Welcome

A strategic transportation plan connecting communities across North Carolina, focused on creating a more responsive, diverse, and inclusive transportation system for keeping people and freight moving safely and efficiently.

NC MOVES 2050

CONNECTING YOUR COMMUNITY, YOUR VOICE AND YOUR FUTURE

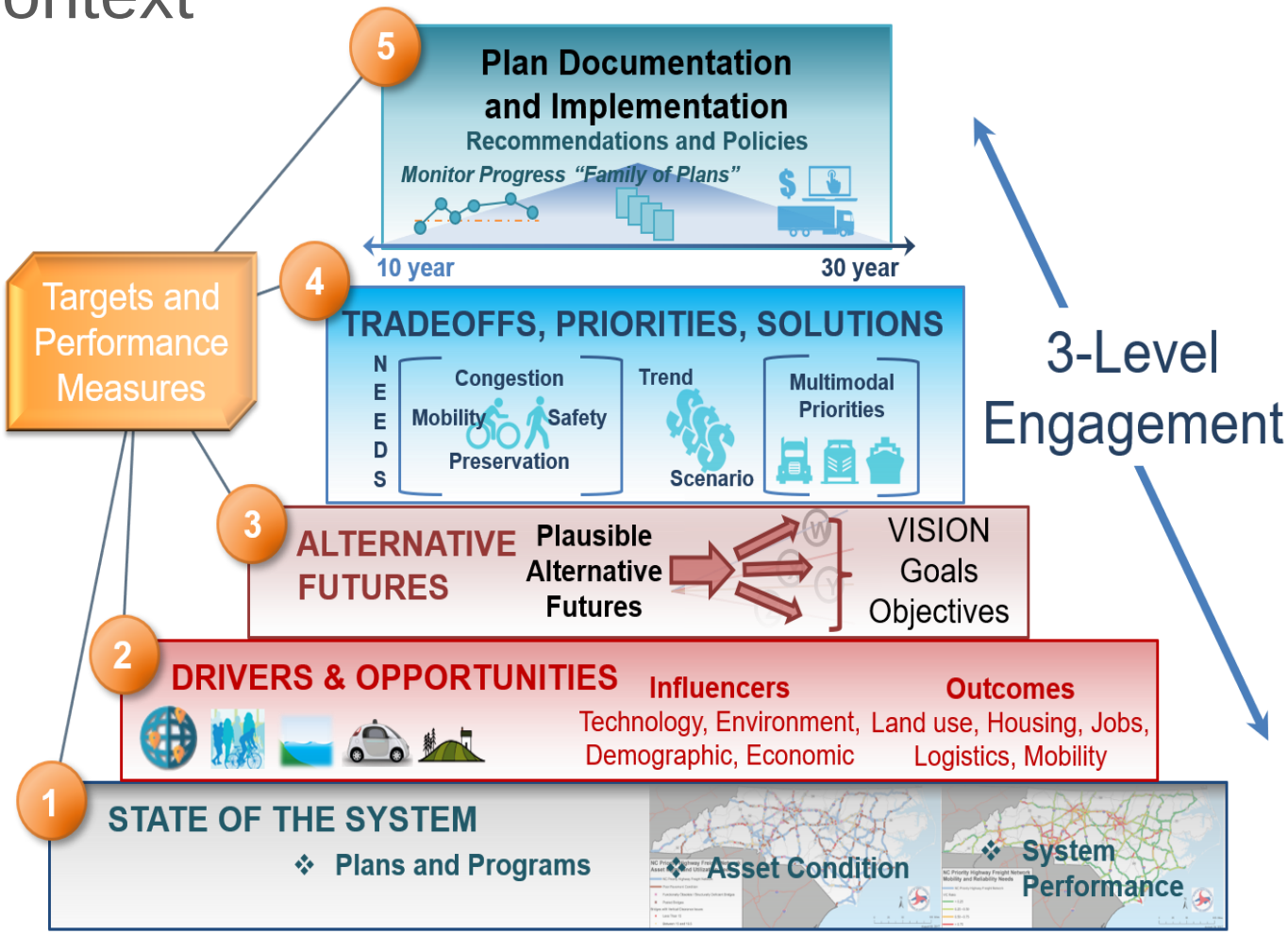
Agenda Outline

2030 Multimodal Transportation Needs

1. Context
2. Approach, Organization
3. Summary Insights – Mode, Tier, Region, Assets
4. Future Demand
5. Transition to 2050 Needs
6. Next Steps

