



TDA Conference - Madison, Wisconsin

## Can Tolling Really Work in Wisconsin?

Presented by Jack Finn, HNTB Corporation  
November 13, 2008

# Factors Driving Toll Market

- Motor fuel tax is inadequate
- Increase in fuel efficient vehicles are eroding the purchasing power of gas tax
- Deteriorating physical infrastructure, Congestion
- New construction costs climbing
- Alternative revenue source
- Changes in political and management landscape
- Increased use of technology
- More acceptance of user-fee financing
- Result is Increase in new toll facilities



# We are entering a new “Turnpike Era”

- Struggle for Infrastructure Financing at both State and Federal level
- Estimated surface transportation financial needs are more than double current funding
- Innovative Finance, Public-Private Partnerships, User Fees = **TOLLS**
- Public perception of toll roads has changed



# Public Perception is Changing

## Public Opinion on Toll Roads has Shifted

- When asked “Free Road vs. Toll Road,” they answer Free Road
- When asked “Toll Road vs. No Road,” they answer Toll Road

## Key to Public Acceptability

- Credibility of the argument that funding is not available from other sources
- Public perception that use of tolls will bring the project much sooner than waiting for funding from other sources



# SAFETEA-LU PROGRAMS / PROVISIONS



- **Value Pricing Pilot Program** – Continuation from ISTEA
- **Express Lanes Demonstration Program** - 15 demonstration projects to permit tolling to manage high levels of congestion. Mandates automatic tolling.
- **Section 1121 (HOV Program)** – Authorizes conversion of HOV lanes on federal-aid roads to HOT lanes
- **Interstate System Construction Toll Pilot Program** - States permitted to collect tolls on interstate to fund construction. Limited to three projects.
- **Interstate System Reconstruction and Rehabilitation Toll Pilot Program** - Continuation of TEA-21, allows 3 interstate tolling projects for the purpose of reconstructing interstate.
- **PAB, TIFIA, SIB and Toll Credits**

# ADDITIONAL FEDERAL PROGRAMS

## USDOT Urban Partnership Agreement

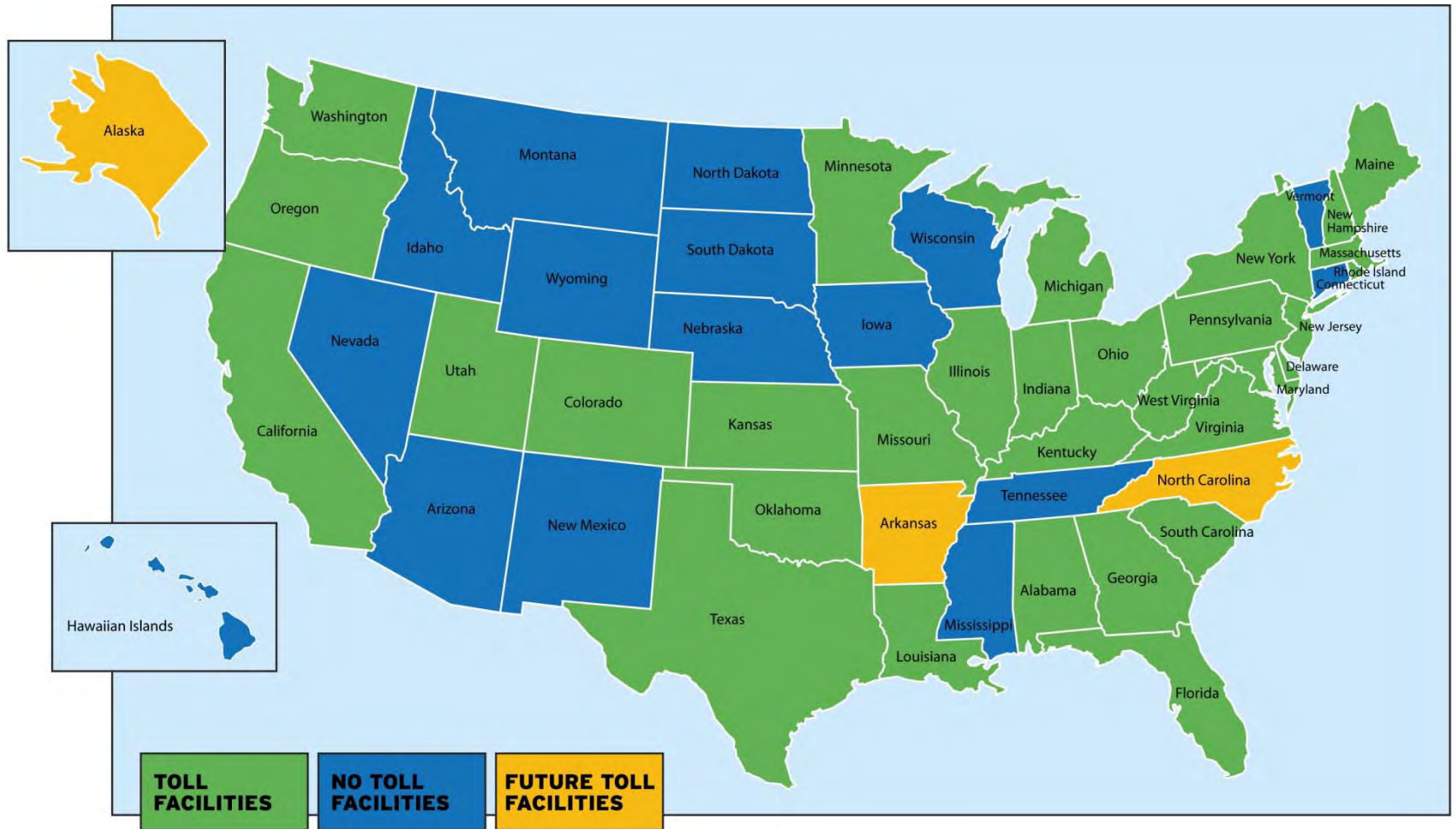
- USDOT's Congestion Initiative offered \$1 billion to five local projects to implement broad congestion pricing.
- Selected in August 2007: Miami, Minneapolis/St. Paul, New York City, San Francisco, and Seattle
- New York State Assembly failed to pass the initiative and lost \$355M in funding

