New Metrics for Success

presented to
Rail-Volution 2010

presented by
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Transportation leadership you can trust.
Questions for Presenters

- How is “success” defined? How do the new metrics differ from previous metrics of success?
- What was the motivation for developing these metrics?
- How were they used in project or system planning?
- Did stakeholders find the metrics useful?
- Where were the data obtained? How much effort did it take?
- How transferable are the metrics?
TCRP H-41 – Measuring the Environmental Performance of Major Transit Projects

- **Objective**
  - “Present, evaluate, and demonstrate criteria, metrics, and methods for assessing and comparing the environmental performance of major transit investments…”

- **Work Tasks**
  - Literature review and stakeholder outreach
  - Listing and screening possible metrics (100+!)
  - More detailed testing of a small number of metrics

- **Contrast with NEPA**
  - Environmental impacts vs. performance
  - Most impacts treated as negative impacts to be mitigated
  - Focus on direct impacts
Stakeholder Outreach

- **Uses of environmental performance measures**
  - Prioritizing investments
  - Federal funding applications
  - State/local requirements and objectives
  - Outreach and marketing

- **Common measures used**
  - GHG emissions
  - Avoided automobile travel
  - Land use and economic development (indirect effects)
  - Quality of life
Quality of Life Metrics

- Travel time saved
- Jobs created
- Pedestrian safety, access, walkability
- Accessibility to destinations, mobility, transportation options
- Transportation + housing affordability
## Performance Categories and Dimensions

### Traditional focus vs. Life-cycle emissions

<table>
<thead>
<tr>
<th>Performance Category</th>
<th>Transit</th>
<th>Avoided Auto</th>
<th>Facilities</th>
<th>Vehicles</th>
<th>Land Use/Indirect Impacts</th>
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<td>Energy Use and GHG Emissions</td>
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<td>Air Quality and Public Health</td>
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<td>Ecology, Habitat, and Water Quality</td>
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<td>Community and Quality of Life</td>
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- **Vehicle Operations – Direct + Full Fuel Cycle**
- **Construction and Disposal**

More significant than direct impacts?
Baseline for Comparison

Transit Project vs:

No Project? Or...

Highways & Sprawl?
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Discussion Questions

- Would the metrics our speakers have discussed resonate in your community?

- What other metrics (traditional or non-traditional) have you used or considered? What benefits are of greatest interest to your constituents?

- Are there things you’d like to be able to measure but have trouble with – because of poor data, hard to define, etc.?

- Are there additional guidance, tools, or resources that you would find helpful in measuring and communicating the benefits of a project?