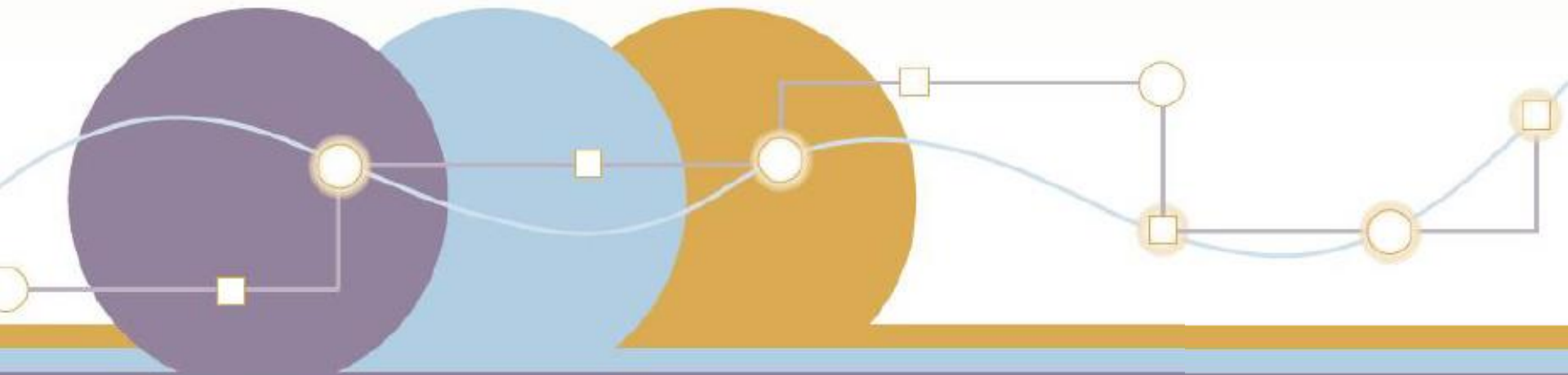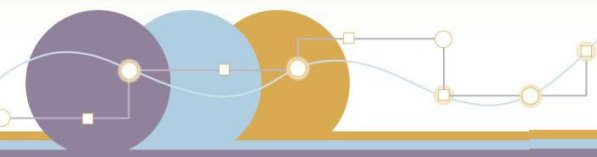# Stewardship Heavy, Oversight Light: TPM Capability Maturity Model Workshop
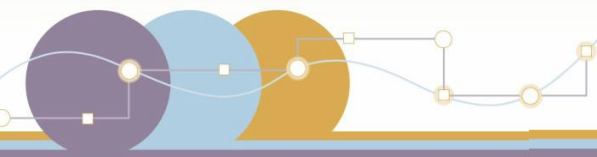
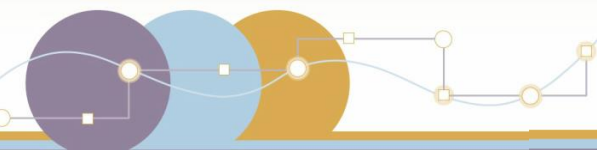FHWA Office of Transportation Performance Management

Welcome

- Presenters
  - Michael Nesbitt, FHWA
  - Karen Miller, MoDOT
  - Susanna Hughes Reck, FHWA
  - Patricia Hendren, Spy Pond

- Support
  - Cynthia Maloney, VOLPE
  - Lauren Deaderick, VOLPE

- Roundtable Facilitators (YOU)

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Federal Highway Administration

Welcome

- Presentations
  - TPM-TAP and Overview of TPM CMM
  - "Baseline Development and Target Setting"
  - "Organization and Culture"
  - Performance Management Benchmarking

- Interactive Polling by text and web via PollEverywhere (it is like voting for American Idol, or the Voice, but better!!!)

- Roundtable Discussions and Report out

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Federal Highway Administration

Poll Everywhere Test Questions

When ASKED and poll is active, respond at PollEv.com/tpmtpm808 or Text a CODE to 22333

My organization is best described as a:

- ❑ State DOT **(1ORG)**
- ❑ MPO **(2ORG)**
- ❑ Transit Agency **(3ORG)**
- ❑ State Agency **(4ORG)**
- ❑ Local Government **(5ORG)**
- ❑ Federal Agency **(6ORG)**
- ❑ Private Sector **(7ORG)**
- ❑ Other **(8ORG)**
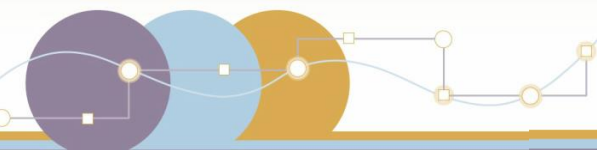
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Poll Everywhere Test Questions

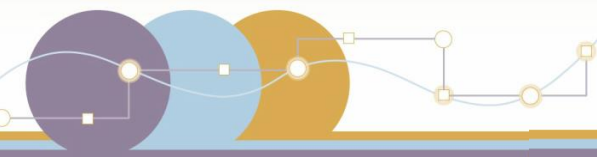**When ASKED and poll is active, respond at PollEv.com/tpmtpm808 or <u>Text 3TPM and your message</u> to 22333**

In three words, describe how you feel about feel about transportation performance management.

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Federal Highway Administration

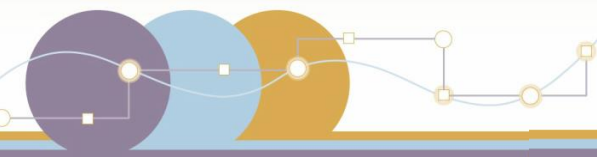# TPM Technical Assistance Program (TAP) Overview

Michael Nesbitt
FHWA Office of Transportation Performance Management
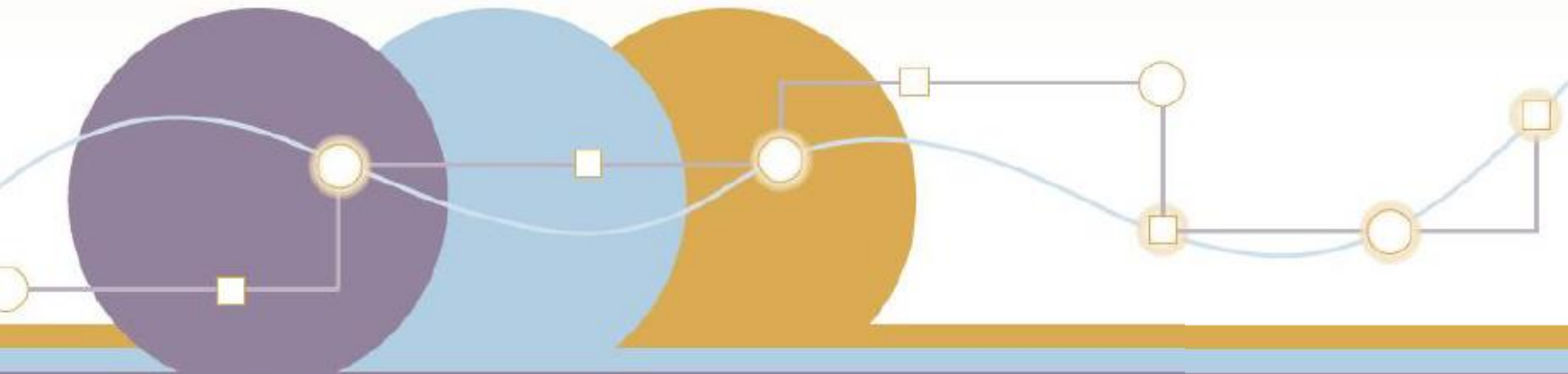
TPM TAP Purpose

- Purpose:

  "to provide assistance to States, MPOs and transit agencies in a collaborative manner that reflects FHWA's stewardship heavy and oversight light approach to performance management implementation"

- Audience: YOU
  - State DOTs, MPOs and transit agencies

- Results
  - Understand current state of practice
  - Identify what is needed to get better
  - Provide new tools to help
  - Show progress
  - Note: <u>Not</u> for MAP-21 implementation compliance
  - Spur implementation of TPM principles

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Overview of the TPM Technical Assistance Program

The TPM Technical Assistance Program (TAP) will be comprised of three parts:

Technical Assistance Resources	On-Site Assistance and Action Planning	National Assessments and Surveys

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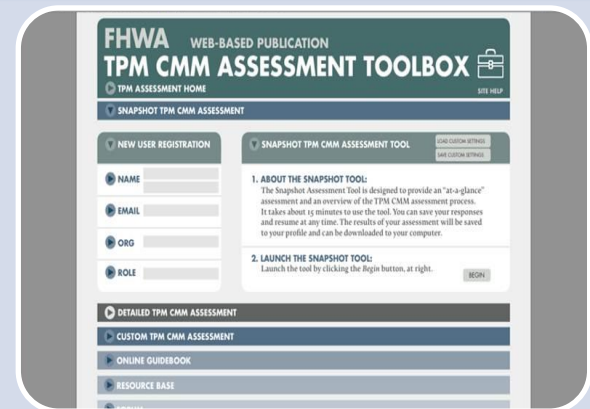
Technical Assistance Resources

Develop TPM Capability Maturity Model (CMM)

• **Date: Fall 2015**

Distribute TPM Implementation Guidebook

• **Date: Fall 2015**

Deploy TPM Toolbox that integrates TPM CMM and Guidebook

• **Date: Early 2016**

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Federal Highway Administration

TPM TAP Key Elements

- Focus on linking TPM to decision making
- Foster relationships between people implementing TPM
- Leverage existing frameworks and guides
- Provide flexibility to assess maturity by performance area
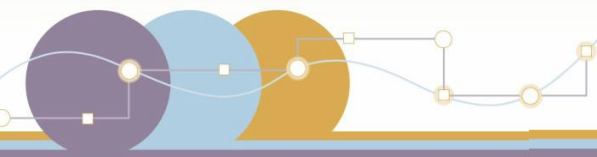- Maximize impact of tools and guidance

