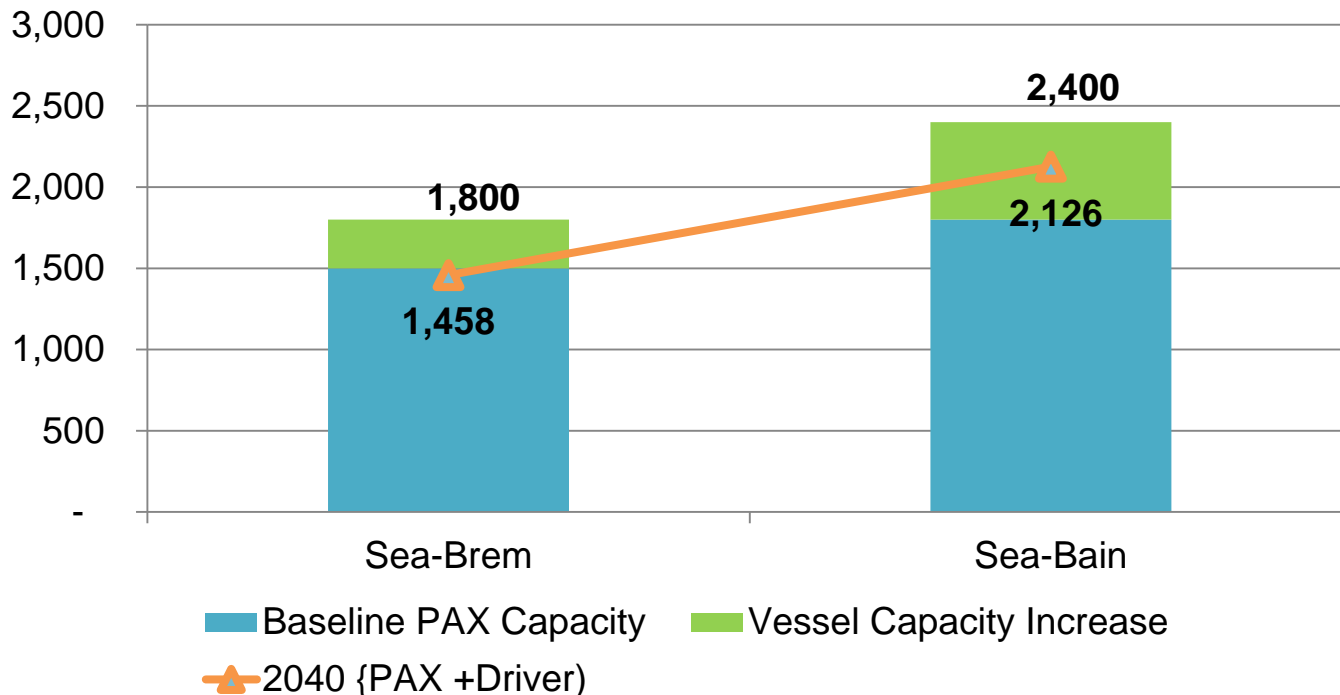
\*Includes Option A for Edmonds/Kingston

# Manage growth—Increase passenger capacity to encourage walking and biking.

## Draft Plan recommendations:

- Increase passenger capacity on Bremerton and Bainbridge routes.

**Peak sailing ridership with vessel passenger capacity increases**



# Manage growth—Spread demand and encourage walk-on ridership.

## Draft Plan recommendations:

- Expand reservations.
- Consider pricing and fare structure.
- Partner with transit providers to improve multimodal connections.
- Give customers real-time trip planning information.
- Improve fare collection.



# Questions?

# Options for Central Sound routes — Edmonds/Kingston vessels

- Option A: Continue operating two large vessels.
- Option B: Replace two large vessels with a three mid-sized vessels.





















