



NM Transportation Infrastructure Revenue Subcommittee Mobility Project Opportunities

August 31, 2021



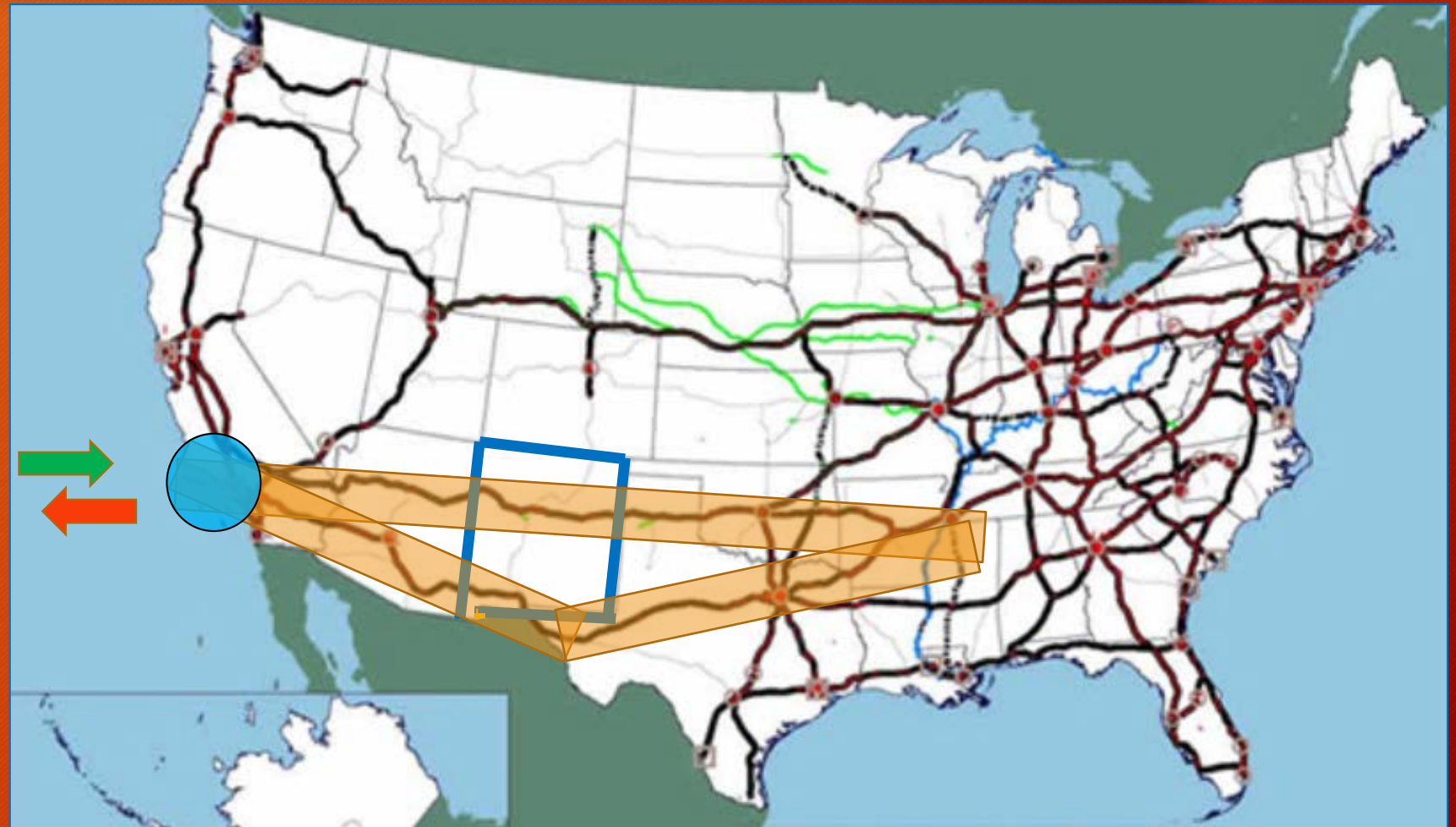
Key Issues For This Meeting

1. Industry Status and Momentum
2. New Mexico's Standing - Mobility Sector
3. HB 270/NMDoT
4. Opportunity/NM Mobility Strategy Recommendations
5. Gallup Investment Plan
6. Going Forward

