



Pennsylvania
Asphalt
Improvement
Network
(PASIN)

***Presentation to
NCAUPG/OAPC***

Industry Objectives

- Ensure best quality pavements
- Assisting with QC/QA processes
- Improve the durability asphalt pavements



Currently

- Managing for pay
 - Driven by current acceptance method
- Not focused on process capability



PASIN–Quality Management System

- Managing for quality
- Process capability
- Process improvement

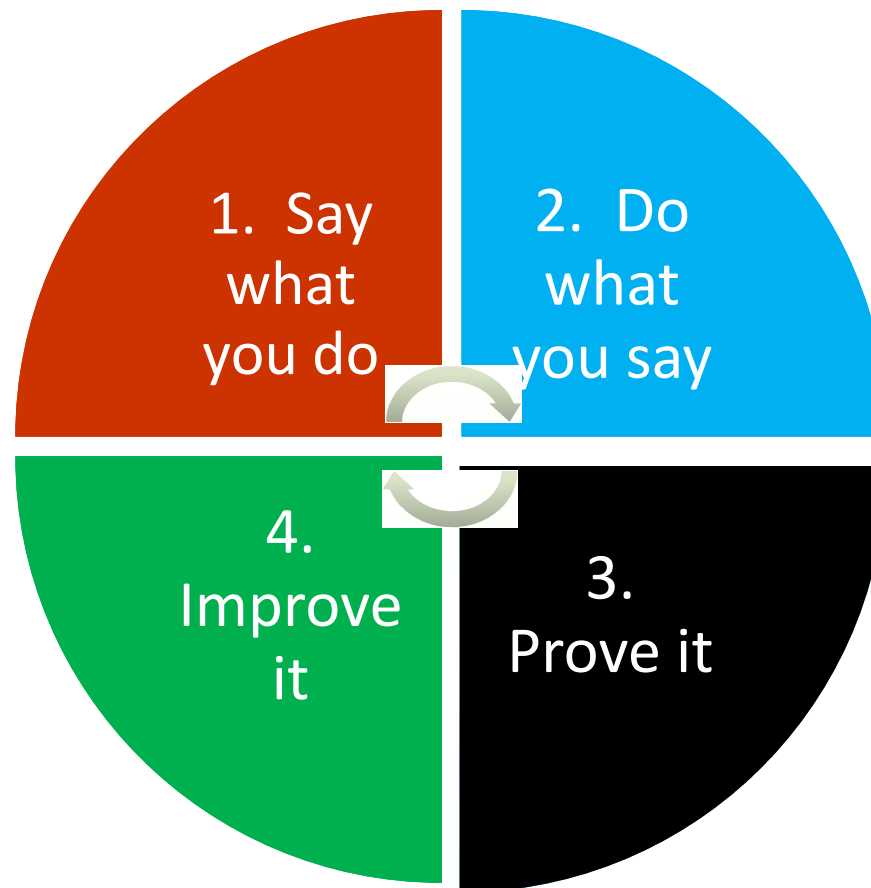


PASIN Participants

- Pennsylvania Department of Transportation
- Federal Highway Administration
- Pennsylvania Asphalt Pavement Association
- American Council of Engineering Companies
- PA Aggregate and Concrete Association
- AASHTO Materials Reference Laboratory
- Pennsylvania Turnpike Commission
- NECEPT



PASIN Implementation



PASIN QMS Elements

- Management review
- Customer focus
- Corrective and preventive actions
- Control of non-conforming product
- Control of documents
- Control of records
- Internal audits
- External audits



PASIN Quality Manual

Title: Asphalt Quality Systems Manual	Page 1 of 32	Pennsylvania Asphalt Improvement Network (PASIN)	
Owner/Approver:	Document No.: QM01	Rev. Date: 04/05/06	Rev. No 8.3

Pilot Project Quality Systems Manual

Pennsylvania Asphalt Improvement Network (PASIN)



Activities to Date

- Baseline Assessment
- Conducted five pilot projects
 - First round - a struggle
 - PASIN implementation templates
 - Warranty link



