

The background of the slide is a dark, atmospheric photograph of a city street at night. Several tall skyscrapers are visible in the background, some with lights on. The street in the foreground is dark, with light trails from cars and streetlights creating a sense of motion. The overall tone is professional and modern.

HIGH STREET

Metrics, Benchmarking and Target Setting

Joe Crossett



**Results from NCHRP Project 20-118:
Effective Performance Management
by Transportation Agencies—
Benchmarking and Comparative
Measurement**

(Final Draft Report)



Benchmarking and Comparative Measurement



Starting Point: TRANSPORTATION DISRUPTION



“Mans took 10,000 years to generate the first 5 exabytes of data, but we now generate that amount of data every other day.”

Eric Schmidt, former Google CEO



BENCHMARKING:

Using compatible data to compare performance outcomes among DOTs with the aim of learning from success stories and continuously improving

WHY BENCHMARK?



Gain new perspectives



Inform performance target setting



Uncover noteworthy practices



Spur improvement & innovation



INDEPENDENT BENCHMARKING

Low effort for agencies

Modest cost

**Can be responsible to
management concerns**

Relies on readily available data

Flexible, ad-hoc approach



BENCHMARKING NETWORKS

More nuanced – can tailor data and measures to specific areas of concern

Agencies may be motivated to remain engaged once in a network

Information is confidential among participants (Subject to FOIA)

A nighttime photograph of a city skyline with several illuminated skyscrapers. In the foreground, a highway shows long, horizontal light trails from moving vehicles. A bridge with a large arch is visible in the middle ground, and a modern building with lit windows is situated near the water.

Basic 6 Step BENCHMARKING

Step 1.
**Set the
Stage**

Choose a leader,
Clarify objectives,
Get buy-in, and
Assemble a team

Step 2.
**Define Your
Approach**

Choose & define measures,
Identify data sources,
Get buy-in, and
Assemble a team

Step 3. **Select Peers**

Don't strive for perfection,
Consider criteria like climate, population,
agency budget, organizational structure,
or travel volume

Step 4.
Obtain Data

National sources: NBI, FARS, NTD, etc.

Peer data: Potential to provide more targeted and relevant information

Step 5.
**Analyze the
Data**

Be prepared to clean data Explore data
using visuals & statistics

Step 6.
**Identify Noteworthy
Practices**

Data analysis should lead to conversations with top-performing agencies about the ways they achieve results



DIGITAL BENCHMARKING PLATFORM

1. Define meaningful peer groups

Transportation Comparative Benchmarking Platform

2. Compare performance

ben(t)SHmärk

The ongoing process of comparing outcomes and practices to those of similar organizations, with the intention of continuously improving quality and performance.

3. Collaborate and Learn

This platform is intended to facilitate continuous benchmarking among state DOTs. Here, transportation practitioners can find appropriate peers, compare performance across a number of measures, and most importantly, connect with other practitioners to discover what works for performance improvement. Register for full site access, or browse publicly available performance and improvement information.

My DOT

Name	Population Served	System Mileage
New York State Department of Transportation (NYSDOT)	19,745,289	114,365

Peers

Show Only Active Agencies

Save changes

? Similarity Score ↕		Name ↕	? Population Served ↕	? System Mileage ↕
9.88	<input checked="" type="checkbox"/>	Florida Department of Transportation (FDOT)	20,612,439	122,659
9.50	<input checked="" type="checkbox"/>	Pennsylvania Department of Transportation (PENNDOT)	12,784,227	120,091
9.41	<input checked="" type="checkbox"/>	Ohio Department of Transportation (ODOT)	11,614,373	122,926
9.32	<input checked="" type="checkbox"/>	North Carolina Department of Transportation (NCDOT)	10,146,788	106,334
9.30	<input type="checkbox"/>	Illinois Department of Transportation (IDOT)	12,801,539	145,840
9.30	<input checked="" type="checkbox"/>	Michigan Department of Transportation (MDOT)	9,928,300	122,286
9.28	<input type="checkbox"/>	Georgia Department of Transportation (GDOT)	10,310,371	128,134
9.09	<input type="checkbox"/>	Wisconsin Department of Transportation (WisDOT)	5,778,708	115,372
9.01	<input type="checkbox"/>	Indiana Department of Transportation (INDOT)	6,633,053	96,570
9.00	<input type="checkbox"/>	Tennessee Department of Transportation (TDOT)	6,651,194	95,637
8.98	<input type="checkbox"/>	Missouri Department of Transportation (MoDOT)	6,093,000	131,549
8.96	<input type="checkbox"/>	Oklahoma Department of Transportation (ODOT)	3,923,561	112,711
8.95	<input type="checkbox"/>	Virginia Department of Transportation (VDOT)	8,411,808	75,062
8.94	<input type="checkbox"/>	Alabama Department of Transportation (ALDOT)	4,863,300	102,020
8.93	<input type="checkbox"/>	Iowa Department of Transportation (DOT)	3,134,693	114,442