Key Strategic Location

NM Is At The Center of Two Critical Transcontinental Freight Routes

Both Of These Corridors Begin At The Los Angeles Region Seaports



Industry Status and Momentum

- Freight Movement Versus People Movement
- Autonomy and Powertrain Technologies - Moving In Parallel
- Real-World Deployment Today
- Players: OEMs + Technology Developers + Logistics Companies + Shippers
- States That Put It Together Will Develop Role/Investment
 - Regulatory
 - Infrastructure
 - Real World Deployment
 - Fluid P3 Structure
- Long-Term Requirement For Testing & Development and Infrastructure

Mobility Sector Eco-System

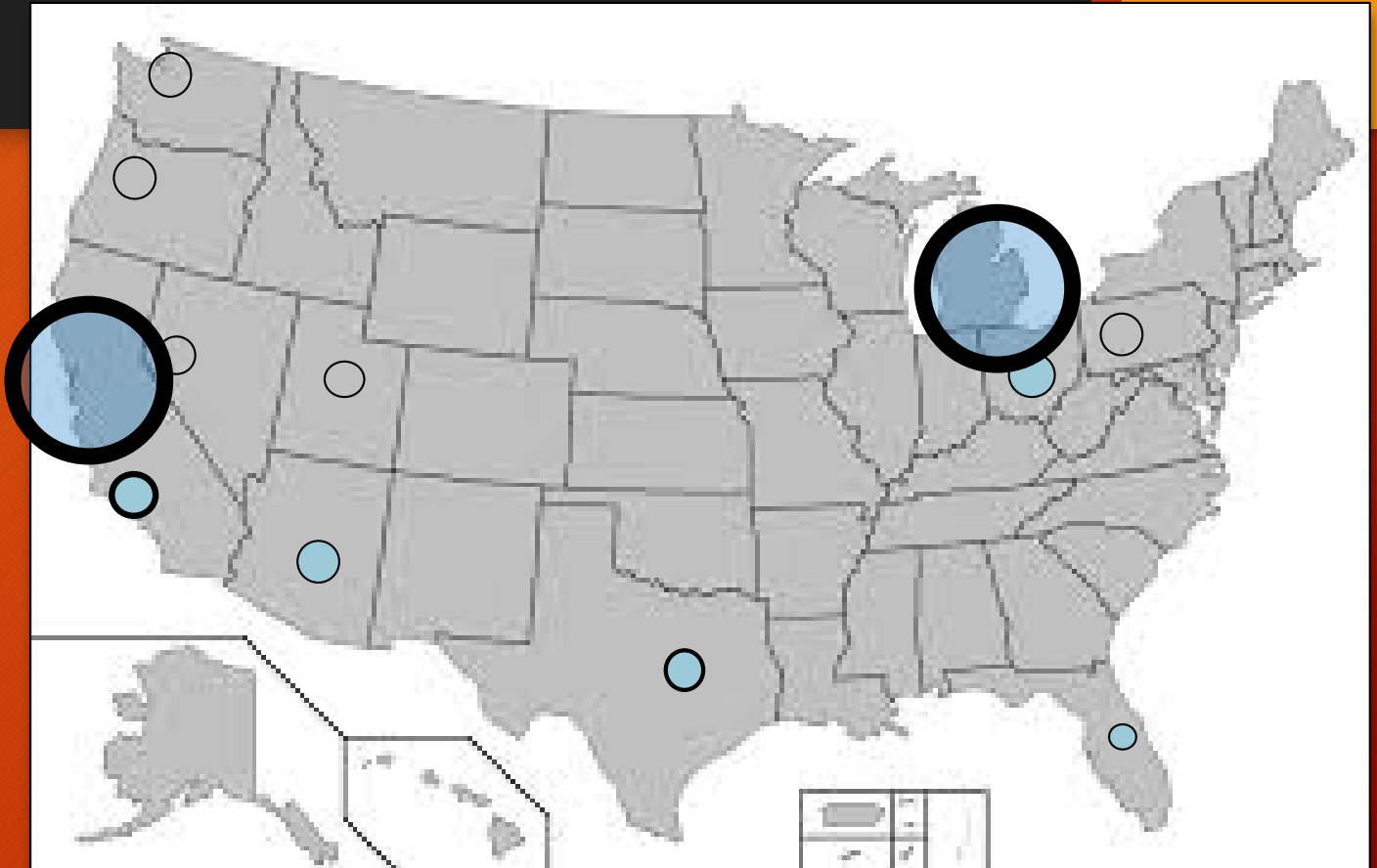
Investment From Key Sub-Markets

- Optics Components
- Sensor Components
- Computational Processing Components
- Cyber Software/Components
- Truck Platooning Software/Components
- Battery/Energy Storage
- Powertrain Technology - Hydrogen and Electric
- Fueling + Charging Infrastructure
- Chinese Automakers Influence



