Transportation Asset Management

By the:

Transportation Asset Management
Expert Task Group (TAM ETG)

TAM ETG

What is TAM? MAP-21

''(2) ASSET MANAGEMENT.—The term 'asset management' means a **strategic and systematic** process of **operating, maintaining, and improving physical assets**, with a focus on both **engineering and economic analysis** based upon **quality information**, to identify a structured sequence of maintenance, preservation, repair, rehabilitation, and replacement actions that will achieve and sustain a desired **state of good repair** over the **lifecycle** of the assets at minimum practicable cost.''
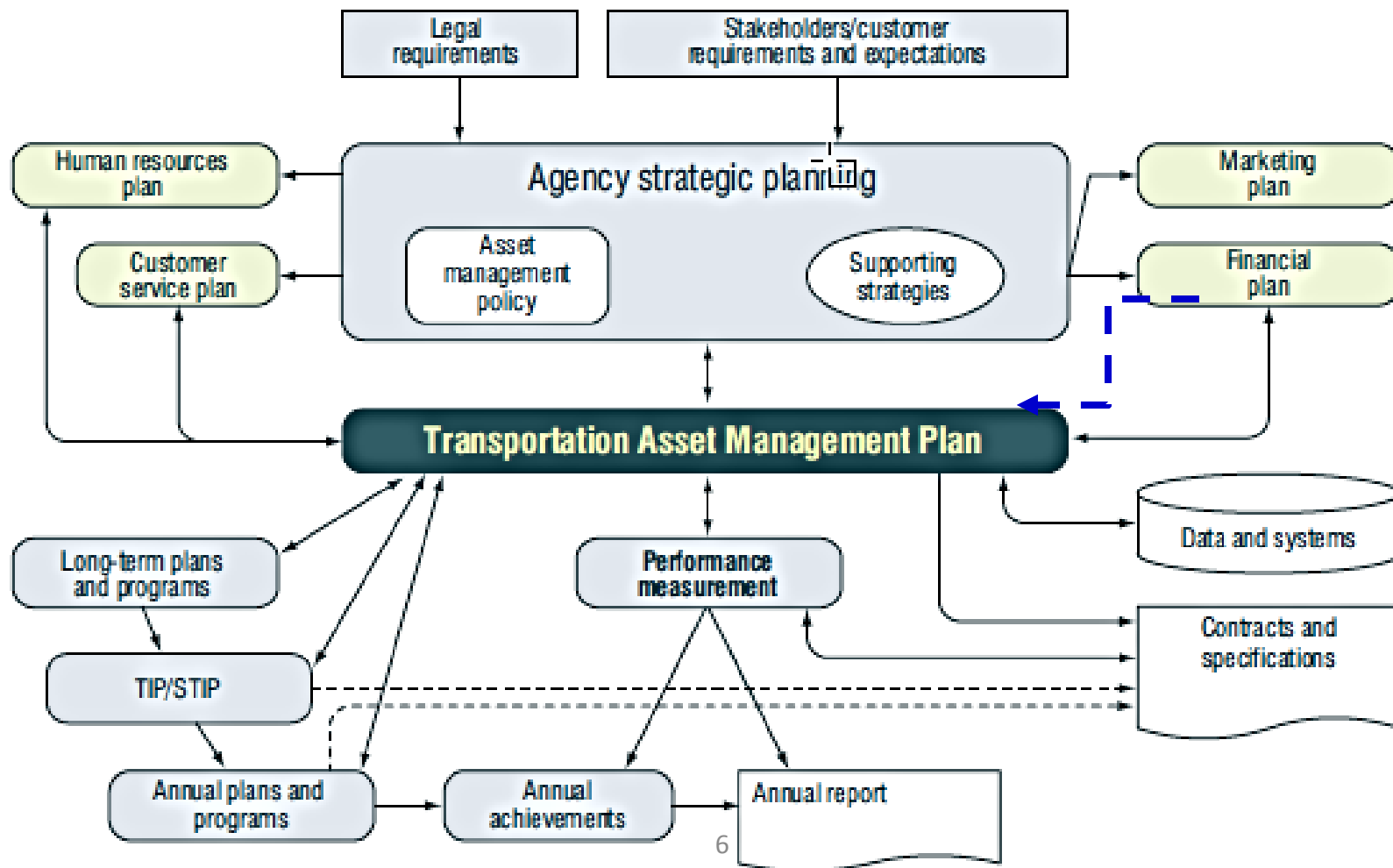
What is TAM?

It focuses on **business and engineering** practices for **resource allocation** and utilization, with the objective of **better decision making** based upon **quality information and well defined objectives**.

AASHTO Subcommittee on Asset Management

TAM and MAP-21

- Each State is required to develop a **risk-based asset management plan** (**TAMP**) for the National Highway System (NHS) to improve or preserve the condition of the assets and the performance of the system.

