

Future of Aviation Conference

KEYNOTE



Investments Built to Last

Julie Lorenz, Secretary

Kansas Department of Transportation

Director of the Kansas Turnpike Authority

Chair, Kansas Infrastructure Hub



“Some of us have great runways already built for us. If you have one, take off. But if you don't have one, realize **it is your responsibility** to grab a shovel and **build one** for yourself and **for those who will follow after you.**”





Transportation, including
aviation, is about moving
people and goods

AND
so much more





Stand the test of time

MASSACHUSETTS

SCENARIOS



Momentum



Tech Triumph



Global Chaos



Gentle Footprint

KANSAS

SCENARIOS



Regional Hubs



Resiliency Challenged



**Cities & Advanced Ag
Win the Day**

We stand at this unique time...

CHALLENGES

- Pandemic – recovery
- Political tension
- Extreme weather
- ALICE
- Workforce

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OPPORTUNITIES

- IIA & funding certainty
- Promise of technology
- Greater understanding of the interconnectedness of action

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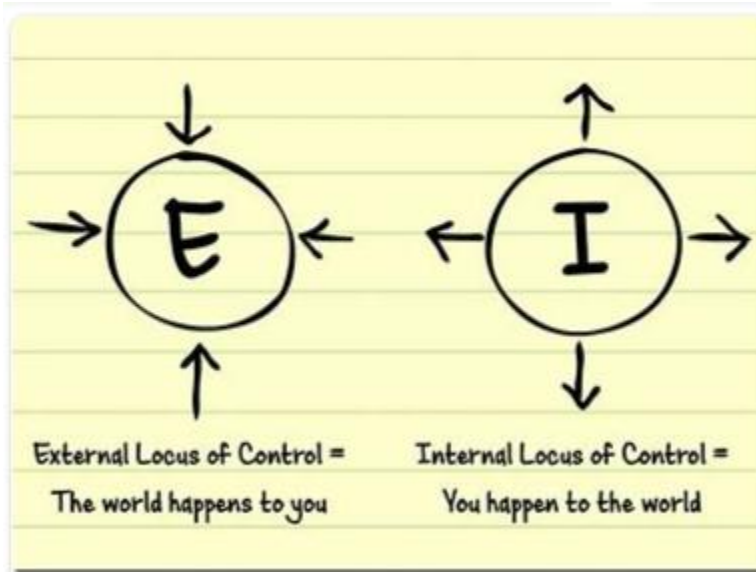
CHALLENGES

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- Political tension
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Locus of Control: Psychology Today





“We choose to go to the Moon in this decade and do the other things, **not because they are easy**, but **because they are hard**; because that **goal will serve to organize and measure** the best of our energies and skills, because that **challenge** is one that we are **willing to accept**, one we are **unwilling to postpone**, and one we intend to **win**, and the others, too.”



Collective and Individual Actions for State DOTs Envisioning and Realizing the Next ERA of America's Transportation Infrastructure – Phase I

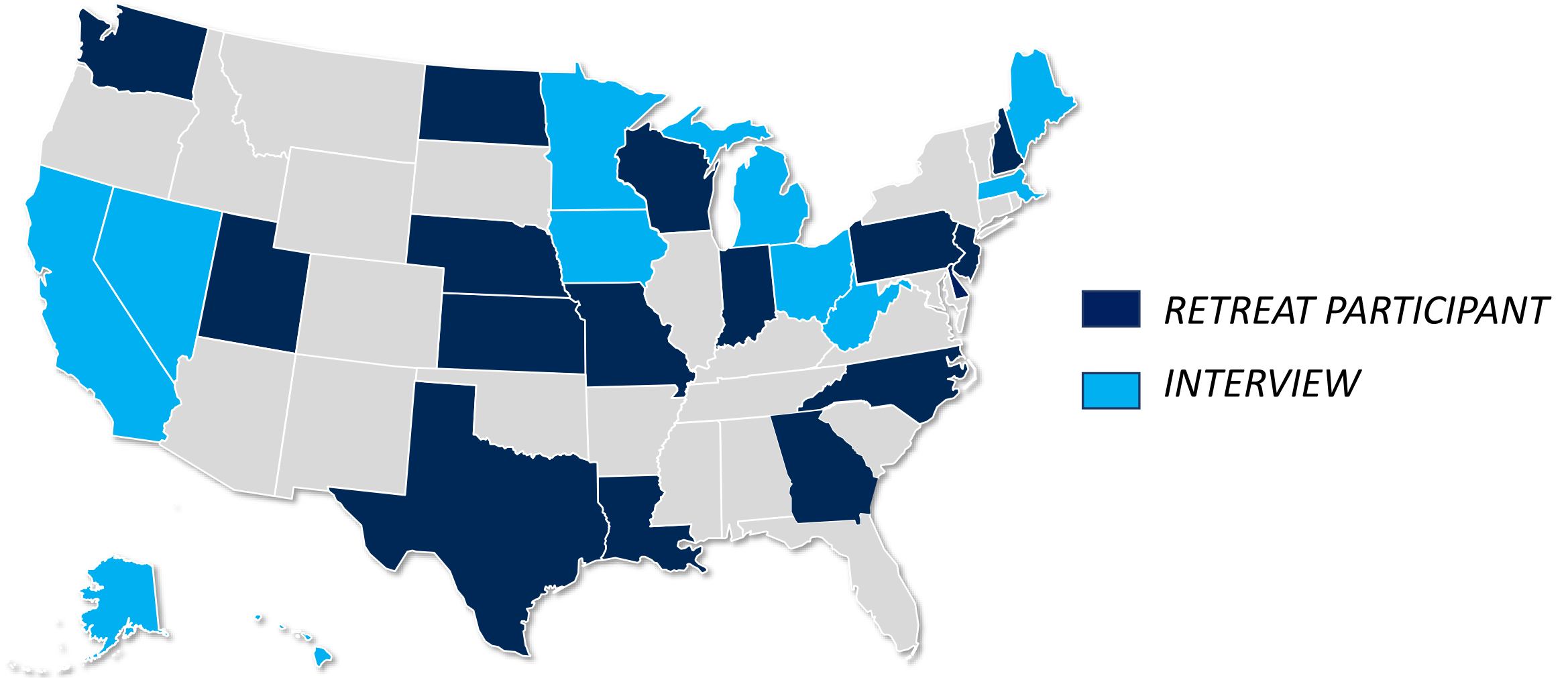
NCHRP 20-24 (138)