Mobility Sector in the US

- Not Following Legacy Automotive Sector Low-Cost Assembly Model
- Main Hubs Detroit and Silicon Valley - Global Hubs
- Western States Are Emerging as Focus Hubs
- Michigan and Florida Have Made Significant Public Investments



New Mexico's Standing – Mobility Sector

- Previously No Formal Strategy
- Now Recognized As Player - Early Stages
- Differentiator Is Integrated Approach:
 - Business Friendly
 - Safety Focus
 - Economic Development
 - Whole State Perspective - Laboratory
- Gallup Has Set Pace With Local Initiative With Much Wider Implications
 - Article in *Automotive World*



Current Article/Market Exposure

**Automotive
World** est. 1992

Work is underway to create a network of next-gen logistics centres designed for automated freight movement and zero-emission trucks. By Megan Lampinen
July 28, 2021



July 28, 2021

**Next-generation rail and truck
corridor to reshape freight
movement**

“The trucking sector faces its share of headwinds but in the Western US, it has been particularly hard going of late. Imports from Asia into the ports along the West Coast have been booming and earlier this year caused a bottleneck at key ports. In February, the California ports of Los Angeles and Long Beach, which serve as gateways for goods from Asia, reported a 45% jump in the volume of containers handled. In March that figure stood at 80%.

“NM recently passed legislation enabling the use of its roadways for freight technology testing and development. “Here, for the first time in the US, an entire state has set itself out as a laboratory for freight movement testing, development and deployment,” Wasserman explains. This includes a focus on specialized infrastructure to support testing and development of automation and propulsion technologies.

“In New Mexico we’ve completed a state-wide Mobility Strategy that creates a comprehensive business plan for supporting testing, development, deployment and product manufacturing of mobility in the state,” he explains. The strategy has been launched with a new Mobility Investment District along I-40 in Gallup

