

Considering Events in Multimodal Freight Corridor Planning

Bruce Lambert
Executive Director
Institute for Trade and Transportation Services

January, 13, 2009

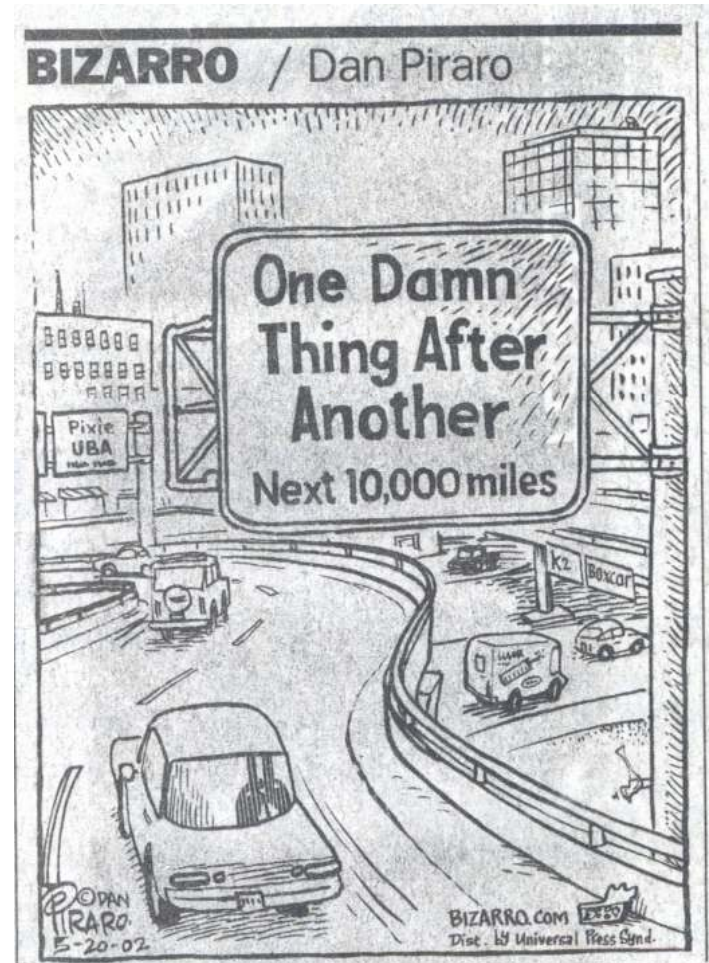
What kind of transportation system do we want? Now? Or In 30 years?

Safe, Secure, Environmental
Responsible,
Efficient/Reliable

- Common theme across Modal Agencies, USACE, US DOT, State DOT's, etc.

Customers
(Shippers/Carriers/Public)
assume this plus

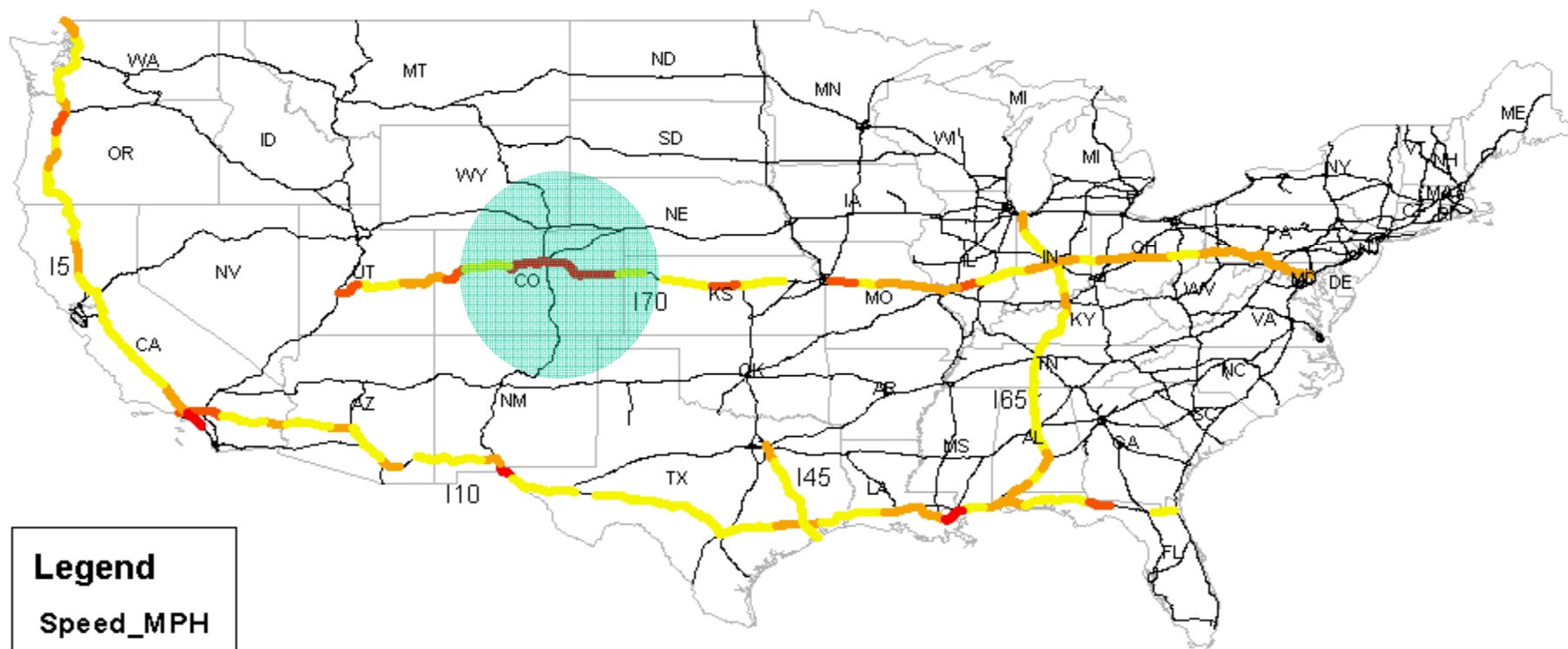
- cost effectiveness and accessibility to various modes and facilities, and ultimately markets