NC 2050 Moves Plan Development

Context



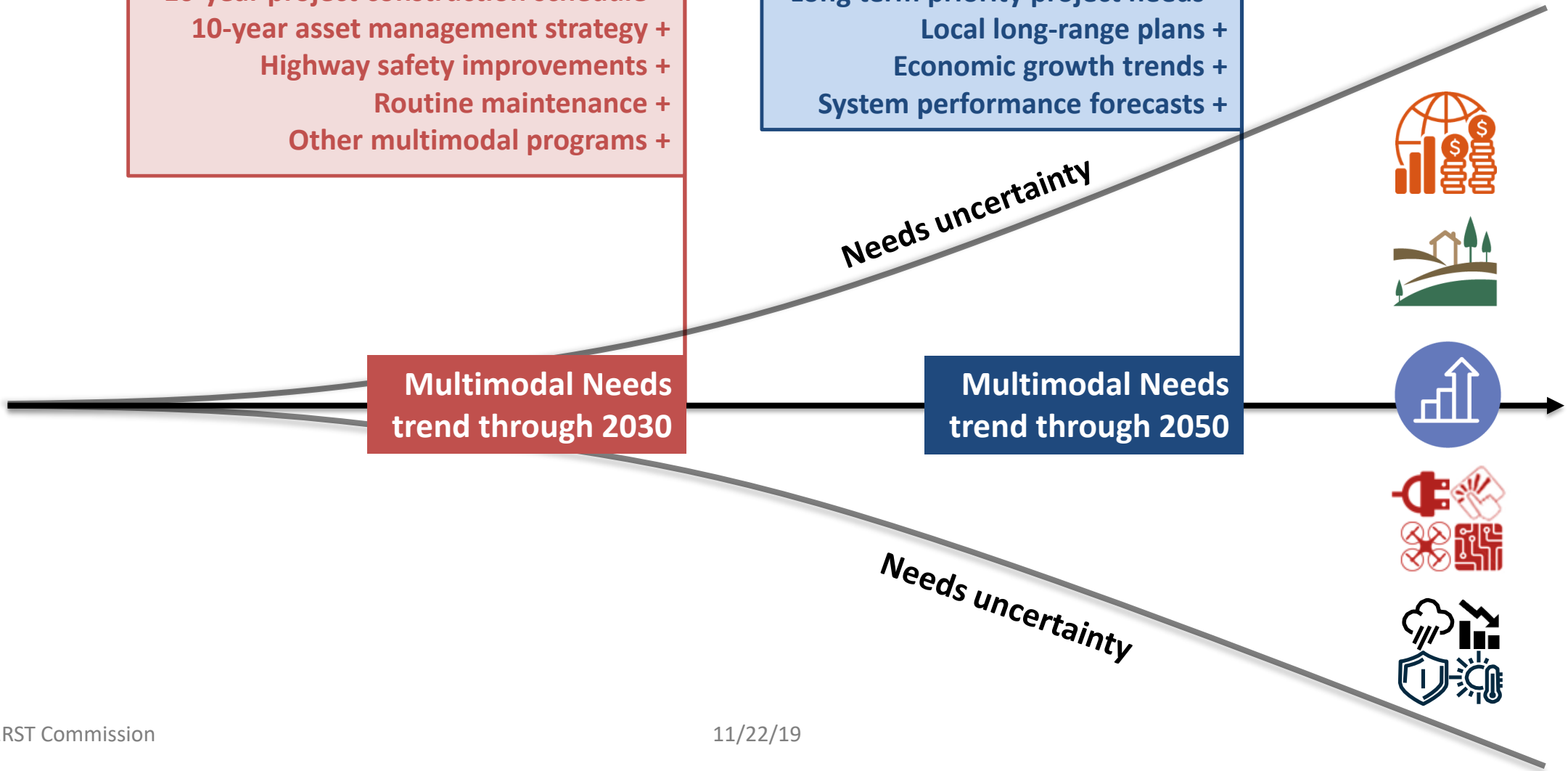
3-Level Engagement

- Federal requirement
- Inventory existing planning practice
- Identify short- and long-term trends, disruptors, challenges and opportunities
- Evaluate multimodal system-wide needs (2030, 2050)
- Forecast 2050 financial opportunity
- Develop and test robust strategies
- Engage stakeholders, partners, and public
- ***BUILD A <u>BLUEPRINT</u> TO <u>ALIGN</u> AGENCY VISION, GOALS, OBJECTIVES AND <u>GUIDE</u> LONG TERM INVESTMENT POLICY, SYSTEM PERFORMANCE***

Multimodal Needs – Overall Approach

10-year project construction schedule +
10-year asset management strategy +
Highway safety improvements +
Routine maintenance +
Other multimodal programs +

Long term priority project needs +
Local long-range plans +
Economic growth trends +
System performance forecasts +



Multimodal Needs – Outcomes

Alternative Futures Multimodal Performance

By mode (mobility & assets)
Highway (passenger and freight), transit, active transportation, freight rail, passenger rail, aviation, ferries

By system
Interstate, Primary, Secondary Statewide / Regional tier

By region
Large / Medium / Small Urban and Rural

Goals & Objectives

- Growing, diverse, and equitable economy
- Agile, resilient, and quality infrastructure
- Efficient, accessible, and connected system
- Sustainable and livable communities
- Safety and security for all users
- Innovative funding, program delivery, and partnerships

By mode (mobility & assets)
Where are we meeting or falling behind our vision, mission, goals?