HB 270/State of New Mexico

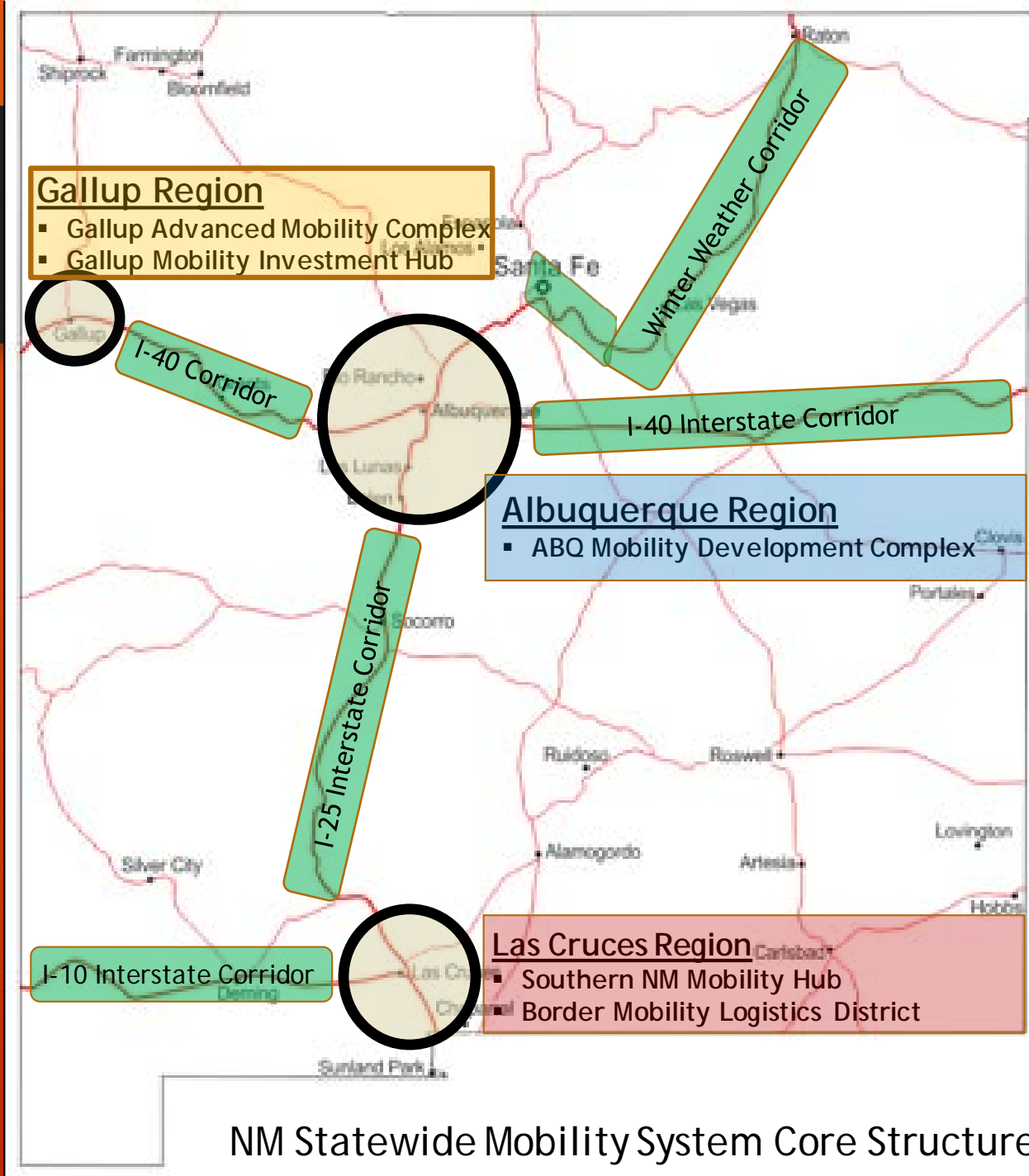
- Importance of the Legislation
 - Visibility of Intent To Market To Use New Mexico Highways For Testing
 - Clarity About State Requirements
 - Input From Industry
- Leadership of State DoT
 - Unique in Objective Blend:
 - Regulation
 - Encourage and Partner
 - Monetize Assets
 - Enable Economic Development



New Mexico Mobility Laboratory

Statewide Mobility Laboratory

- Statewide Scope, Cost, Government Partners, Specialized Infrastructure and Optimized Regulatory Structure
- Partners in Three Regions - Statewide Testing/Development Environment
- Closed-Courses: R&D, Testing, Certification
- Mobility Testing & Development Corridors
- Economic Development Incentives



Gallup : New Mexico Mobility Strategy

Gallup Mobility Investment District

- Truck Propulsion and Vehicle Automation
- Research + Testing + Development + Certification
- Engineering & Product Development, Assembly
- Anchor to Next-Generation Truck/Freight Corridor

New Mexico Mobility Laboratory

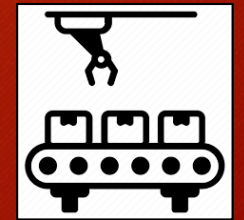
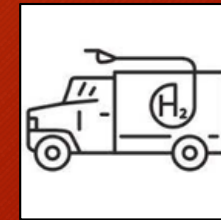
- Regulatory/Policy
- Overall Statewide Business Proposition
- Corridors/Interstate/Urban Testing + Development