Define Peer Groups

Peer Selection

Peer Group

Asset Condition Peers ▾

New Peer Group[Delete Group](#)[Reset Peer Groups](#)

Peer Group Name

Asset Condition Peers

Similarity Criteria

State Characteristics

- Annual Budget
- GDP Per Capita
- Bridge Deck Area
- Heating Degree Days

- Population Served
- Percentage of Urban Lane Miles
- AASHTO Region

- System Mileage
- Vehicle Miles Travelled
- Seatbelt Use Rate

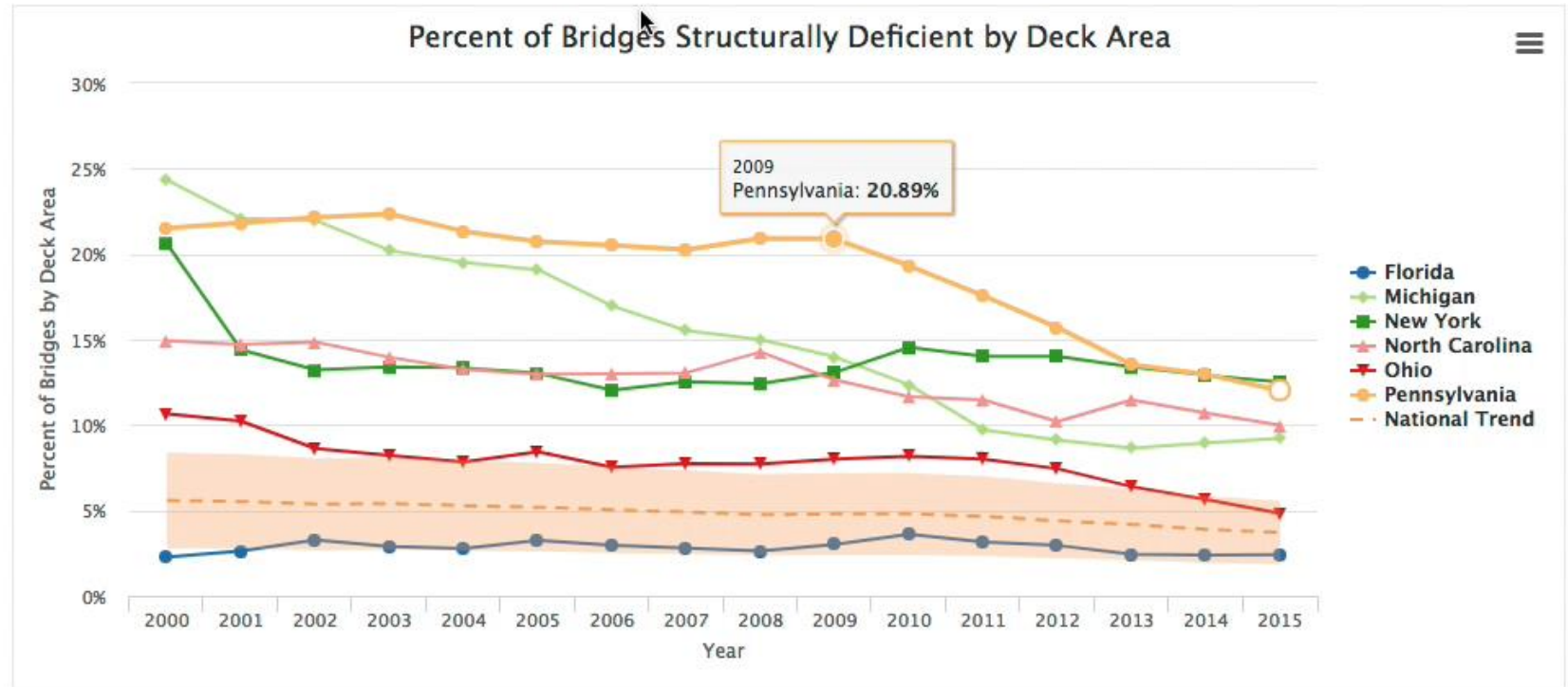
Performance Measures

Safety :

Agency Trend Peer Trends Peer Comparison (Single Year)

Peer Group [Edit Peer Group](#)

Date Range To



Click on a chart node to request a noteworthy practice request.