Multimodal Needs 2030 & 2050

Capital Project Priorities
+
Systems plans and programs
+
Local plans

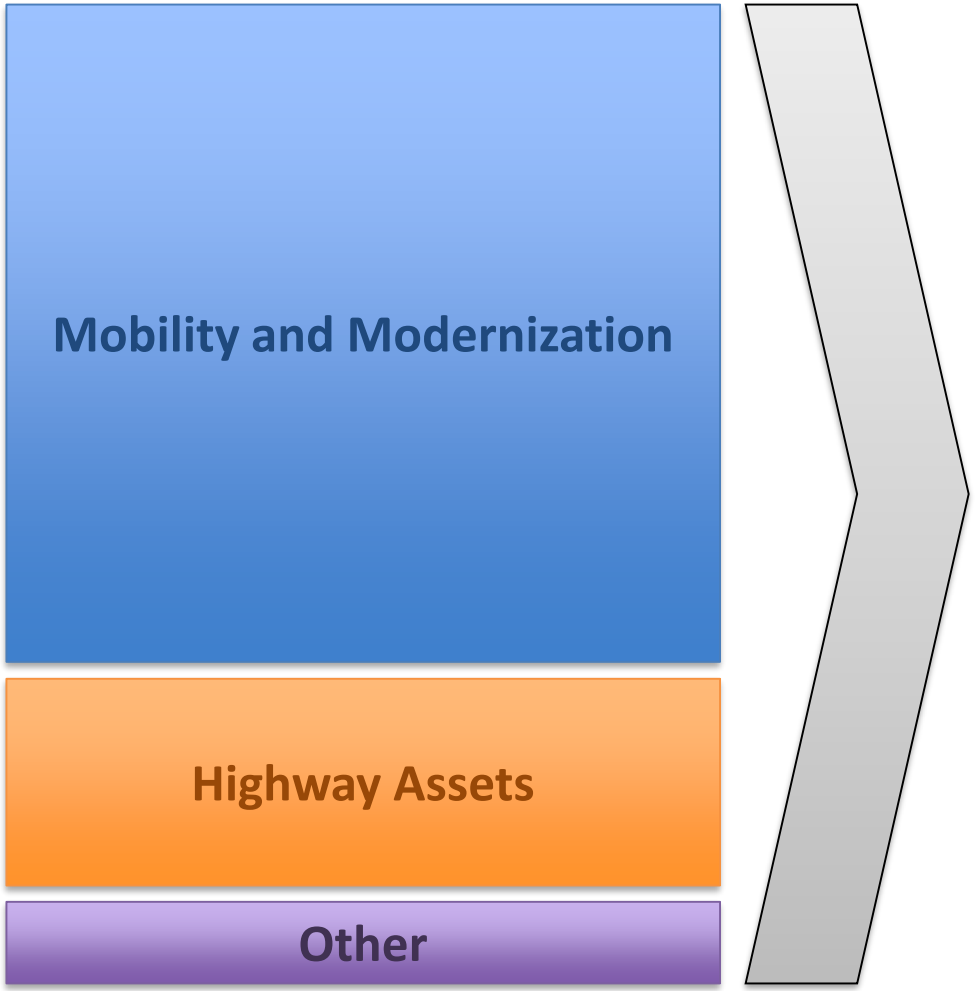
Needs range (across the futures)

Organized:
By mode
By need type
By system

Summarized:
Statewide
Regional

Multimodal Needs – 2030 Trend

Qualifications for Preliminary Estimates



Guiding Parameters:

- Order of magnitude, planning level assessment
- Variety of databases, sources, analytical practice, and subject matter input
- Capital and operating costs within a range (2017-2019 dollars)
- Costs to NCDOT vs. total implementation
- Asset estimates to achieve NCDOT infrastructure targets
- Conservative inflation rate
- Exclude non-infrastructure support programs
- Exclude needs beyond NCDOT database for privately owned rail and commercial service airports
- Exclude other, yet to be determined infrastructure needs not found in source documents

Multimodal Needs – 2030 Trend

Sources/Analysis - Preliminary Estimates (billions)

Mobility and Modernization ($76)

- NCDOT/Partner Near-term Priorities (project specific; demand driven)
- Highway and Non-Highway Capital Improvements
- Highway Modernization (safety, operational improvements)
- Summarize by NCDOT Maintained System, Mode, STI Tier, Region

Highway Assets ($26)

- Pavement/Bridge Deterioration
- Routine Maintenance (mowing, snow plowing, signs, rest area upkeep)
- Storm Expenditures
- Asset Management Strategies, Goals and Targets