CAPABILITY MATURITY MODEL

+

Toolbox

+

Workshops, Peer Exchanges

=

Spur adoption and advancement of TPM

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Federal Highway Administration
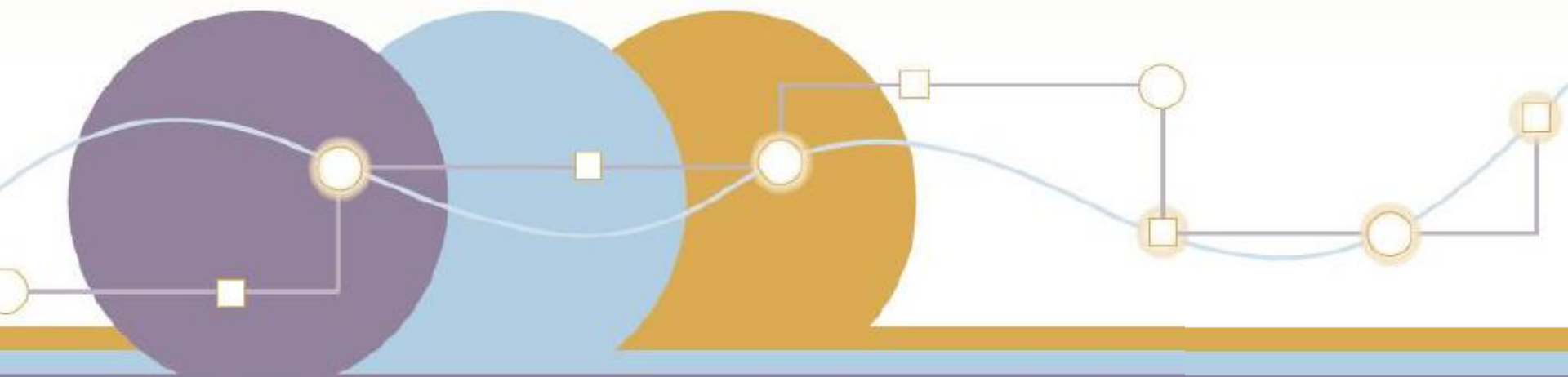
TPM TAP Stakeholder Working Group

- **Role: guide the development of products to ensure products are useful**
  - Six webinars over next 12 months
  - Written comments on draft material

- **Specifically selected to create diversity across**
  - Subject matter expertise
  - Range of agencies
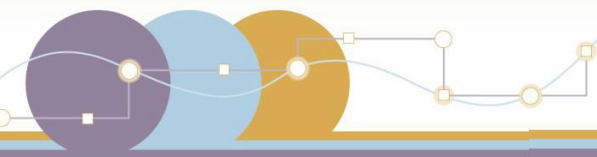 - Geographic representation
  - Involvement in TPM

Agency	Confirmed
State DOTs	23
MPOs	8
Transit	6
National	3

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Federal Highway Administration

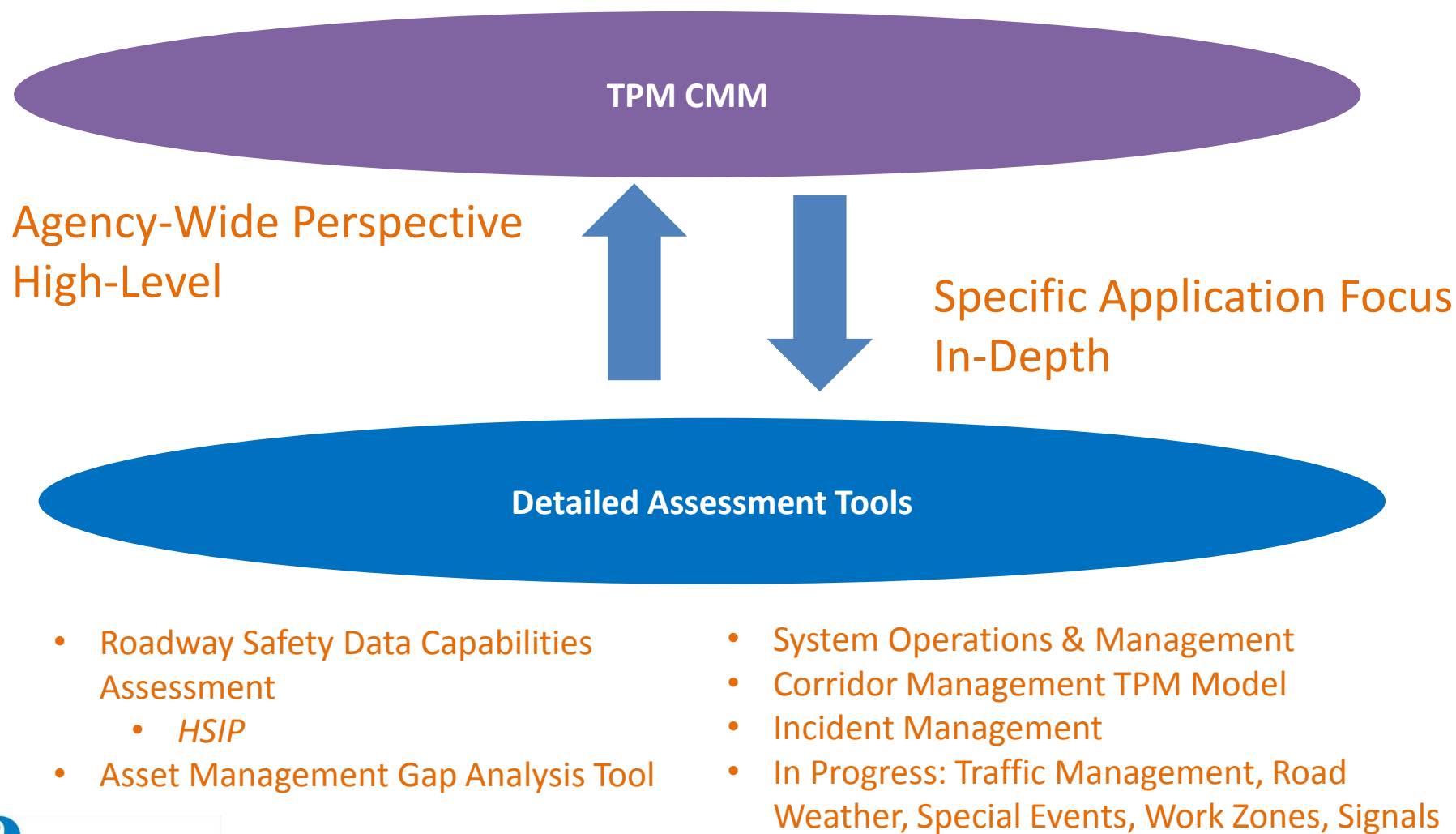# TPM Capability Maturity Model

Michael Nesbitt
FHWA Office of Transportation Performance Management

TPM CMM's Relation to Other Tools

TPM CMM

Agency-Wide Perspective
High-Level

Specific Application Focus
In-Depth

Detailed Assessment Tools

- Roadway Safety Data Capabilities Assessment
  - *HSIP*
- Asset Management Gap Analysis Tool

- System Operations & Management
- Corridor Management TPM Model
- Incident Management
- In Progress: Traffic Management, Road Weather, Special Events, Work Zones, Signals

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Federal Highway Administration
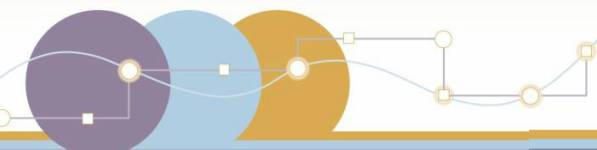
Final

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CMM: Framework Considerations

1. Grounded in maturity model practices and recent transportation related assessment models

2. Balance "too few" components vs "too complicated"

3. Move dialogue from "what is TPM" to "**HOW** to do it"

4. Ability to distinguish maturity by performance areas

5. Align with current research on data quality and management

6. Reflect recent performance management frameworks

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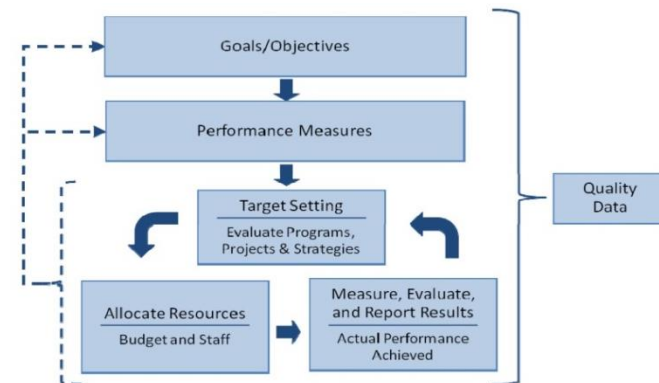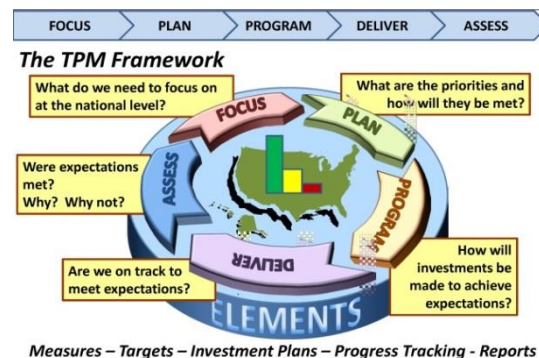
The 10 Components of the TPM CMM:

1. Strategic Framework

2. Target Setting

3. Performance-Based Planning

4. Performance-Based Programming

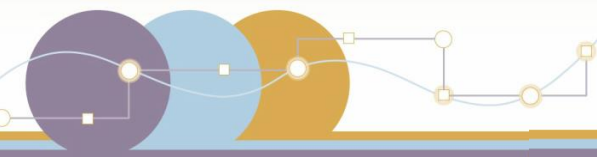5. Monitoring & Assessment

6. Reporting & Communication

A. TPM Organization & Culture

B. External Collaboration

C. Data Usability & Analysis Capabilities

D. Data Management

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Turning the TPM CMM into the TPM Framework