Option	Number of vessels in service	Vessel type	Per vessel vehicle capacity	Per vessel passenger capacity	Sailing frequency
A	2	Large	188/202	1800 / 2000	~Every 45-60 min
B	3	Medium	144	750 to 1200	Every 30 min

# Options for Central Sound routes

KEY	 Existing/Neutral	 Increase Cost	 Enhancement	 No/Poor
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## Draft Plan options:

- A. Replace two (2) large-vessel operation with a three (3) mid-sized vessel operation
- B. Maintain existing two (2) large-vessel operation

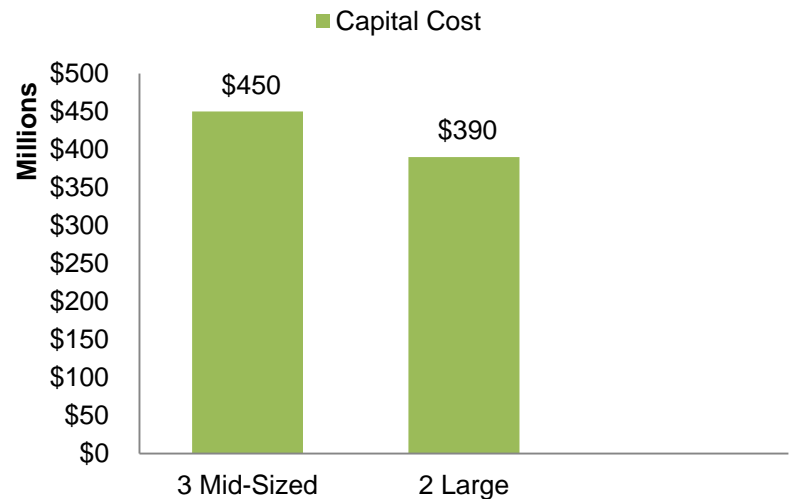
System Element	2-Vessel Operation	3-Vessel Operation	Other/Notes
Capacity			Increase in service hours
Transit Connections Synch			30 minute cycles synchs better with transit
System Congestion Relief			<b>Congestion relief for Kitsap routes</b> — some diversion of growth from Bainbridge and Bremerton routes
Frequency of Service			Enhanced frequency of service (30 minute headway)
Operating Expense			Higher operating costs (+\$3.2 M annually—offset by crew/energy/insurance)
Revenue Impacts			Increased revenue (~ \$2 M fare revenue)
Capital Cost			Terminal enhancements needed in either scenario and additional vessel
Terminal Impacts			Smaller pulses of traffic, 2 slips desirable
System Resilience and Fleet Configuration			Interchangeability and simplification of crew training/maintenance
Maintenance Requirements			Increases maintenance costs, no additional relief vessel

# Options for Central Sound routes

## Assessment:

- Congestion relief:
  - Additional capacity at Edmonds/Kingston.
  - Divert some growth from other routes.
- Preliminary net annual operating cost increase of (~\$2.6 mil\*).
- Additional vessel capital costs.
- System resiliency.

## One-time capital costs (In Millions)



\* Shown in 2019 constant dollars

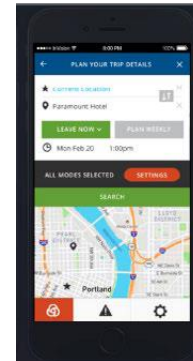
# Questions?



# Customer experience—Use technology to enhance customer experience.

## Draft Plan recommendations:

- Give customers better trip planning information.
  - Ticketing and reservation system.
  - Customer alerts.
  - Accurate terminal conditions and wait times.
  - Terminal wayfinding and real-time information.
  - Real-time parking information.
- Reduce wait times.
  - Improve terminal operations.
  - Increase service and maintenance relief vessels.
  - Upgrade technology.