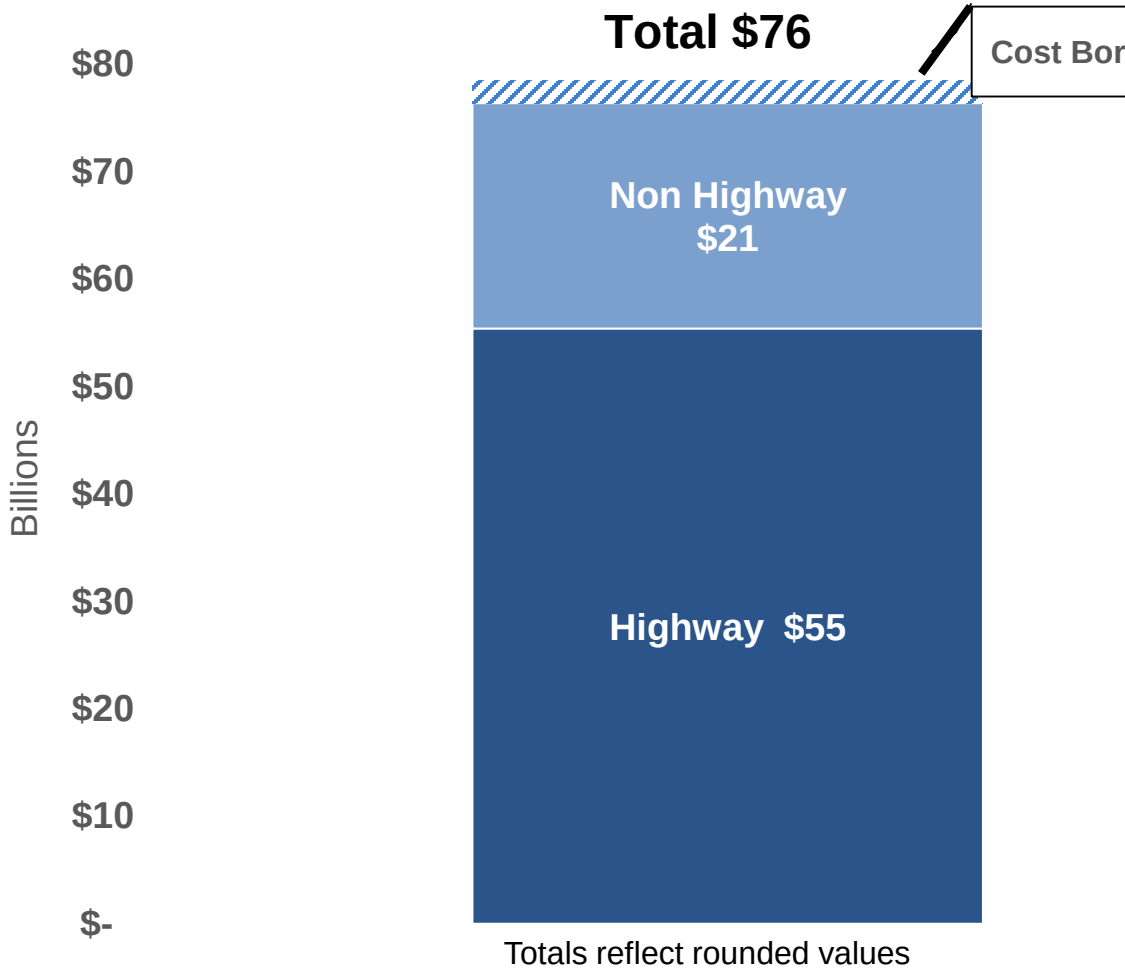
Other ($6)

- Financial or Operational Support to Non-Highway Modes
- Support of Local Needs (sidewalk construction)
- Small Construction / Spot Safety Program
- Traffic Management and Signal Systems

Total Estimated 2030 Trend Needs: $108 Billion

Multimodal Needs - 2030 Trend

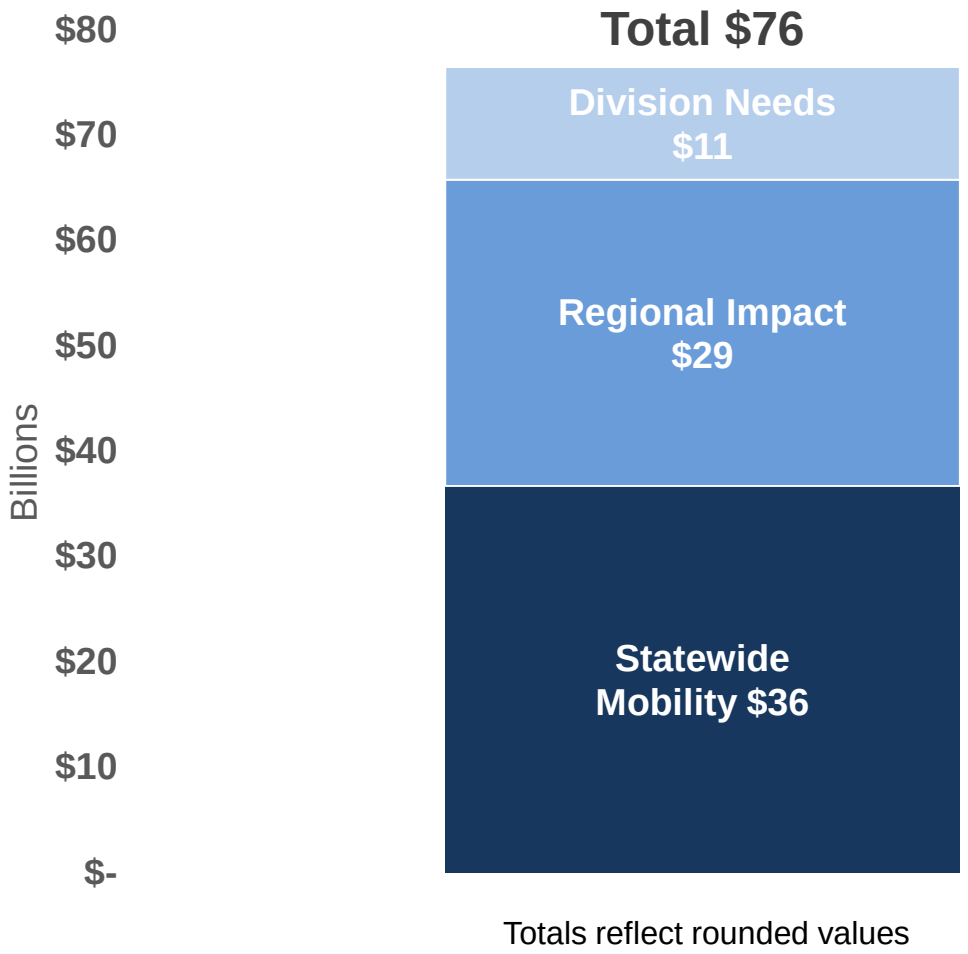
Mobility and Modernization – Estimates by Mode (billions)