## USDOT Congestion-Reduction Demonstrations

- Fund projects that integrate transit, technology, and congestion pricing to relieve congestion on highways
- In April 2008 USDOT selected Los Angeles to receive \$213M and Chicago to receive \$153M



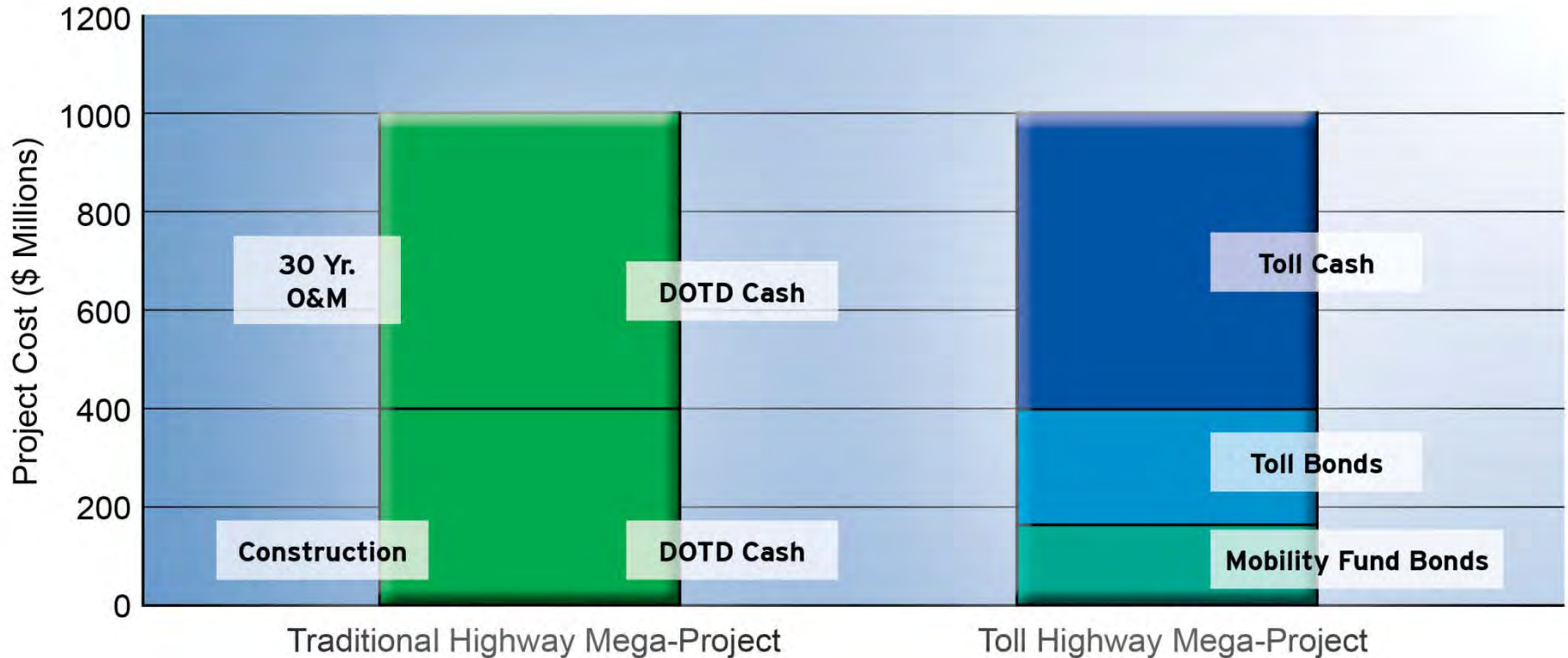
# Current Toll Facility States



**States introducing tolls: NC, AR, AK, NV, MS**

**States adding toll agencies: FL, TX, CA, CO, LA, VA, SC**

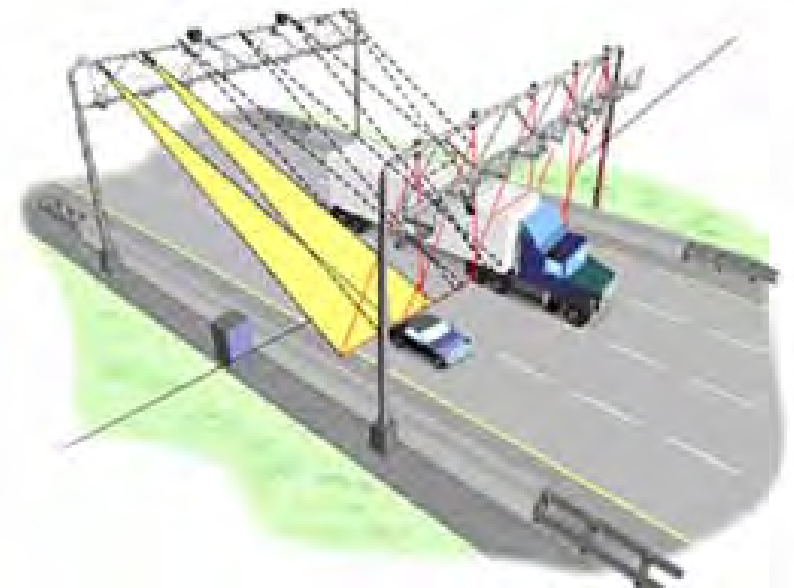
# Leveraging Tolling for Increased Funding



