

Sustainability Performance Measurement for Transportation Agencies

By

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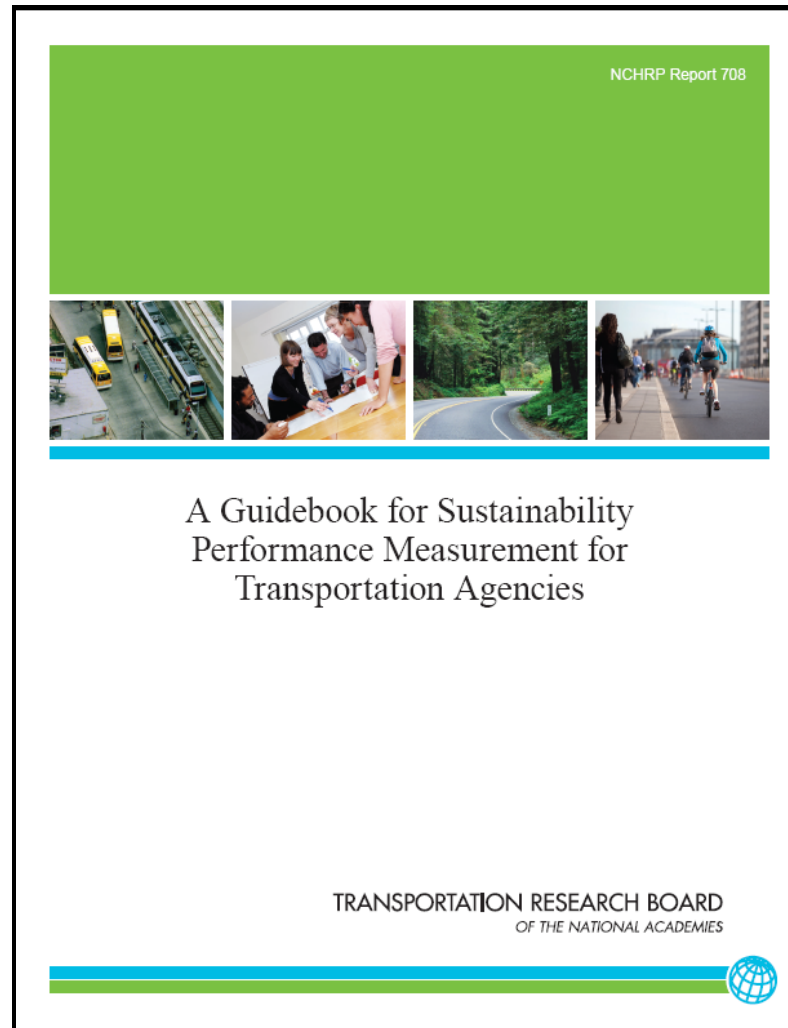
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Transportation has many impacts

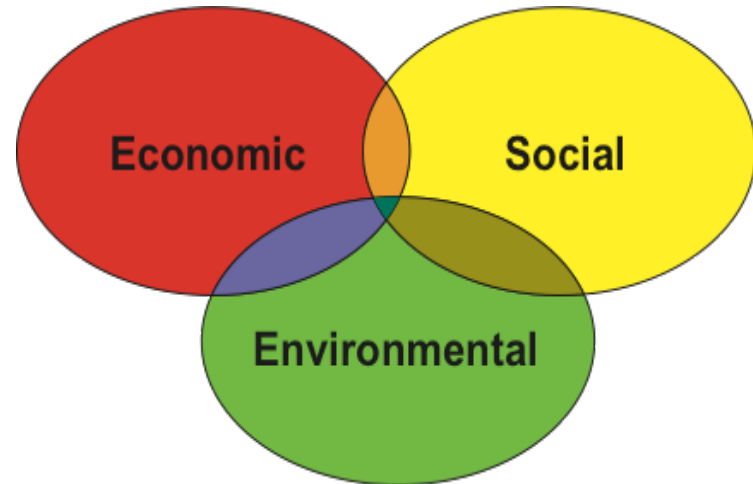


NCHRP 8-74



Overview of Sustainability

“development that meets the needs of the present without compromising the ability of future generations to meet their own needs”



Sustainable Transportation?