- **Committed projects in NCDOT capital program plus future needs**
- **Population influx, increased freight, suburban growth, longer commute times drive highway capacity needs**
- **Incremental shift from highway travel to other modes due to increased technology and convenient travel options**
- **Local partners (transit operators) shoulder higher implementation costs**

Multimodal Needs - 2030 Trend

Mobility and Modernization – Estimates by STI Tier (billions)



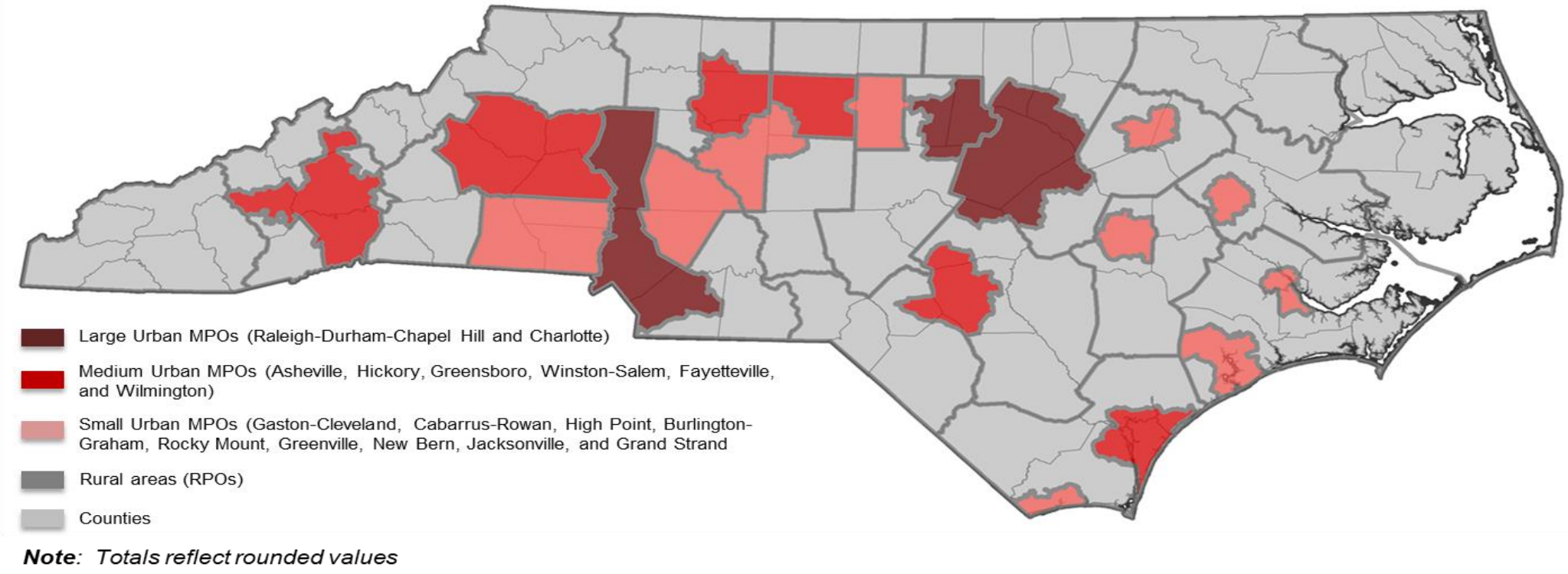
Totals reflect rounded values

- **Significant demand on highest tier facilities and systems**
- **Capacity improvements and modernization of suburban routes and growth of intra-regional transit needs**
- **Greater competition between highway and non-highway needs to meet multimodal solutions at regional and division levels**

Multimodal Needs - 2030 Trend

Mobility and Modernization – Estimates by Region (billions)

Large Urban: $26 + Medium Urban: $17 + Small Urban: $8 + Rural (RPOs): $25 = Total: $76



***Note**: Totals reflect rounded values*

Multimodal Needs - 2030 Trend

Estimates by Asset System and Other (billions)