Risks and Events occur everywhere

- Every region of country suffers from this!! (Where is Paradise?)
 - Tornados, Heat, Drought, Flooding, Snow, Rain, Hurricanes, etc...
 - Climate and Demographic changes
 - Difference of Scale and Frequency of Events and Risks
 - Infrastructure is becoming more critical in responding to events
-

Corridor Data Based on March 19, 2003
From 4:00pm - 8:00pm PST
Truck Speed Calculation Based on 50-mile increments



Corridor's included in analysis are (I5, I10, I45, I65, I70)

“Ongoing Disruptions” implies managing or mitigating risks

- Understanding normal and asymmetric risks
 - Who bears the risk and to what degree
 - Difference of public and private sector risk assessment and response
 - Balancing national versus sub regional, local importance
 - Identifying policy and planning goals
 - Understanding micro and regional interactions
 - Build for extreme or normal conditions
 - New standards or retrofitting
 - Estimate willingness to pay/change
 - Budget challenges
-

How Do We Respond to Change in Public Sector – some examples

Sector	Short-Term	Medium Term	Long Term
Users	Prepare, Respond, Ignore	Prepare, Ignore	Move, relocate
Emergency Responders	Respond	Training, New equipment, etc., Table Top Exercises	Move, relocate
Public Infrastructure	Respond Operationally	Improve Operational Response	Retrofit or repair, engineering standards, etc.
Planning Response	<i>Forensic Studies</i>	<i>Recommendations</i>	<i>Policy/Planning Guidance, Ordinances</i>



After the Fact - Forensic Economics

● Costs to Users

- Delay, lost productivity – plant closures
- Inventory disruptions – lost output, supply chains
- Survey instruments – modeling behavior

● Infrastructure damage assessments

- Damages to roadway, tracks, etc.
- Inspection time – costs

● Non Transportation Infrastructure Affects

- Services Disruption, Power-Power
- Recreational Losses
- Environmental Derogation

● A lot of this information would not necessarily be in initial planning consideration

System Planning Limited by Traditional Public Sector Planning Frameworks

- Shaped by demands to compare projects within a given budget (mode) or geography
 - Differ by agency regarding what can be considered
 - Public Benefits and Costs
 - ⊖ Reduce emissions, environmental restoration, health risks and exposure, risk management/ mitigation, etc., Job creation.
 - Externalities – limited consideration
 - ⊖ First Order effects – Improved Operations
 - ⊖ Second and Third Order Effects – changing capacity and routings
 - Forecasting and Scenario profiles
 - Desired certainty of answers often exceed analytical capacity
 - Network effects not included
 - No pre – post study analysis done on routine basis
-

Recent Cross or Corridor Modal Studies Externalities Are Discussed

- Black Warrior Tenn-Tom Waterway System
 - Minnesota Bridge Collapse
 - Business Realignment Estimates - FHWA
 - (NCHRP) Report 586: Rail Freight Solutions to Roadway Congestion
 - Lock and Dam Closures
 - Chickamauga Locks
 - Emsworth, Dashields, and Montgomery
 - Marine Highway Program
-