Project Outcomes

- Compelling vision of what transportation can deliver for Americas
- Via Moonshot(s) by the end of this decade
- And a menu of strategies/actions State DOTs can deploy

We came together: 27 States so far





And Nontraditional Partners: 29+

We examined trends & uncertainties...



DEMOGRAPHICS

PROSPERITY



*FUTURE OF
WORK*

*TRADE &
LOGISTICS*



*REGIONS &
MEGAREGIONS*

COMMUNITIES



TECHNOLOGY

ENERGY



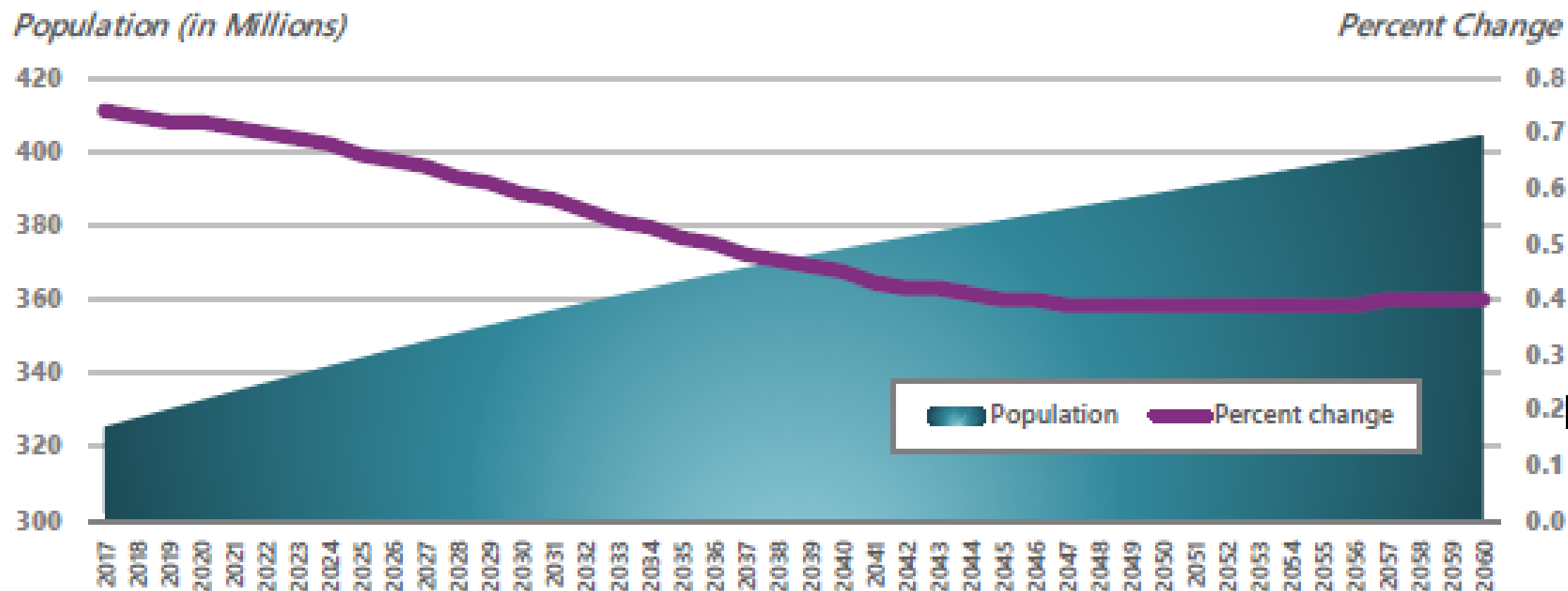
*RISK &
RESILIENCE*

*CIVIC &
GOVERNANCE
SYSTEMS*



Demographic Trends: Pace of Population Growth Slowing

400 MILLION AMERICANS BY 2060, BUT THE PACE OF GROWTH SLOWS

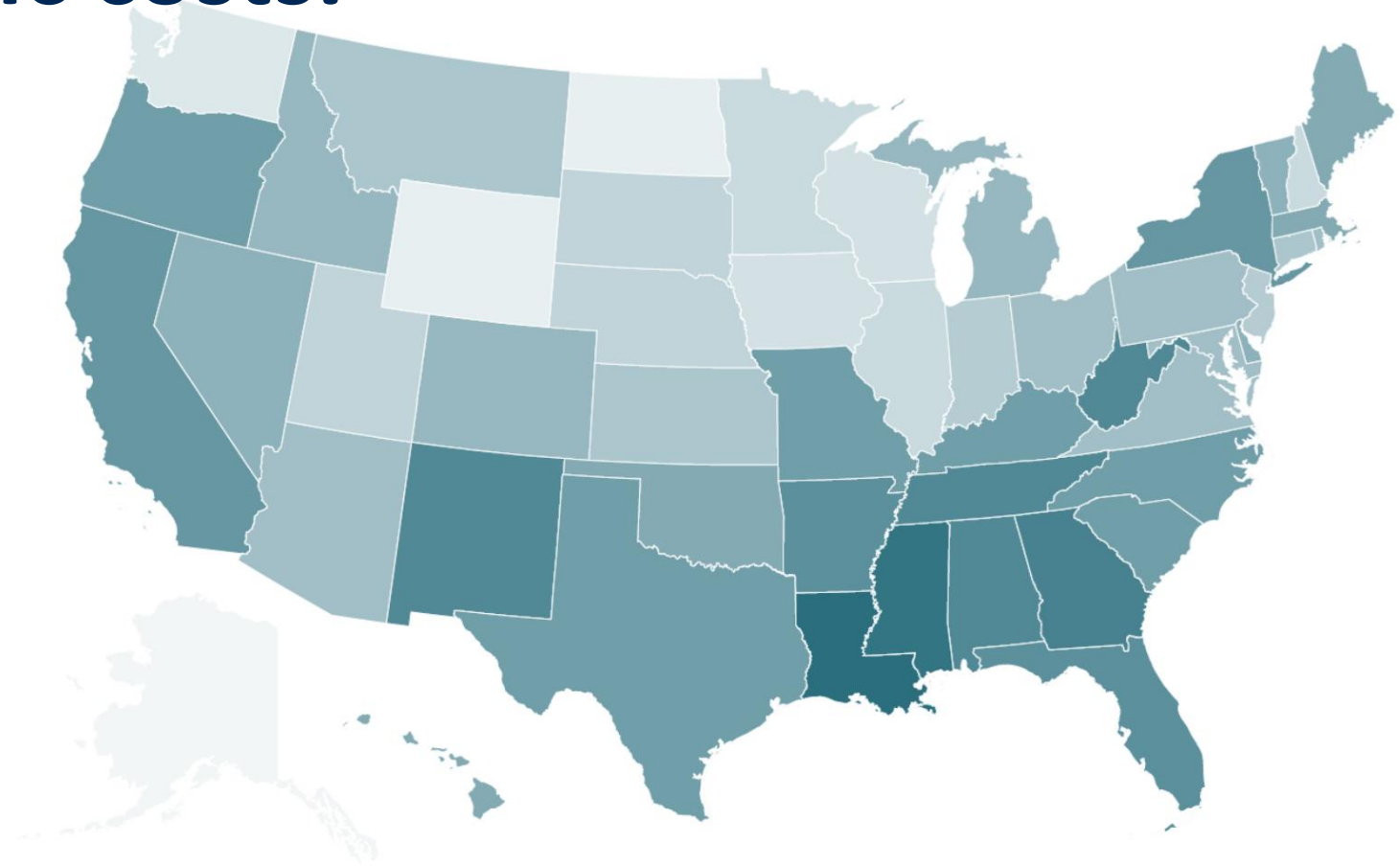


Source: U.S. Census Bureau, 2017 National Population Projections. Minor adjustments anticipated in next forecast based on final 2020 Census data.