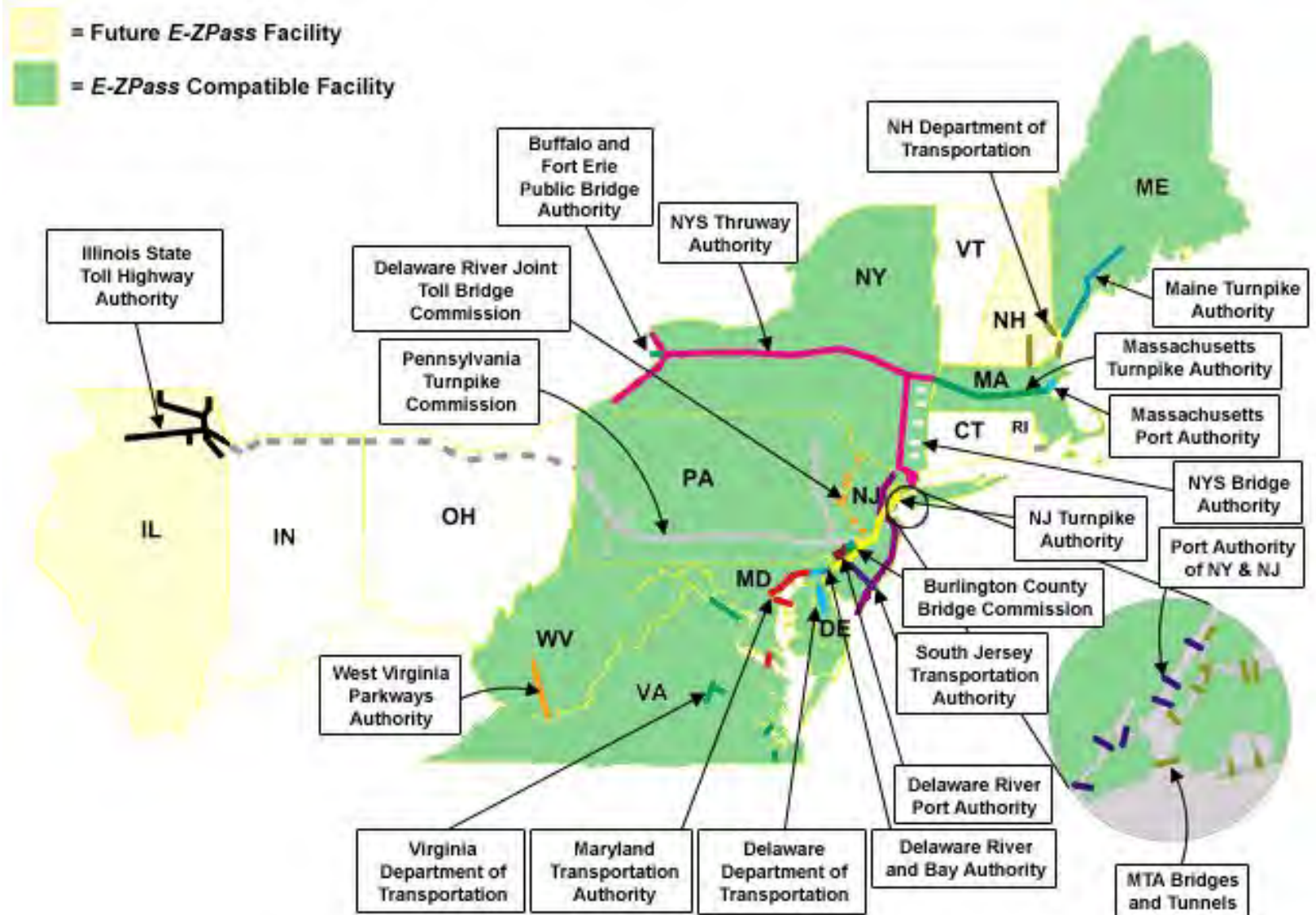
**STATE CAPITAL OUTLAY:  
\$100 Million Toll vs. \$1 Billion Traditional**

# Electronic Toll Collection Benefits

- Revenue collection at highway speeds
- Enhances congestion/peak-hour pricing
- Current and future technology
- Interoperable with parking garages, etc.
- Significantly reduces traffic congestion
- More convenient for drivers
- Allows managed lanes



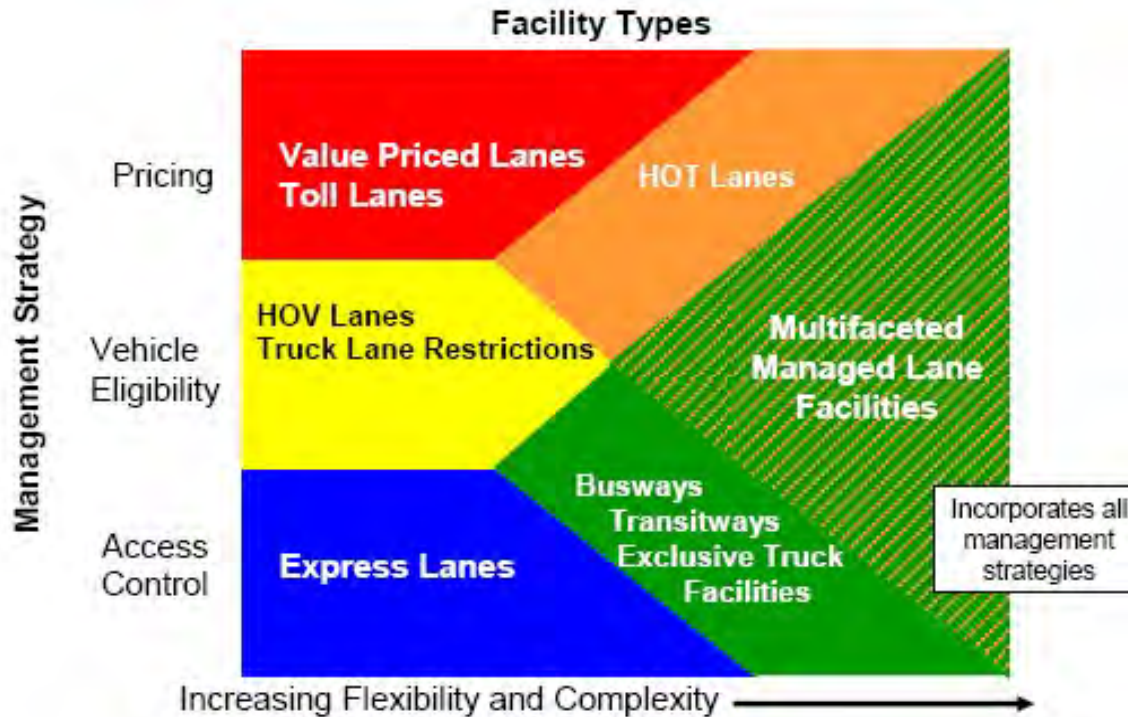
# What Other States are Doing - E-ZPass ( IAG )