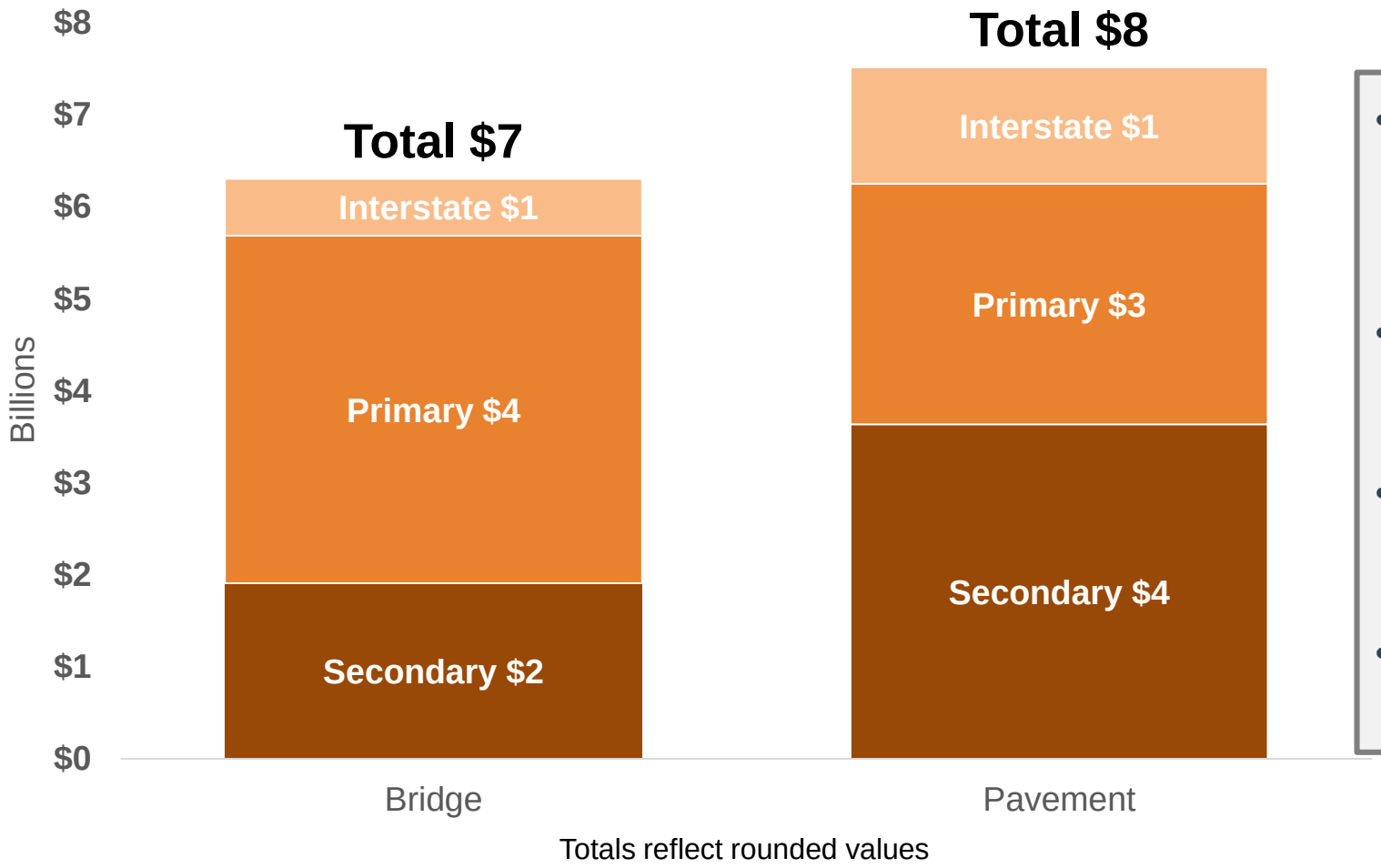
2030 Highway Assets - Total Need	
Bridge	**$7**
Interstate	$1
Primary	$4
Secondary	$2
Pavement	**$8**
Interstate	$1
Primary	$3
Secondary	$4
Routine Maintenance	**$11**
3-Yr Avg Non-RMIP Expenditures	$4
RMIP Production to Meet Goals – Annual Needs	$5
Annual Storm Expenditures – 5-Yr Avg	$2
Total:	**$26**

2030 Other – Total Need	
State Non-Highway Support	**$5**
Small Construction	**$0.4**
ITS Infrastructure / Traffic Management	**$0.2**
Total:	**$5.6 - $6**

Totals reflect rounded values

Multimodal Needs - 2030 Trend

Highway Pavement/Bridge – Estimates by System (billions)



Totals reflect rounded values

- Legislative and Department 2030 performance targets and goals
- Higher expected rate of asset deterioration
- 10-year Routine Maintenance Improvement Plan (RMIP) focus
- Technology driven improvements

Multimodal Needs

Considerations to move from 2030 to 2050

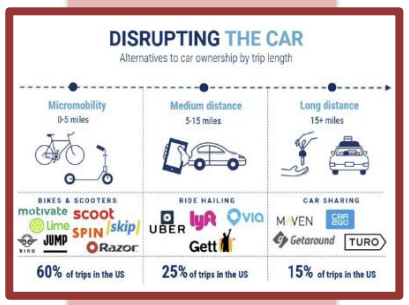
- **Exploratory**
  - Linked to Alternative Futures economic and performance outcomes
- **Uncertainty**
  - Ranges reflect the connection between differing future performance narratives and potential needs
- **Trend Diversity**
  - Acknowledge potential unknowns and risks
- **Research**
  - What did we learn from drivers and opportunities to inform needs and associated strategies

INNOVATIVE

A future where technology in transportation drives new development patterns and economic growth. This results in a low-carbon, shared, lower cost, and more accessible multimodal system.

Connected Hubs

Shared Mobility



Drones, Driverless and Electric Vehicles

GLOBALLY CONNECTED

A future where economic growth in manufacturing, technology, automation, and services positions NC as a leading market for a skilled workforce, connected to the world by international gateways and an efficient freight system.