Prosperity Trends: 42% of U.S. Households can't afford basic costs.

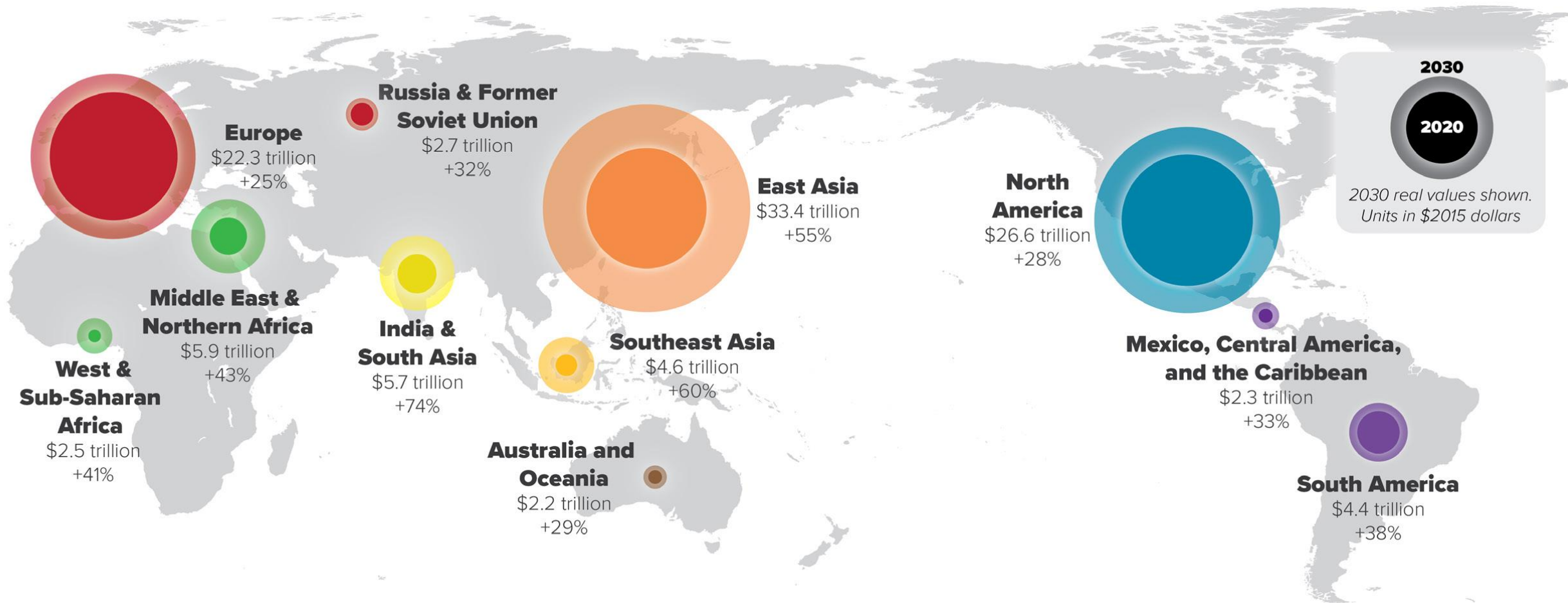
- **13%** earn income **below poverty line**
- **29%** are asset limited, income constrained & employed (ALICE)
- Average households spend **16%** of total expenditures on transportation – **20%** in rural areas. (2nd to housing)