# Existing Toll Programs Governance

| CATEGORY | STATEWIDE  | REGIONAL/LOCAL   | SINGLE PROJECT   |
|----------|--|--|--|
| PUBLIC   | <b>DOT</b>   | North Texas Tollway Authority<br>Central Texas Regional Mobility Authority<br>Orange County Tollway Authority (FL)<br>Port Authority of New York & New Jersey<br>Delaware River & Bay Authority<br>Delaware River Port Authority<br>Delaware River Joint Toll Bridge Commission<br>South Jersey Transportation Authority<br>Massachusetts Port Authority<br>Miami-Dade Expressway Authority (FL)<br>Transportation Corridor Agencies (CA)<br>Harris County Toll Road Authority (TX)<br>MTA Bridges and Tunnels (NY)<br>Richmond Metropolitan Authority (VA)<br>New York State Bridge Authority<br>Bay Area Toll Authority (CA) | E-470 (CO)<br>Golden Gate Bridge, Highway & Transportation District (CA)<br>Orange County Transportation Authority - SR91 (CA)<br>Buffalo & Fort Erie Public Bridge Authority<br>Thousand Island Bridge Authority<br>Chesapeake Bay Bridge and Tunnel District |
|          | <b>SEPARATE AGENCY</b>   |  |  |
|          | Kansas Turnpike Authority<br>Illinois State Toll Highway Authority<br>Oklahoma Turnpike Authority<br>Massachusetts Turnpike Authority<br>New Jersey Turnpike Authority<br>Pennsylvania Turnpike Commission<br>Georgia State Road and Tollway Authority<br>New York State Thruway Authority<br>Ohio Turnpike Commission<br>Maine Turnpike Authority<br>Rhode Island Turnpike and Bridge Authority<br>Colorado Tolling Enterprise (CDOT Staff) |  |  |
| PRIVATE  |  | <b>FOR PROFIT</b>  | <b>FOR PROFIT</b>  |
|          |  | United Toll Systems Bridges (AL)   | Ambassador Bridge (MI)<br>Dulles Tollway Extension (VA)<br>California Transportation Ventures - SR125 (CA)<br>Detroit - Windsor Tunnel (MI)<br>Grosse Ile Bridge Company (MI)  |
|          |  | <b>NOT FOR PROFIT</b>  | <b>NOT FOR PROFIT</b>  |
|          |  |  | Lake of the Ozarks Community Bridge Corp.  |

