Washington State Ferries 2040 Long Range Plan

Technical and Policy Advisory Group

Stephanie Cirkovich, WSF Community Services and Planning Director
Ray Deardorf, WSF Senior Planning Manager
Hadley Rodero, Strategic Communications Manager

May 17, 2018

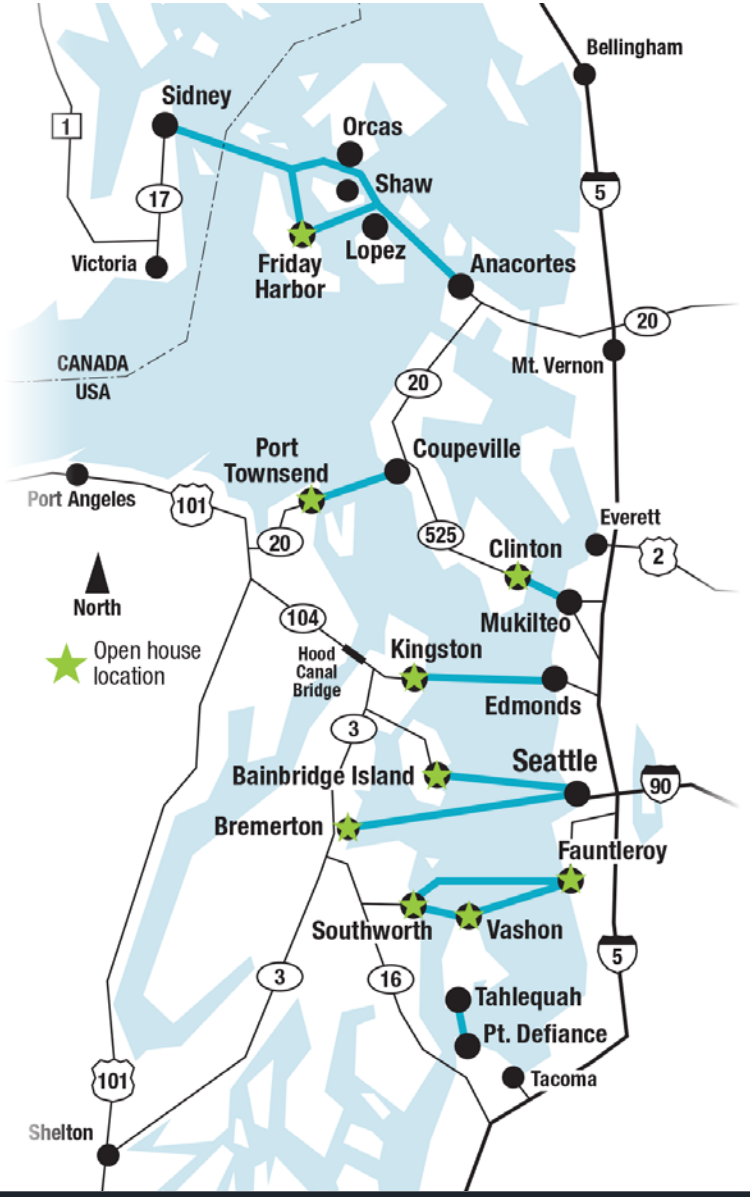
Agenda

- Welcome and introductions
- Community engagement update
- Present key plan elements
- Lunch break
- Update on work to date for additional plan elements
- Small group discussions
  - Route-by-route service scenarios
  - Vessel maintenance and replacement
- Small group report out
- Next steps