Percent Below ALICE Threshold
31% 51%

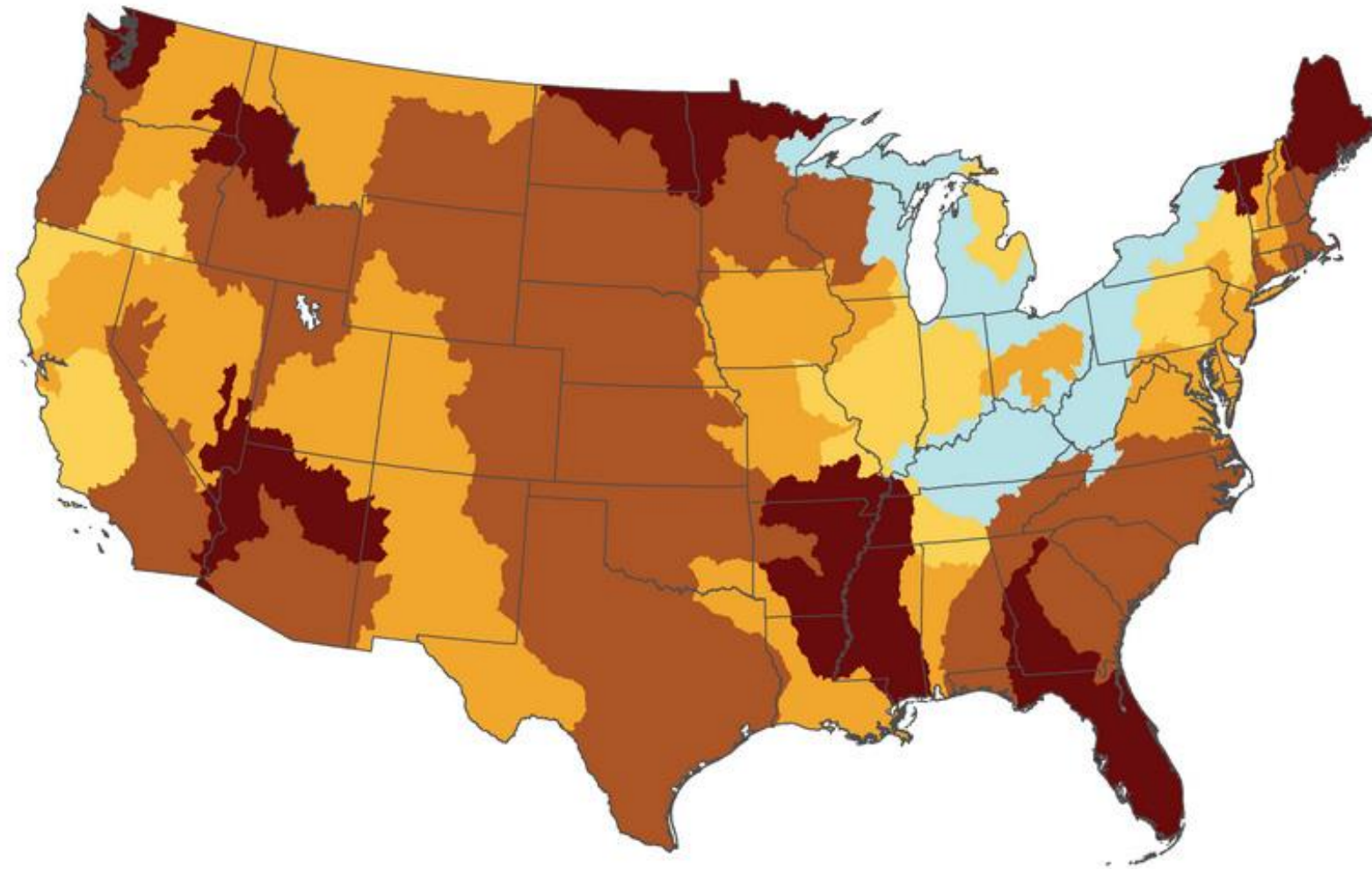


Trade & Logistic Trends: Projected GDP Growth 2020-2030





Regional Trends: Water Demand Increase by 2050



Change (%)