# Managed Lanes: The Big Picture

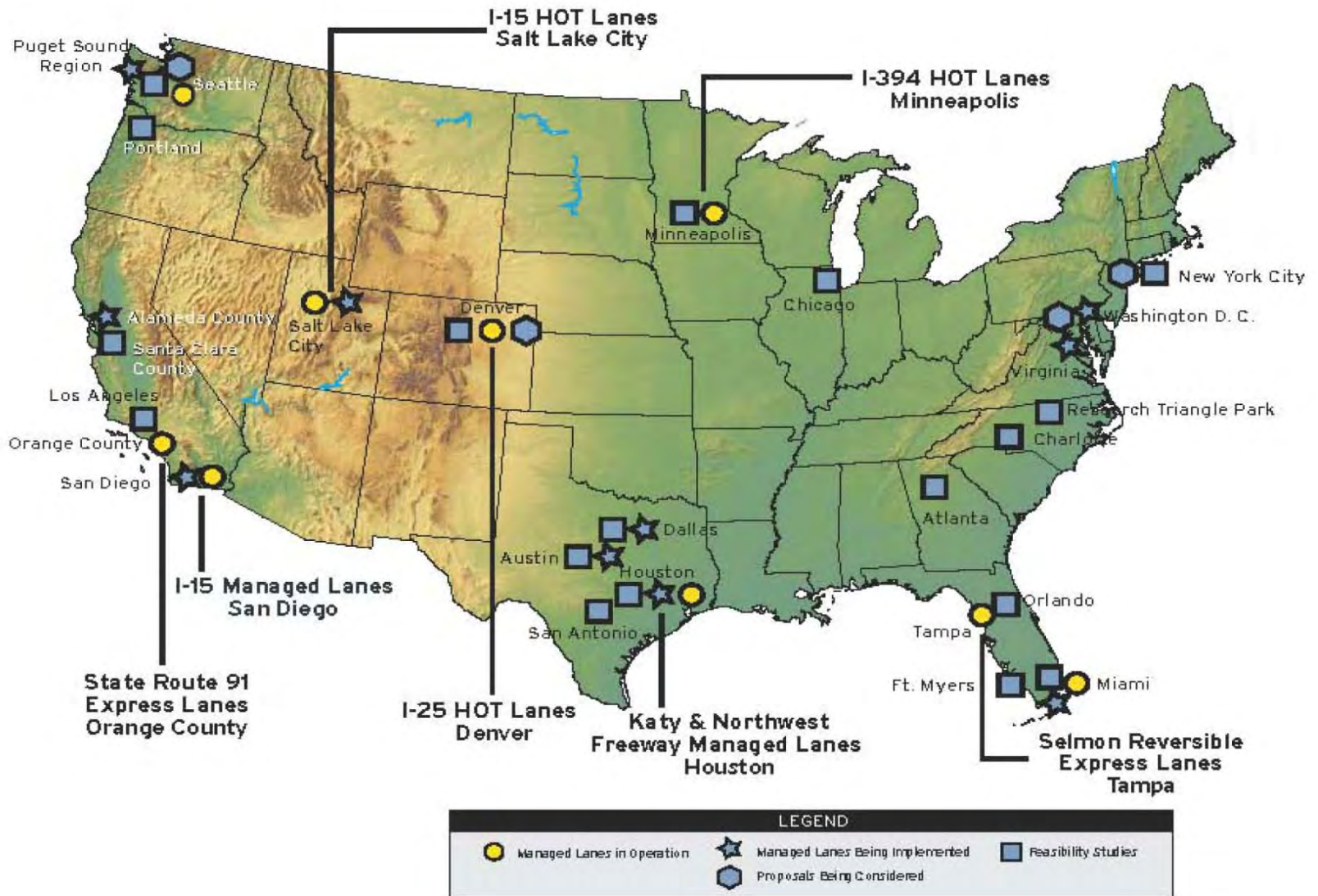


“A managed lane facility is one that increases freeway efficiency by packaging various operational and design actions. Lane management operations may be adjusted at any time to better match regional goals.”

# HOT Lanes: The Big Picture

- “Next Generation” HOV Lanes
- Promotes full utilization of capacity
- Supports fast, convenient transit and other forms of ridesharing
- Consistent with SAFETEA-LU
- In general, cover O & M and part of the Capital Cost
- Most implemented by MPOs for traffic demand management and mobility purposes
- Initial strategy is typically HOT Lanes

# Managed Lane Projects in the U.S.



# SR 91 (California)



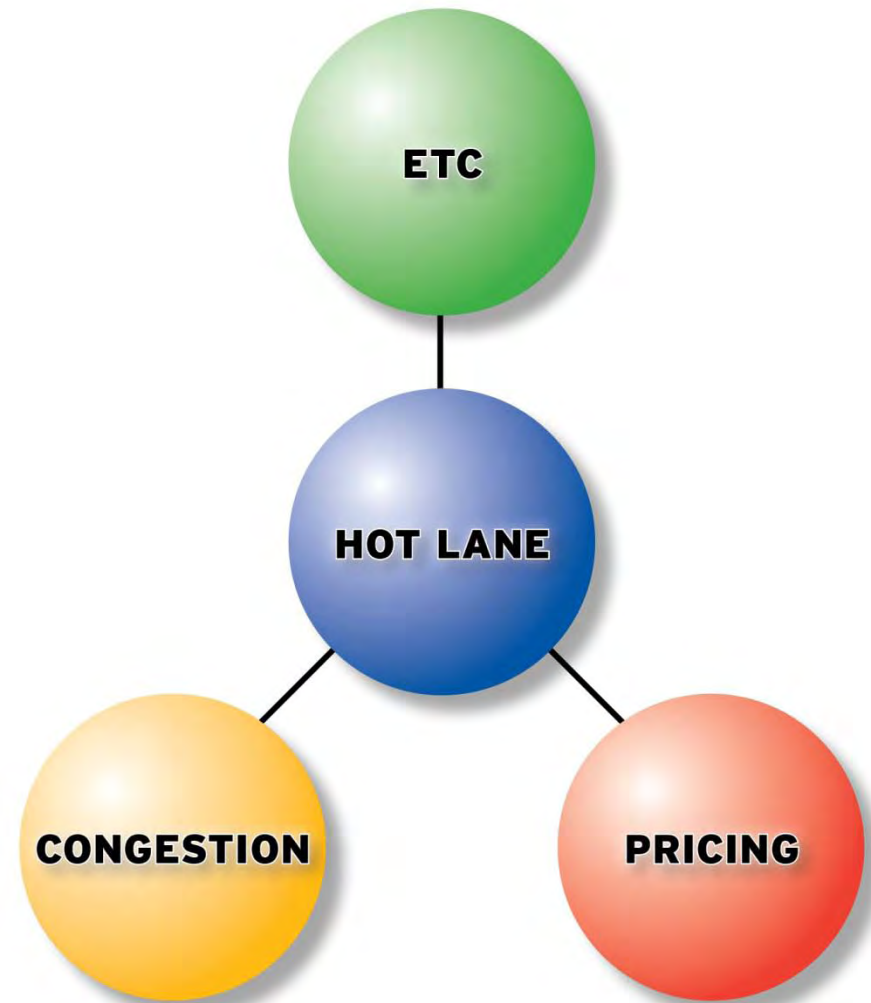
# Case Study – SR 91, California

- Private franchise CPTC in 1990 (AB680)
- 10-mile configuration: 4-2-2-4
- \$130M initial construction cost
- HOV3+ free except peak hours, HOV2 discount, SOV value priced (\$1.00 - \$9.50)
- Non-compete clause in contract
- OCTA purchased franchise in 2003 (\$207.5 million)