[Download Raw Data \(csv\)](#)

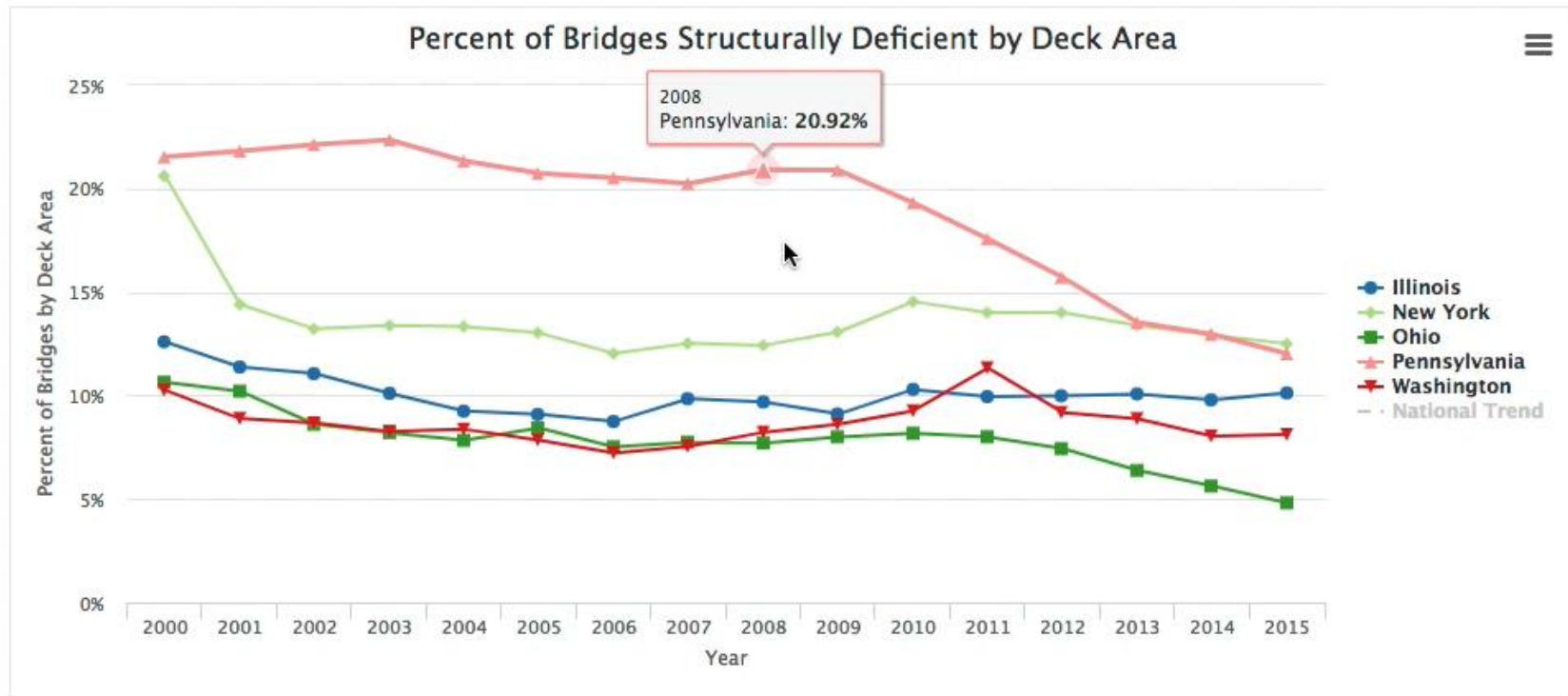
There are no statements of Noteworthy Practice for your current selection.

New Statements

Agency Trend
 Peer Trends
 Peer Comparison (Single Year)

Peer Group Bridge Peers [Edit Peer Group](#)

Date Range 2000 To 2015



Click on a chart node to request a noteworthy practice request.

[Download Raw Data \(csv\)](#)

There are no statements of Noteworthy Practice for your current selection.

New Statements

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Search bar



Mail

Navigation icons: back, forward, archive, trash, folders, tags, more

1 of 115

COMPOSE

Noteworthy Practice Response - Comparative Benchmarking Platform

Inbox x

- Inbox (86)
- Starred
- Important
- Sent Mail
- Drafts (73)
- All Mail
- Categories
 - Awaiting Reply
 - Inbox/Grad School St...
 - Recipe
 - Sent Items/
 - Sent Messages
 - Travel
 - More



Comparative Benchmarking Platform <mark@benchmarking.site>
to Mark

6:02 PM (8 minutes ago)



Hi Mark Egge:

Good news! Your request to Pennsylvania Department of Transportation (PENNDOT) for additional information regarding the agency's Percent of Bridges Structurally Deficient by Deck Area performance in 2015 has been fulfilled.

Use the following link to view the response:

<http://benchmarking.site/compare/bridge-condition/deficient-bridges/4023>

Thanks!

Comparative Benchmarking Platform

**Interested in
learning
more?**

Try it yourself:

<http://benchmarking.tpm-portal.com/>



HIGH STREET