

# Navigation Economic Technologies Symposium

## Large Group Exercise

Question #3: What new qualities and characteristics do we want to ADD to inland navigation economic evaluation techniques over the next 10 years?

- Better handle on full cost used for comparable modes analysis
- Peer review of methodologies techniques
- Regional detail should be greater
- Integration with environmental models
- Externalities incorporated within models
- Value of reliability modeled more explicitly
- Value of delay modeled in greater detail
- Responses of shippers to planned and unplanned closures
- Rail market endogenized to models
- Better info on value of shipper time
- We should pay more attention to the interactions of water transport and other modes, particularly rail
- We should focus more attention on the responses of shippers to congestion
- We need to improve/devise procedures to folding risk/uncertainty analysis into our evaluations
- More disaggregating of waterway movements
- More data & costs of the land side legs
- More data on shipper response to delay
- Better environmental evaluation link & tools
- Better forecast tools by major commodity not just waterway portions
- Shippers behavior (not just rate based behavior)
- Full logistics/transaction costs
- Econometric analysis of detailed shipment records
- Better Analysis of alternative modes (supply and demand characteristics)
- On board peer review through-out the process
- Include externalities
- Endogenous forecasts
- Consider modifying max. willingness to pay
- Include explicitly elasticity
- Model (to the extent we can) full costs
- Include the original origin to destination in the analysis without the current aggregation
- Include the other externalities (increased traffic, air pollution, safety) into the analysis
- Model all or most important of the alternative options of commodities
- Landside costs original origin – ultimate destination

- Behavioral models based on shipper decision perspective (i.e. dependability of service, quality of service, inventory impacts).
- EQ impacts on mode & route choice
- Reliable models -> corps
- Observed market process should be used to value incremental units of output provided by projects
- Water transportation should be examined in a framework consistent with spatial equilibrium theory
- Spatial equilibrium modeling
- Systematic data collection to support SEM
- Uncertainty
- Demand management capability of models
- Correct computation of with/without economic value of waterway
- Endogenous water transportation demand model
- More detail in cost data after team averages
- Updated solute approaches
- Modification of models to deal with wider range of issues
- Develop the true O-D data including costs and time factors for major alternative routes linking O-D.
- Link commonality demand with transport mode route choice
- Time factors (delays) should be incorporated in evaluation – both surface and waterways
- Open process
- Publications & newsletters practice & procedures
- More formal statistical analysis on behavioral elements
- More effort on consistency in datasets
- Better rate analysis
- \_\_\_\_\_ to multimode
- Better solution of short term & long term
- Alternate methods of transporting or using commodities
- Not assume unconstrained alternative use capacity ... roads or trains may already be at capacity and are not an alternative
- Impact of using alternate mode of transportation
- Treatment of impacts beyond those currently considered
- Must root planning models in serious & rigorous economic models that are close to real world approximations of decision making
- Plant location decisions & capacity and attributes. e.g. loading facilities
- Better integration of spatial competition & product and mode competition
- Integration of service characteristics
- Much more on shippers alternative and their choice away these alternatives (i.e. alternative routes, modes, destinations, quantities)
- The import of waterway delay on shippers business and profits
- The overall flow of freight by mode, not just for water traffic

- The choices of shippers who are not currently using waterways and what would induce them to shift to water shipping
- A focus on real shipper behavior and a sensitivity to geographic & commodity heterogeneity
- Try to understand how individual actors would really respond to changes in water service prices & qualities
- Recognition that commodities are often production inputs to services (the true NED effect) and production functions for services can change (coal vs. other electrical generation, uses for grain, etc.)
- Representation of true O-D not just dock to dock
- Better scenario analysis
- Better non-structural analysis
- Frame problem more broadly transportation not just navigation addressing the “disjointed incrementalism” attributed to the sec. Transportation
- Thoroughly assess historical rate analysis to determine if historical rates can support “long term” rates rather than using the volatile spot rates of current methodology
- Inventory costs
- Impacts of shift to alternative modes including cost of pollution, wear and tear on highways and vehicles