# HOT Lane Issues

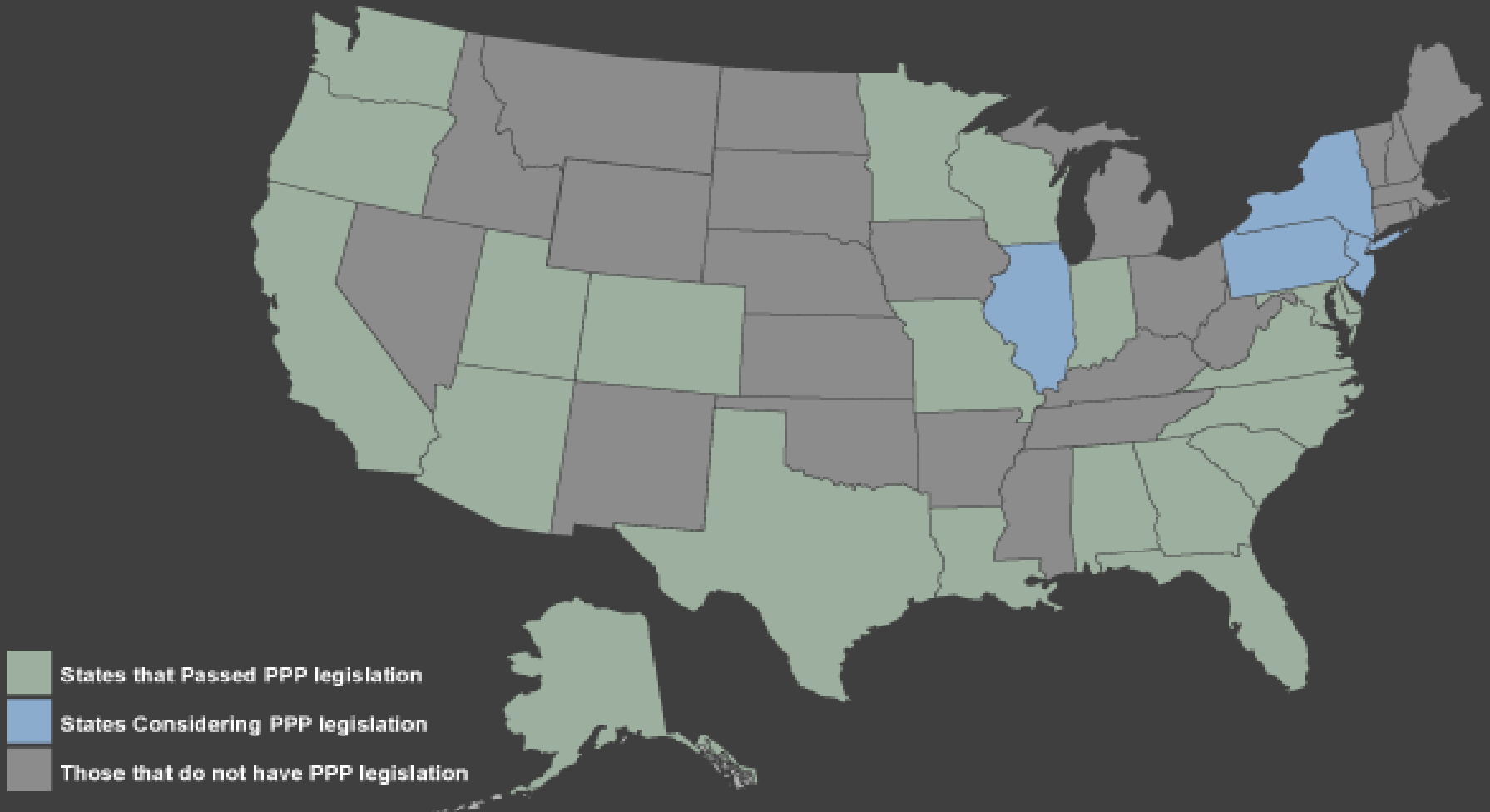
- Fully electronic open road tolling
- Requires congestion in free lanes
- Dynamic/variable pricing to maintain free flow
- FHWA approval for tolling interstate
- Public perception
- Enforcement



# Public/Private Partnerships (P3's)

- Becoming more popular as infrastructure funds are stretched to meet increasing demand
- Benefits public and private sectors
  - Private ventures can share some of the risk, while making a profit appropriate to that risk
  - Public agencies build desired projects now rather than later tapping into private equity funding
  - Ability to extend not just through design and construction, but also through operation and maintenance for additional savings
- Both toll facilities and **non-toll** facilities
  - Missouri Safe & Sound Bridge program
  - Miami Port Tunnel availability payments