Community engagement update

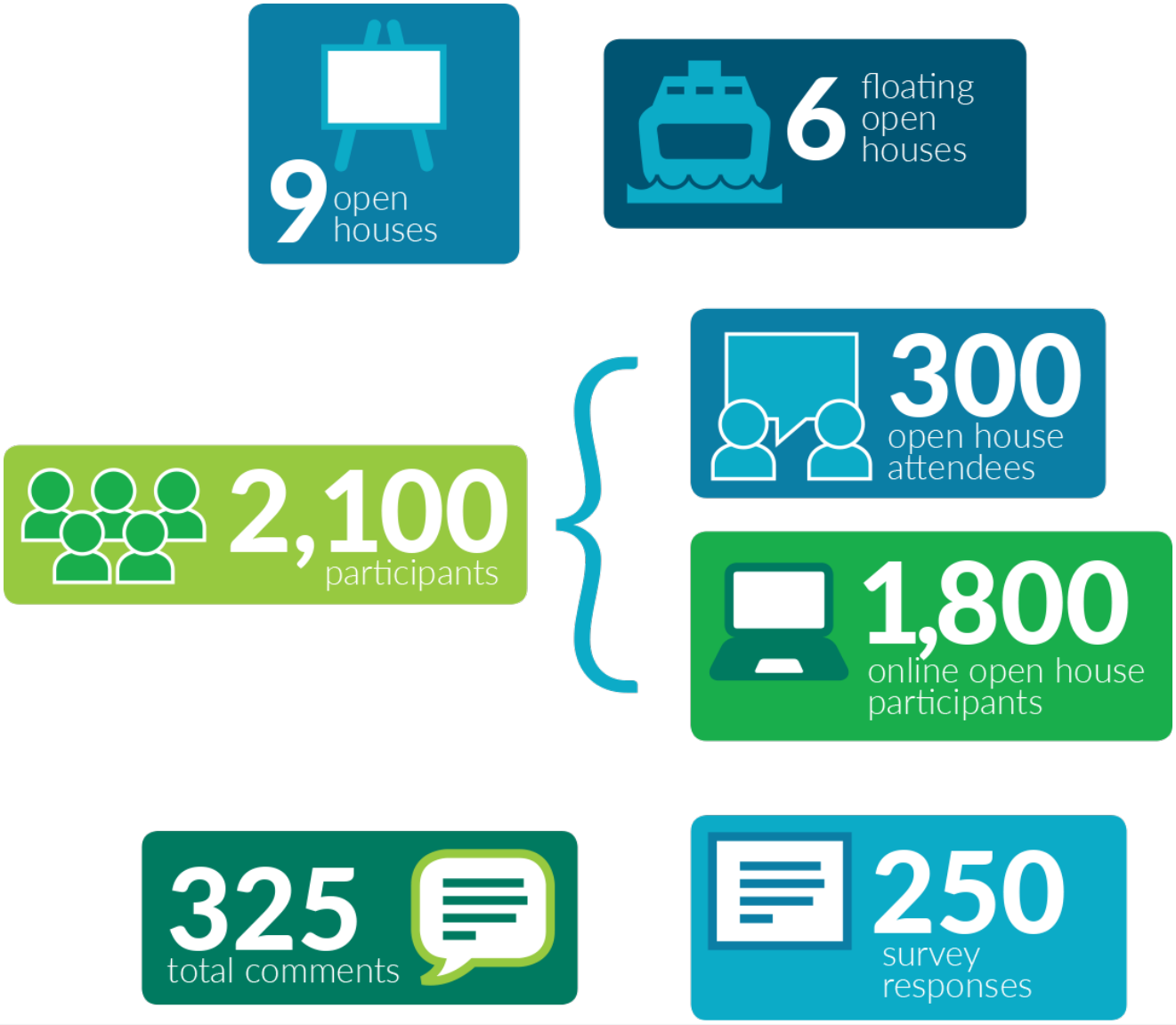
- 9 in-person open houses
- Online open house live from April 10- May 24

WSFlongrangeplan.com



Getting the word out

Community engagement



What we've heard

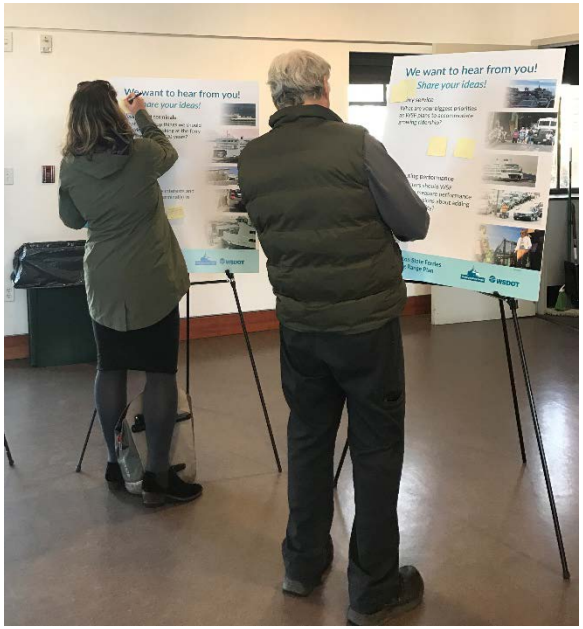
Key themes:

- Reliability
  - Prioritize building new ferries and invest in maintenance so ferries don't break down as often
  - Provide reliable service (no matter what)
  - Seek stable funding
- Plan for growth
  - Increase ferry service and add routes
  - Evaluate strategies such as vehicle reservations and adjusting schedules
  - Build more ferries and improve terminals
  - Questions about growth