AARs

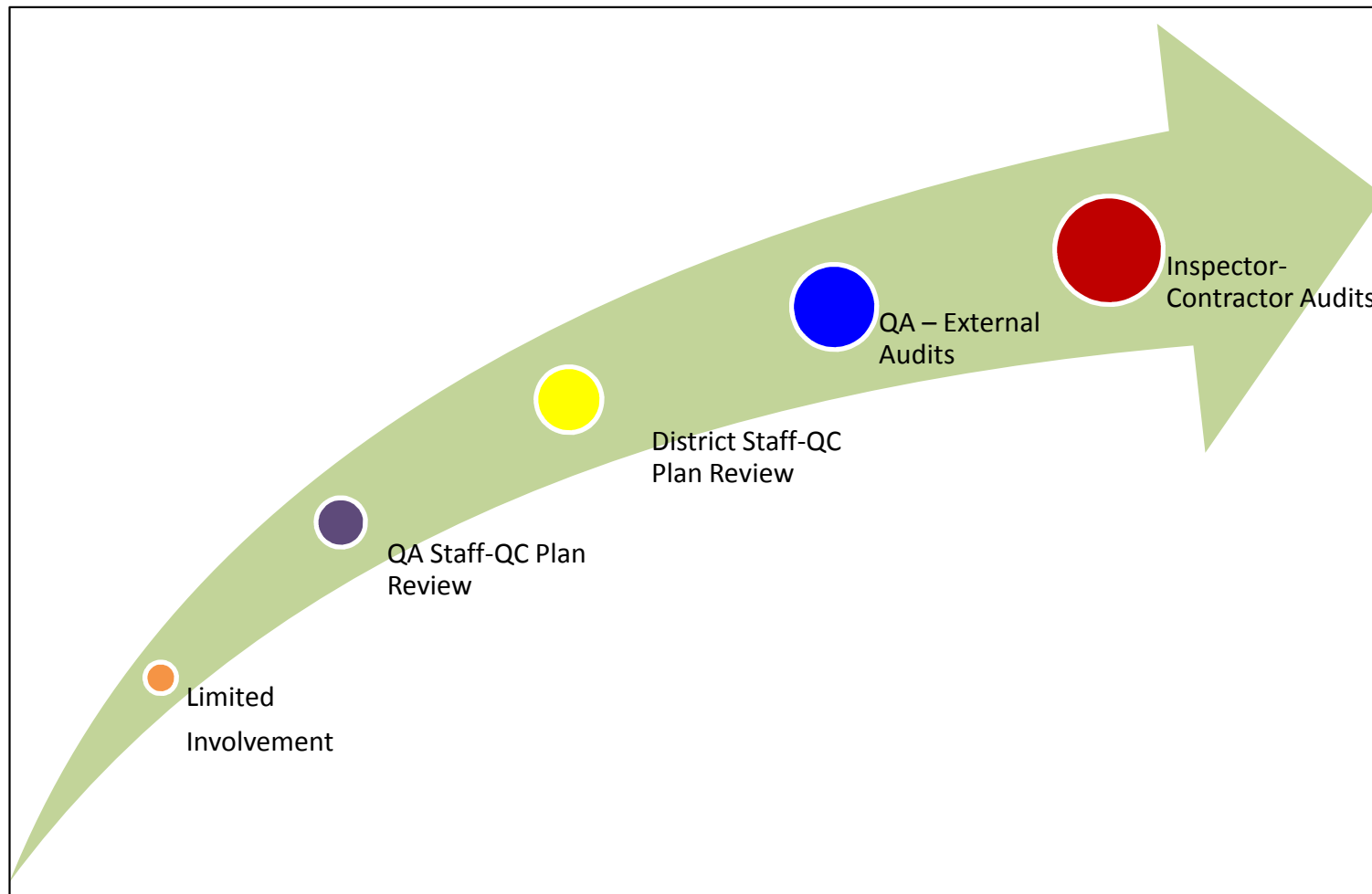
- Increased profits
- Improvement in quality
- Senior management involvement
- Customer focus
- Corrective actions



Vision

- Quality Management System principles
- Standard operating procedures
- Culture change
 - Unplanned - results unpredictable
 - Planned - desired results

Culture Change – PennDOT



Best Practices ~ FMEA

- Failure Mode and Effect Analysis
 - Failure causes
 - Effects analysis
- Derived by PASIN Core Team
- Refined by industry work groups

Best Practices

"Techniques, methodologies, processes or procedures that through experience and research, have proven to reliably lead to performance results recognized as exceeding those achieved by most organizations."