1. **Strategic Framework**

2. **Target Setting**

3. **Performance-Based Planning**

4. **Performance-Based Programming**

5. **Monitoring & Assessment**

6. **Reporting & Communication**

A. **TPM Organization & Culture**

B. **External Collaboration**

C. **Data Usability & Analysis Capabilities**

D. **Data Management**

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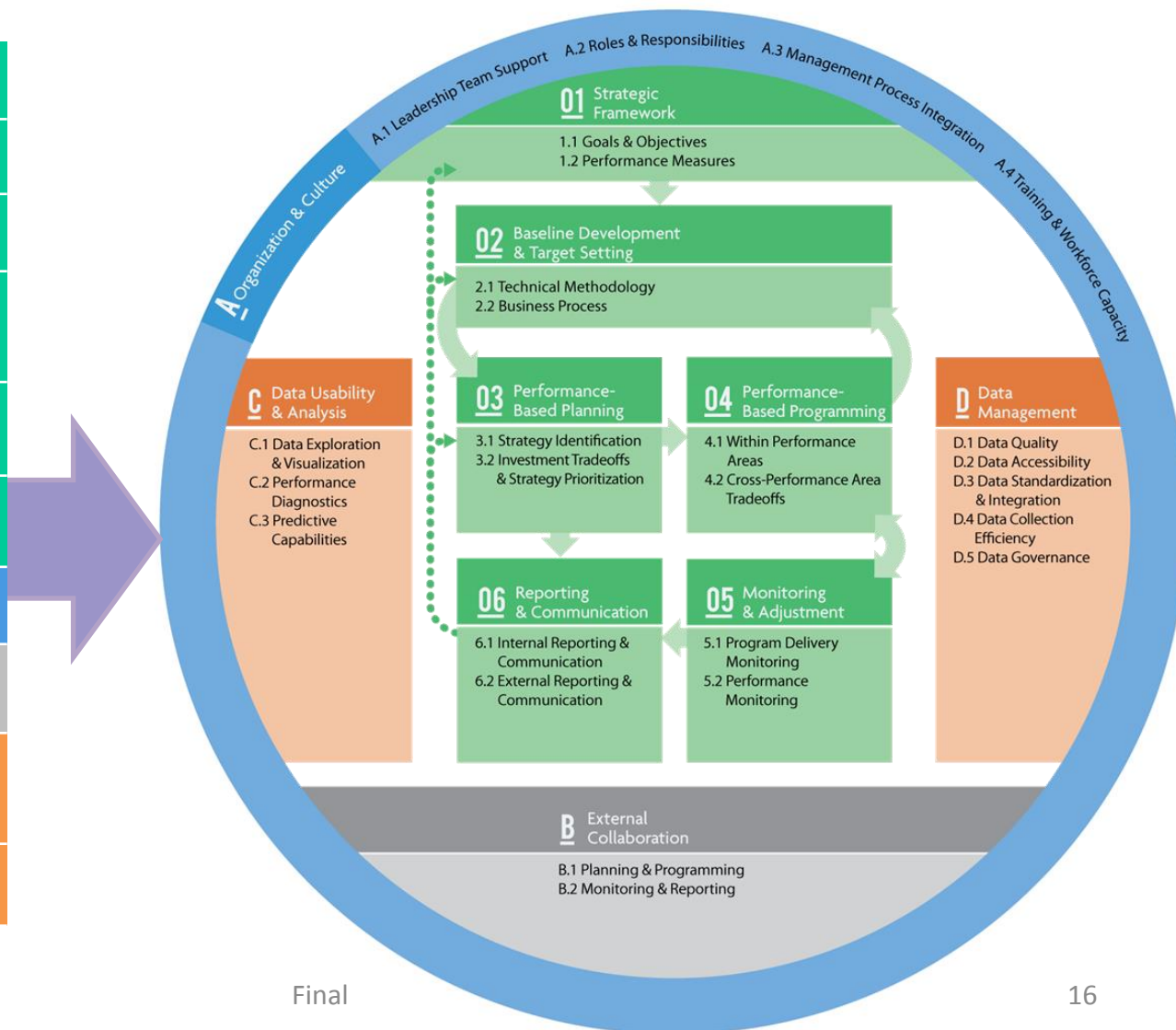
Drafting Maturity Levels: Considerations

- Consistency with existing guidance on TPM (e.g., PBPP)

- Coverage of people, process, and technology

- Reflect terminology in existing models (e.g., TSM&O)

- Align with current research on data assessment

- Preliminary list of actions naturally flow

  - NOTE: Guidebook will cover the "how to"

- Based in <u>real world</u> agency examples

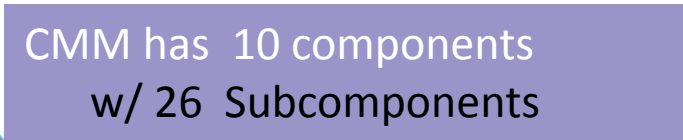- Remain faithful to the generic maturity level descriptions
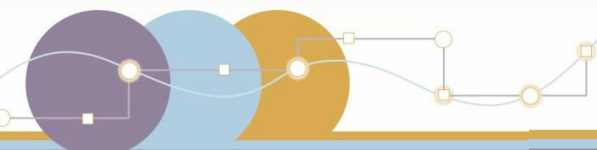
TPM CMM Levels of Maturity

Level	Definition
1.Initial	Ad hoc, uncoordinated, firefighting, champion-dependent
2.Developing	Nominal framework (e.g., organizational roles) being defined and systematic approaches starting to emerge
3.Defined	Framework and systems defined but not fully implemented or effectively supporting decision making
4.Functioning	TPM practices have been institutionalized, information used to guide actions, data improvements being pursued, basic predictive and tradeoff capabilities in place
5.Sustained	TPM will survive across new leadership, managers using performance information, data effectively managed, and external stakeholders view performance results as useful in promoting accountability and transparency

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TPM Framework

CMM has 10 components
 w/ 26 Subcomponents

Today we are focusing on:

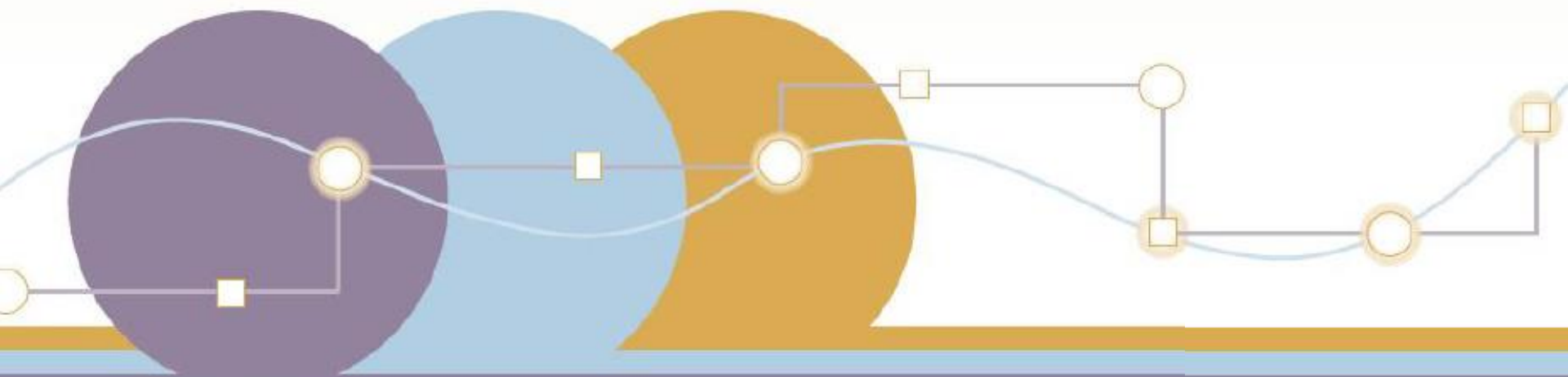2. Baseline Development &
Target Setting
     2.2 Business Process
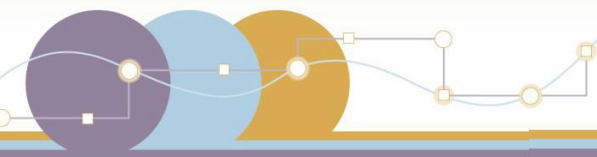
A.   Organization &Culture
     A.2 Roles and
     Responsibilities

Baseline Development & Target Setting

FHWA Office of Transportation Performance Management

CMM Component 2: Baseline Development and Target Setting

BASELINE DEVELOPMENT AND TARGET SETTING

DEFINITION: The use of baseline data, information on possible strategies, funding constraints and forecasting tools to collaboratively set targets.
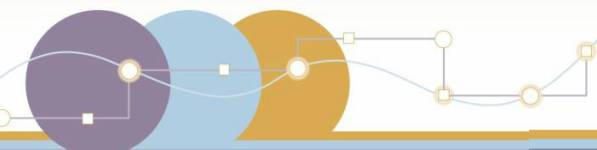
SUBCOMPONENTS:

- 2.1 Technical Approach

- 2.2. Business Process: Establishment of an internal agency process including internal coordination and collaboration to set and modify performance targets.
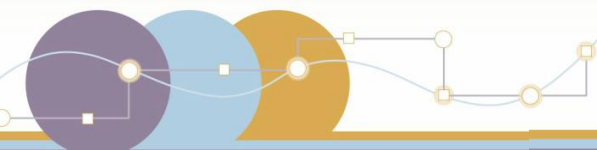
CMM Component 2: Baseline Development and Target Setting—2.2 Business Processes

Level	Description of Maturity Level
Initial	no defined business process to review performance trends, establish benchmarks or set targets.
Developing	coordinated and collaborative process is under development to review trends and establish benchmarks or targets Staff responsibilities and roles in this process are being clarified.
Defined	Documented process for how targets will be set, formally approved and process for how benchmarks will be identified, reported and reviewed – including steps, roles and responsibilities.
Functioning	Process is an integral component of planning, budgeting, staffing, and employee performance evaluations.
Sustained	Agency has applied process for multiple cycles. Approach is being continually refined as needed to address organizational structure changes.

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CMM Component 2: Baseline Development and Target Setting—2.2 Business Processes

For every level of maturity, there is a list of actions to describe WHAT to do to move to the next maturity level. These actions will eventually be linked to the guidebook that will detail HOW to complete the actions.

