

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

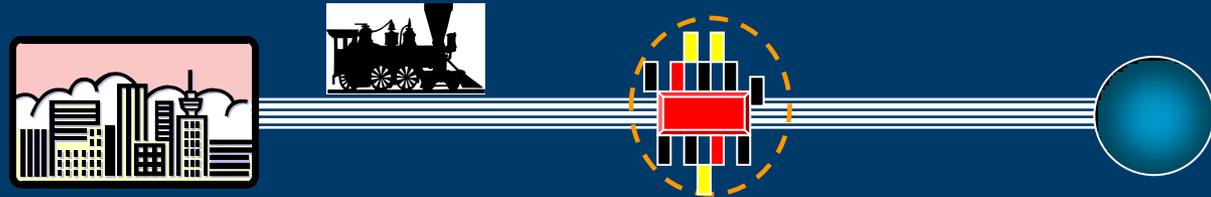
Life-cycle emissions

Performance Category	Vehicle Operations – Direct + Full Fuel Cycle		Construction and Disposal		Land Use/Indirect Impacts		
	Transit	Avoided Auto	Facilities	Vehicles	Land Conversion	Buildings	Travel Impacts
Energy Use and GHG Emissions							
Air Quality and Public Health							
Ecology, Habitat, and Water Quality							
Community and Quality of Life							

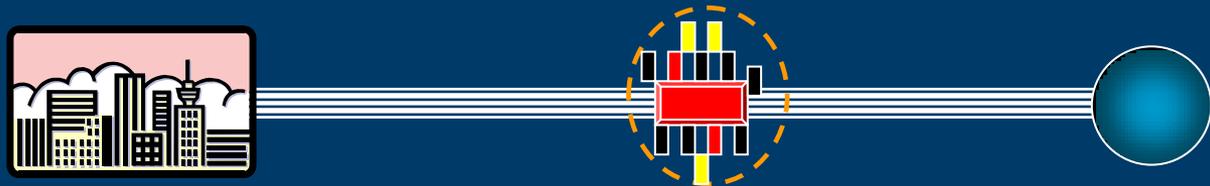
More significant than direct impacts?

Baseline for Comparison

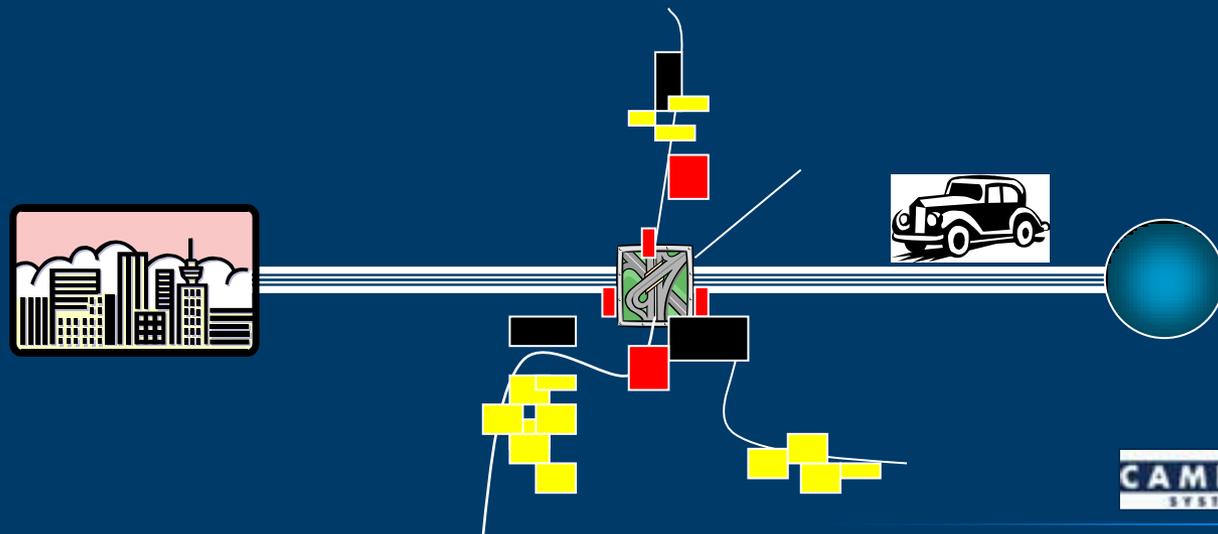
Transit Project
vs:



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?**