< 0

0 to 10

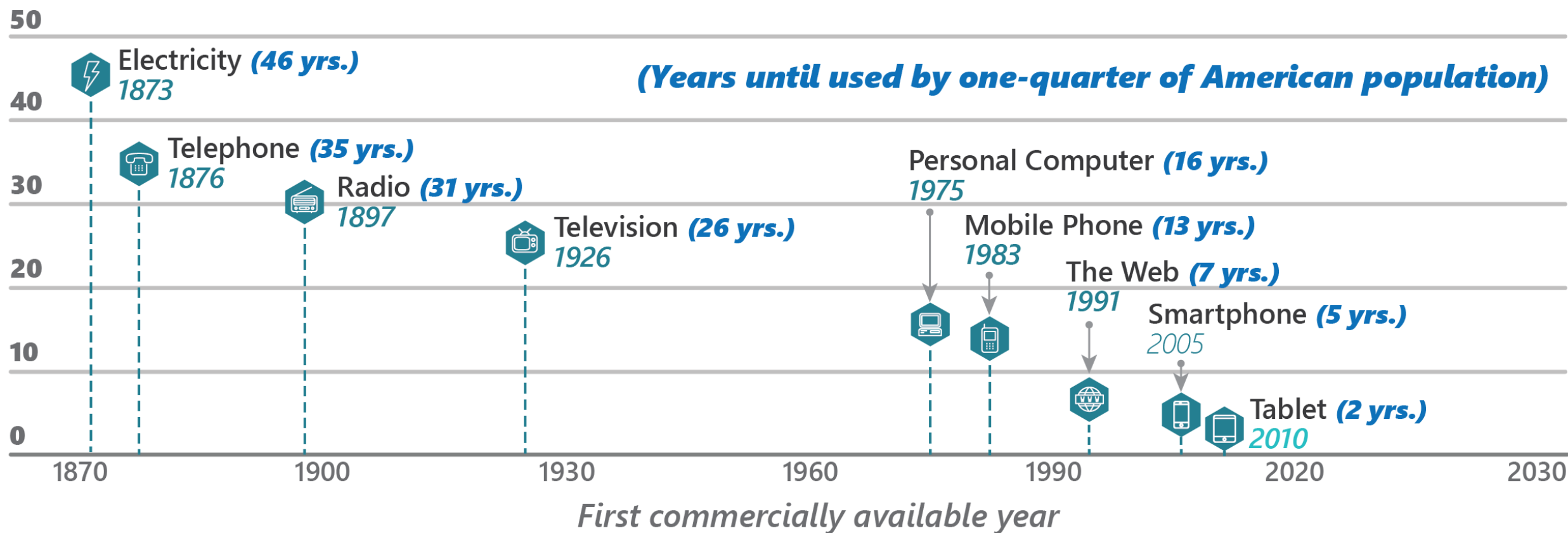
10 to 25

25 to 50

> 50



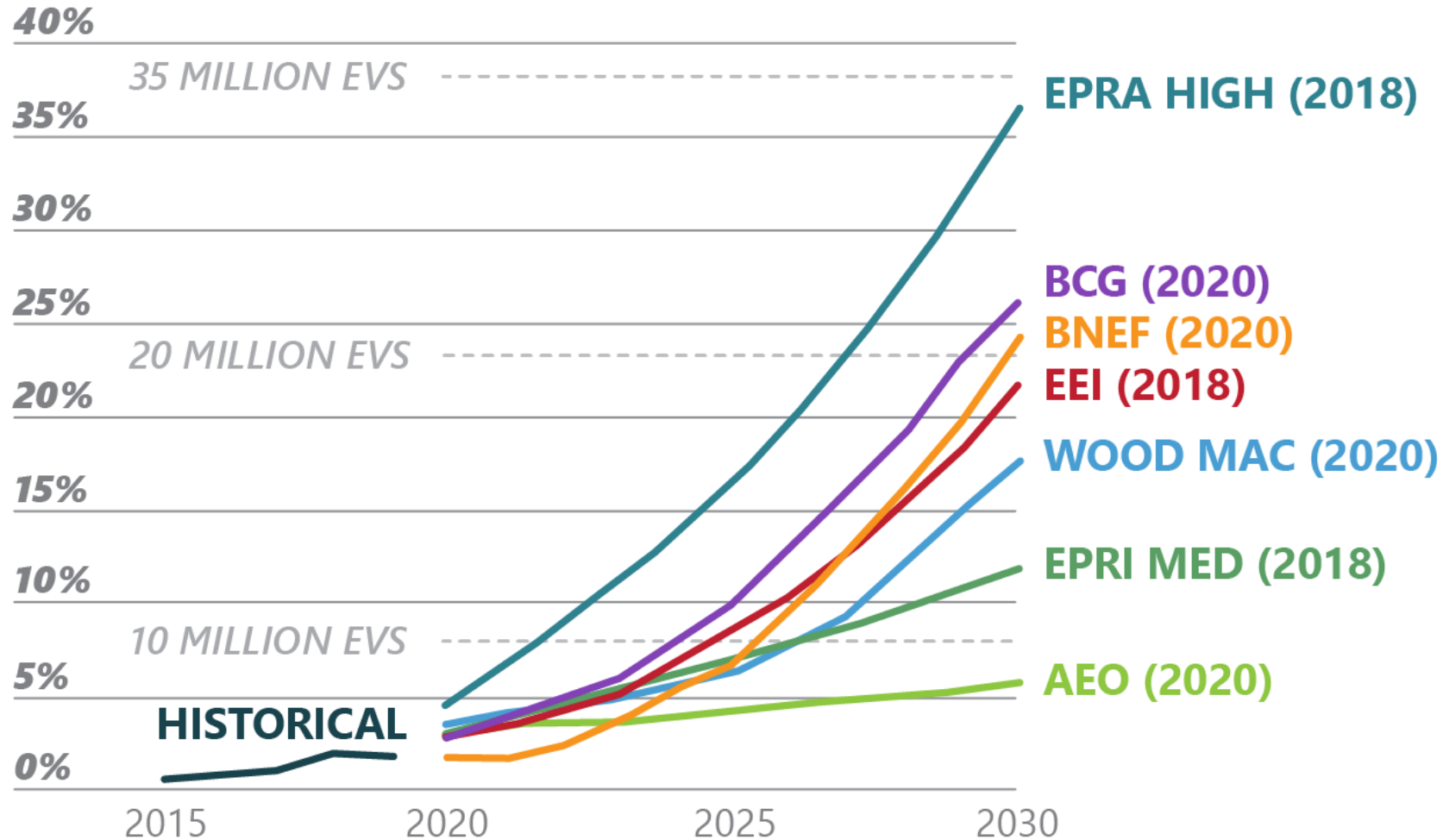
Technology Trends: Historic Adoption of New Tech