Best Practices ~ Plant

- ❖ Results in...“asphalt pavement that is:
 - Consistent in quality
 - Maximizes durability”
- ❖ Total - 74
- ❖ New Best Practices




Best Practices ~ Laydown

- Improve laydown quality control
- Total - 42
- New Best Practices



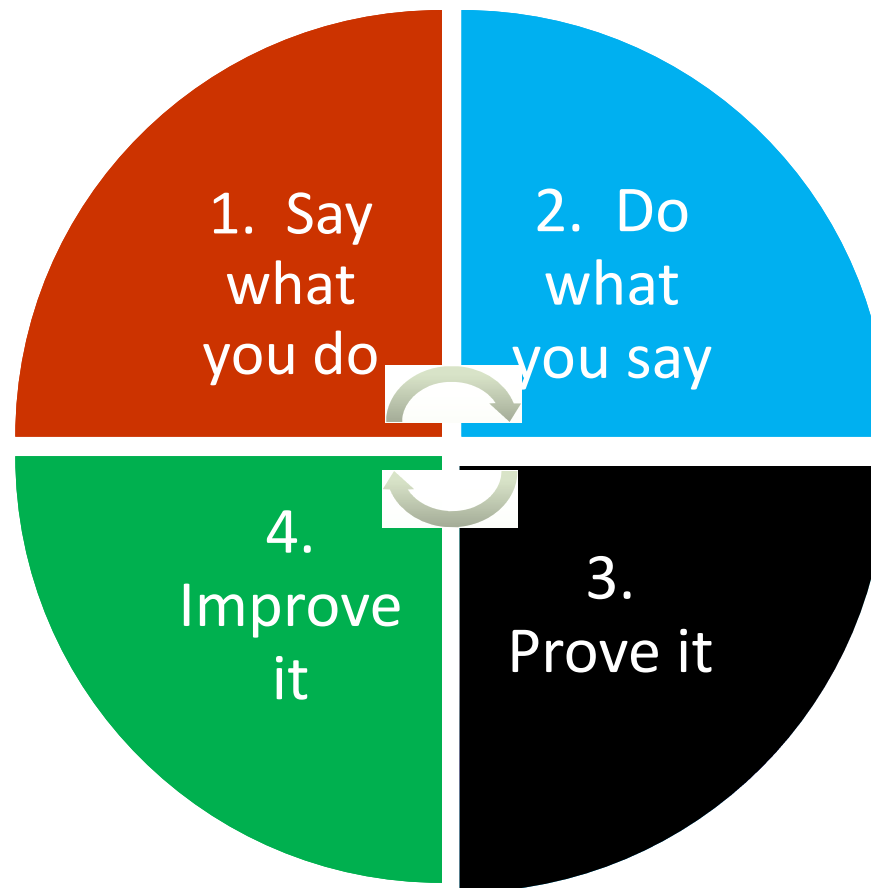
Best Practices ~ Implementation Plan

❖ ***HMA PASIN Implementation Plan***

CONTRACTOR'S LOGO		
Hot Mix Asphalt PASIN Implementation Plan		
Project Name and Number		
		
Submitted by: _____ Date: ____2008		
Organization	Name	Hot Mix Asphalt Implementation Plan
Contractor	Submitted by and date	
PASIN Team	Approved by and Date	



PASIN Implementation



PASIN Implementation

❖ ***PASIN Support:***

- Quality Manager
- Management
- Plant personnel
- Paving personnel
- PASIN Implementation Team
- External certified auditors



Implementation Plan

❖ ***Company Management Team***

- Management
- Production personnel
- Paving personnel

Implementation Plan

❖ ***Company Best Practices Support:***

- Develop/modify processes to meet pilot requirements
- Develop and/or use required forms to assess process effectiveness
- Support training by Quality Manager
- Provide implementation information for internal and PASIN external auditors

Implementation Plan

❖ ***Contractor Internal Audit Team***

- Manage internal audits
 - schedule, implement audits and keep records
- Publish audit report
- Communicate results of audits
 - company senior management

PASIN Implementation

❖ ***PASIN Implementation Team:***

- PennDOT
 - ADE
 - Bureau of Construction and Materials
 - Others
- PA Asphalt Pavement Association
- Consultants



Management Review



Management Review

(Source: PASIN Quality Manual – Section 5)

❖ ***Management Commitment:***

- Monitor motoring public satisfaction
- Control QMS processes and products
- Maintain and improve QMS



Management Review (cont.)