# Questions?

# Sustainability and resilience— Green the fleet and reduce our environmental footprint

## Draft Plan recommendations:

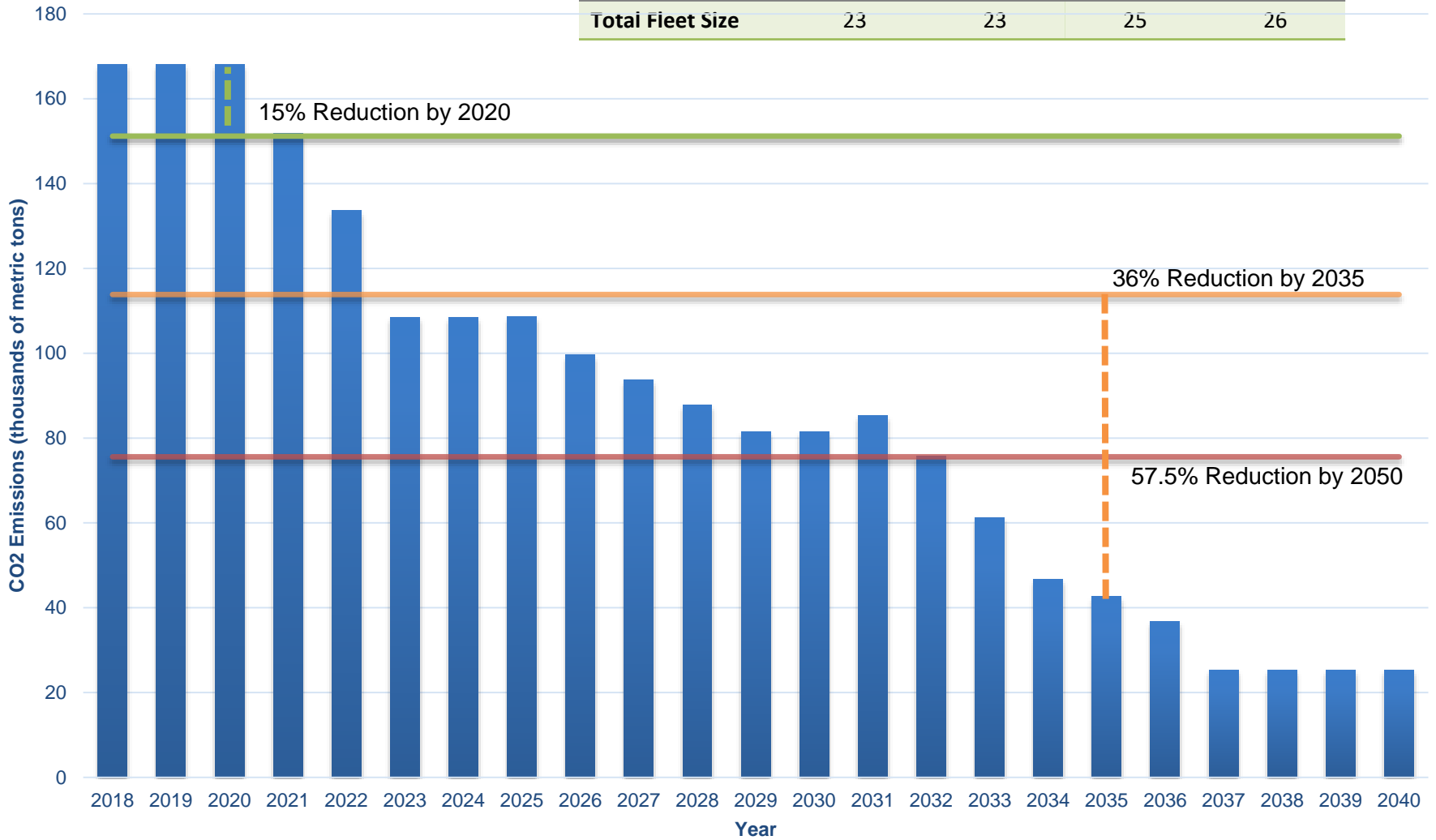
- Green the fleet.
  - Reduce fuel consumption.
  - Electrify fleet.
  - Quiet ferries to reduce impact to Orca whales.
- Promote walk-on ridership.
- Improve operational efficiency.
  - Reduce idle time for queued vehicles.
  - Improve buildings' energy efficiency.
- Organizational strategy.
  - Baseline and reporting.



