Capital Improvement Program Development in Long-Range Integrated Strategic Planning

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Key Presentation Take-Aways

- Service goals drive the process
- Don’t over-design
- Plan for corridors (not routes)
- Capital costs provide both inputs and outputs
- Iterate, iterate, iterate
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Service goals drive the process

- Establish frequency and travel time targets
- Document existing conditions and committed improvements
- Understand current constraints
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• Establish frequency and travel time targets
  – Function of travel demand
  – Function of market competitiveness
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- Document existing conditions and committed improvements
  - Service levels
  - Near term improvements
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- Understand the current constraints
  - Infrastructure capacity
  - Freight coordination
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Don’t over-design

• Organization before electronics before concrete
• Design improvements to meet the service goals
• Operator, rolling stock, route agnostic
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- Organization before electronics before concrete
  - Scheduling and ticketing
  - Signaling and electrifications
  - System expansion
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- Design improvements to meet service goals
  - Sidings and station meets vs double/triple tracking

Example: Identification of Infrastructure Requirements Using String Chart
Operator, rolling stock, route agnostic

- Improvements tied to service goals, not operators or specific equipment
Plan for corridors (not routes)

- More than one route between two destinations
- Allow for shared corridors and overlapping services
- Organize improvements into corridor based programs
More than one route between two destinations

- Allows for iteration and flexibility in meeting service goals
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- Allow for shared corridors and overlapping services
  - Shared investments
  - Flexible service patterns
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- Organize improvements into corridor based programs
  - Phased implementation
  - Independent utility
  - Constituent partnerships and coalitions
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Capital costs provide both inputs and outputs

- Tools for comparing options in service delivery
- Identify corridor level costs and phase implementation over time (cost catalog)
- Helps refine service goals
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- Tools for comparing options in service delivery
  - Multiple delivery options
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- Identify corridor level costs and phased implementation over time
  - Iterative and derivative
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- Helps refine service goals
  - Costs drive feasibility and timeline of implementation
  - Return on investment and benefits costs analysis
Iterate, iterate, iterate

- Coordination with stakeholders
- Allow for responsive adaption to markets and other conditions
- Refine service goals to scale implementation over time and ensure independent utility of investments
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• Coordination with stakeholders
  – Elected officials and political jurisdictions
  – Agencies and operators
  – Public input
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- Allow for responsive adaption to markets and other conditions
  - New markets and opportunities
  - Sea level rise, resiliency
• Refine service goals to scale implementation over time and ensure independent utility of investments

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Case Study: 2018 California State Rail Plan

- **Process:**
  - Driven by long range 2040 Vision
  - Commitment to statewide integrated rail network
  - Cost estimates derived from cost catalog

- **Results:**
  - Capital improvement program with phased implementation and corridor based investments
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Case Study: 2018 California State Rail Plan

- 2022 (Draft)

- South Bay Area
- North Bay Area
- Central Valley/Sierra Nevada
- Central Coast
- LOSSAN North

$2,833

$186
$133
$121
$100

$2,833
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Case Study: 2018 California State Rail Plan

- 2027 (Draft)

- South Bay Area
- North Bay Area
- Central Valley/Sierra Nevada
- Central Coast
- LOSSAN North
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Case Study: 2018 California State Rail Plan

- 2040 (Draft)

- South Bay Area
- North Bay Area
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- LOSSAN North

$18,400
$7,700
$700
$4,900
$1,500

[Map of California rail system with various regions highlighted and costs indicated.]
Case Study: 2018 California State Rail Plan

- 2022 (Draft)
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Case Study: 2018 California State Rail Plan

- 2027 (Draft)
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Case Study: 2018 California State Rail Plan

- 2040 (Draft)

- Vegas to Palmdale
- LA Urban Mobility Corridor
- Inland Empire
- LOSSAN South

$0 $0
$17,300
$1,200
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Case Study: 2018 California State Rail Plan

- 2040 (Draft)

$119,790
$18,112
$4,792

- 2022 Time Horizon
- 2027 Time Horizon
- 2040 Time Horizon
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Questions?