TAMP Link to Other Plans

6

TAMP and Risk

Crack Filling

Crack Sealing

Chip Seal

Slurry Seal

Micro Surfacing

Ultra-thin Overlay
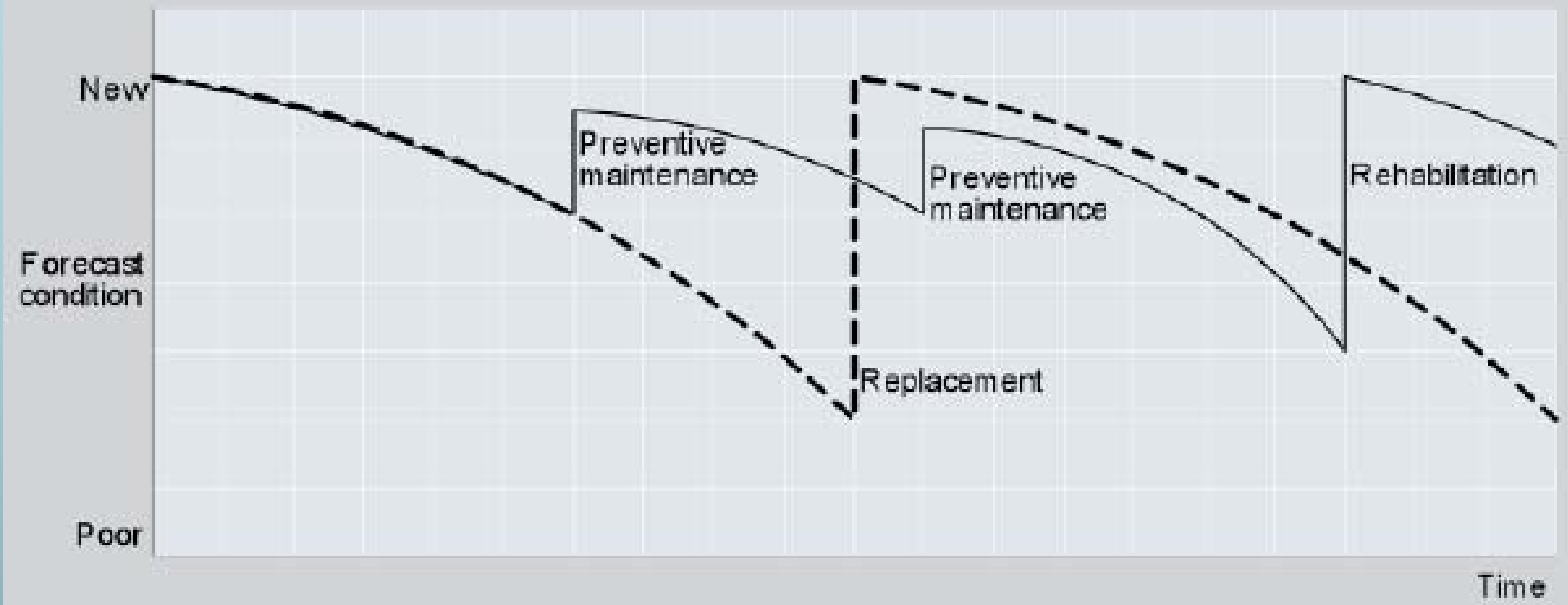
Hot-Mix Overlay

Mill and Overlay

Joint Resealing

Small Repair

Full-Depth Repair

Diamond Grinding

Dowel-Bar Retrofit

Pavement Restoration

New

Forecast condition

Poor

Preventive maintenance

Preventive maintenance

Replacement

Rehabilitation

Time

http://www.fhwa.dot.gov/planning/processes/tribal/planning_modules/asset_management/assetmanagementmodule.pdf
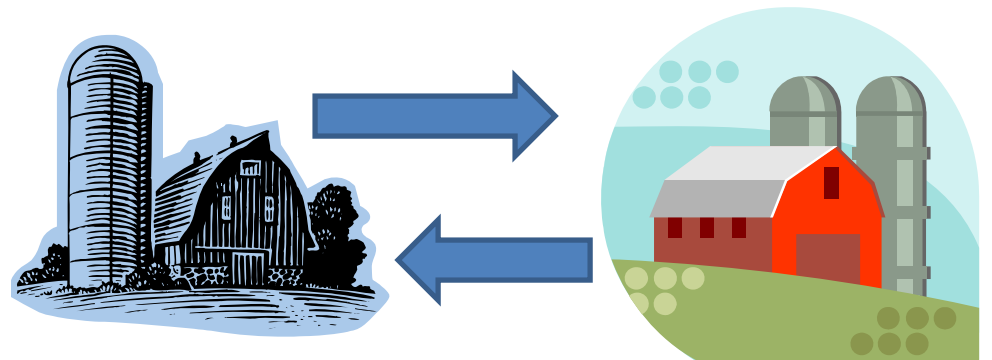
TAM Core Questions:

- What is the current state of my assets?

- What are my required levels of service and performance delivery?

- Which assets are critical to sustained performance delivery?