# Projected CO<sub>2</sub> emissions

## Annual CO<sub>2</sub> Emissions RCW 70.235.050 Reduction Requirements

	2019	2023	2030	2040
Plug-in Hybrid	0	5	12	22
Diesel	23	18	13	4
<b>Total Fleet Size</b>	<b>23</b>	<b>23</b>	<b>25</b>	<b>26</b>



# Resilient system—Plan for emergencies and climate change to sustain reliable service through 2040

## Draft plan recommendations:

- Plan for earthquakes and long term rising sea level.
  - Establish key routes for repair.
  - Identify and prioritize seismic upgrades.
  - Develop emergency response plan.
  - Explore alternative landing sites and loading methods.
  - Identify fuel supplier emergency access.
  - Increase fleet size for emergency relief.
  - Assess terminal elevation needs.
  - Evaluate design standards.
- Identify potential partners and funding sources.



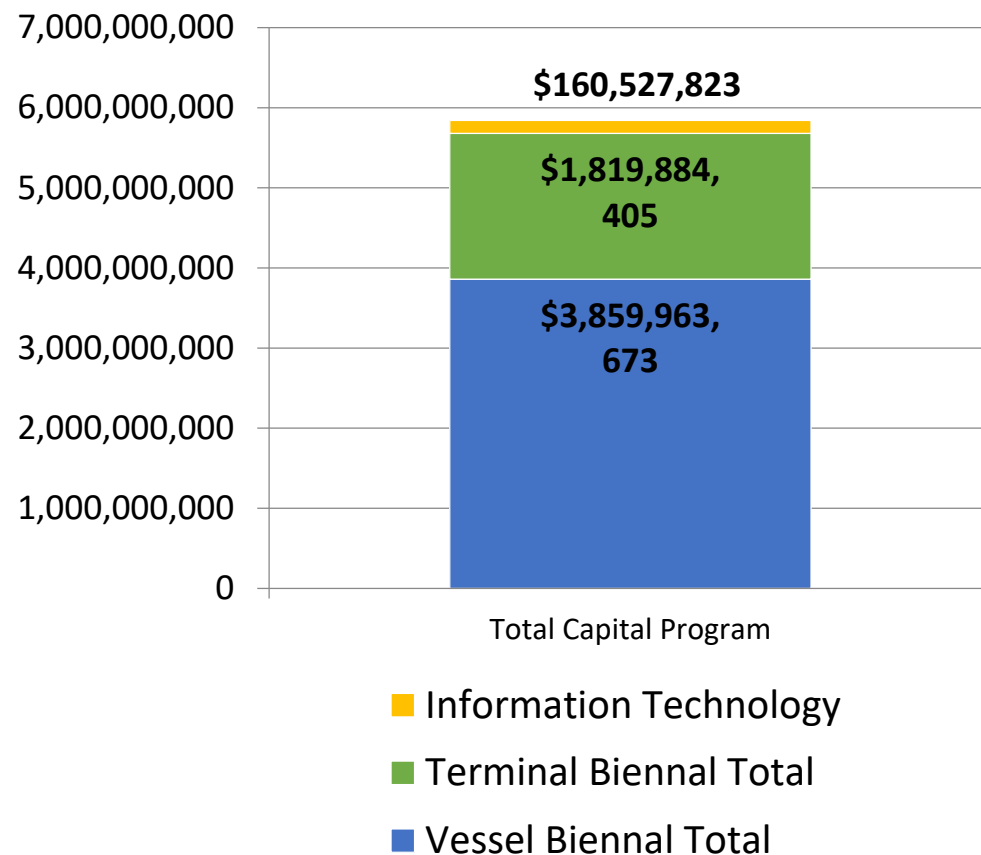
# Questions?