Problem Statement – Public Perspective

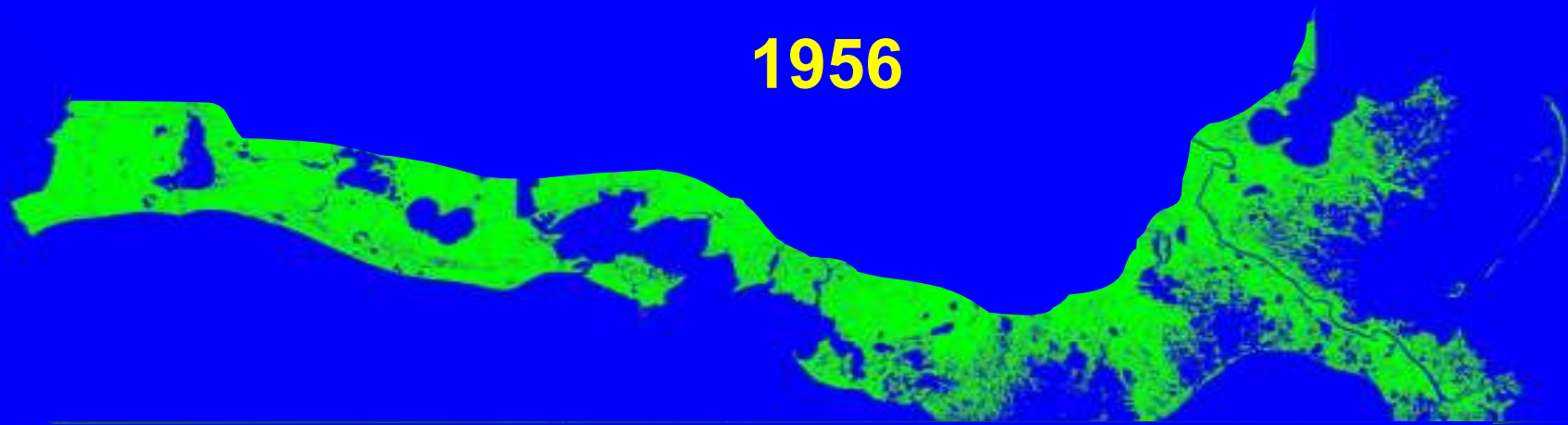
- Do we have the right tools (data/models, funding, etc.) to develop sustainable projects to enhance/improve corridor operations?
 - Can we effectively make statements on broad benefits and externalities related to risks?
 - Does the right guidance exist to allow for these benefits to be considered across modes and implemented?
-

Some Basic Research Questions

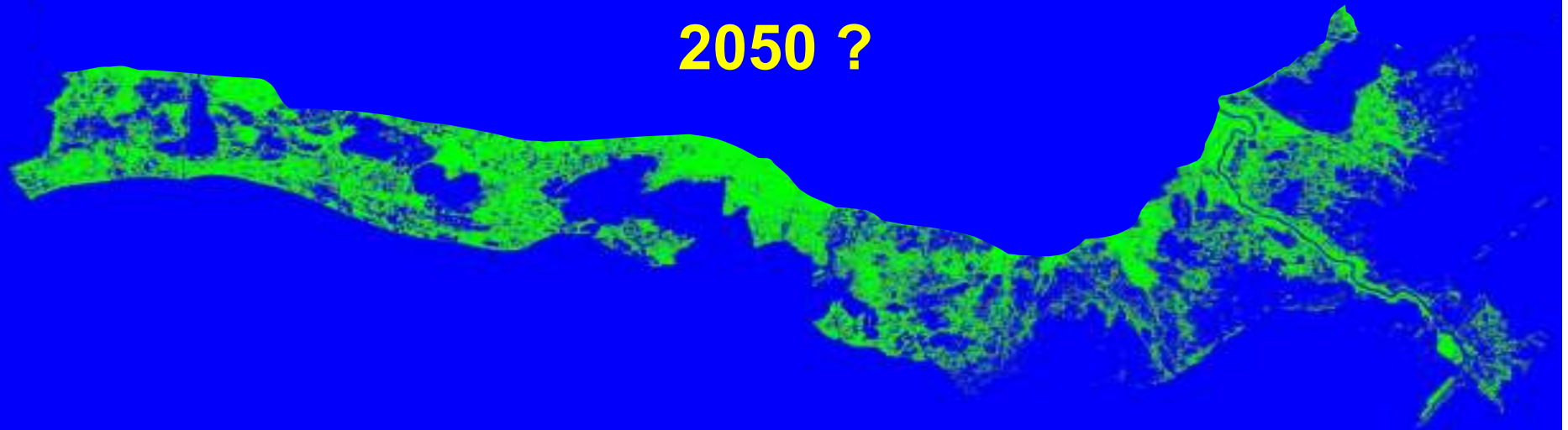
- Evaluation of externalities in current project approval process
 - Relationship of multimodal trade off analysis in environmental stewardship discussions
 - Data and planning guidelines that are cross agency and modally transparent
 - Improve understanding of spatial markets and realignment in response to transportation projects and risks
 - Encouraging determination on boundaries related to non-monetary public goals (risks, health, etc.)
 - Expanding geographic corridors into a more integrated framework
 - Coordinating multiuse or multipurpose planning options
 - How to implement any recommendations?
-

Coastal Louisiana

1956



2050 ?



Conclusion

- Weather (Events) Happens!!
 - Do we need to include new variables in planning process that fully estimate all costs/benefits
 - Some studies already seeking to understand relationships for freight
 - Response frameworks vary, but unless we are moving to a long term framework that better aligns additional activities with other goals, we will not improve corridors
-