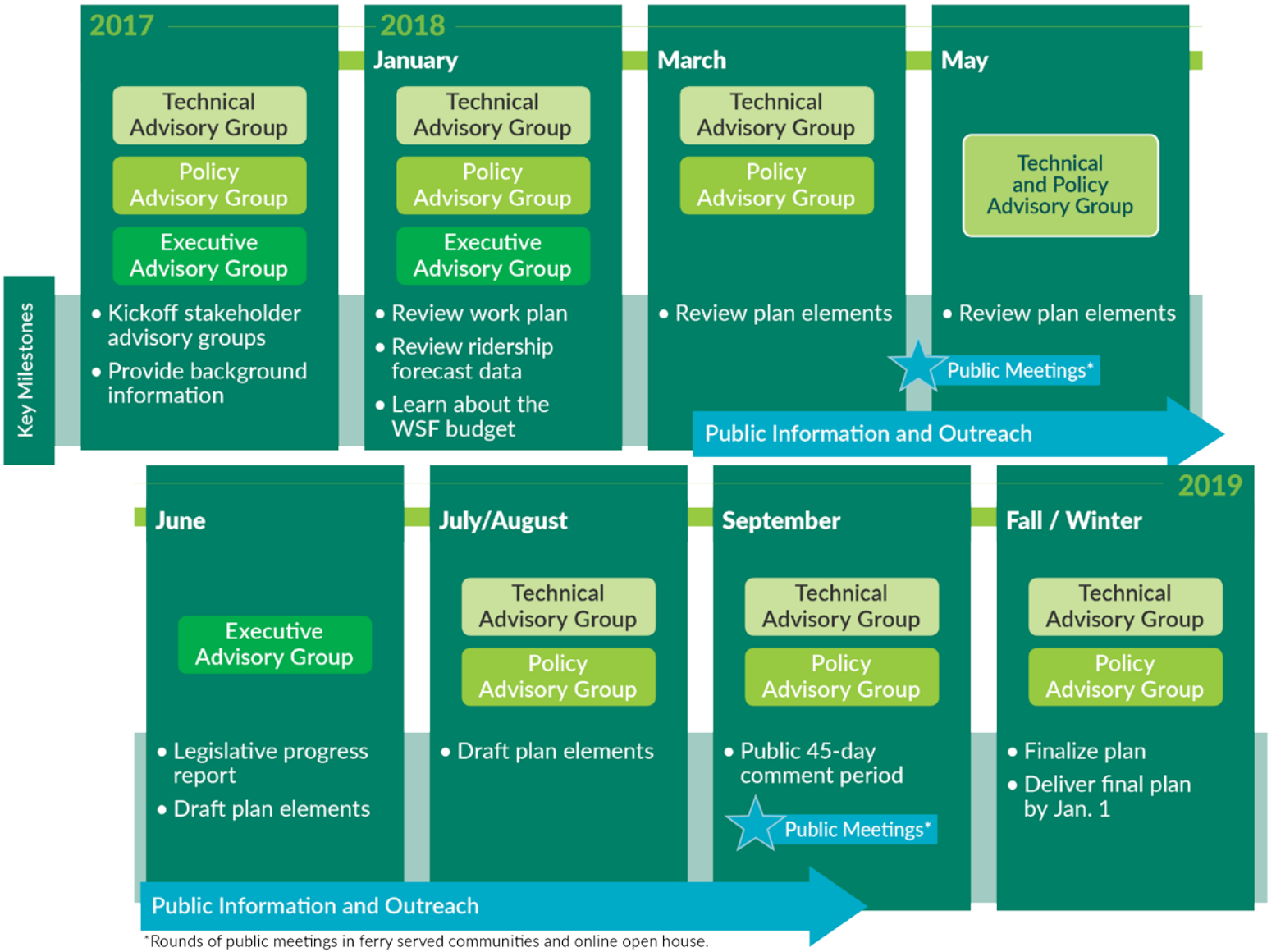
What we've heard

Key themes continued:

- Accessibility and multimodal connections
  - Ensure accessibility for all users
  - Improve connections to transit
  - Better walking, biking, parking, and carpooling amenities
- Technology and customer experience
  - Improve ticket technology and wi-fi
- Sustainability and resiliency
  - Reduce carbon-emissions
  - Prepare for climate change and emergencies



Timeline



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

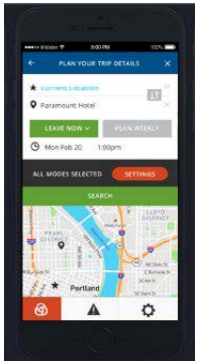
Key findings and preliminary recommendations

- Technology
  - Assessment
  - Preliminary recommendations
- Vessel maintenance and replacement
  - Assessment
  - Preliminary recommendations
- Level of service
  - Current standards
  - Preliminary recomendations

Technology assessment: gap analysis

Gap analysis findings

- Need for integrated systems
- Ability to manage and analyze data is limited
- Customer information is incomplete
- Reliance on manual processes
- Electronic fare system needs upgrading
- Need for accurate and reliable passenger counting
- Communications infrastructure needs updating
- Managing specialized assets is challenging
- Landside infrastructure outside of WSF purview
- Opportunities to convert vessels to hybrid/electric



Technology assessment: priorities

Key priorities

Reliability

- Provide seamless and predictable customer planning, booking, ticketing, and traveling
- Support customers before and during travel with targeted, useful, and accurate trip information and alerts
- Improve data and technologies that enhance safety and security

Efficiency

- Use technology to load ferries more efficiently and spread demand across peak periods
- Improve operational efficiency with better data capture, management, and analytics
- Efficiently manage and apply technology investments and resources

Sustainability

- Plan strategically to upgrade and replace legacy systems
- Use technologies to improve WSF's environmental footprint

Technology assessment: recommendations

Preliminary recommendations to WSF

Near term (0-5 years)	Mid term (5-10 years)	Long term
• Upgrade ticketing and reservations • Improve terminal queue detection and wait times • Refresh website • Improve customer alerts • Convert vessels to hybrid/electric • Vessel, terminal, and IT asset management system • Vessel automation systems**	• Update vessel communication system • Implement automatic passenger counting • Improve terminal wayfinding and real time passenger information • Upgrade common schedule database	• Provide real time parking information • Provide real-time vessel monitoring system* • Implement automatic passenger counting-vehicles** • Detect vehicle length automatically**