Gallup Region Mobility Investment Strategy

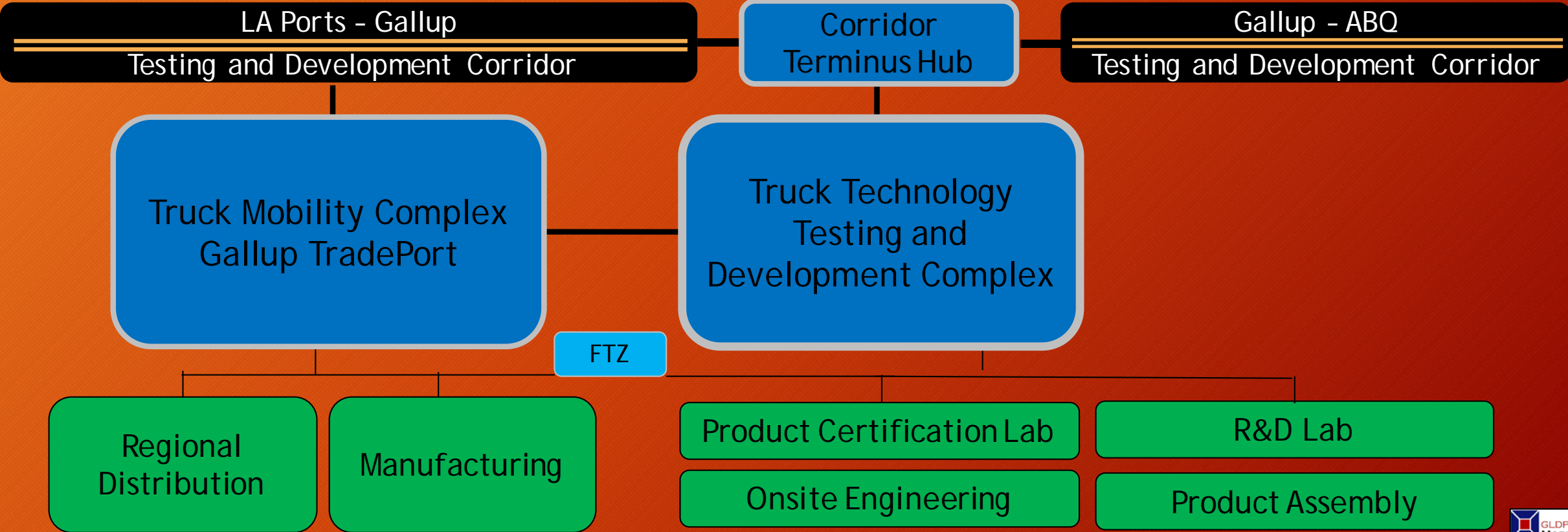
- Capitalizes on I-40 Strategic Location and State/Local Leadership
 - Become Industry Recognized Mobility Center
 - Important Transcontinental Corridor
 - Gateway/West-Facing



- Position the Region and State as National Model for Cargo Transport Efficiency
 - Autonomous Technologies
 - Clean Powertrain Technologies
 - Next-Generation Logistics Complex



Gallup Mobility Investment Plan



Industry Reaction

- Being Received Well By Industry
- Desire State's/Communities That Understand Special Needs and Want to Be Partner
 - OEM's - Companies That Manufacture Trucks (Legacy and New-Entrant Players)
 - Technology Developers - Companies That Are Creating Underlying Technologies For Autonomy and Clean Powertrain Systems
 - Logistics Providers - Companies That Manage Trucking and Other Logistics Services
 - Infrastructure Providers/Investors - Involved in Fueling/Charging, Telecom, Other Infrastructure

Industry Reaction

- Badly in Need Of Testing Options
- Excited About NM's Interest in Mobility, Strategy and Legislation
- Love the Almost Direct Access to Decision-Makers
- OEMs Interested in Combined Test/Development Setting, Business Friendly
- One Firm Said They Will Set-Up Testing/Showcase Center
- Another Firm Said They Would Consider Building/Investing in Proprietary Asset Near Main Testing Campus
- Truck Mobility Complex Gets Very High Attention: Trucking Services, Investors
- Time of Essence

Testing and Development Complex + Corridor Terminus Hub

Project Design

Testing and Development/Corridor Terminus

Testing/Development

- Straightaway
- Low/Mid Speed Course
- Admin Building
- Shop Space

Corridor Terminus

- Electric Charging Infra
- Hydrogen Fueling Infra
- Admin Building
 - Engineers/Safety Drivers
 - Data Upload
 - Meetings



