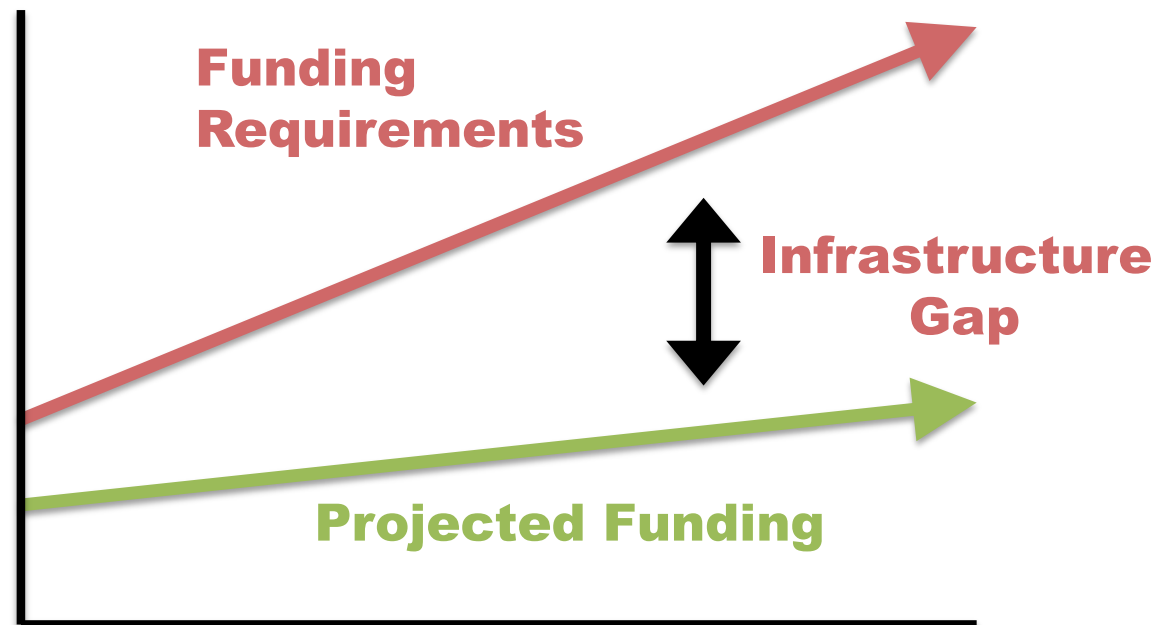




**ASSET MAINTENANCE OUTSOURCING:  
HOW WILL DOT'S OPERATE IN THE FUTURE?  
DAVID RADER, DBI SERVICES**

## The Problem: Infrastructure owners are struggling to make ends meet.

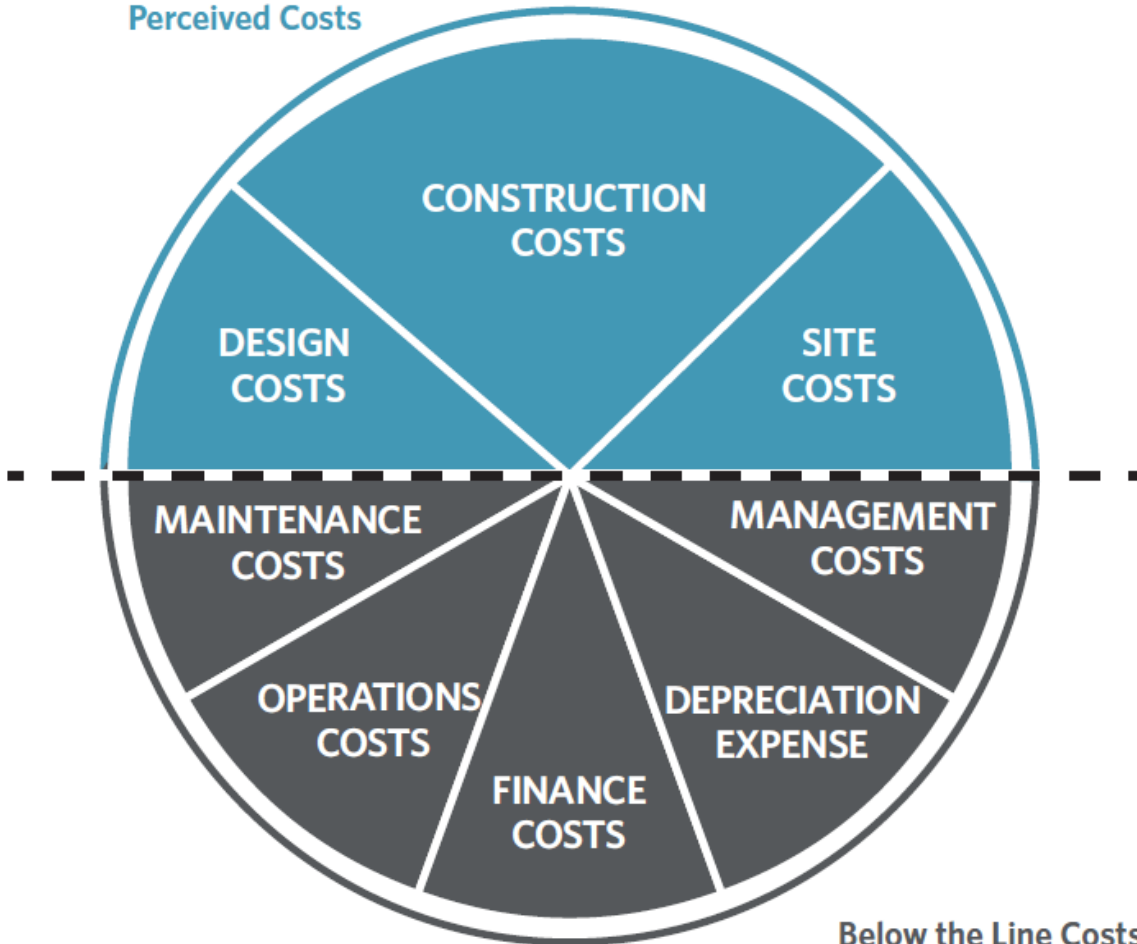
- Focus is shifting from new and additional capacity, but doing more with less
- Nationally - \$836 Billion Shortfall by 2020