*** Indicates that this investment ranges in priority (e.g. moderate to high)**

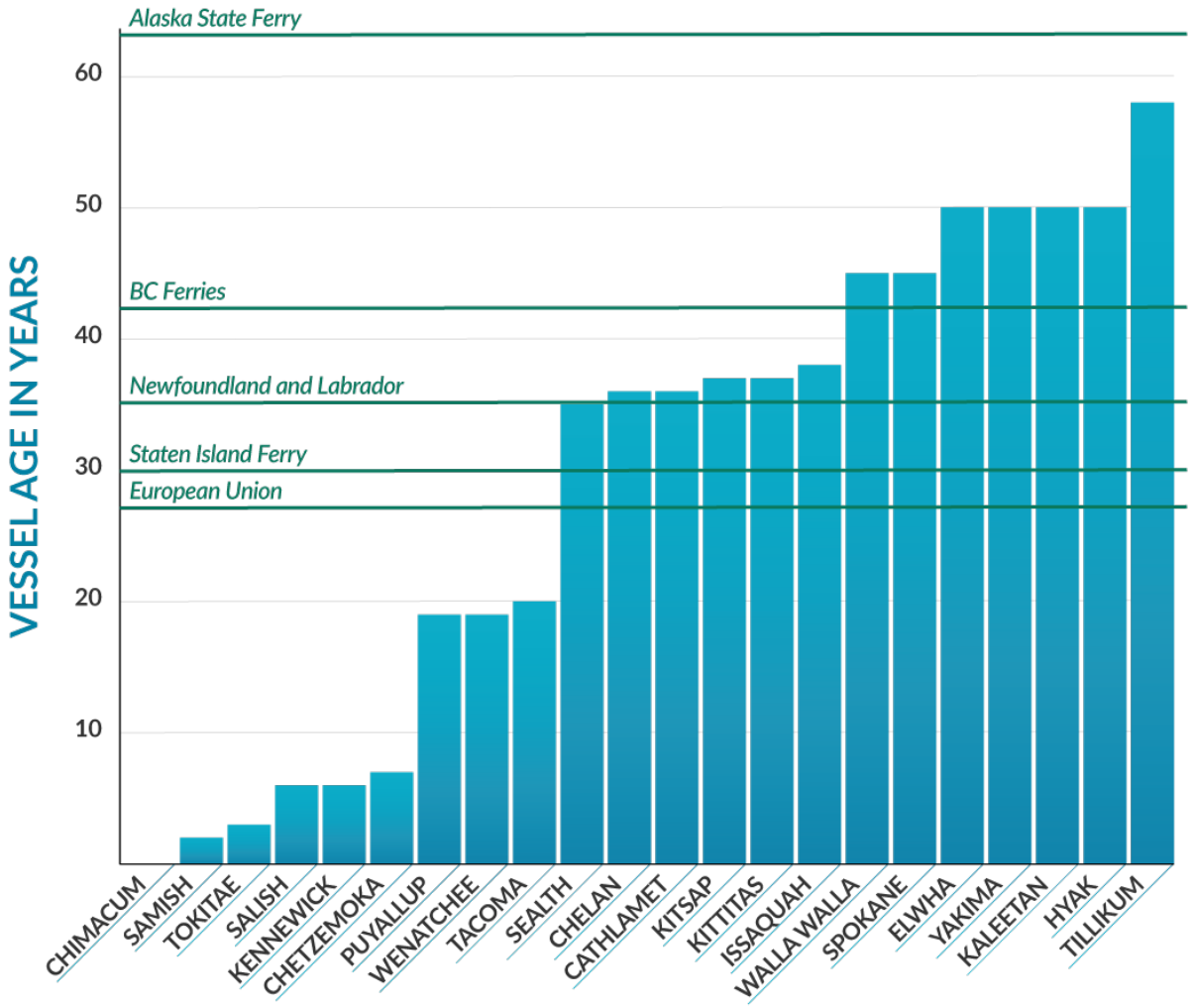
Q & A

Vessel maintenance and replacement assessment

State of the fleet

- Lack of funding
- Prioritizing maintaining service over maintenance
- Lack of relief vessels to perform required maintenance
- Aging fleet
- High utilization