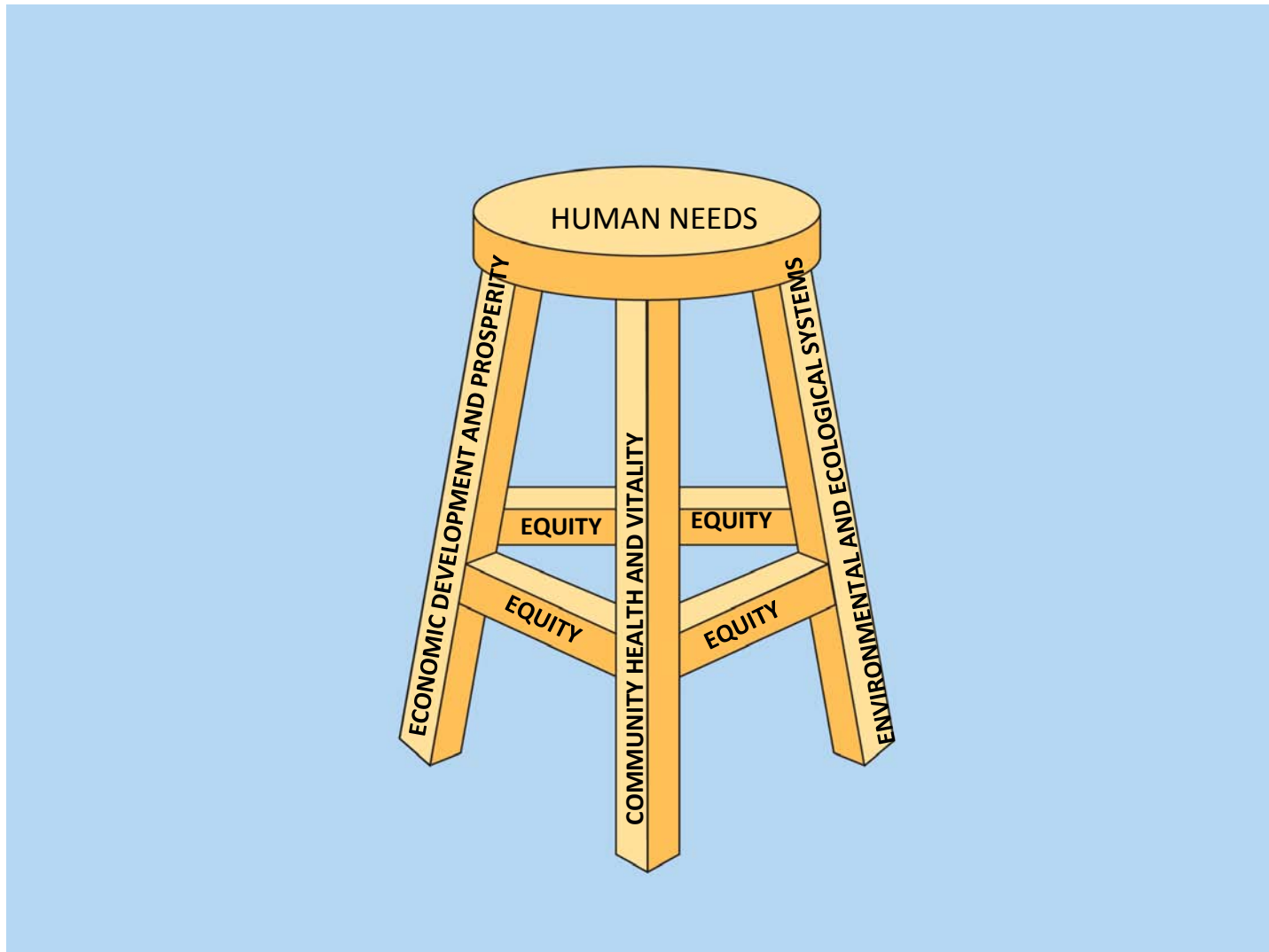


Sustainable Transportation?