Level	Description	ACTIONS to move to next level:
Developing	coordinated and collaborative process is under development to review trends and establish benchmarks or targets Staff responsibilities and roles in this process are being clarified.	Initiate discussions about the approach to be used for either benchmarking or target setting within different agency performance areas.
Defined	Documented process for how targets will be set, formally approved and process for how benchmarks will be identified, reported and reviewed – including steps, roles and responsibilities	Integrate use of benchmarks and/or targets into planning, programming, budgeting, staff allocation and employee performance evaluations.
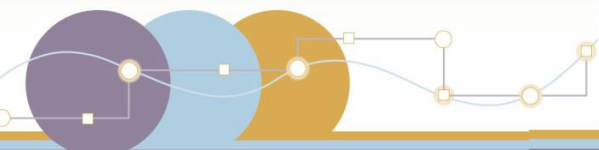
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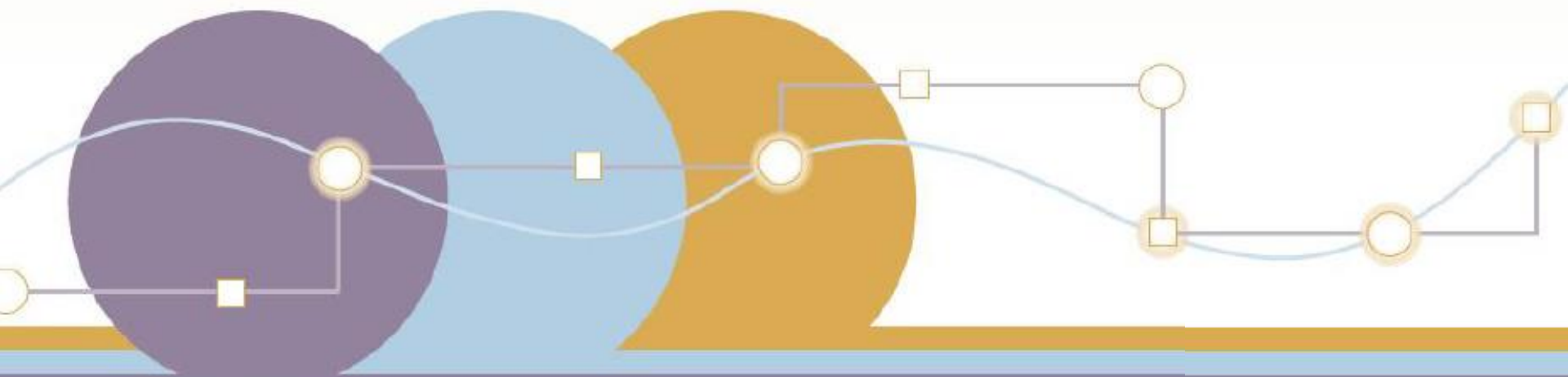
Poll Anywhere and Roundtable Discussion

When poll is active, respond at PollEv.com/tpmtpm808 or Text a CODE to 22333
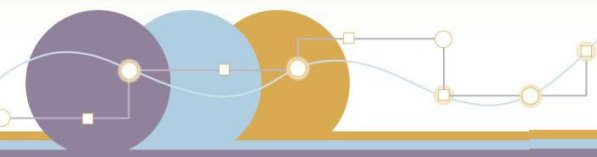
What level are you at under subcomponent 2.2?

❑ Initial - Level 1 **(1TSB)**

❑ Developing – Level 2 **(2TSB)**

❑ Defined – Level 3 (**3TSB**)

❑ Functioning – Level 4 **(4TSB)**

❑ Sustained – Level 5 **(5TSB)**

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MoDOT

MoDOT's Target Setting Business Process
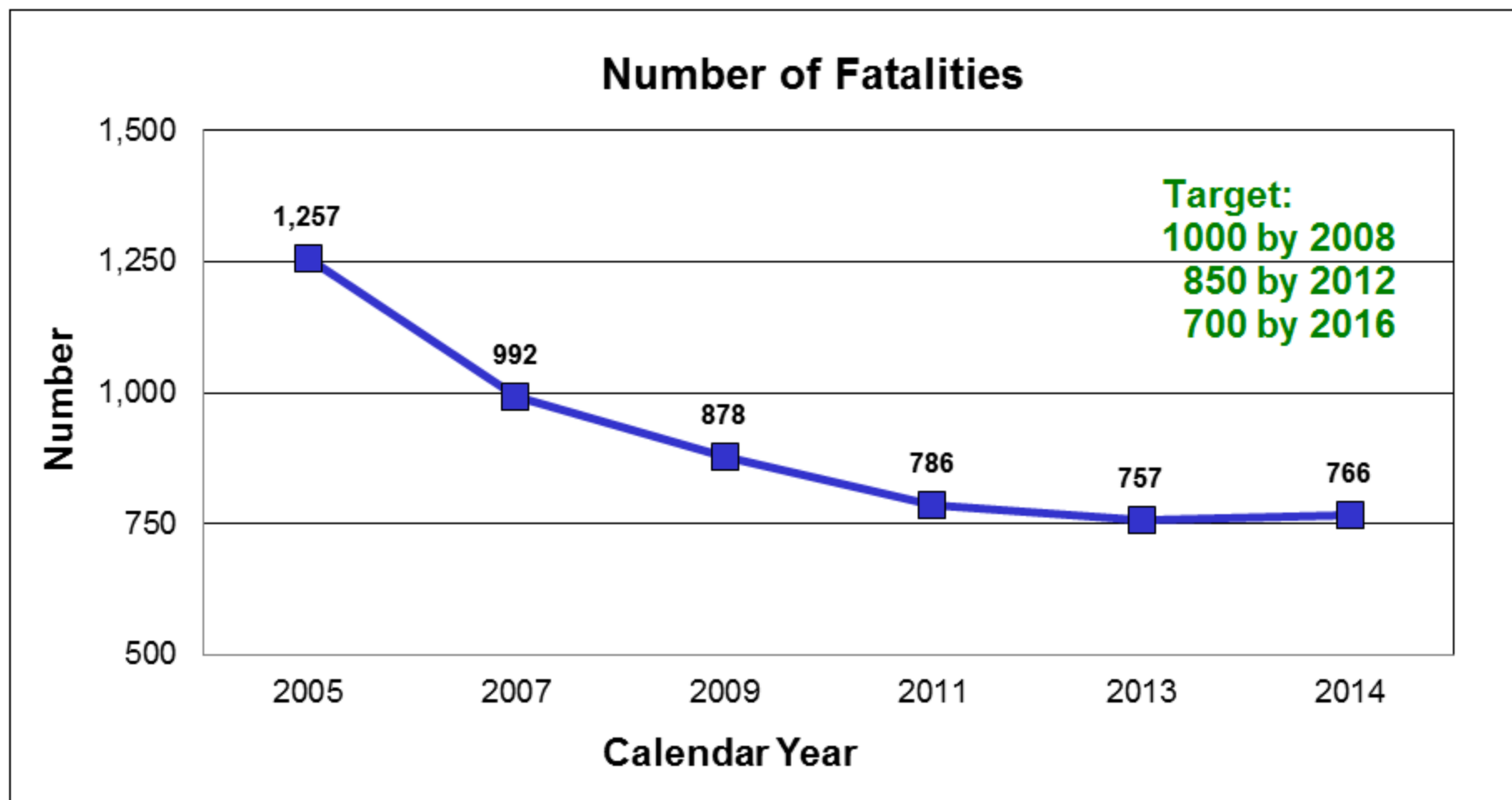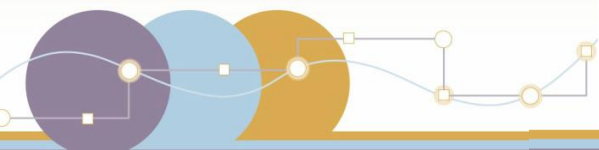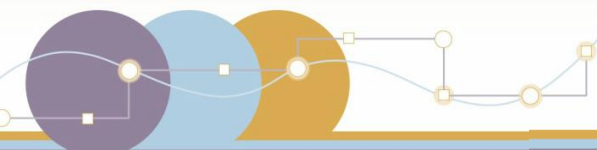
Karen Miller, MoDOT

MoDOT's Experience

- Target Setting - Business Process
  - "Show Me" Your Data
  - Strategies
  - Projections
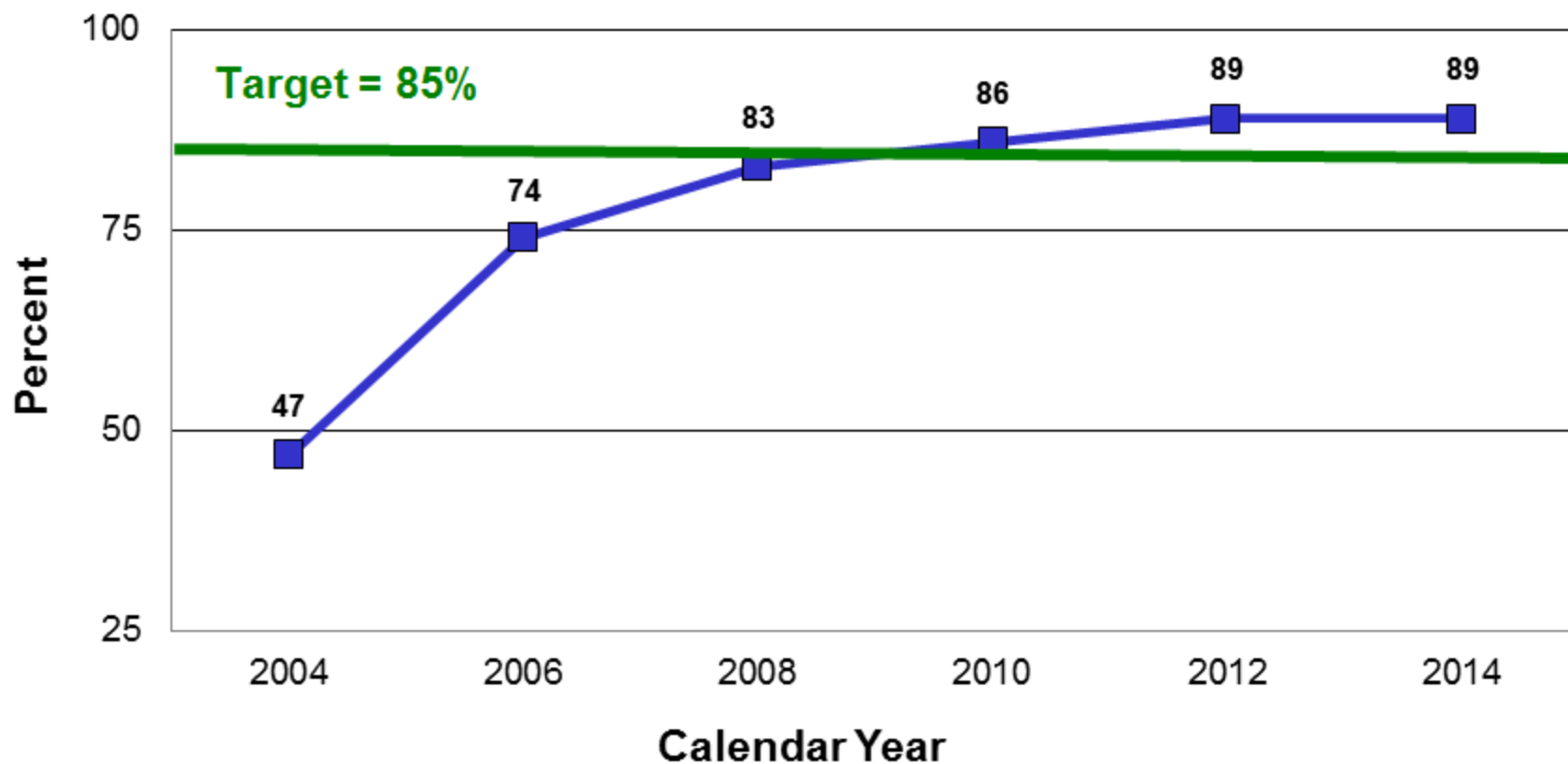 - Target
  - Review and Adjust