Vessel age compared to other systems' vessel retirement age

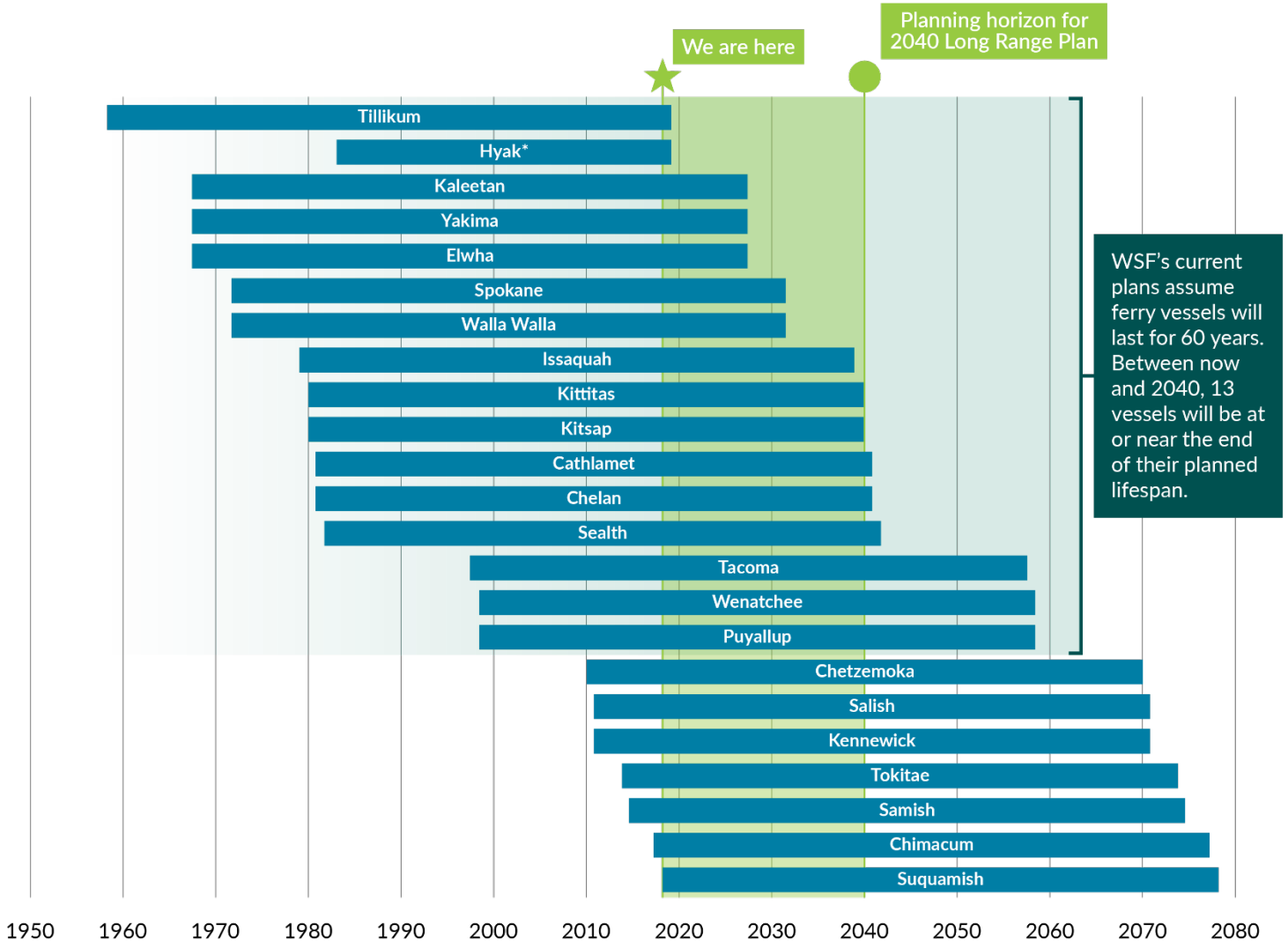


Vessel maintenance and replacement assessment

Key constraints:

- Shipyard availability
- Lack of reserve fleet
- Dedicated funding for vessel replacement program

Current vessel retirement schedule



*Hyak did not have a mid-life refurbishment. It is scheduled to be retired in 2019.

Vessel maintenance and replacement assessment

Preliminary recommendations to WSF to stabilize the fleet:

- Build new Olympic Class vessel(s) immediately, in service by 2022/2023
- Build new ferries with hybrid and electric power and retrofit Jumbo Mark II Class
- Implement comprehensive, large-scale construction program that maximizes efficiency and builds vessels in sequence
- Replace Issaquah Class ahead of Jumbo Class

Policy review:

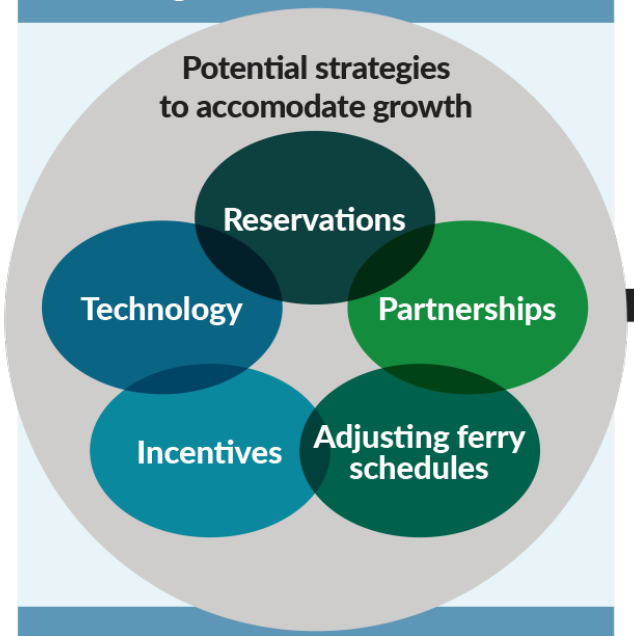
- Vessel service lifespan
- Contracting restrictions on shipyard contracts to streamline building process
- Public education and outreach campaign on the state of the ferry system and its importance to economy

Q & A

Current level of service standards

Collect vehicle ridership forecasts by route for January, May and August

Is vehicle capacity full on 25-35 percent of sailings in these months?