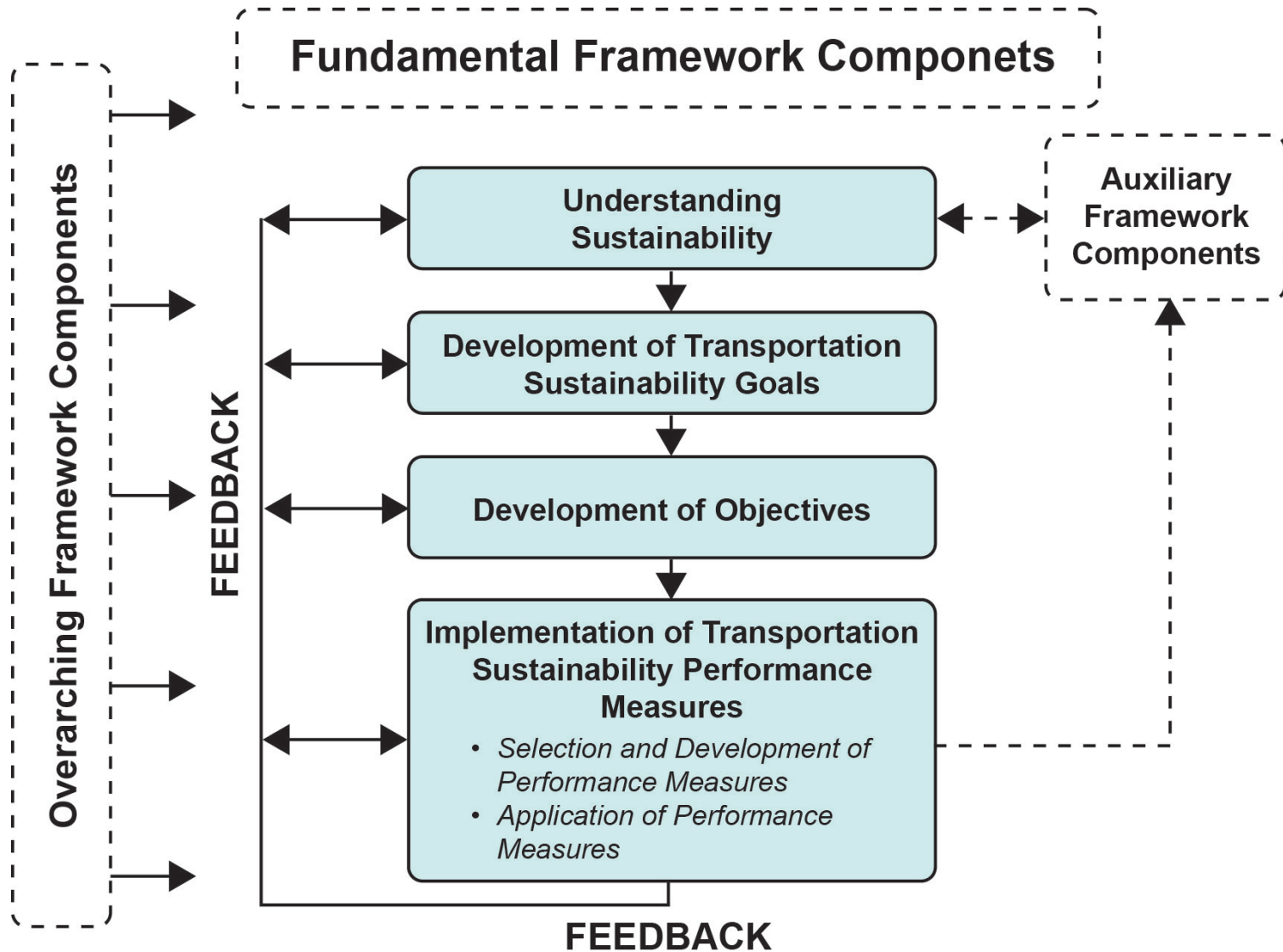
Principles of Sustainability

- ***Sustainability entails meeting human needs for the present and future, while:***
 - *preserving and restoring environmental and ecological systems,*
 - *fostering community health and vitality,*
 - *promoting economic development and prosperity, and;*
 - *ensuring equity between and among population groups and over generations.*