Energy Trends: Projected U.S. EV Sales

EV SHARE OF NEW VEHICLE SALES





Risk & Resilience Signposts

World Economic Forum Identified the Most Severe Risks on a Global Scale over next 10 years

1. Climate action failure
2. Extreme weather
3. Biodiversity loss
4. Social cohesion erosion
5. Livelihood crises
6. Infectious diseases
7. Human environmental damage
8. Natural resource crises
9. Debt crises
10. Geoeconomic confrontation

What's our vision?

Aspirational Goals



“Moonshots live in the gray area between audacious projects and pure science fiction; they are a **10x improvement, not 10%.**”

Google X



DEFINING A
MOONSHOT

What if we...

*Reorient our
transportation
goals and
investments to
support
communities?*





DEFINING A
MOONSHOT

What if we...

*Reinvent how
transportation
systems are
operated and
managed?*





DEFINING A
MOONSHOT

What if we...

*Redesign how
customers
experience
transportation?*



Creating a spectrum of actions

- Communications/engagement
- Partnerships
- Policies/regulations
- Plans/programs
- Assets/right of way
- Land use coordination
- Investments
- Technology/data
- Human resources
- Governance/organization

Partnerships

**Support
nontraditional
partnerships
(e.g., housing or
public health)**



**Catalyze
community
visions and
leverage delivery
capacity to
support local
partners**

Guidebook for Implementation of UAS Operational Capabilities

NCHRP 23-20

How to start the conversation...

**Operational
Needs at State DOTs**

**Cross-Cutting
Policy Impacts**

A collaborative research initiative.