Tier 1

Is vehicle capacity full on 50-85 percent of sailings in these months

Add vehicle capacity

- larger vessels
- additional sailings

Tier 2

Level of service recommendations

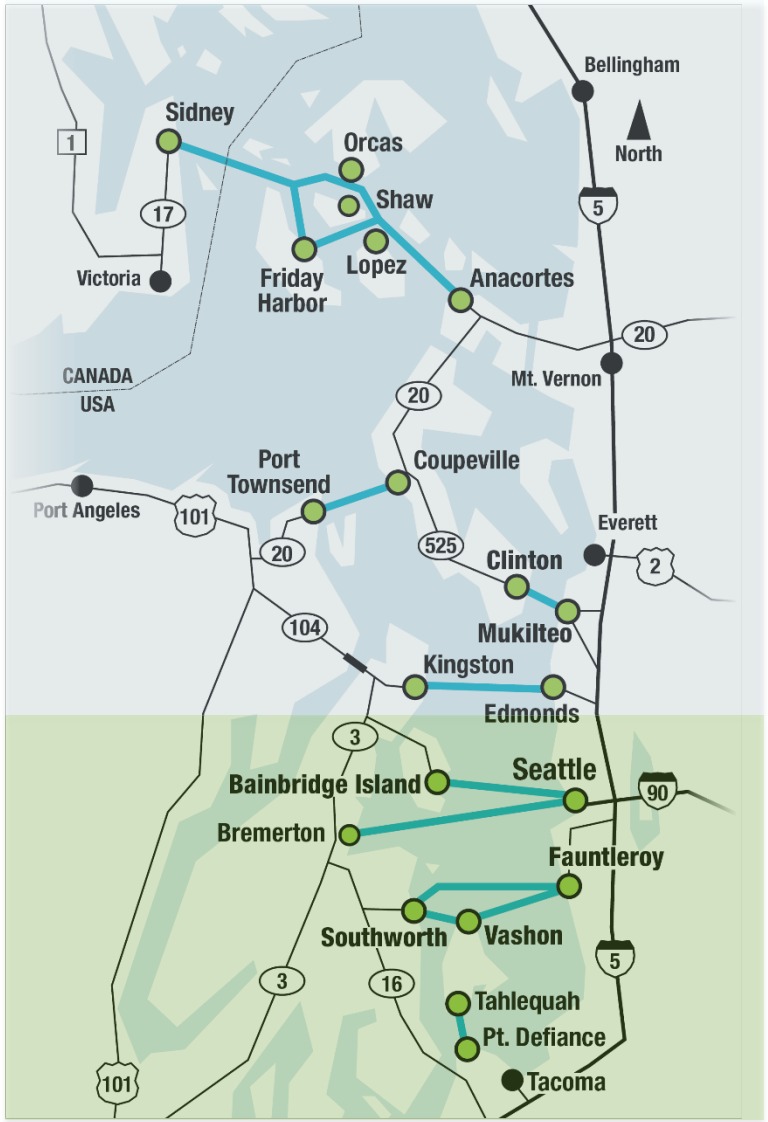
Preliminary recommended changes to LOS standards:

- Revise vehicle criteria:
  - On routes with reservations, measure space available for reservations instead of total vessel capacity
- Add passenger criteria:
  - Accommodate all walk-on passengers
  - LOS for bicycles?
  - Two tier approach
    - Level 1: Use vessel indoor seated capacity (could differ by route depending on length of crossing)
    - Level 2: Use total passenger capacity

Route-by-route service levels

North Puget Sound routes:
Heavier vehicle congestion

South Puget Sound routes:
Heavier passenger congestion, some vehicle congestion



Q & A

Lunch break

Existing performance metrics

Financial

- Annual operating cost
- Overtime hours
- Fuel consumption

Asset Management

- Average time vessels out of service

Operations

- Passenger and crew injuries
- Customer satisfaction
- On-time performance
- Service reliability

Capital Project Delivery

- Percent of terminal projects completed on time and within budget
- Percent of vessel contracts completed on time and within budget
- Preliminary engineering costs (% of capital cost)

Performance metrics recommendations

Preliminary recommendations to WSF:

- Revise existing metrics:
  - Vessel maintenance (out of service time)
  - Late departures (on-time performance)
- Add new metrics:
  - Vessel reliability
  - Queue length, peak period wait times
  - Dwell time by route
  - Greenhouse gas emissions

Seismic assessment and emergency preparedness

Preliminary recommendations to WSF:

Seismic assessment

- Identify and prioritize seismic upgrades
- Incorporate into asset management program
- Seek opportunities and clarity around funding requirements