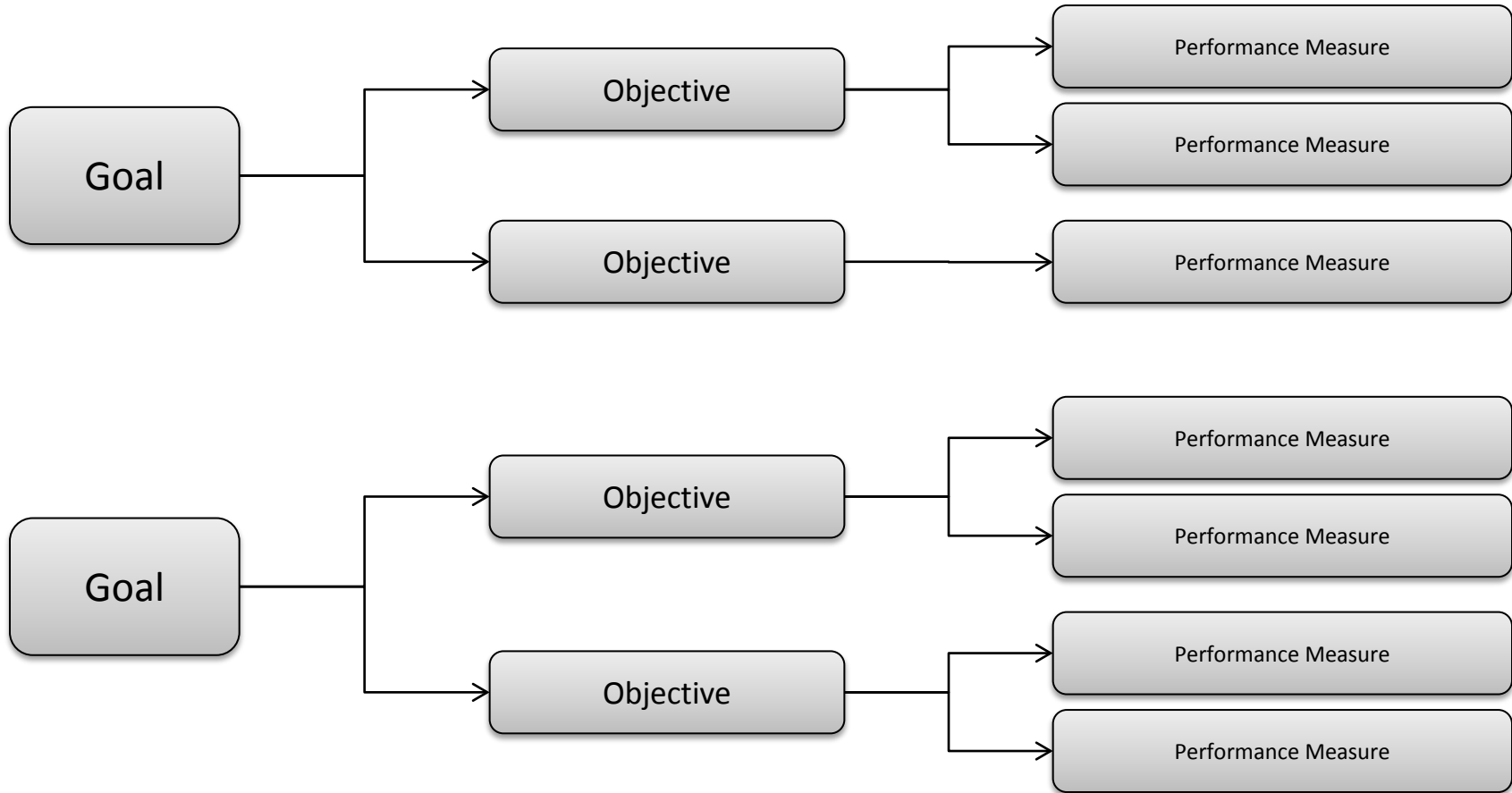


Framework Development

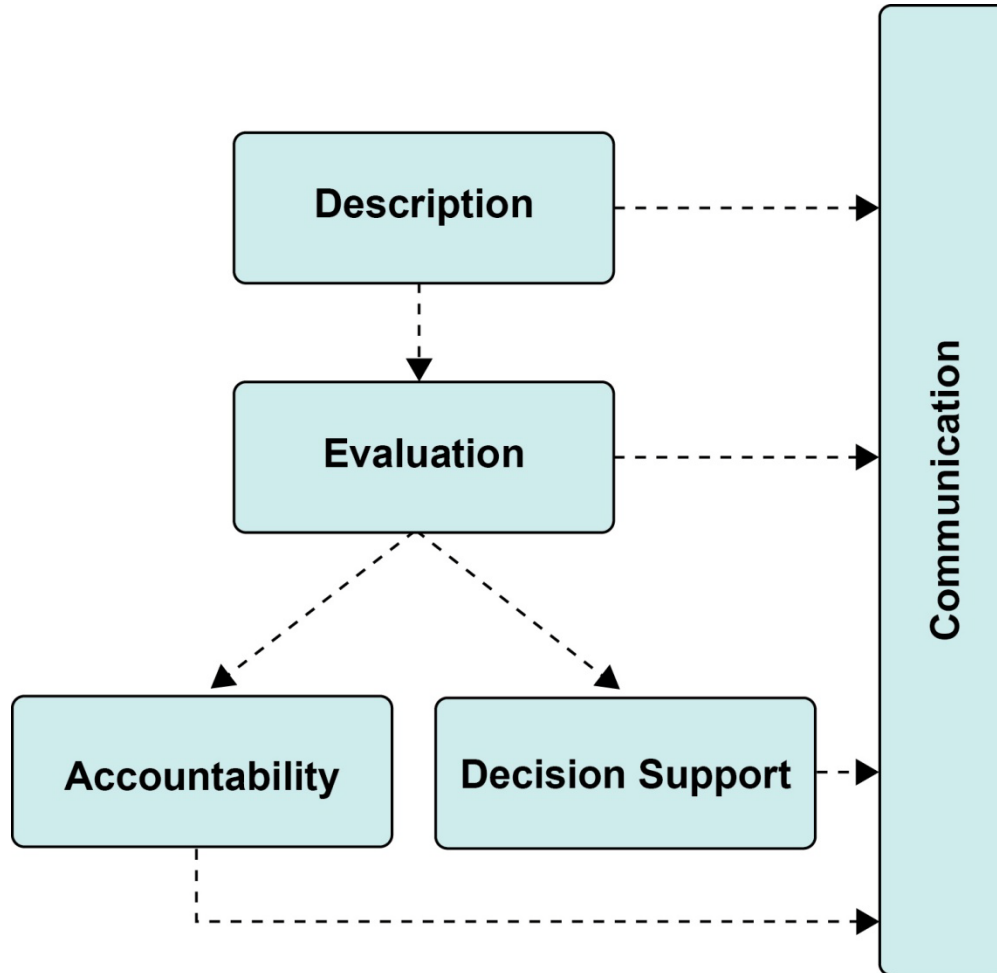
- ***“what does a transportation agency need to be equipped with?”***
- **Framework consisting of:**
 - Fundamental components
 - Overarching components
 - Auxiliary components