Number of Fatalities

Target:
1000 by 2008
850 by 2012
700 by 2016

2005: 1,257
2007: 992
2009: 878
2011: 786
2013: 757
2014: 766

Calendar Year
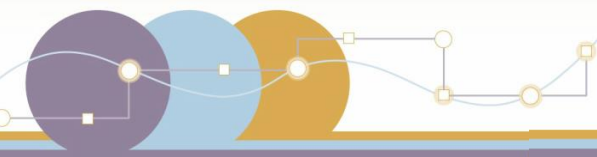
Percent of Major Highways in Good Condition
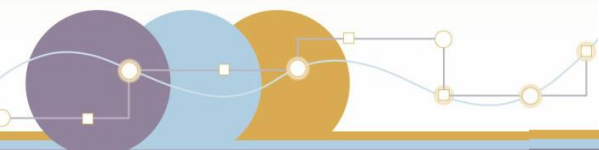
Percent of Overall Customer Satisfaction
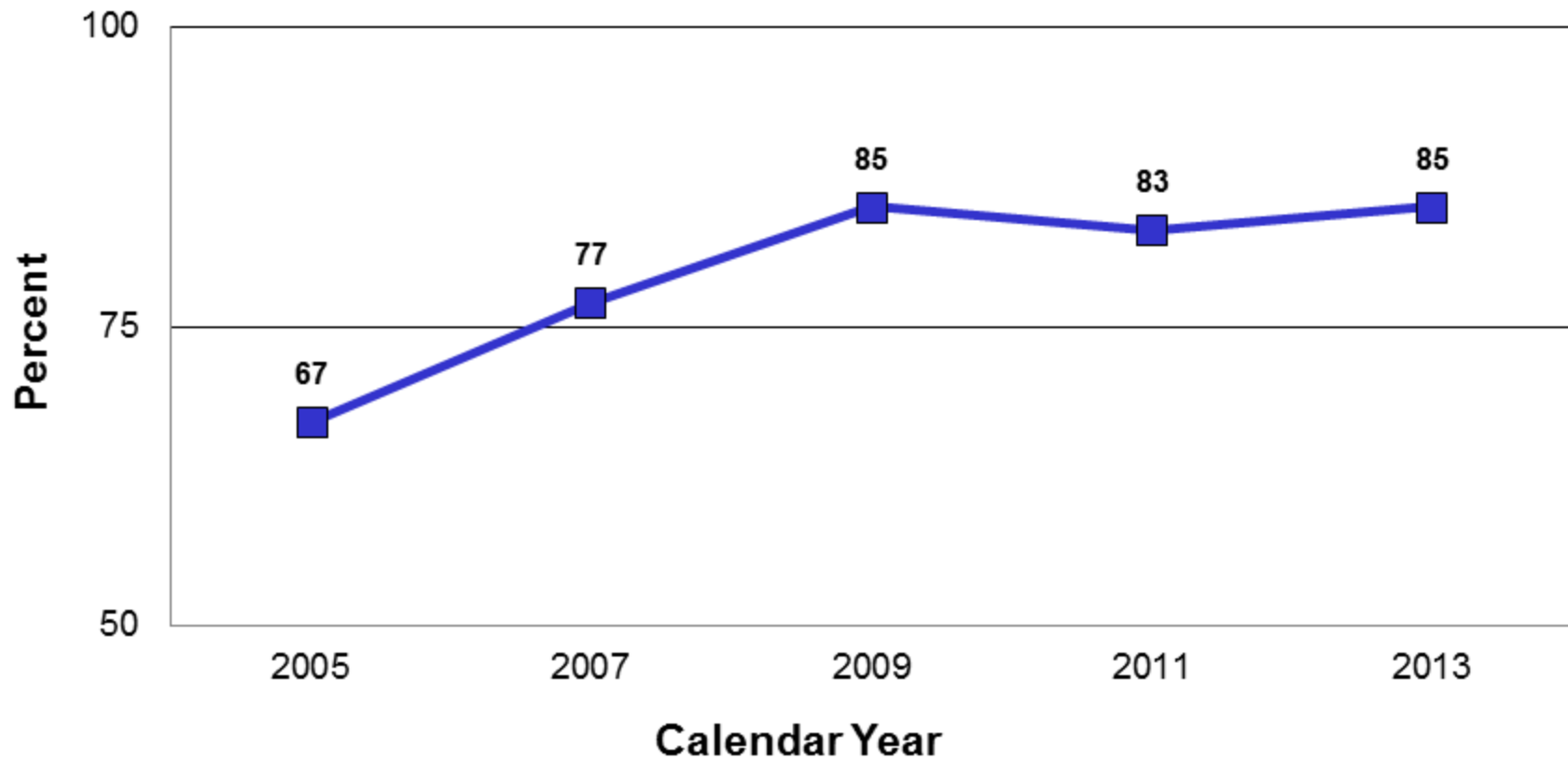
Poll Anywhere and Roundtable Discussion

When poll is active, respond at PollEv.com/tpmtpm808 or **Text BIGT** and your message to 22333

Using no more than 4 words, what is your biggest challenge in developing targets?
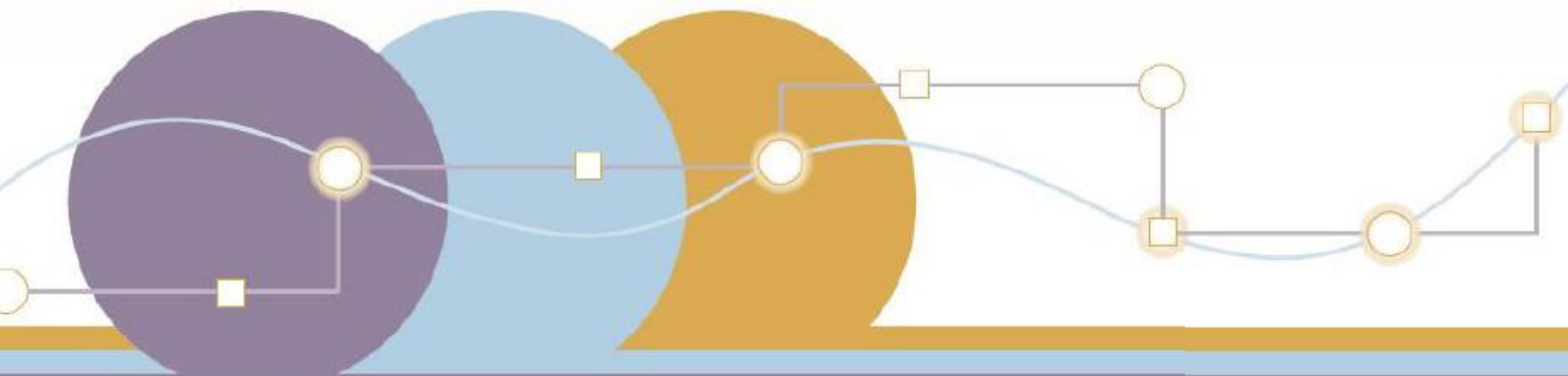
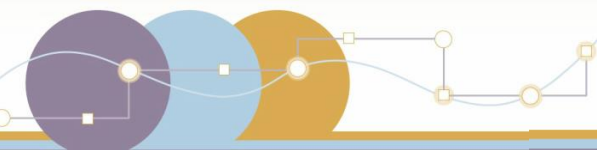## Poll Anywhere and Roundtable Discussion

Roundtable Discussion

– Discuss the challenges you face in developing targets.

– Discuss the maturity level you selected in the poll.

– Share any best practices on target setting.

TPM Organization & Culture

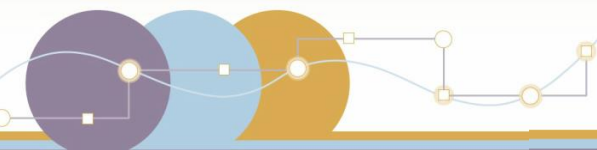FHWA Office of Transportation Performance Management

TPM CMM Component A: TPM Organization & Culture

TPM ORGANIZATION & CULTURE

DEFINITION: Institutionalization of a performance management culture within the organization, as evidenced by leadership support, employee buy-in, and embedded organizational structures and processes that support performance management.