# PPP - Activity Across Nation



# Project Delivery Landscape

|                                      | DESIGN<br>BID<br>BUILD                       | DESIGN<br>BUILD                              | DESIGN<br>BUILD<br>OPERATE<br>MAINTAIN       | DESIGN<br>BUILD<br>FINANCE                   | SHADOW<br>TOLL<br>DESIGN<br>BUILD<br>MAINTAIN<br>FINANCE | AVAILABILITY<br>PAYMENT<br>DESIGN<br>BUILD<br>MAINTAIN<br>FINANCE | AVAILABILITY<br>PAYMENT<br>DESIGN<br>BUILD<br>OPERATE<br>MAINTAIN<br>FINANCE | ASSET<br>LEASE   | ASSET<br>SALE  | DESIGN<br>BUILD<br>OPERATE<br>MAINTAIN<br>FINANCE                            |
|--------------------------------------|--|--|--|--|--|---|--|--|--|--|
|                                      | Design<br>Build                              | Design<br>Build                              | Design<br>Build<br>Operate<br>Maintain       | Design<br>Build<br>Finance                   | Design<br>Build<br>Maintain<br>Finance                   | Design<br>Build<br>Maintain<br>Finance                            | Design<br>Build<br>Operate<br>Maintain<br>Finance                            | Finance<br>Operate<br>Maintain   | Finance<br>Operate<br>Maintain   | Design<br>Build<br>Operate<br>Maintain<br>Finance                            |
| SOURCE OF FUNDS:<br>NON-TOLL PROJECT | ■ Traditional                                | ■ Traditional                                | N/A  | ■ Traditional                                | ■ Traditional  | ■ Traditional   | N/A  | N/A  | N/A  | N/A  |
| SOURCE OF FUNDS:<br>TOLL PROJECT     | ■ Traditional<br>■ Revenue Backed - Low Risk | ■ Traditional<br>■ Revenue Backed - Low Risk | ■ Traditional<br>■ Revenue Backed - Low Risk | ■ Traditional<br>■ Revenue Backed - Low Risk | N/A  | ■ Traditional<br>■ Revenue Backed - Low Risk                      | ■ Traditional<br>■ Revenue Backed - Low Risk                                 | ■ Traditional<br>■ Revenue Backed - Low Risk<br>■ Revenue Backed - High Risk | ■ Traditional<br>■ Revenue Backed - Low Risk<br>■ Revenue Backed - High Risk | ■ Traditional<br>■ Revenue Backed - Low Risk<br>■ Revenue Backed - High Risk |
| PROJECT TYPE                         | Greenfield                                   | Greenfield                                   | Greenfield                                   | Greenfield                                   | Greenfield   | Greenfield  | Greenfield   | Brownfield   | Brownfield   | Greenfield   |
| REVENUE RISK                         | Public                                       | Public                                       | Public                                       | Public                                       | Public   | Public  | Public   | Private  | Private  | Private  |

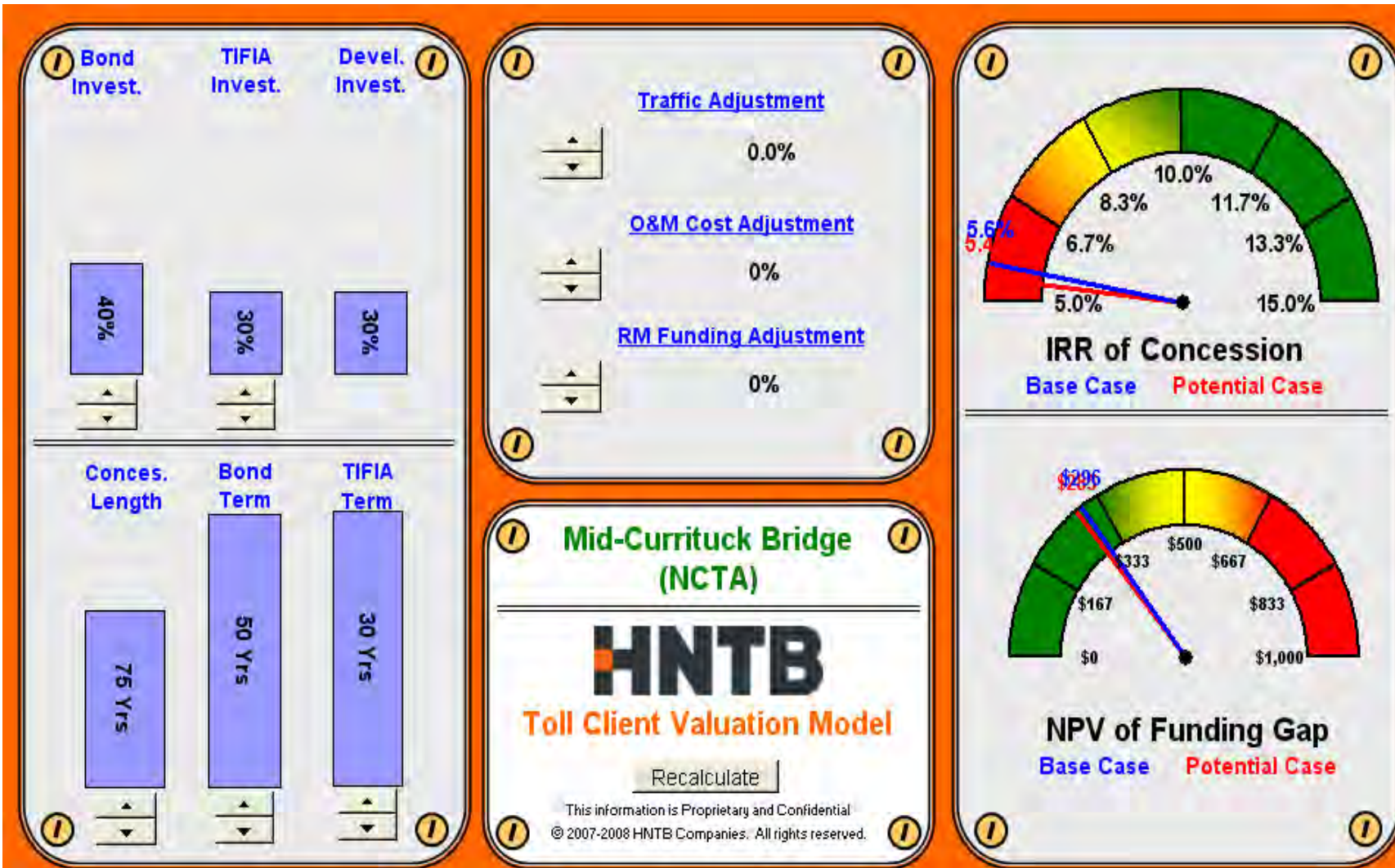


Increasing Risk

# Public-Private Partnerships

| Pros  | Cons   |
|---|--|
| <ul style="list-style-type: none"><li>▪ Access to private capital</li><li>▪ Private sector less risk adverse and can raise more capital than public sector</li><li>▪ Revenue sharing of excess revenue or up-front payment</li><li>▪ Appropriate risk sharing</li><li>▪ Additional expertise</li><li>▪ Tolls set at market rate</li></ul> | <ul style="list-style-type: none"><li>▪ Required return on equity</li><li>▪ Rate of return issues<ul style="list-style-type: none"><li>▪ Is return commensurate with risk?</li><li>▪ Should rate be capped?</li></ul></li><li>▪ Some loss of control</li><li>▪ Early buy-out issues</li><li>▪ Legislative approval required</li><li>▪ Non-compete issue</li><li>▪ Private sector sets toll rates</li></ul> |