(Source: PASIN Quality Manual – Section 5)

❖ ***Management Actions:***

- Establish a quality policy and measurable goals
- Ensure availability of resources
- Conduct periodic management reviews
- Communicate importance of satisfying customers' needs

Management Review (cont.)

(Source: PASIN Quality Manual – Section 5)

❖ **PASIN Quality Policy:**

"We will satisfy those we serve by consistently designing, constructing and maintaining durable, high quality asphalt highways through the use of processes that have minimum adverse effect on surrounding communities and are continuously improved."



Management Review (cont.)

(Source: HMA Plan Implementation Template)

❖ *Standard Agenda:*

- Quality goals
- Production goals
- Scheduling
- Resources
- QC test results
- Acceptance test results
- Audits
- Customer complaints
- Non-conformances
- Corrective and preventive actions



Management Review (cont.)

(Source: HMA Plan Implementation Template)

- ❖ *Introduction*
- ❖ *Methodology*

Implementation Plan		
Action Item	Responsibility	Timeframe from NTP Date

- ❖ *Quality Policy*
- ❖ *Quality Objectives*
- ❖ *Management Review Team Members*
- ❖ *Standard Management Review Agenda*



Internal Audits



Internal Audits

(Source: PASIN Quality Manual - Section 8)

- ❖ ***Internal audit plan***
- ❖ ***Auditors from the company***
- ❖ ***Coaching from the PASIN team***
- ❖ ***Internal Audit Report***



Internal Audits

(Source: PASIN Quality Manual - Section 8)

- ❖ **Has the process been planned?**
- ❖ **Is the process carried out according to plan?**
- ❖ **Are the planned results being achieved?**



Internal Audits

(Source: PASIN Quality Manual - Section 8)

❖ *Are opportunities for improvement being identified and implemented?*

- By correcting non-conformities
- By identifying root causes of problems and implementing corrective action
- By identifying trends and the need for preventive action
- By innovation

Internal Audits

(Source: PASIN Quality Manual - Section 8)

- ❖ *Introduction*
- ❖ *Methodology*

Implementation Plan		
Action Item	Responsibility	Timeframe from NTP Date

- ❖ *Auditor Qualification*
- ❖ *Auditor Training, Approved Auditors*
- ❖ *Audit Plan*
- ❖ *Audit Schedule*



Corrective and Preventive Actions

Corrective and Preventive Actions

(Source: PASIN Quality Manual - Section 8)

❖ *Problems or potential problems*

- Identify
- Record
- Analyze
- Resolve
- Prevent

Corrective and Preventive Actions

(Source: PASIN Quality Manual - Section 8)

❖ **Action:**

- Establish a Corrective & Preventive Action Reporting System that specifies the use of a formalized problem solving approach of a degree appropriate to the magnitude of the problem.

Corrective and Preventive Actions

(Source: PASIN Quality Manual - Section 8)

- ❖ Introduction
- ❖ Methodology (Root Cause Analysis)

Implementation Plan		
Action Item	Responsibility	Timeframe from NTP Date

- ❖ Corrective Actions
- ❖ Preventive Actions
- ❖ Closure Tracking and Verification

Internal Audits

(Source: PASIN Quality Manual - Section 8)

❖ ***Example Audit Plan***

- Scope
- Organize the audit team
- Determining the starting and ending points of the audit (Process Flow Diagram)
- Review company documentation
- Develop and Approve audit checklists
- Schedule audit
- Complete audit reports

Most Important

- ❖ Management Review
- ❖ Internal Audits

Key for Success

- ❖ ***Every employee involved knows what they are responsible for as well as what everyone else is responsible for.***



Questions?