Project Preliminary Engineering and Cost

Infrastructure Costs

Total Project \$ 18M

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Test Complex \$ 14M

Corridor Terminus Hub \$ 4M

Plus 10% Contingency

GALLUP AIRPORT MOBILITY ZONE PRELIMINARY DEVELOPMENT COST ESTIMATE (08/09/2021)				
ID NO.	DEVELOPMENT ITEM	QUANTITY	UNITS	TOTALS
1	TEST TRACK, 2-LANES WITH SHOULDERS	7,700	LF	\$ 5,000,000
2	URBAN / SUBURBAN TEST TRACK CIRCUIT	12,300	LF	\$ 3,500,000
3	DRIVES & PARKING AREAS	9,600	SY	\$ 1,300,000
4	AIRPORT SECURITY FENCE LINE	9,600	LF	\$ 500,000
5	ADMINISTRATION & SHOP BUILDING	10,000	SF	\$ 2,000,000
6	TRUCK FUELING, DIESEL STORAGE TANK & DISPENSERS (3)	1	LS	\$ 300,000
7	TRUCK FUELING, ELECTRIC CHARGING STATIONS (2)	1	LS	\$ 2,100,000
8	TRUCK FUELING, HYDROGEN TANK & DISPENSERS (2)	1	LS	\$ 3,000,000
9	WATER LINE EXTENSION TO ADMIN/SHOP BUILDING	1,000	LF	\$ 100,000
10	SEPTIC TANK SYSTEM FOR ADMIN/SHOP BUILDING	1	LS	\$ 50,000
11	ELECTRIC POWER SUPPLY TO ADMIN/SHOP BUILDING	1,000	LF	\$ 100,000
12	TELECOMMUNICATIONS TO ADMINISTRATION BUILDING	1,000	LF	\$ 50,000
TOTAL PRELIMINARY DEVELOPMENT COST - GALLUP AIRPORT MOBILITY ZONE				\$ 18,000,000