# Investment and implementation— Plan for a safe, reliable, sustainable, and integrated system.

- Financial plan approach
  - Investments for near-term, mid-term, and long-term
  - Capital and operating costs
  - Revenue: Sources and uses
- Capital costs
  - Vessels
  - Terminals
  - Technology
- Operating costs
  - Labor increases
  - Fuel (Energy) decreases
  - Other

# Investment and implementation— Preliminary capital costs

**2020-2040 Capital Investment Plan**



## Vessels:

- 16 New vessels (hybrid-electric).
- 6 Existing vessel conversions.

## Terminals:

- Operational improvements projects.
- 18 Terminal conversions and utility upgrades for electric charging.

## Information technology:

- System upgrades and enhancements to support operations.

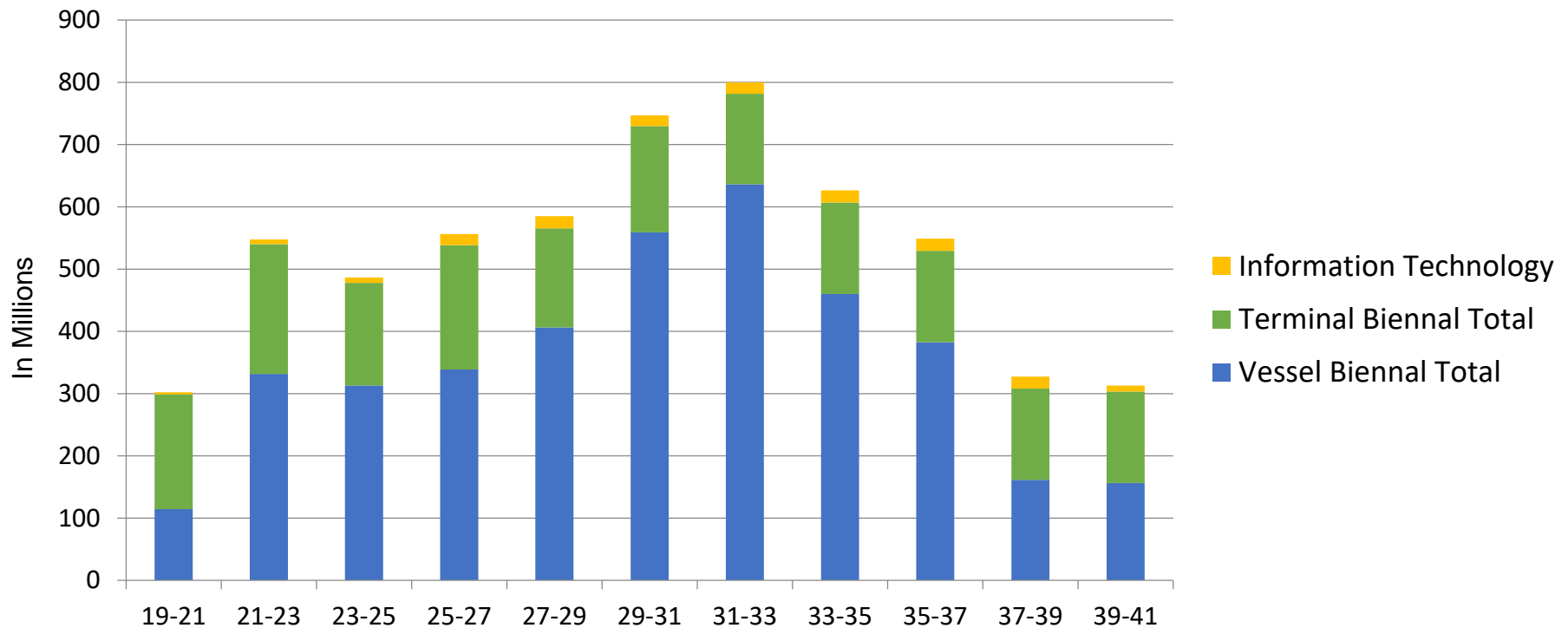
\* Shown in 2019 constant dollars



# Investment and implementation— Preliminary capital costs

Dollars by category and biennium:

2020-2040 Capital Investment Plan by Biennium

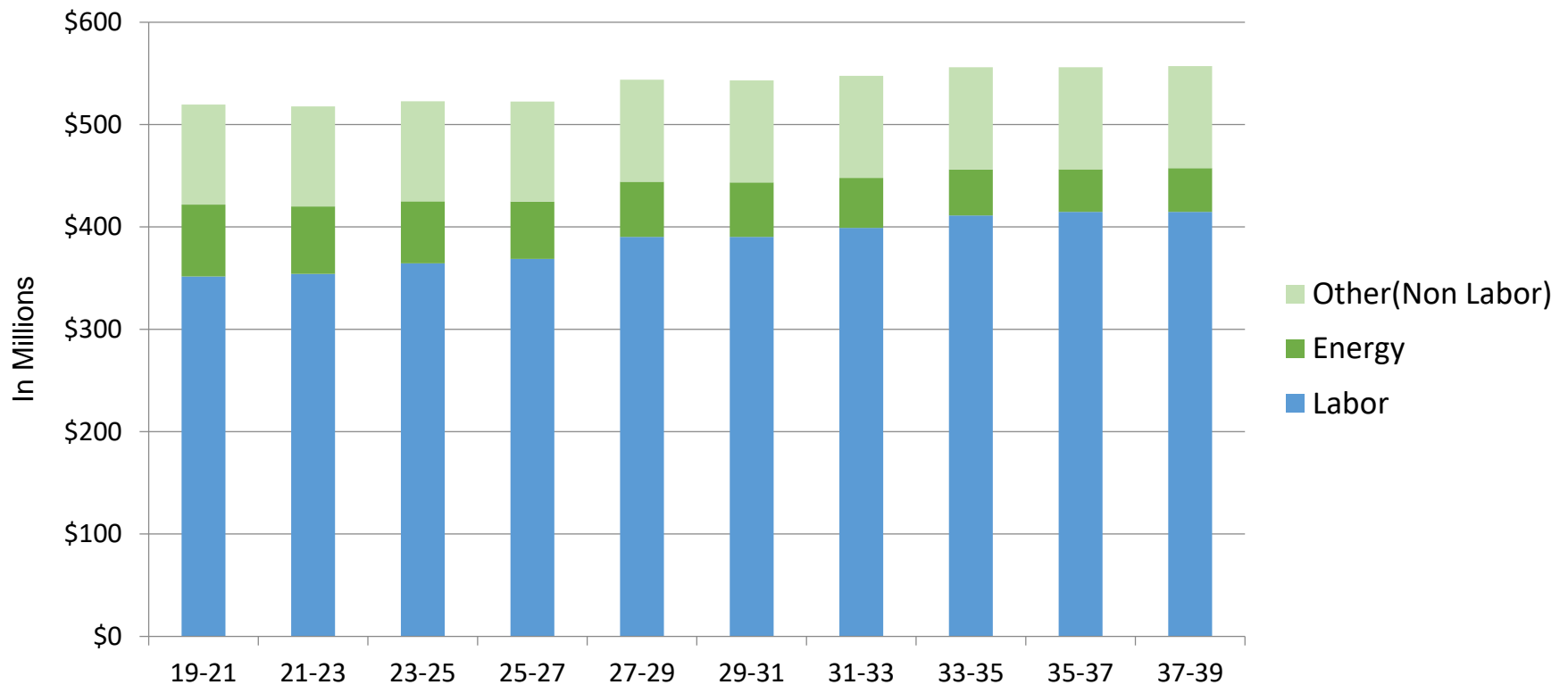


\* Shown in 2019 constant dollars

# Investment and implementation— Preliminary operational costs

Dollars by category and biennium :

2019-2040 Operating Investment Plan



\* Shown in 2019 constant dollars

# Cost efficiencies— in investment and operation.

## Influential Factors:

- Policy
- Regulations
- Management Decisions
- Technology
- Other (market, labor practices, ridership, etc)