International Partners

Diverse Workforce

Industry Automation

RENEWED

A future where small towns and rural communities grow and are more connected to each other and urban centers by various forms of transportation.

Local Economies

Connections

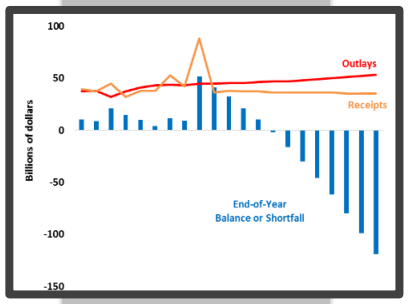
Balanced Growth

UNSTABLE

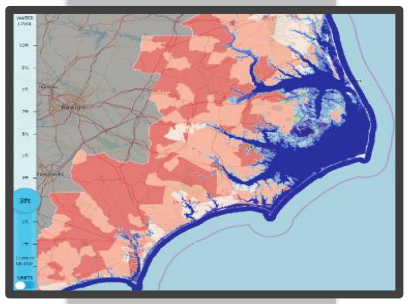
A future where funding instability, political and social events, environmental threats, and energy uncertainty stalls tourism and stagnates the economy. This creates a transportation system where travel costs are high and mobility is more unreliable.

Severe Weather Events

Funding Challenges

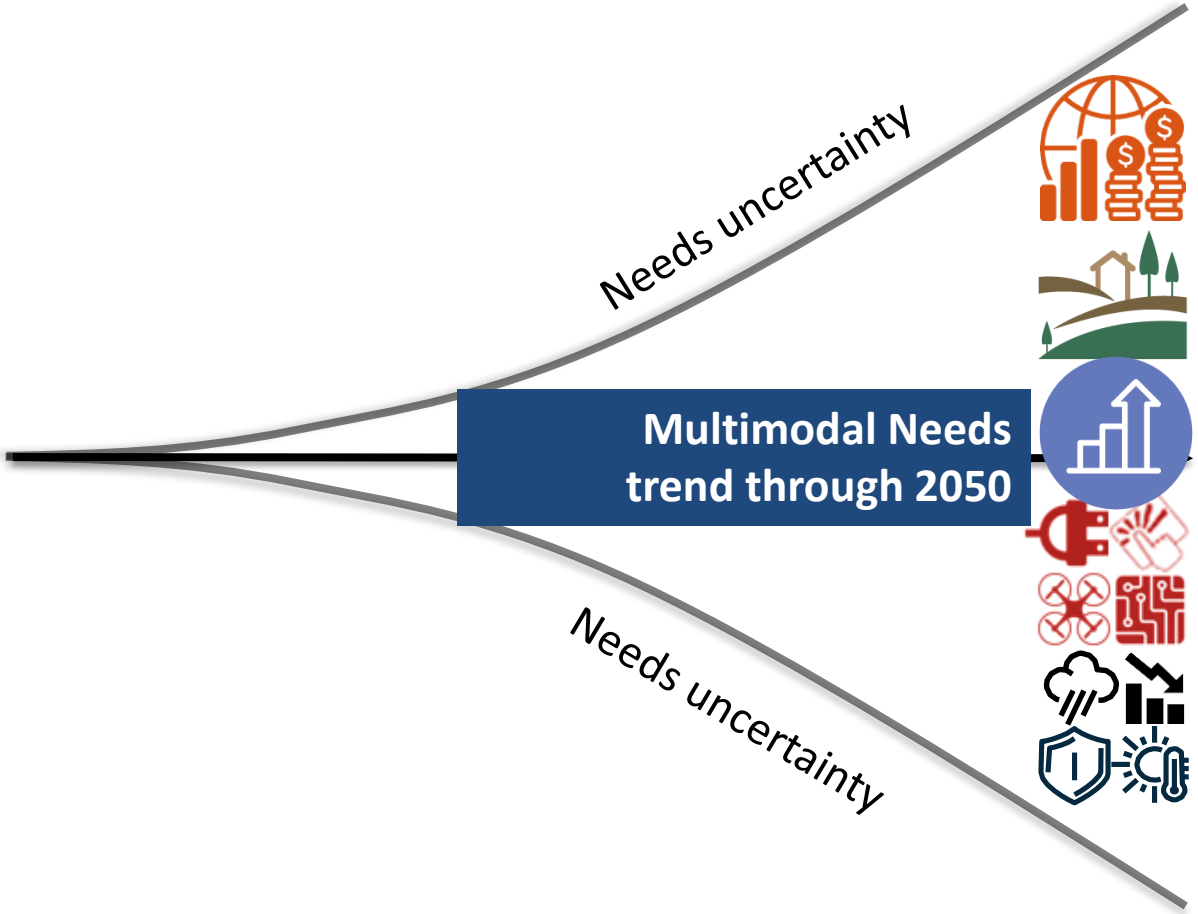


Threatened & At Risk Communities



Transition to 2050 Multimodal Needs

Trend vs Alternative Futures



Mobility and Modernization

- Extrapolate short term needs relative to economic and performance trends
- Fiscally constrained needs from local long-range plans
- Future range based on adjusted highway to non-highway needs ratio
- Subject Matter Input