Testing and Development Corridors

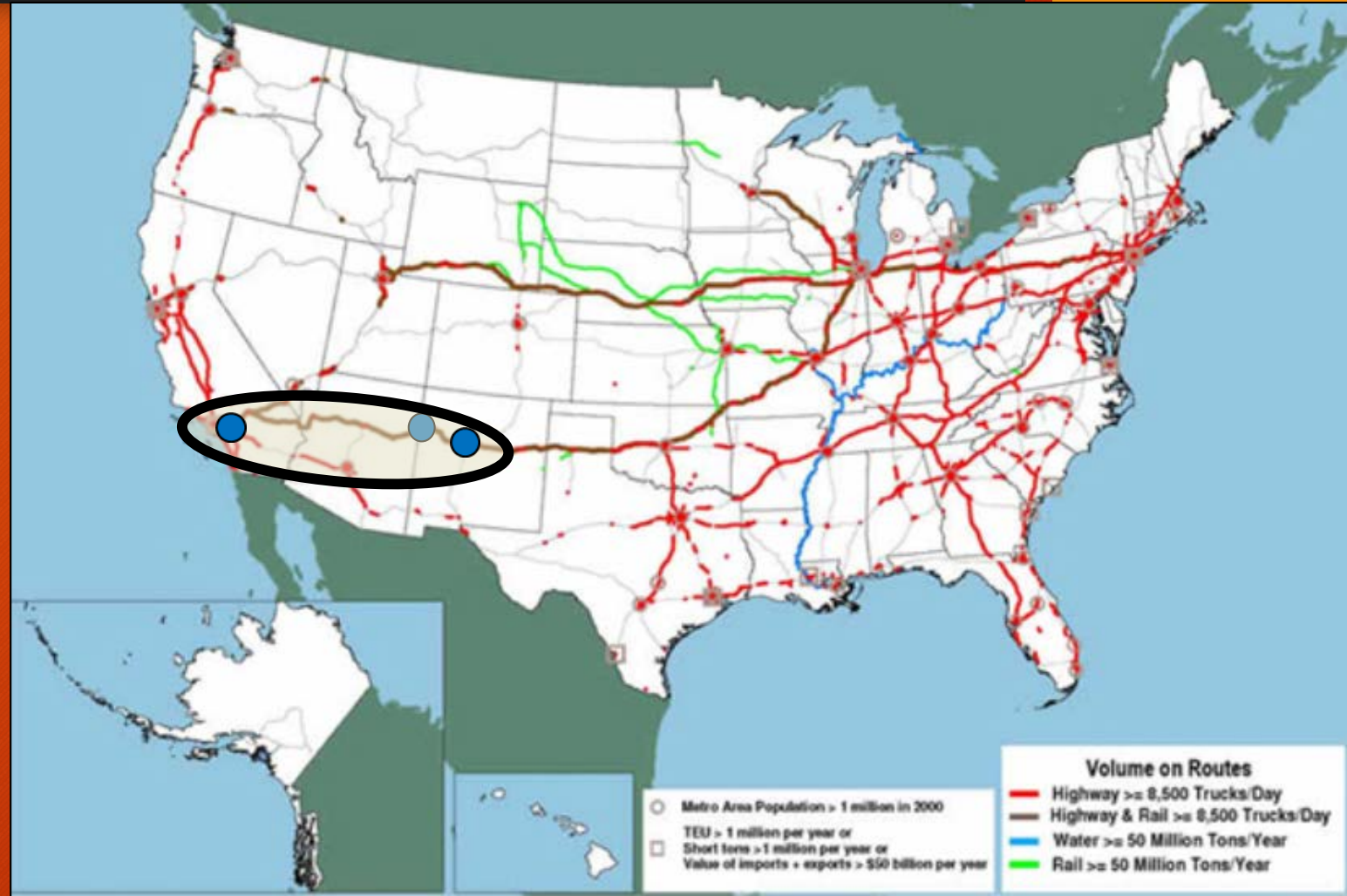
Truck Technology Testing Corridors

Autonomous and Clean Powertrain Technology

- I-40 is a Uniquely Important National Trucking Corridor
- Major Element is Los Angeles Ports Complex
- Gallup's Strategic Location
- Overall: 795 Mile Corridor
- Two Segments: Long-Haul and Short-Haul

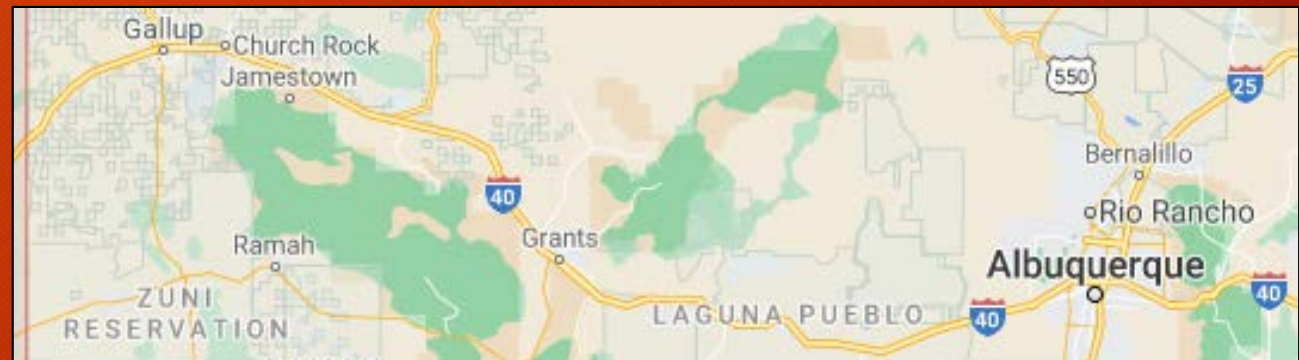
Gallup - to - Albuquerque

LA Ports Complex - to - Gallup



Gallup - to - Albuquerque Testing Corridor

- Corridor Length: 127 Miles
- Specified in NM Mobility Strategy
- Critical Legislation Passed by NM Legislature to Support Testing
- NMDOT Enthused About Gallup - to - Albuquerque Corridor
 - Formal Designation to Follow
 - Joint Marketing + Signage
- Short-Haul: Day Turnaround
- Interfaces With Testing Complex
- Terminus: Critical Infrastructure