Project Phases



1. Planning



2. Methodology



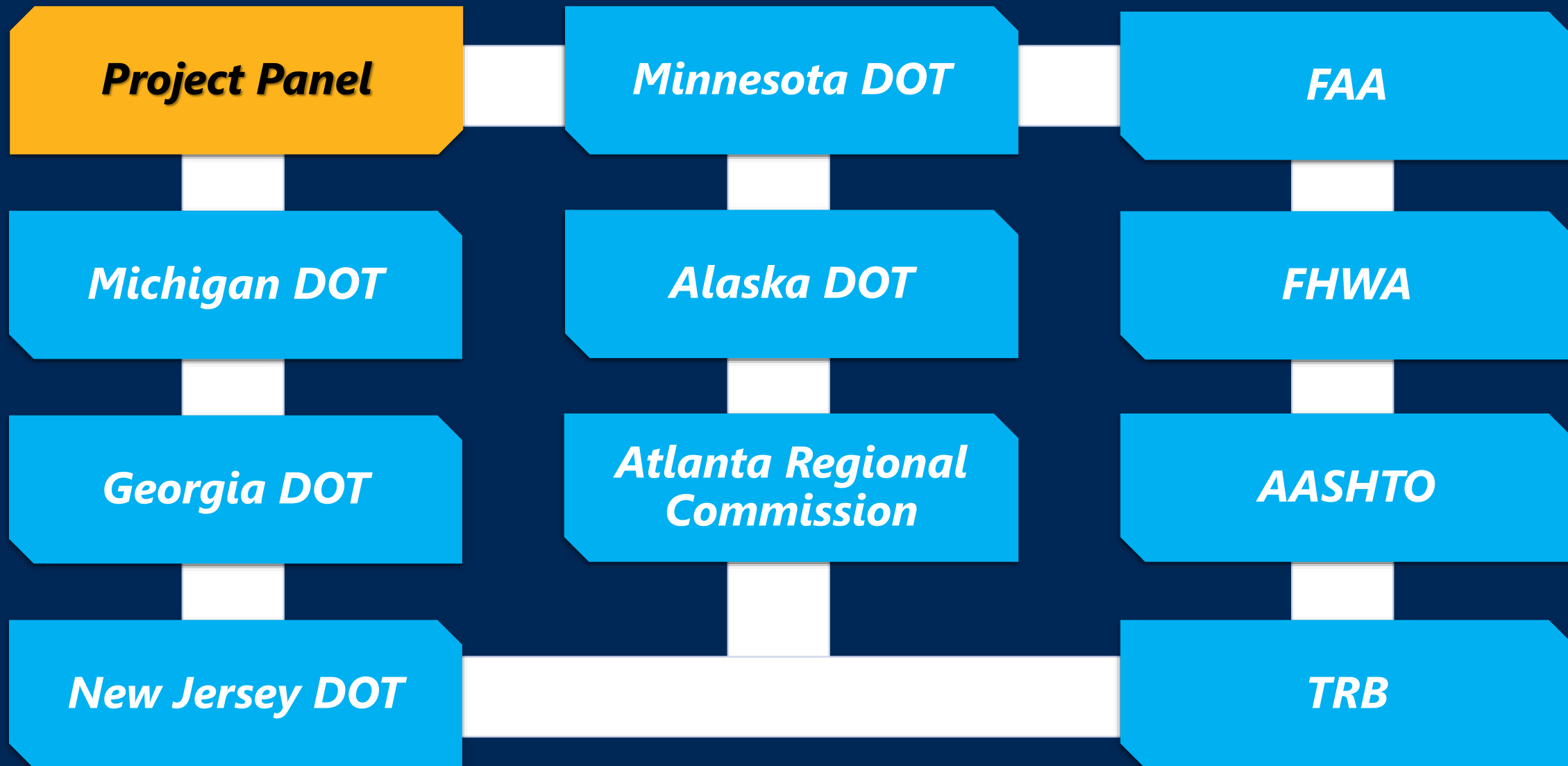
3. Workshop & Final Deliverables

Project Objectives

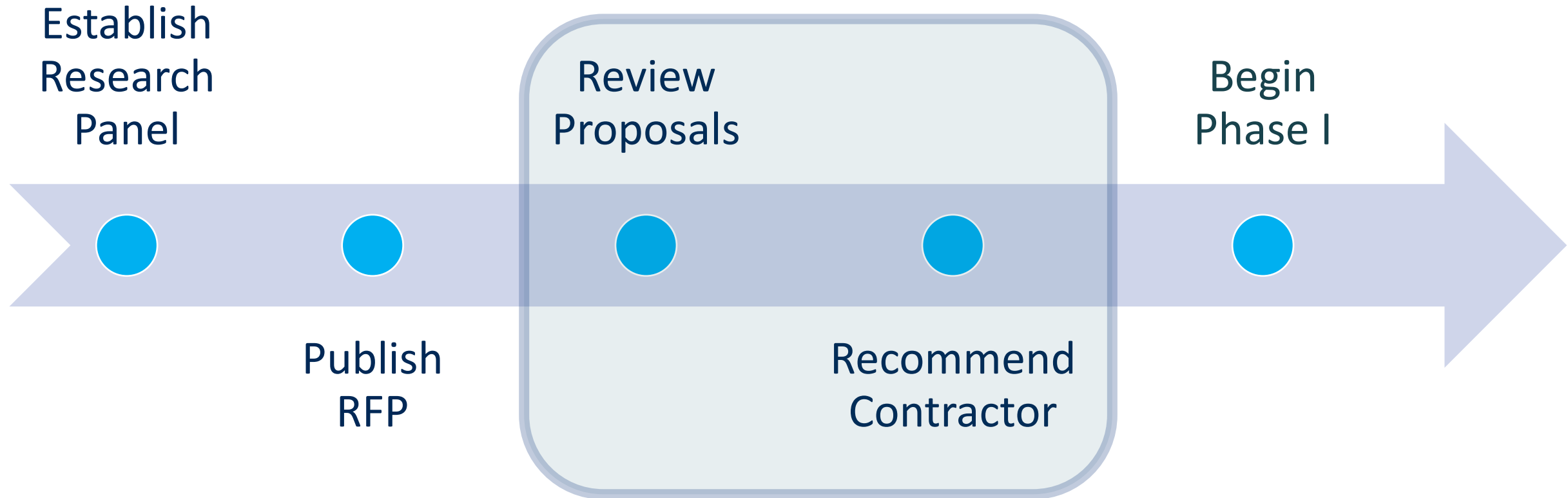
- Current roles and responsibilities across levels – Federal, State & Local Agencies
- UAS deployment pathways & implications for DOTs
- Forums to mediate conflicting roles and define key issues

Project Tasks

- Literature review to characterize roles for state & federal government
- Analyze & assess the framework of UAS/AAM governance
- Identify critical issues for interjurisdictional collaboration



What's next?



AASHTO UAS/AAM Inter-Committee Working Group 2022 Activities Update

Mid-Year Status

Engage DOT Colleagues

- Convened Quarterly Meetings and Communicated with the Council on Aviation
- Shared Best Practices and Operations Updates
- Assessed Policy Developments and Research Opportunities

Collaborate with Partners

- Engaged with FHWA to Support Domestic and International Research
- Partnered with NASAO to Review FAA Guidance
- Collaborated with NASAO to Support AAM Legislation in Congress

Promote Information

- Published the AASHTO "UAS/AAM State of Play" 2nd Edt. Information Sheet
- Publicized the AASHTO Website for UAS/AAM Resources and Working Group Information



THANK YOU



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