SUBCOMPONENTS:

- A.1. Leadership Team Support
- A.2. Roles and Responsibilities: Organizational structure and clearly designated and resourced positions that support effective execution of performance management. Established accountability for meeting performance outcomes.
- A.3. Management Process Integration
- A.4. Training and Workforce Capacity

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TPM CMM Component A: TPM Organization & Culture— A.2. Roles and Responsibilities

Level	Description
INITIAL (Level 1)	
DEVELOPING (Level 2)	
DEFINED (Level 3)	Roles and responsibilities for performance management have been defined, but not yet fully implemented.
FUNCTIONING (Level 4)	Staff at multiple levels of the organization understand their roles with respect to performance management practices. A clear organizational structure for performance management is in place - with sufficient budget and staffing.
SUSTAINED (Level 5)	

Final

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TPM CMM Component A: TPM Organization & Culture—A.2. Roles and Responsibilities

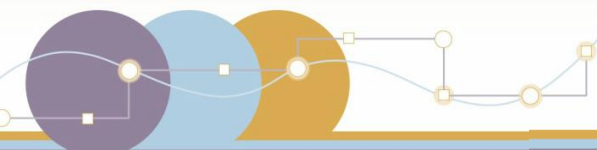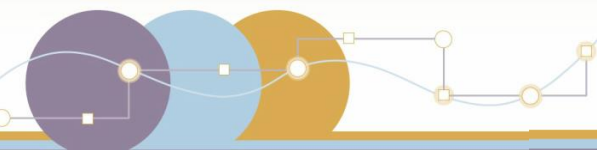| Level	Description	ACTIONS to move to next level:
DEFINED (Level 3)	Roles and responsibilities for performance management have been defined, but not yet fully implemented.	Clearly identify staff responsibilities for the performance management practices, its deployment and its maintenance.
FUNCTIONING (Level 4)	Staff at multiple levels of the organization understand their roles with respect to performance management practices. A clear organizational structure for performance management is in place with sufficient budget and staffing.	Integrate mentoring and succession planning to minimize the risks related to the loss of key staff knowledge and skills in performance management.

Poll Anywhere and Roundtable Discussion

When a poll is active, respond at PollEv.com/tpmtpm808 or Text a CODE to 22333

What level are you (your agency, organization, etc) at under subcomponent A.2?

❑ Initial - Level 1 **(1ROLE)**

❑ Developing – Level 2 **(2ROLE)**

❑ Defined – Level 3 **(3ROLE)**

❑ Functioning – Level 4 **(4ROLE)**

❑ Sustained – Level 5 **(5ROLE)**

The Evolution of FHWA's TPM Roles and Responsibilities

Susanna Hughes Reck
FHWA Office of Transportation Performance Management

U.S. Department of Transportation
Federal Highway Administration
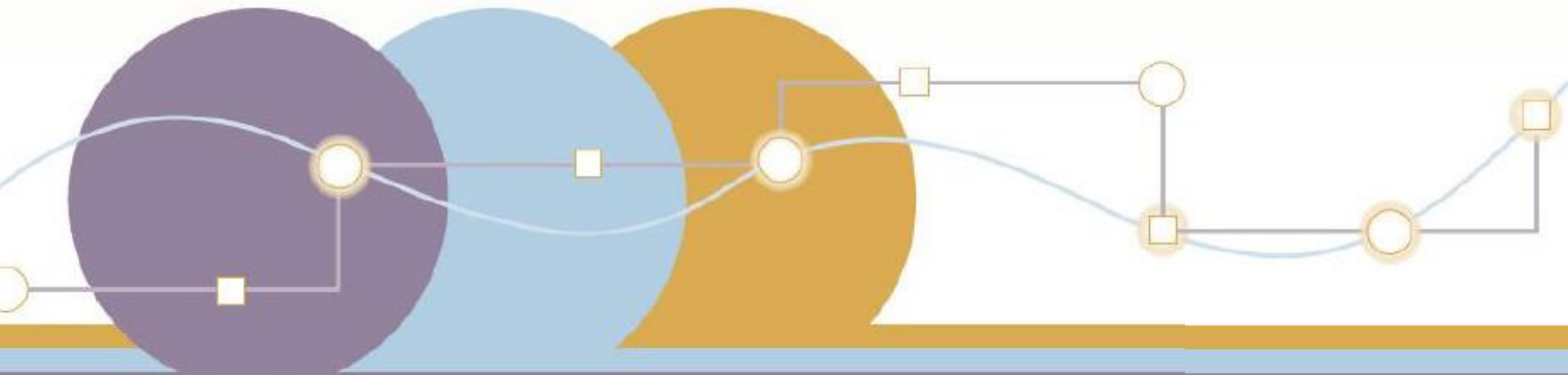
Why is TPM Important to FHWA?
(it is not just b/c Congress said so)

- Natural evolution to improve decision making and resource allocation

- Improves transparency and accountability for federal funds

- Opportunity to advance performance management practices

ERRR...   CAN'T STOP. TOO BUSY!!

TOO BUSY TO IMPROVE?
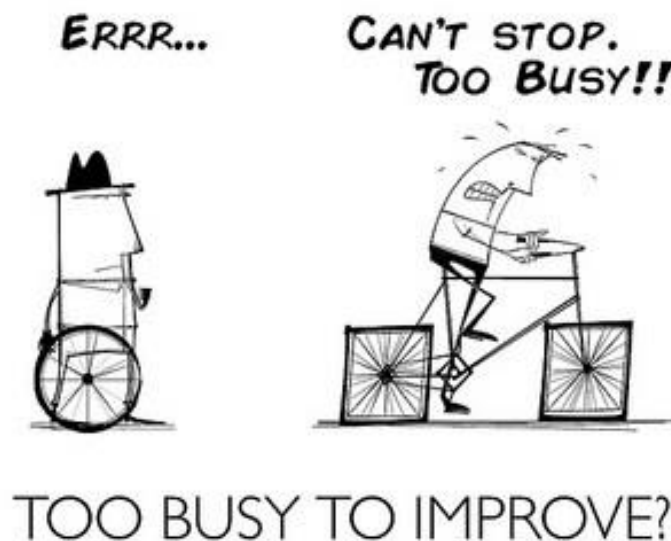
WorkCompass

Purpose of Roles and Responsibility Project

- Identify what FHWA would most likely be doing to administer & support a performance-based Federal-aid Highway Program.

- Assess:
  - **What** are the roles?
  - **When** will they occur?
  - **How** will they be conducted?
  - **Which** units have the responsibility?

Purpose of Project: Roles & Responsibilities...

- **Is:**
  - A means of identifying and vetting Federal roles
  - An understanding of unit responsibilities
  - An assessment of preparation needs
  - A project that will evolve with rulemaking

- **Is Not:**
  - Agency's staffing plan
  - Program guidance
  - Operating procedures
  - The final word – roles will evolve

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Internal Challenges to Address

Internal challenges

- ❑ Overcome the language usage already in existence

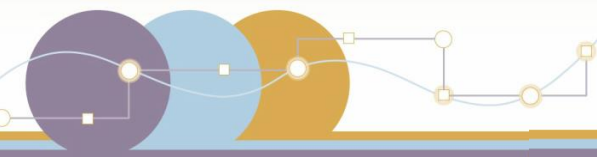- ❑ Coordination among the various owners to make sure [are] on the same page

- ❑ Getting buy-in from offices already ahead

- ❑ Coordination with all other groups

- ❑ Don't have knowledge or skills

- ❑ Preparing to take on new responsibilities and letting go of other responsibilities

- ❑ Managing staff expectations

- ❑ Initiative fatigue and sense of urgency

- ❑ Resistance to change

- ❑ ? Don't screw with it; or rush it

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Focus for FHWA – Phased Approach to TPM Implementation

Phase 1 ➜ *Preparing* (before authorization)
- Positioning FHWA by building our strength

Phase 2 ➜ *Transitioning* (enactment of law)
- Clearly define staff roles and responsibilities

Phase 3 ➜ *Implementing* (after regulations are in place)
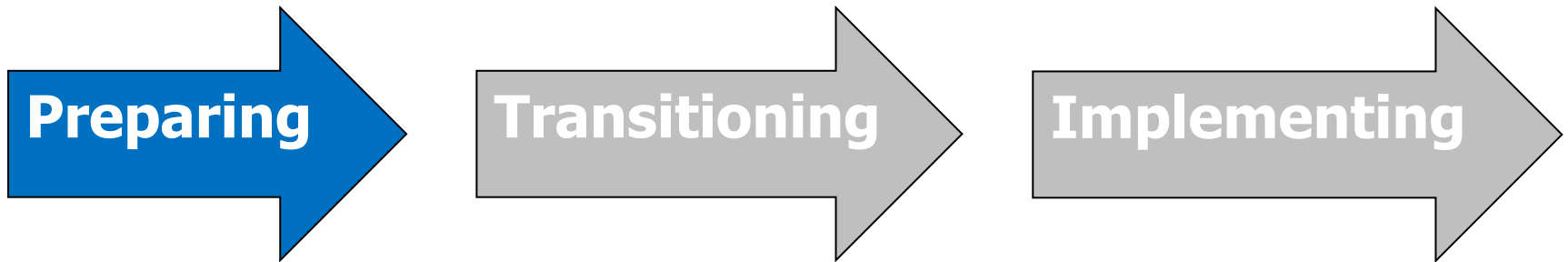- Engaging with States on implementing TPM

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Preparing → **Transitioning** → **Implementing**

Positioned FHWA to Build on our strength by

- Creating an Office to lead TPM change management effort

- Identifying possible TPM Roles and Responsibilities
    - Reviewing current Knowledge, Skills, and Abilities (KSAs) and developing new KSAs
    - Gap Analysis
    - Competency Models

- After MAP-21 released, refined TPM Roles and Responsibilities
    - Established work plan
    - Identified Training Champions throughout FHWA (HQ and Divisions)

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Preparing → **Transitioning** → **Implementing**
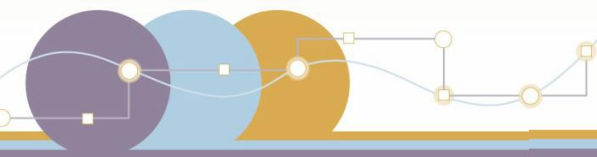
Clearly defining staff Roles and Responsibilities by

- Developed an internal Roles and Responsibility Report guide to clearly outline individual TPM roles and responsibilities

- Evaluating Division Offices Readiness to assist States with performance management

- Conducting a National review that assess the implementation of program performance

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Federal Highway Administration