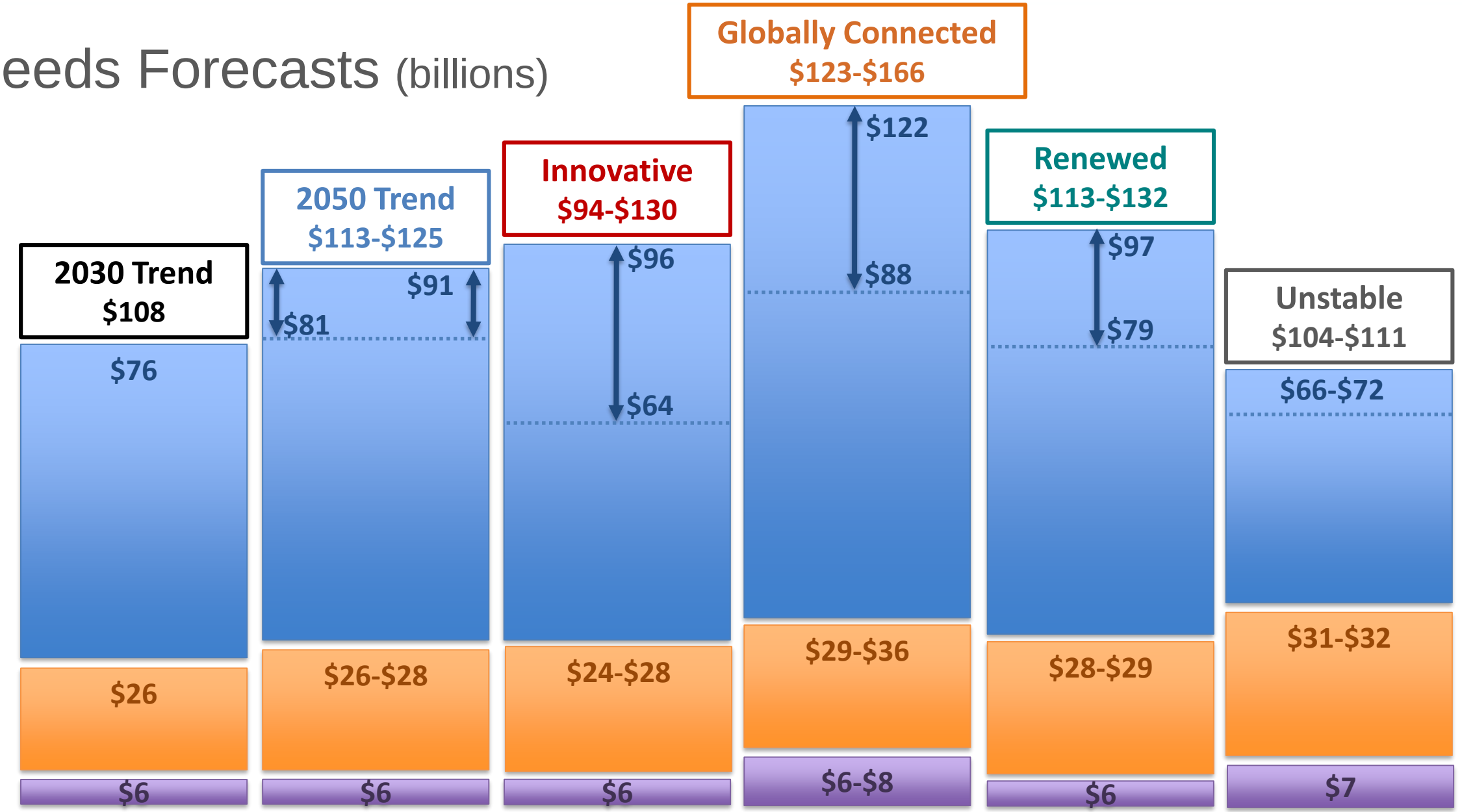
Assets

- Deterioration Based
- Disruption Based

Other

- Large scale investments beyond source documents
- Known initiatives with uncertain costs

Needs Forecasts (billions)



NC Moves 2050 Plan Development

Next Steps

Fall/Winter 2019 — **Strategy Refinement**

- Working Group
- Needs Assessment and Future Performance
- Existing Plans and Studies
- Modal/Subject Matter Experts
- Stakeholder Outreach

Influencers

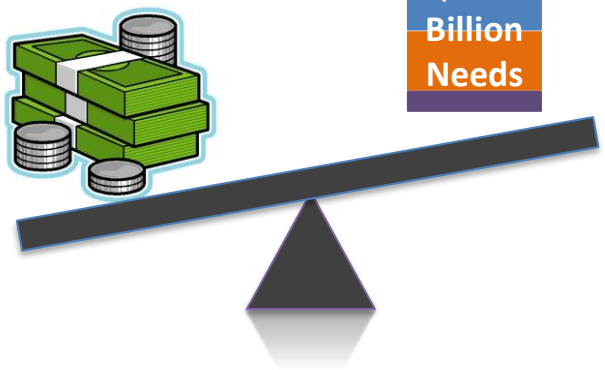
Strategy description and high-level "consumer reports" style assessment

Winter/Spring 2020 — **Strategy Trade-Off Assessment**

Strategies to test for performance and impact

Performance Matrix

- Mobility
- Asset
- Financial
- Risk
- Timing
- Other



Robust decision-making framework aligning timing and cost with potential risk and implementation reality

QUESTIONS