**HOW WILL DOT's OPERATE IN THE FUTURE?**

# **PARTNERSHIPS UTILIZING AN ASSET MANAGEMENT APPROACH**

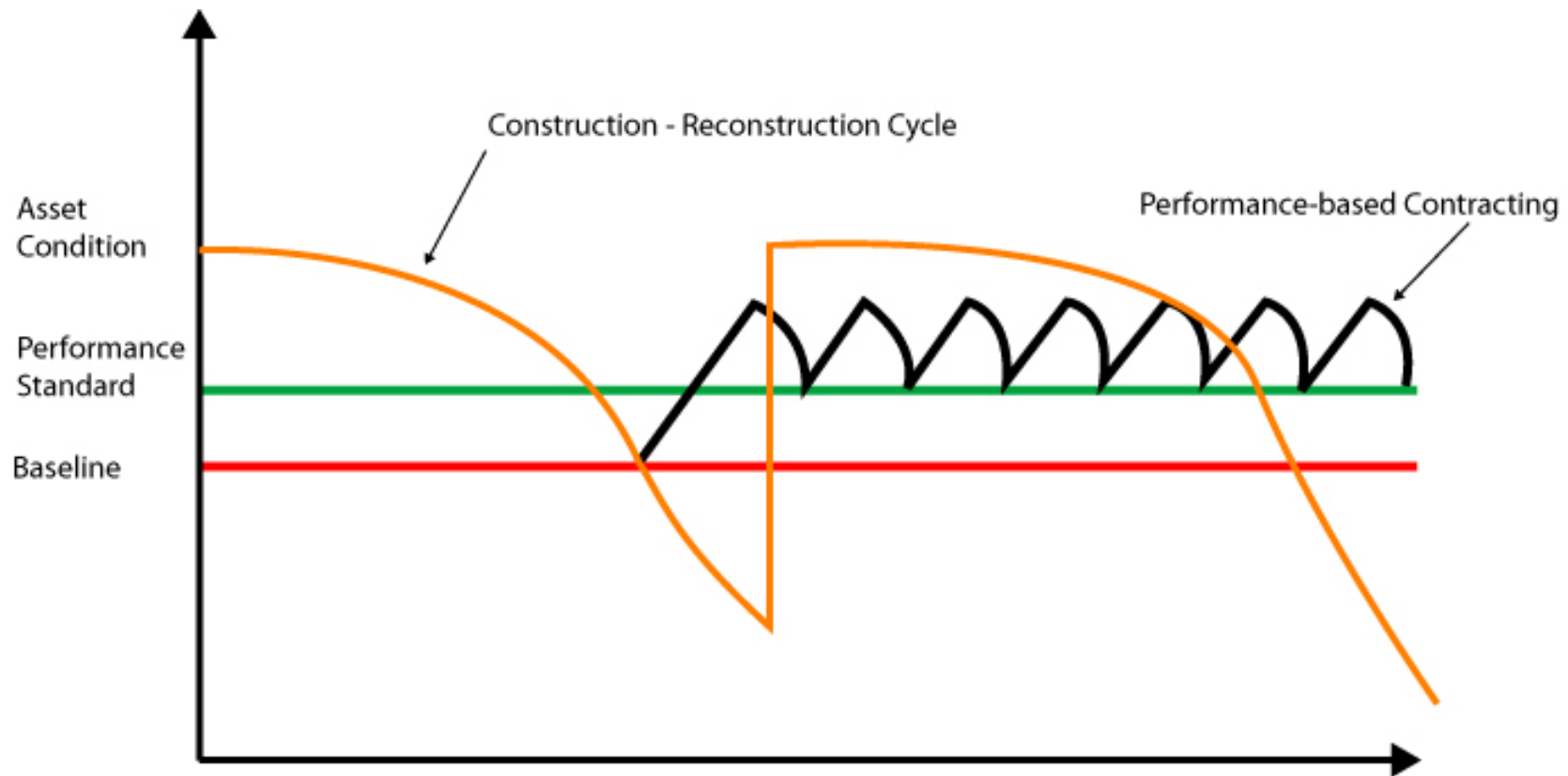
Perceived Costs



**Asset management recognizes that significant cost savings can be achieved if an asset's whole life costs are taken into account**

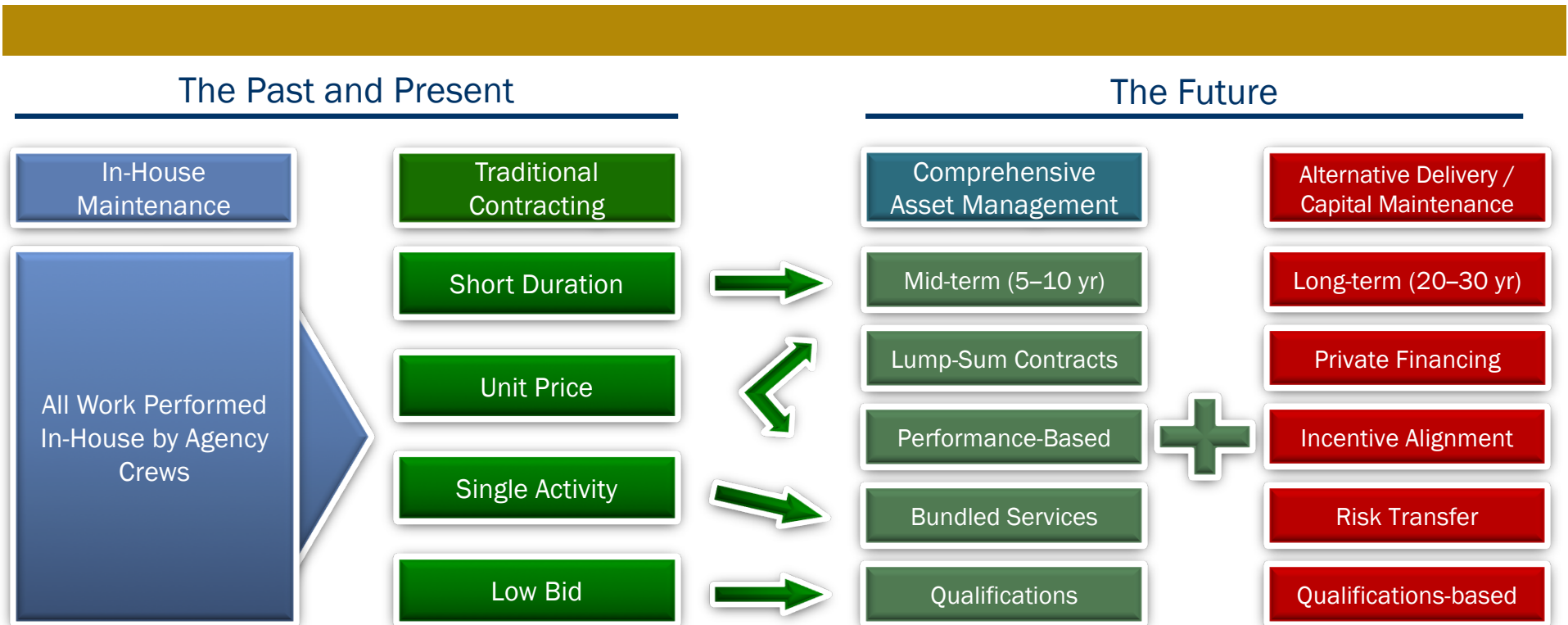
# Operations and Maintenance Strategies

## Quality does not Cost More





# Evolution of the Asset Maintenance Model in US



# Asset Maintenance Contract Model - “Full Service”

- Comprehensive Maintenance Operations
- Performance Based Contracts
- Lump-sum / Fixed Priced
- Long-term Contracts
- Risk Sharing