Preparing → **Transitioning** → **Implementing**
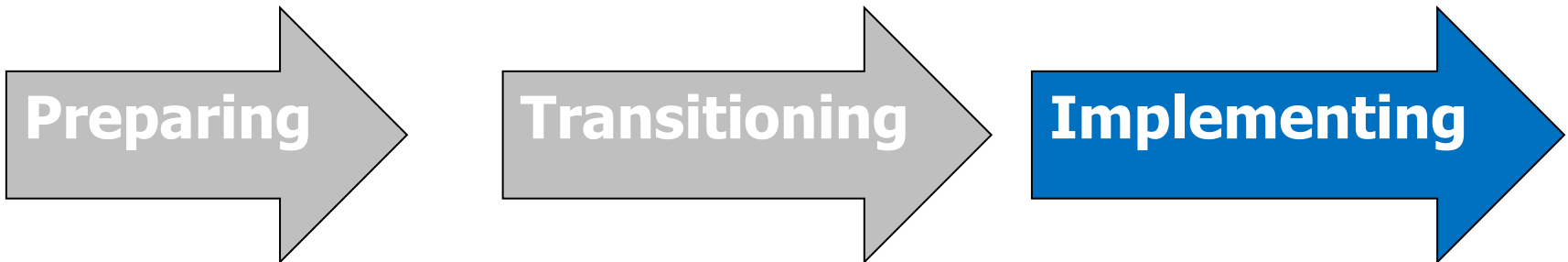
Engaging with States/MPOs on implementing TPM by

- Conducting ongoing National Assessments on implementation of program performance

- Provide Division Offices with resources to help States/MPOs with performance management

- Developing internal feedback loops to monitor progress and adjust roles and responsibilities

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Federal Highway Administration

Lessons Learned from Roles and Responsibilities Project

- Lesson Learned:
  - Defining Roles and Responsibilities Takes Time
  - TPM is Evolution, not Revolution
  - Being asked questions is a sign of progress
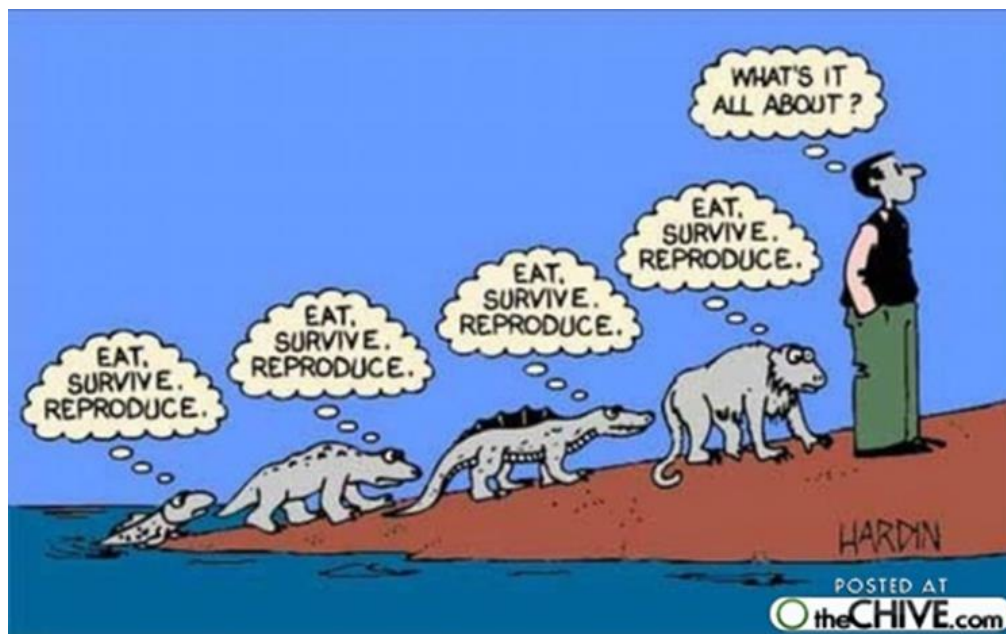
Poll Anywhere and Roundtable Discussion

When poll is active, respond at PollEv.com/tpmtpm808 or **BIGR** and your message to 22333

Using no more than 4 words, what is your biggest challenge in defining roles and responsibilities?

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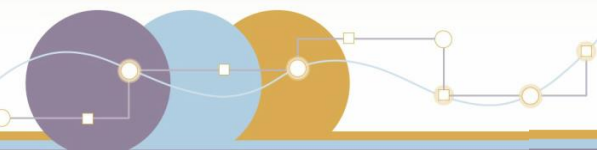
Poll Anywhere and Roundtable Discussion

- Roundtable Discussion
  - Discuss the maturity level you selected in the poll.
  - If your agency wanted to move up a Maturity Level, are the actions listed in the subcomponent A.2 table appropriate? What would actions would you recommend?

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TPM Benchmarking

Patricia Hendren
Spy Pond Partners
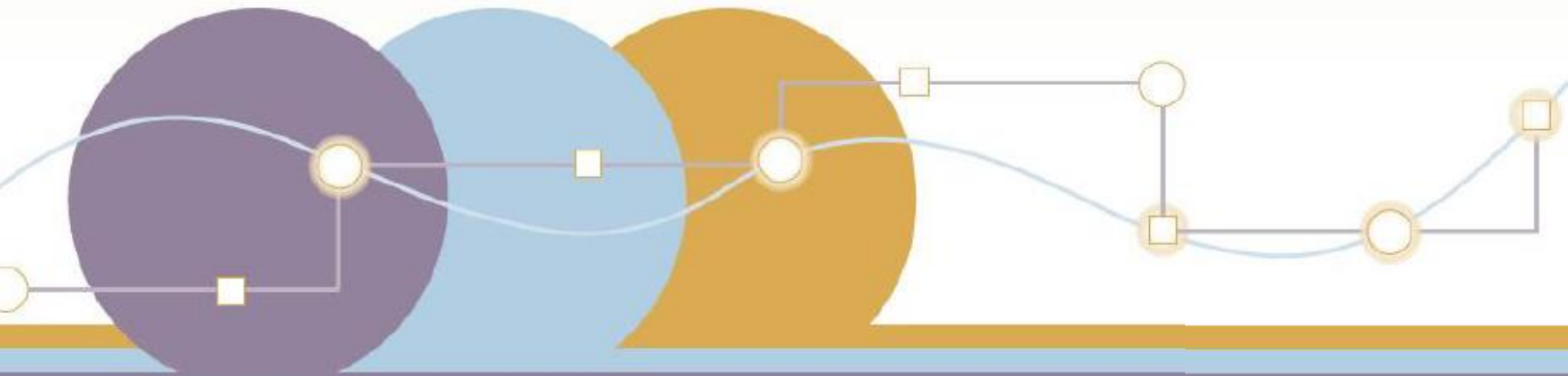
Poll Anywhere Question

When ASKED and poll is active, respond at
PollEv.com/tpmtpm808 or **Text a CODE to 22333**

What does "**benchmarking**" mean to you:

- ☐ Comparing your current agency results to prior results (**1MARK**)
- ☐ Comparing your agency results to other agencies (**2MARK**)
- ☐ Comparing your agency results to "the best" (**3MARK)**
- ☐ Trepidation (**4MARK**)
- ☐ All the above (**5MARK**)

TPM Benchmarking: Against Yourself

Why?

- See trends over time
- Evaluate impact of actions
- Clear understanding of data and measure definition
- Continually push improvement

Number of Pedestrian Fatalities and Injuries on All Maryland Roads

TARGET: < 2,050 injuries per year by 2015

TARGET: < 92 fatalities per year by 2015

Number of pedestrian injuries on all roads in Maryland

Number of pedestrian fatalities on all roads in Maryland

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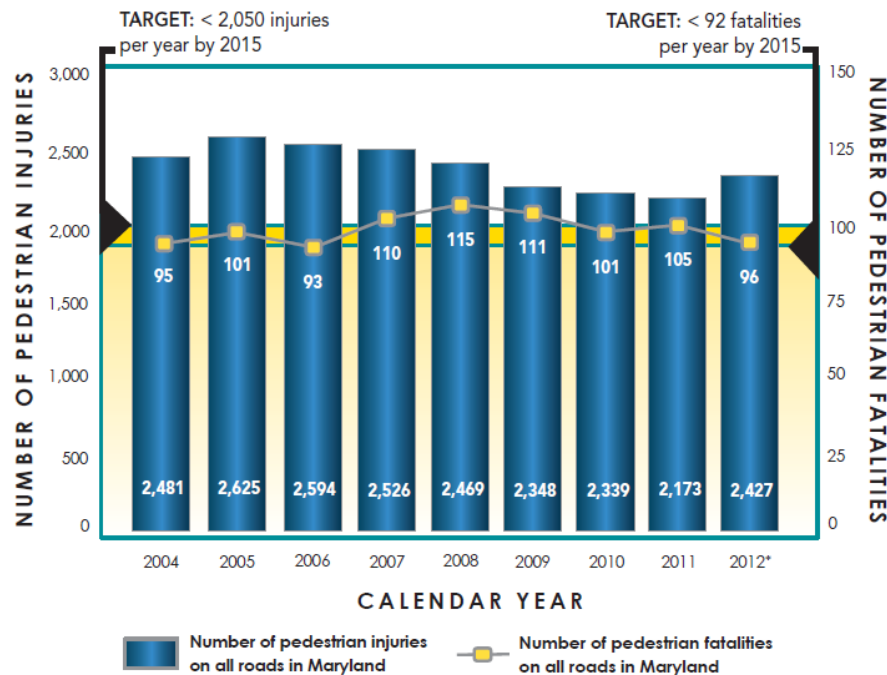
TPM Benchmarking: Against Other Agencies

Why?