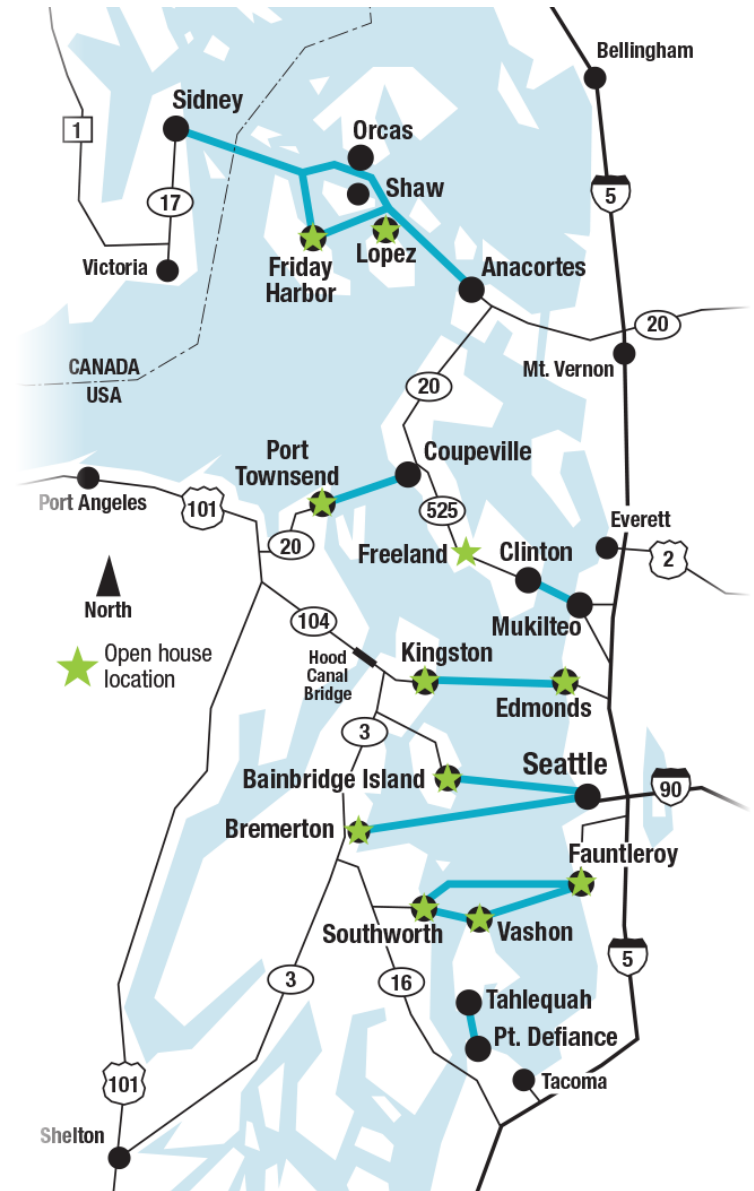
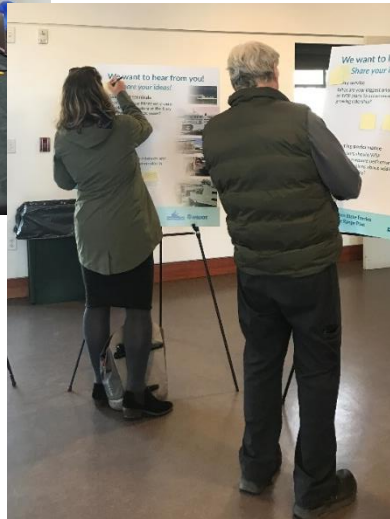
## Draft plan recommendations:

- Capital
  - Policy/legislation
  - Vessel design
  - Resiliency and flexibility
- Labor
  - Crewing levels
  - Technology
- Fuel
  - Vessel operations
- Maintenance
  - Eagle Harbor workforce
  - Cost models
- Other
  - Energy efficient design
  - Partnerships