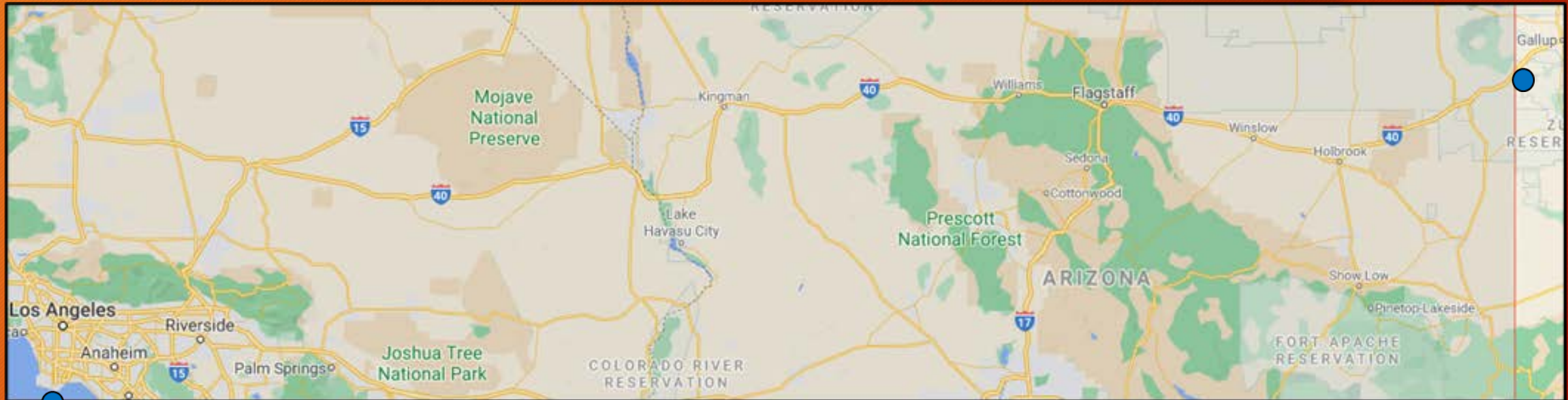


LA Ports Complex - to - Gallup Testing Corridor

- Nationally Significant High-Density Supply Chain Corridor
- Ports Complex Handle 35,000 Trucks Per Day
- California and Ports Are Extremely Focused on Reducing Air Emissions
- NM Governor Supports Climate Change Initiatives & Electric Vehicles in NM
- Ports Wish To Develop “Sustainable Supply Chains”
- California Inland Port Underway
- Long-Haul Routes/Testing: Back and Forth to Ports & Through Truck Movements
- Interfaces With Testing Complex
- Opportunity: Partner With Ports for Flagship Truck Testing Corridor (Years 1-3)
- Supports Development of Truck Mobility Complex (Years 3-5)



LA Ports Complex - to - Gallup



- 668 Miles From the Ports Complex Gate Through Three States
- At Approximate Federal Hours of Service Limits
- Variable Climate/Weather Zones/Elevation
- With Port Partners Would Be Highly Visible For National Freight Network/US DoT

LA Ports – Gallup Corridor Partnership

- The LA Ports – Gallup Corridor Would Require Several Layers of Participants and Partners
 - States + Ports + OEM Trucking Companies + Logistics Operators
- This Project Would be Very Attractive to Federal Government
- Gallup/State of NM Should Lead Partnership Structure:
 - Develop Core Project Proposition; Bring Partners Into Partnership: Gallup & State of NM
 - Develop Operating Protocols and Core Infrastructure Requirements
 - Develop Proposal for Federal Support:
 - Designate As Nationally Important Project and Invest Funds
- Timing For Action: As Soon As Possible

Public Objectives and Federal Interest

- Project is Built Around the Following Public Objectives:
 1. Greenhouse Gas Reduction/Air Quality Improvement
 2. Road Congestion Reduction
 3. Public Road Safety
 4. Economic Development - Rural and Urban
- Federal Government Is Quite Interested in Supporting Large-Scale Super Regional Projects That Meet A Combination of These Objectives
 - USDoT
 - USDoC
 - USDoE

Truck Mobility Complex/I-40 TradePort

- Important to State's Interest in Freight Gateways
- Could Be Twinned With a I-10 TradePort Project
- Hub For Clean Energy and Autonomous Trucks
 - Fueling/Charging
 - Maintenance
 - Cargo Handling/Transfer
- Would Be Core For Logistics-Enabled Investment District



Project Execution

Go-Forward Issues

- Overarching State Strategy and Involvement
- Infrastructure Funding
- Delivery Tools
 - These Projects Are By Their Nature Joint Ventures With Private Industry
 - Critical to Have Tool That Enable P3's
 - Highly Plausible to Attract Private Investment
 - Must Be Clear About How Public and Private Resources Could Be Joined Together To Advance Public Objectives