# Performance Based Approach to Maintenance Contracting



## Drivers of Performance-Based Contracting

- Accomplish More with Less – Getting the work done
- Cost Savings
- Possible reduction in staffing and equipment
- Alignment - Investment Mentality vs. “Worst First.”
- Consistency of Service – Outcome based
- Better Consistent Budgeting
- Less Administration than piecemeal outsourcing



# Roadways

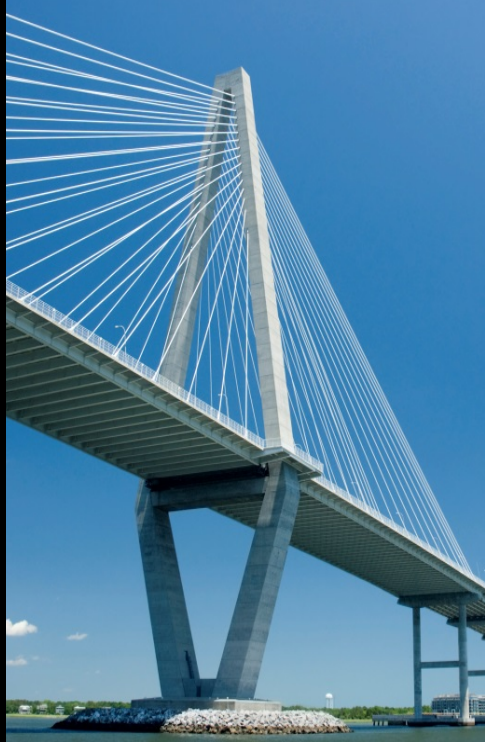


- Over 19,000 Lane Miles
- Almost 5,000 Centerline Miles
- 60 Contracts
- 1,600 Employees





# Structures



- Maintenance Services on over 5,000 Structures and Bridges, Florida Arizona, Georgia, Virginia, Texas and South Carolina.
- Inspection Services on 4,000 Bridges
- Includes 45 Movable Structures





# Facilities



## 100% Rest Areas and Welcome Centers

- Virginia
- Utah
- Missouri
- Arizona

## Vast Majority of Florida

- Rest Areas
- WIM Facilities
- Welcome Centers

**Roughly 50% in Michigan**

# Typical Contract Procurements

## STANDARD

- Corridor
  - Highways/Interstates/Toll Roads
- Geographic
  - Area Collection of Roadways/Facilities/
  - Structures
- Asset Components
  - Rest Areas/Welcome Centers
  - Bridges – Stationary/Moveable
  - Weigh Stations

## PPP

- Alternative / PPP
  - Roadways
  - Toll Facilities – Mainline/Ramp Plazas
  - Structure Rehabilitation and Maintenance



# Florida Department of Transportation Comparison

## FDOT Comparison of Methods

Estimated Levels by FY 07/08

	In-House	Traditional Maintenance Contracts	Asset Management
Annual Maintenance Costs	173.2 mil	\$162.1 mil	\$145.9 mil
Percentage Cost Savings	0	6%	13%
Number of Contracts	0	993	28
Number of Invoices to Process Annually	0	11,916	336
Contract Advertisements and Lettings or Renewals Annually	0	962	4
In-House Maintenance Staffing	3,049	124	38
In-House Non-Maintenance Staffing	123	30	2
Performance or Task-oriented	Performance /Task	Task	Performance

**Final Report**

**Analysis, Comparison, and Contrast of Two Primary Maintenance Contracting Techniques used by the Florida Department of Transportation**

**FDOT Contract No. BDV34 977-04**

**Submitted to:**  
Project Manager: Michael Sprayberry, P.E.  
Florida Department of Transportation

**Submitted by:**

Principal Investigator:	Dr. Raphael Crowley, Ph.D., P.E.
Co-Principal Investigators:	Dr. Christopher J. Brown, Ph.D., P.E. Dr. Adel ElSafty, Ph.D., P.E.
Research Assistant:	Jacob Fuller

University of North Florida  
College of Computing, Engineering, and Construction  
School of Engineering

Asset Maintenance Contracts tend to lead to statistically significant better MRP scores than non-AMCs. These results are statistically significant within the 95% confidence level.