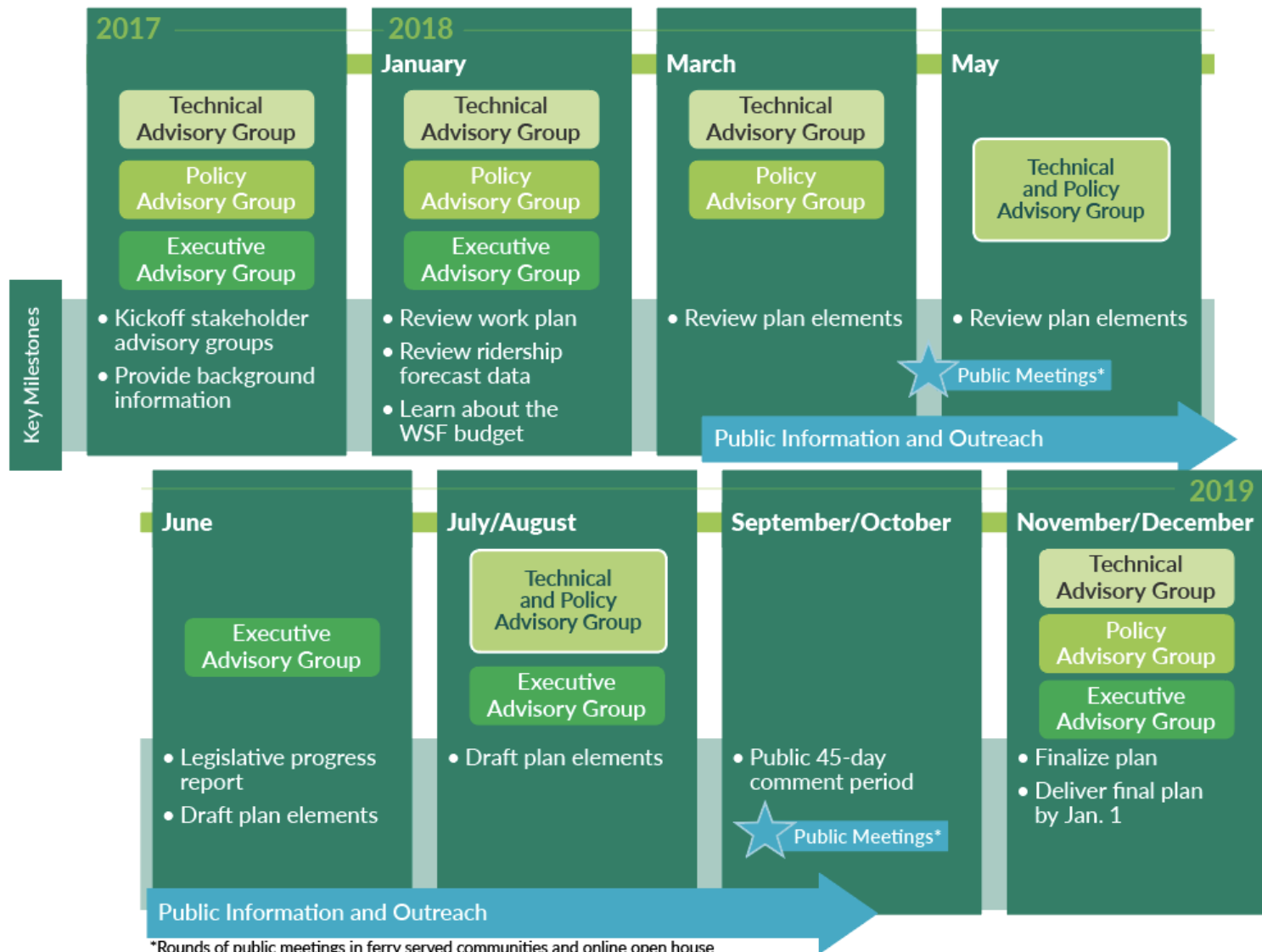
# Questions?

# Fall community engagement

- 11 system-wide open houses
  - Expanded onboard outreach
  - Online open house
- [WSFlongrangeplan.com](http://WSFlongrangeplan.com)



# Look ahead



\*Rounds of public meetings in ferry served communities and online open house.