Final Goal-Objective-Performance Measure Hierarchy



Performance Measurement Application

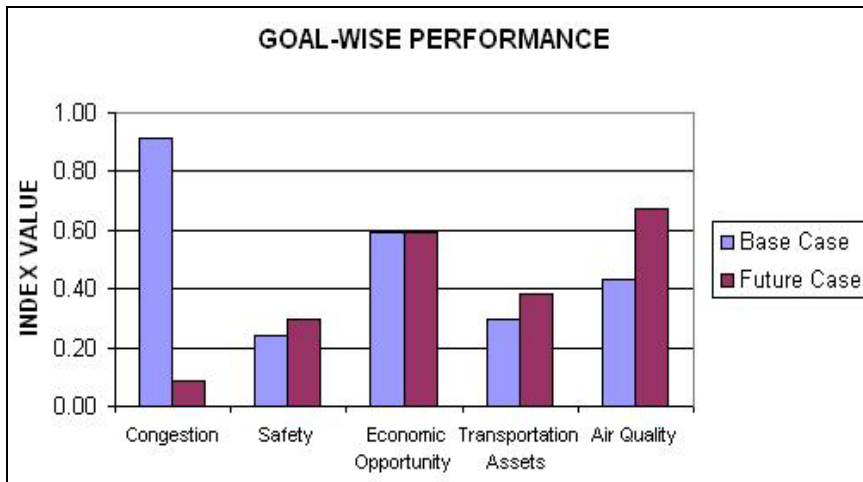
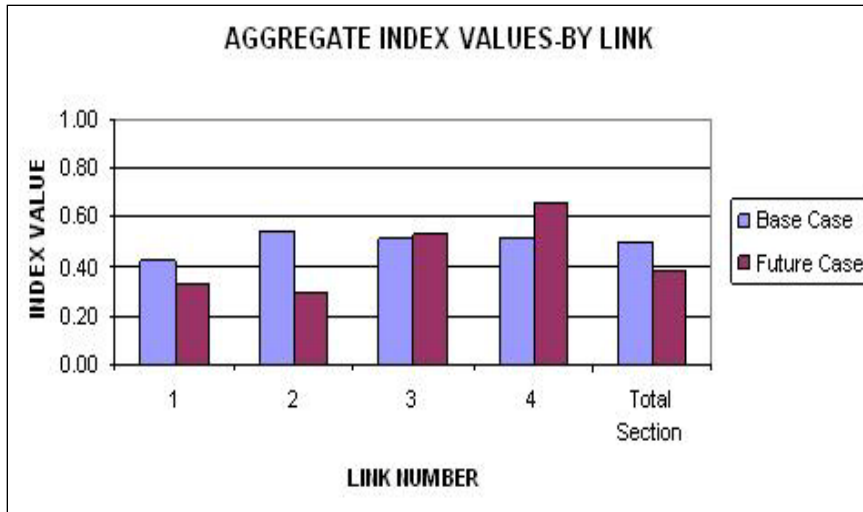


Spreadsheet-Based Compendium

Goal 1. Provide a safe transportation system for users and the general public.				
#	Objectives	Measure A	Measure B	Measure C
<i>Focus Area 1: Planning</i>				
1.1	Reduce the number and severity of crashes	Change in the number and severity of crashes	Change in the number of crashes by crash type and contributing factor	Change in the number and severity of truck crashes
1.2	Ensure safety considerations are addressed for all modes	Change in the number and severity of crashes by user type (e.g., pedestrian, bicycle, transit user, freight)	Change in the number of grade crossing collisions/incidents	
1.3	Ensure safety is considered early in project planning	Change in percentage of projects where safety of a project was reviewed in each of the project development stages by a multidisciplinary review team	Change in the percentage of projects implementing predictive methods of the AASHTO Highway Safety Manual	

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Sample Application



US 281 – San Antonio



Conclusions

- **What we are doing is not sustainable**
- **Key steps are to understand, quantify and apply sustainability**
- **NCHRP 8-74 provides flexible framework and guidebook with compendium**
- **Our role in a better future**