Emergency preparedness

- Establish priority routes for repair (underway)
- Identify funding sources related to emergency preparedness
- Identify alternative landing sites
- Fuel supplier emergency access plan
- Increase number of spare vessels
- “Side-loading” engineering analysis
- Emergency staffing and communication planning

Sustainability

Preliminary recommendations to WSF:

- Executive orders
  - Begin transition to zero-carbon emission fleet
  - Quiet ferries to reduce impact to Orca whales
- Terminals and facilities
  - Reduce idle time for queued vehicles
  - Improve facilities' energy efficiency
- Vessels
  - Reduce fuel consumption and electrify fleet

Review of local and regional plans

WSF reviewed local plans to assess how areas around terminals are likely to change. We asked three questions:

1. Do local plans support ferry service and the facilities needed?
2. Will development increase congestion and create operational challenges?
3. Are transit and non-motorized connections adequate to support a shift to non-single occupancy vehicle modes?

Review of local and regional plans: key findings

Policies in local plans:

- Policies in local plans are generally supportive of inter-modal connections.
- Terminals are in constrained locations where improvements may be difficult.

Impacts from expected development:

- Rapid growth is causing increased congestion across the region.
- Access to some terminals will become more difficult.

Transit and non-motorized connections:

- Strong transit connections at Colman Dock, Edmonds, Mukilteo, Clinton, Bainbridge and Bremerton, less frequent service at other terminals.
- Non-motorized connections vary greatly, plans include an expanded network.

Small group discussions

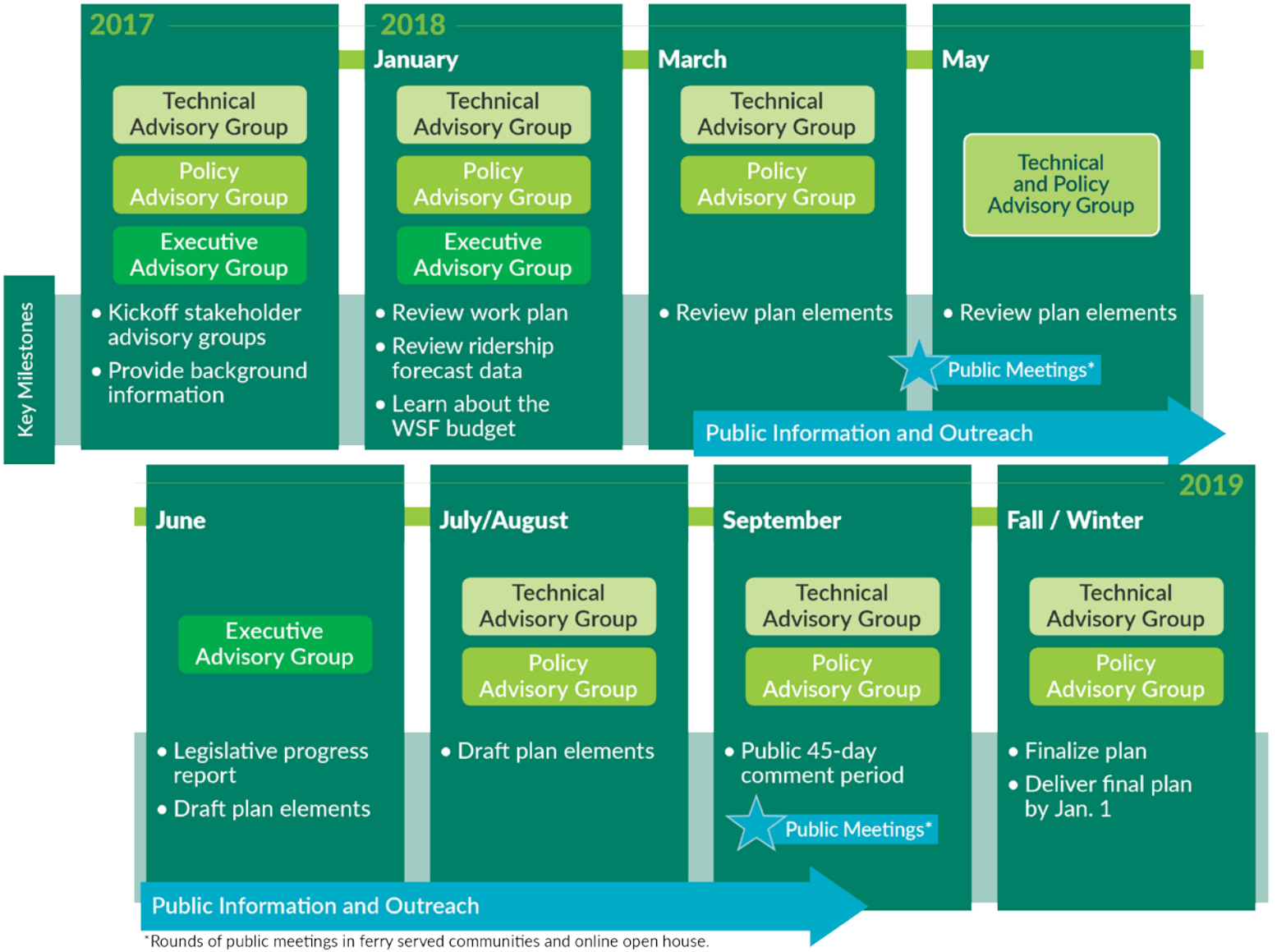
Session 1

- Group 1: Route-by-route service scenarios
- Group 2: Vessel maintenance and replacement