# Toll Client Financial Model - Dashboard

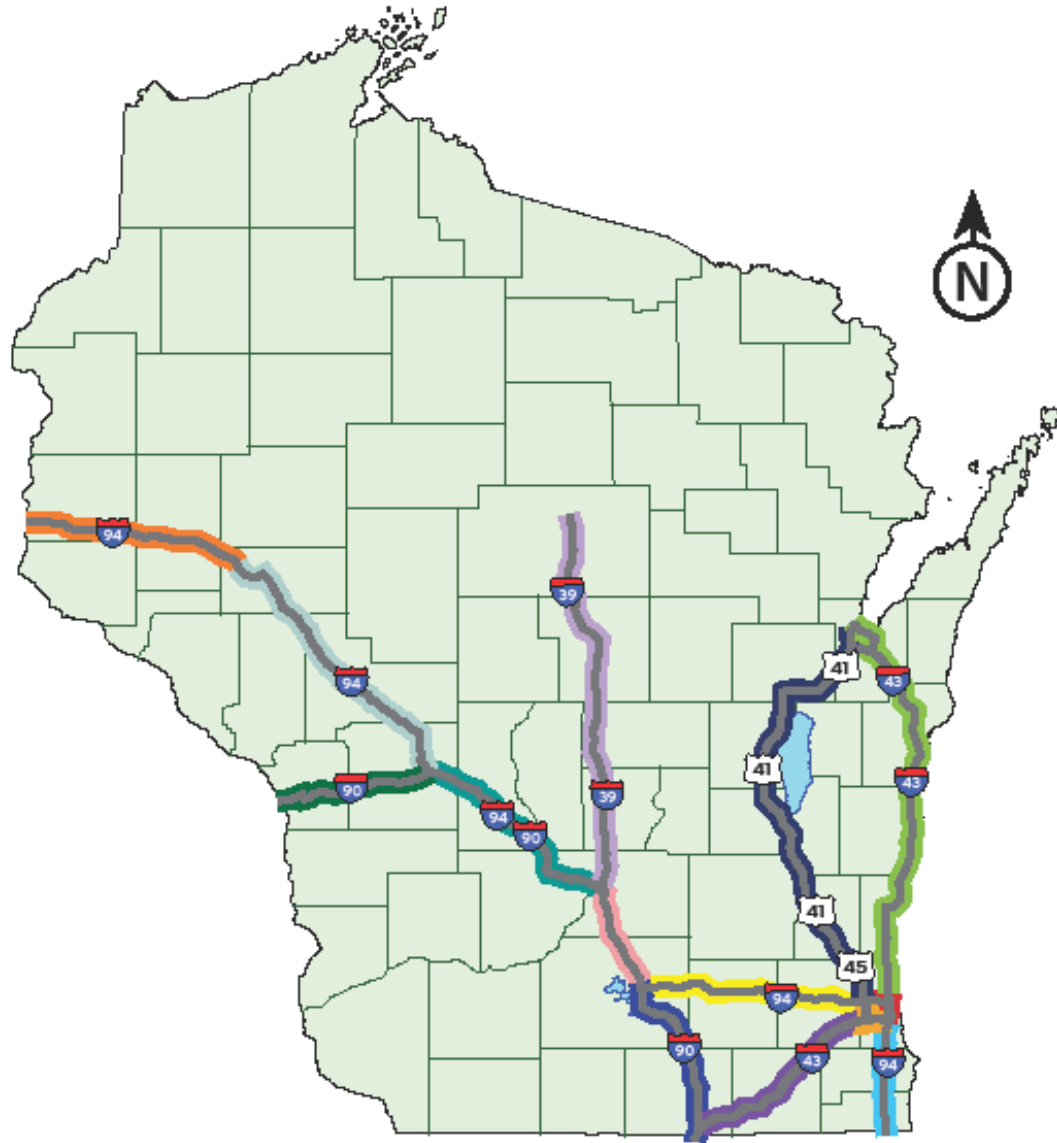


# Business Intelligence for P3's / Toll projects



- Benefits to Wisconsin:
  - Defines project funding opportunities
  - Understanding P3 industry's preferences
  - Establishes project's value and gap funding needs
  - Understand financial sensitivity of various inputs
  - Concession term optimized
- Financial feasibility ultimately rests with DOT

# Hypothetical Toll Road Network



# Full Potential of a toll road system

- 875 miles of freeway
- Assume 1% annual traffic growth and 6 cents per mile
- 300 revenue days per year
- 30 year period: 2015-2045
- Per Mile: ~ \$800,000 gross revenue per year on average
- Per Mile: ~\$25M gross revenue total over 30 years
- System: ~ \$600M gross revenue per year on average
- System: ~ \$20B gross revenue total over 30 years

# Funding Strategy Approach

- You need a plan
- Funding strategy includes:
  - Decision-making tools
  - Appropriate potential projects
  - Assessment of risk sharing
  - Funding strategy plan
- Cost estimates
- Traffic and revenue estimates
- Concept of Operations



# First Steps for Wisconsin

- Update Federal and State legislation
- Screening for potential toll or managed lane projects
- Federal Permissions
- Creation of policies, procedures, governance
- Financing opportunities – public and private
- Financial plan and Operating plan
- Public Outreach



# Tolling and HOT Lane Projects

## Questions?