- Learn from peers
- Identification and implementation of best practices
- Communication of regional and national trends
- Requires- agreed upon data sources and measure definition
- This will take time

2007 — Round 2 · 2008 · 2009 · 2010 · 2011
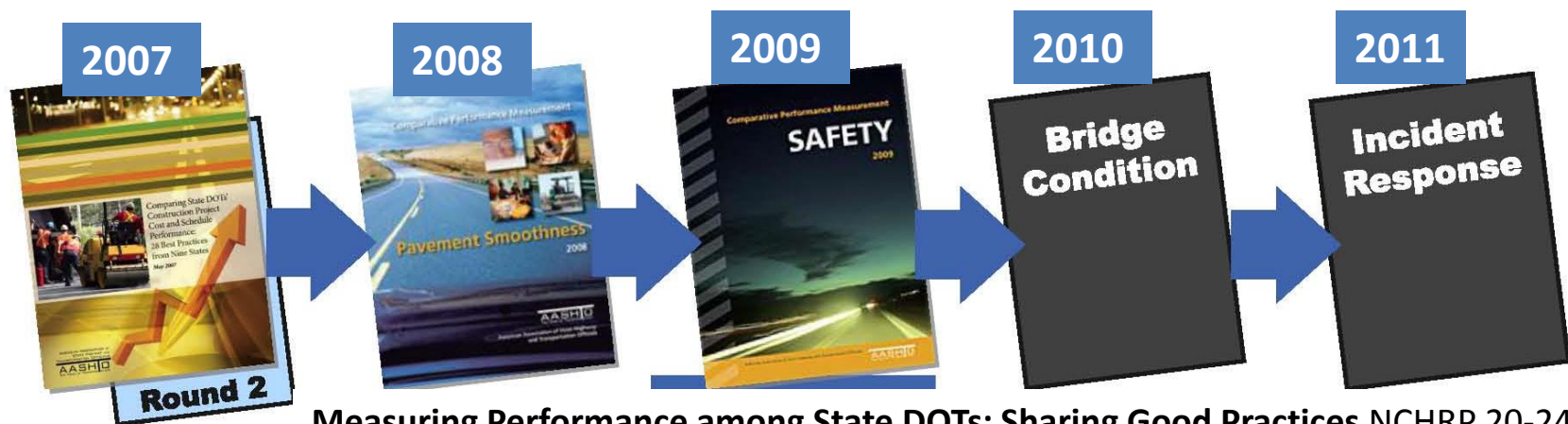
Measuring Performance among State DOTs: Sharing Good Practices NCHRP 20-24(37)

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Federal Highway Administration

TPM Benchmarking: WARNING... must consider attributes

THE WALL STREET JOURNAL.

JANUARY 12, 2012, 11:17 A.M. ET
By Mia Lamar, Dow Jones Newswires

The DOT's Bureau of Transportation Statistics said ... **Hawaiian Airlines was the most on-time carrier with a 92% punctuality rating**

Chicago Tribune

Breaking News, Since 1847
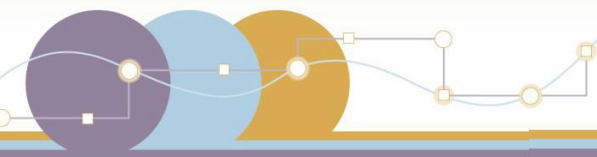
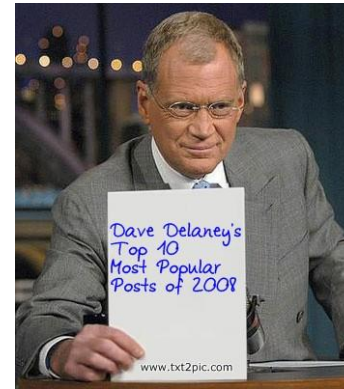*March 09, 2010 By Jon Hilkevitch, Tribune reporter*

U.S. Department of Transportation reported...
Chicago Midway Airport ranks last in on-time departures among nation's 29 busiest airports

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TPM Benchmarking ≠ A list of "best" to "worst"

- Top-10 List from David Letterman
  Funny

- Top-10 List of Employee Injuries from WMATA
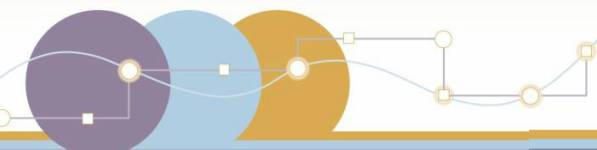 Not Funny
  Not Helpful
  Not Useful

Injury Rates Per 200,000 Hours

SMNT Communications 0.00 (0)	SMNT Power 4.61 (5)
TRST Structures Maintenance 0.00 (0)	LSRD Shady Grove Rail Transportation 4.87 (3)
LSYG Branch Avenue Rail Transportation 0.00 (0)	TRST Track Maintenance Red 4.98 (1)
CMNT West Falls Church Rail Inspection 0.00 (0)	WEMT Western Bus Maintenance 5.03 (1)
CMNT New Carrollton Rail Inspection 0.00 (0)	SAMT Southern Avenue Bus Maintenance 5.19 (1)
TRST Track Maintenance Yellow/Green 0.00 (0)	BLMT Bladensburg Bus Maintenance 5.48 (2)
RLTR Royal Street Bus Transportation 0.00 (0)	TRST Track Production 5.54 (3)
PLNT Contract And Station Enhancement 0.00 (0)	LSYG Greenbelt Rail Transportation 5.57 (3)
TRST Track Maintenance Blue/Orange 0.00 (0)	CMNT Alexandria Rail Inspection 5.65 (2)
SMNT Shops And Material Control 0.00 (0)	CMNT Brentwood Rail Inspection 5.86 (2)
CMNT Greenbelt Major Overhaul Rail 0.00 (0)	MOTR Montgomery Bus Transportation 6.24 (8)
CMNT Branch Avenue Rail Inspection 0.00 (0)	LSBO Alexandria Rail Transportation 6.53 (4)
CMNT Heavy Equipment Shop Rail 0.00 (0)	FMMT Four Mile Run Bus Maintenance 7.11 (2)
WOMT West Ox Bus Maintenance 0.00 (0)	SVMT Service Vehicle Maintenance 7.20 (1)
ROMT Royal Street Bus Maintenance 0.00 (0)	SMNT AFC Section 7.26 (3)
CMNT Glenmont Rail Inspection 0.00 (0)	PLNT Building And Support Shop 7.59 (4)
SMNT ATC Section 1.13 (1)	CMNT Shady Grove Rail Inspection 7.64 (3)
FMTR Four Mile Run Bus Transportation 1.63 (2)	HOMB Heavy Overhaul Bus Maintenance 8.92 (6)
PLNT Grounds Maintenance And Custodial 1.98 (3)	PLNT Equipment 9.07 (5)
WOTR West Ox Bus Transportation 2.27 (1)	CMNT Greenbelt Rail Inspection 9.33 (3)
CMNT Greenbelt Annex Major Overhaul Rail 2.32 (1)	MOMT Montgomery Bus Maintenance 9.94 (3)
ELES Elevators And Escalators 2.89 (2)	SATR Southern Avenue Bus Transportation 10.57 (10)
NOMT Northern Bus Maintenance 3.49 (1)	CMNT Brentwood Major Overhaul Rail 10.91 (2)
LSBO West Falls Church Rail Transportation 3.67 (2)	LSBO Largo Rail Transportation 12.58 (4)
LNMT Landover Bus Maintenance 3.88 (1)	LNTR Landover Bus Transportation 13.97 (15)
LSBO New Carrollton Rail Transportation 4.21 (2)	BLTR Bladensburg Bus Transportation 14.61 (28)
WETR Western Bus Transportation 4.41 (4)	LSRD Glenmont Rail Transportation 19.14 (9)
NOTR Northern Bus Transportation 4.51 (6)	LSRD Brentwood Rail Transportation 20.01 (10)

Ranking Problems:
- Ignores environmental risks with some jobs
- Snapshots don't convey improvement or not
- Data is blind to relative severity of injuries
- No linkage to individuals with responsibility
- Leads to winners & losers . . . Blame culture
- Doesn't create actionable info to improve safety
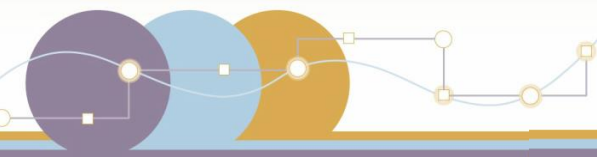- on
-   and on
-     and on

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Final

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Poll Anywhere and Roundtable Discussion

When poll is active, respond at **PollEv.com/tpmtpm808** or **Text a CODE** to 22333
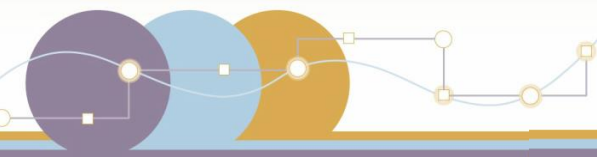
Has your agency been compared to another agency?

☐Yes **(YESTPM)**

☐No **(NOTPM)**

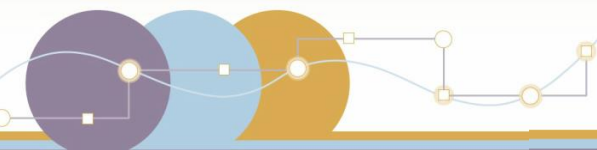## *Poll Anywhere and Roundtable Discussion*

- # Roundtable Discussion
  - – Share an example of when you agency has been compared to another agency (good example and bad example)
  - – Discuss ideas on how to avoid "bad" benchmarking
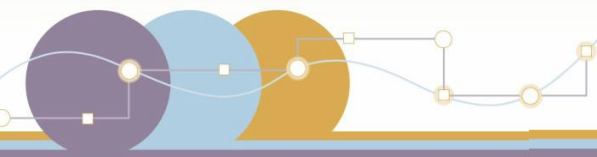
Questions on Almost Everything (But Rulemaking ☺)

QUESTIONS | COMMENTS

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Upcoming TPM-TAP Products

	Activity	Focus
Spring 2015	• Complete Internal Division Readiness Assessment	FHWA Staff
Summer 2015	• Complete Development on CMM	CMM
Summer 2015	• Begin Development on Guidebook	Guidebook
Summer 2015	• Peer Exchange on TPM-GIS (Spokane, WA)	Peer Exchange
Fall 2015	• Publish TPM CMM • Publish TPM Guidebook • Webinars on TPM CMM and Guidebook	Guidebook
Early 2016	• TPM Toolbox	TPM TAP Portal
Spring 2016	• National TPM Implementation Review	Nat. Review
Spring 2016	• Begin holding workshops and Peer Exchanges • (8 Workshops /1 Peer Exchange scheduled for CY 2016)	Workshops/ Peer Exchanges

Final

THANK YOU AND KEEP IN TOUCH!

- FHWA TPM TAP and TPM CMM:
  – Michael Nesbitt (michael.nesbitt@dot.gov)

- FHWA TPM Institutional Capacity Building Team:
  – Susanna Hughes Reck (susanna.hughesreck@dot.gov)

- Missouri Department of Transportation:
  – Karen Miller (Karen.Miller@modot.mo.gov)

- Spy Pond Partners:
  – Patricia Hendren (phendren@spypondpartners.com)

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