Session 2

- Group 1: Vessel maintenance and replacement
- Group 2: Route-by-route service scenarios

Look ahead



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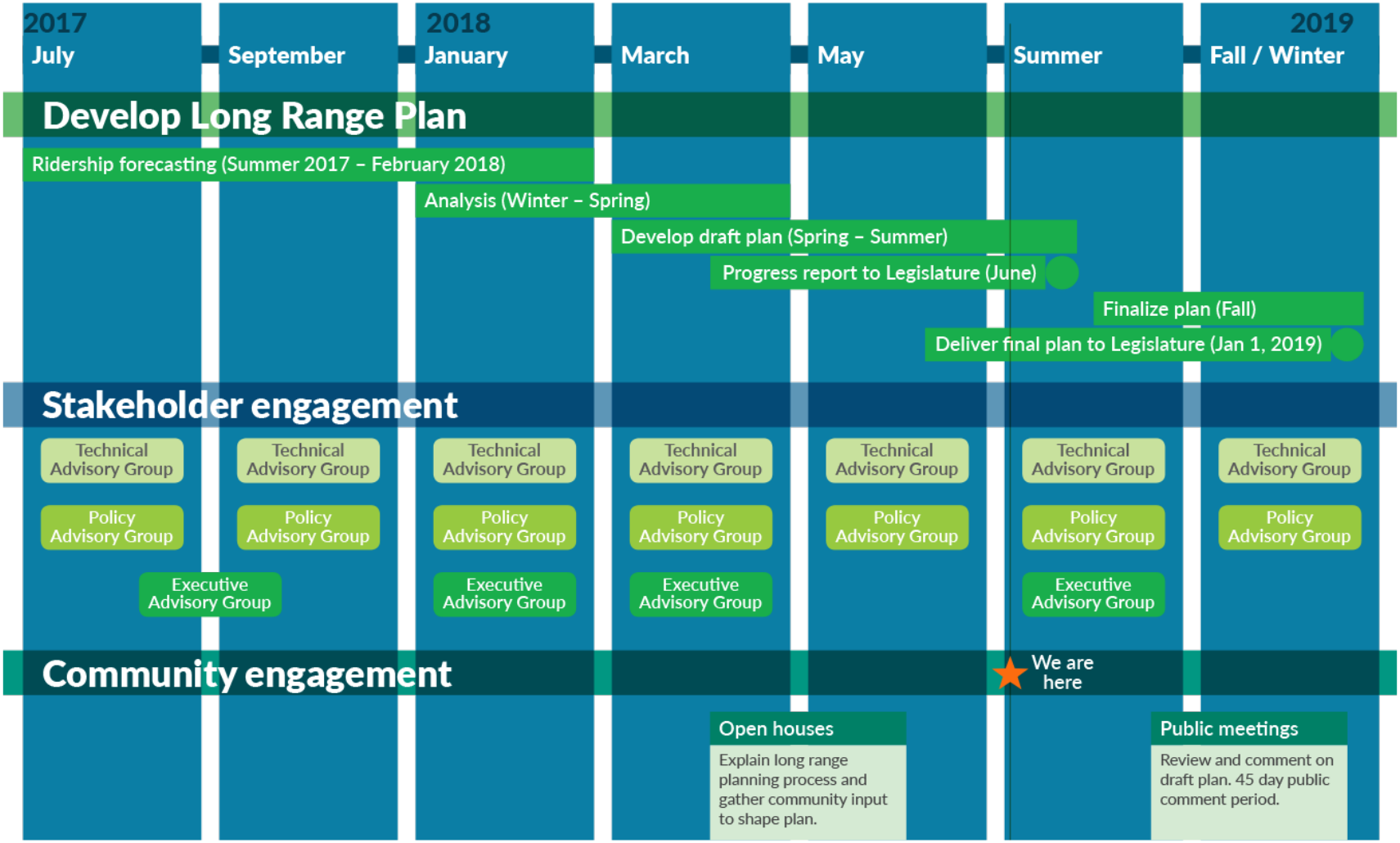
2017
July
September
2018
January
March
May
Summer
2019
Fall / Winter
Develop Long Range Plan
Ridership forecasting (Summer 2017 – February 2018)
Analysis (Winter – Spring)
Develop draft plan (Spring – Summer)
Progress report to Legislature (June)
Finalize plan (Fall)
Deliver final plan to Legislature (Jan 1, 2019)
Stakeholder engagement
Technical Advisory Group
Policy Advisory Group
Executive Advisory Group
Community engagement
We are here
Open houses
Explain long range planning process and gather community input to shape plan.
Public meetings
Review and comment on draft plan. 45 day public comment period.