- What are my best investment strategies for operations, maintenance, replacements, and improvement?

- What is my best long-term funding strategy?
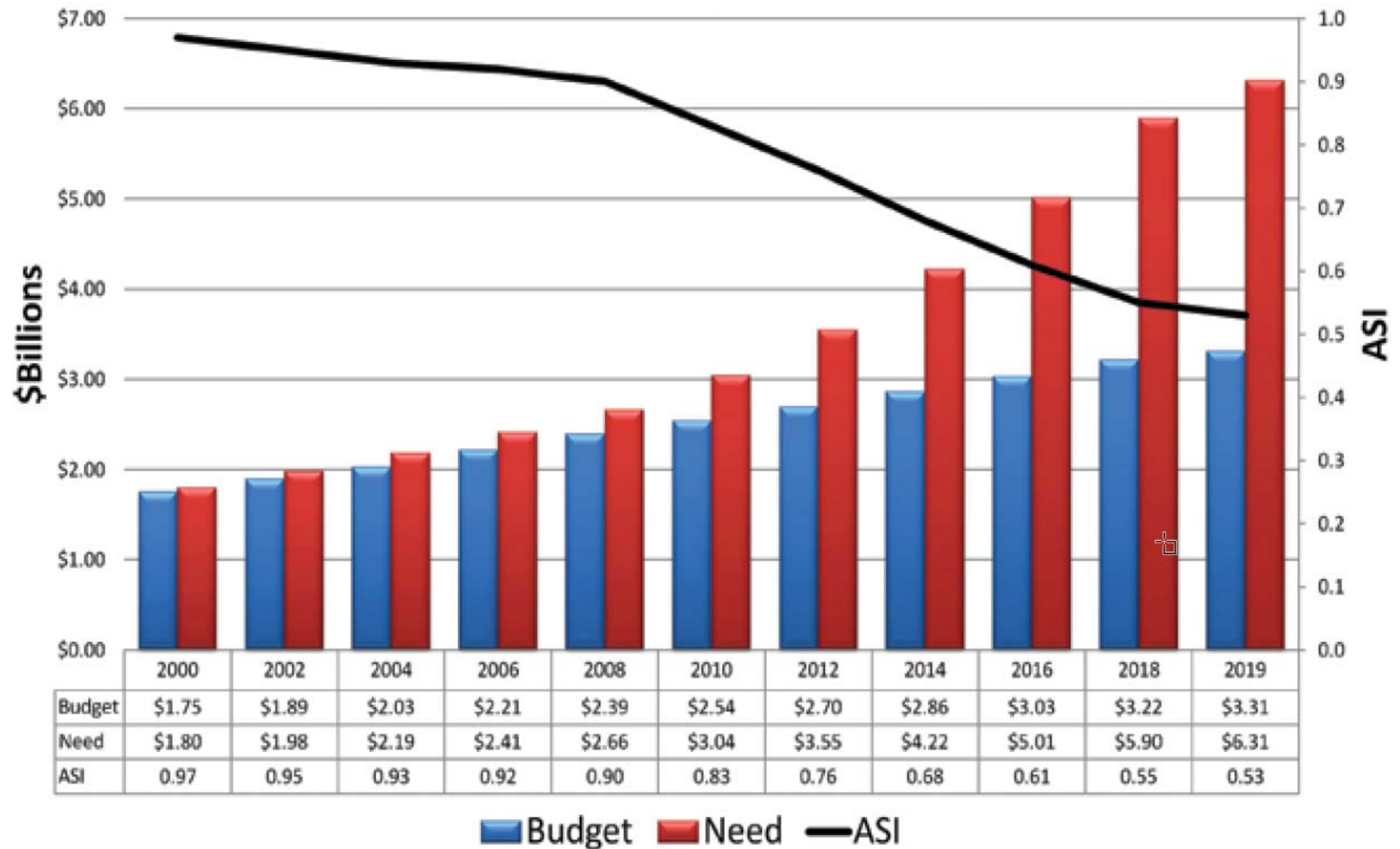
TAM and Data

- **Inventory and condition**
- **Risk assessment**
- **Cost/revenue**
- **Performance measures (Targets?)**
- **Management systems (what-if scenarios)**
- **Future needs (forecasted deterioration)**
- **Communication tools (dash board)**

TAM vs. Current Practice

- **Integrated decision making**

- **Cross asset optimization**

- **Linking resource allocation to performance**

- **Financial planning and investment analysis (ASI)**

Asset Sustainability Index (Financial)

	2000	2002	2004	2006	2008	2010	2012	2014	2016	2018	2019
Budget	$1.75	$1.89	$2.03	$2.21	$2.39	$2.54	$2.70	$2.86	$3.03	$3.22	$3.31
Need	$1.80	$1.98	$2.19	$2.41	$2.66	$3.04	$3.55	$4.22	$5.01	$5.90	$6.31
ASI	0.97	0.95	0.93	0.92	0.90	0.83	0.76	0.68	0.61	0.55	0.53