The Asset Maintenance Contract program was 21.7% more efficient than the non-AMC program from 2009-2015.

The scope of any performance-based agreement needs to be clear, measurable, and unambiguous.

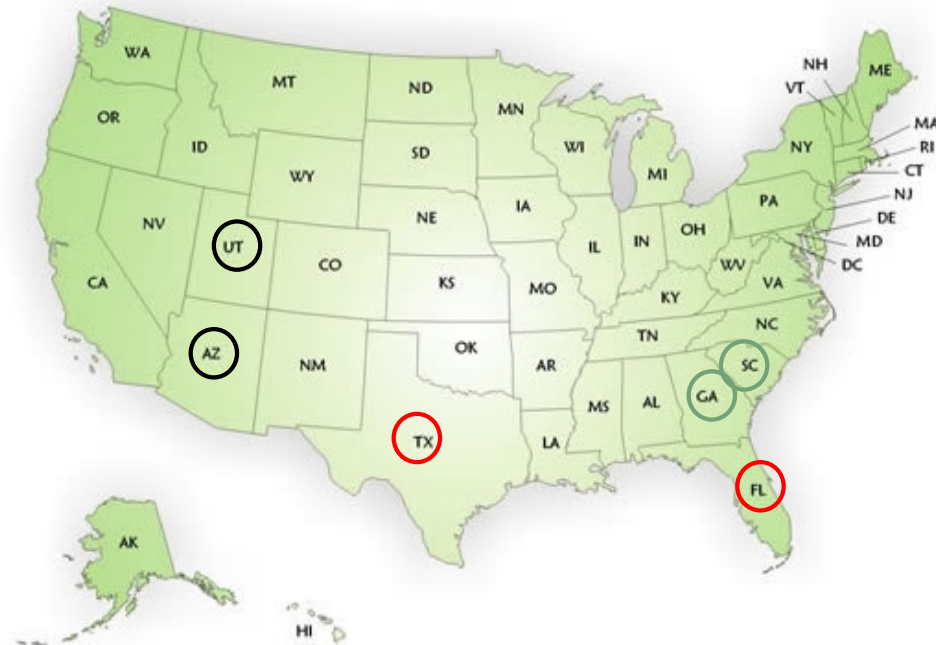


## Flexible Asset Management Services (FAMS) – New Model

# Interviews with State DOTs and Industry Survey

- Florida DOT, Texas DOT, Georgia DOT, South Carolina DOT, Arizona DOT and Utah DOT were interviewed.

Existing State DOTs	Progressing State DOTs	Considering State DOTs
<ul style="list-style-type: none"> <li>Florida DOT</li> <li>Texas DOT</li> </ul>	<ul style="list-style-type: none"> <li>Georgia</li> <li>South Carolina</li> </ul>	<ul style="list-style-type: none"> <li>Arizona</li> <li>Utah</li> </ul>



## Industry Survey

The survey was designed to focus on the Study's key areas asking targeted questions to assess industry sentiment on the PBC market

# Summary of Market Study Findings

## Important Findings



- DOTs see outsourcing of maintenance activities as an important part of their success
- DOTs are interested in finding a better way to contract out maintenance to meet their needs
- Best value rather than low-bid contracts are preferred by DOTs but there are restrictions
- DOTs desire to retain flexibility to direct specific work as required
- DOTs deemed it important to establish regular partnering sessions as part of contract
- DOTs are focused on service delivery above all factors

## Industry Insights



- Strong interest in a new contracting model to grow the market
- Prefer lump sum contracts
- Recommend longer duration contracts
- Appropriate level of risk sharing needs to be defined for each contract
- Believes in the Partnering Process



# Innovative Model :

## Flexible Asset Maintenance Services (FAMS)

FAMS Contracting Elements	Unit of Measure
Performance Based	Fixed monthly payment amount for continuous delivery of performance meeting or exceeding established performance targets
Unit / Cycle	Production units typically measured in tons, acres, gallons, square feet, or lane miles, pricing may be per unit or per cycle
Staff Augmentation	2/3/4 Person Crew, including transportation to worksite
Individual Staff Hour	Staff hour for engineering, inspection, and management personnel

## Critical Success Factors

- Project Champion is Critical
- Partnering is Paramount
- Professional Services RFP Procurement
- Bonding – Annual Bond at Annual Amount
- Realistic Risk Transfer
  - 3<sup>rd</sup> Party Damage
  - Natural Disasters
  - Snow and Ice



# QUESTIONS