



9th International Conference on MANAGING PAVEMENT ASSETS (ICMPA9)

QUALITY MANAGEMENT FOR PAVEMENT CONDITION DATA COLLECTION

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applied pavement
TECHNOLOGY

CELEBRATING 20 YEARS OF PROVIDING PAVEMENT ENGINEERING SOLUTIONS

Presentation Topics

- **Purpose and motivation**
- **Quality management guide**
- **Quality management workshops**

PURPOSE

Pavement Condition Data

Pavement Management

- Condition assessment
- Performance prediction
- Treatment timing and selection
- Allocating resources

Other Applications

- Asset management
- HPMS
- MAP-21
- Calibration of MEPDG

Benefits of Quality Data

- Enhance data use and effectiveness
- Improve accuracy of condition assessment
- Improve performance prediction
- Improve timing & treatment recommendations
- Improve credibility

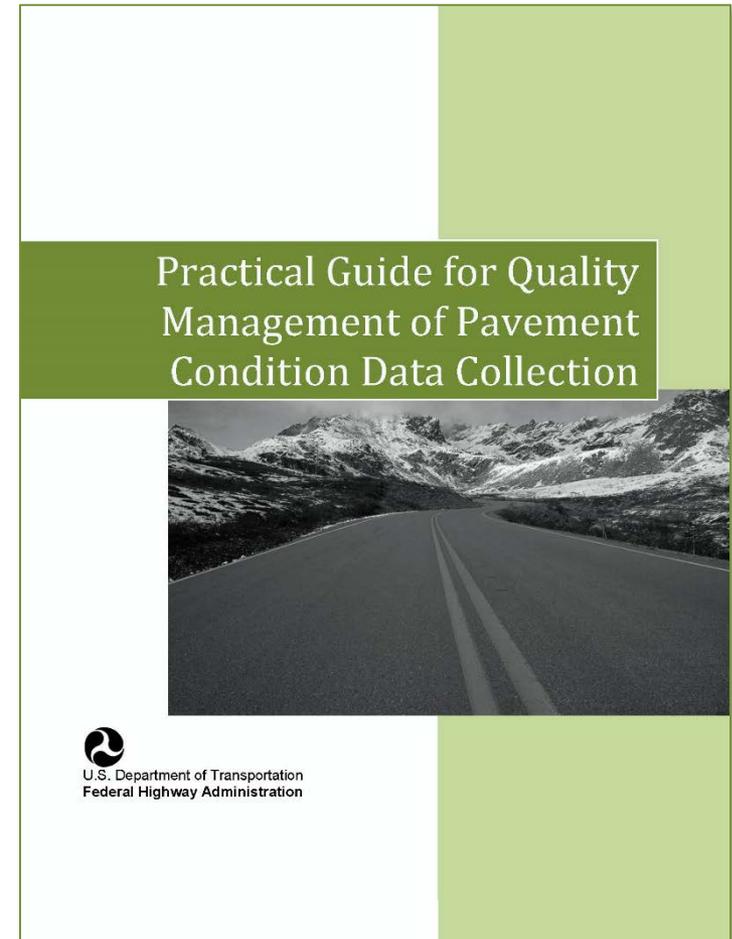
Motivation

- Quality data is essential
- Very few agencies have a documented quality management plan
- Guide document would be helpful

QUALITY MANAGEMENT GUIDE

QM Practical Guide

Aid highway agencies
in developing and
implementing a quality
management plan



Key Components

Collection Protocols

- Types of distress
- How distress is quantified
- Distress computation
- Reporting interval

Training

- Equipment operation
- Automated systems
- Data collection
- Data compilation
- Error check

Equipment & Method

- Equipment calibration
- Method acceptance
- Rater repeatability & reproducibility

Standards

- Ground truth testing
- Control, verification & blind site testing
- Accuracy & precision
- Evaluation process

Key Components (continued)

Roles & Responsibilities

- Who will:
 - Schedule
 - Quality control
 - Acceptance
 - Data checks
 - Problem reporting
 - Tracking progress

Checks

- Distress rating
- Database
- Video
- Independent assurance

Corrective Action

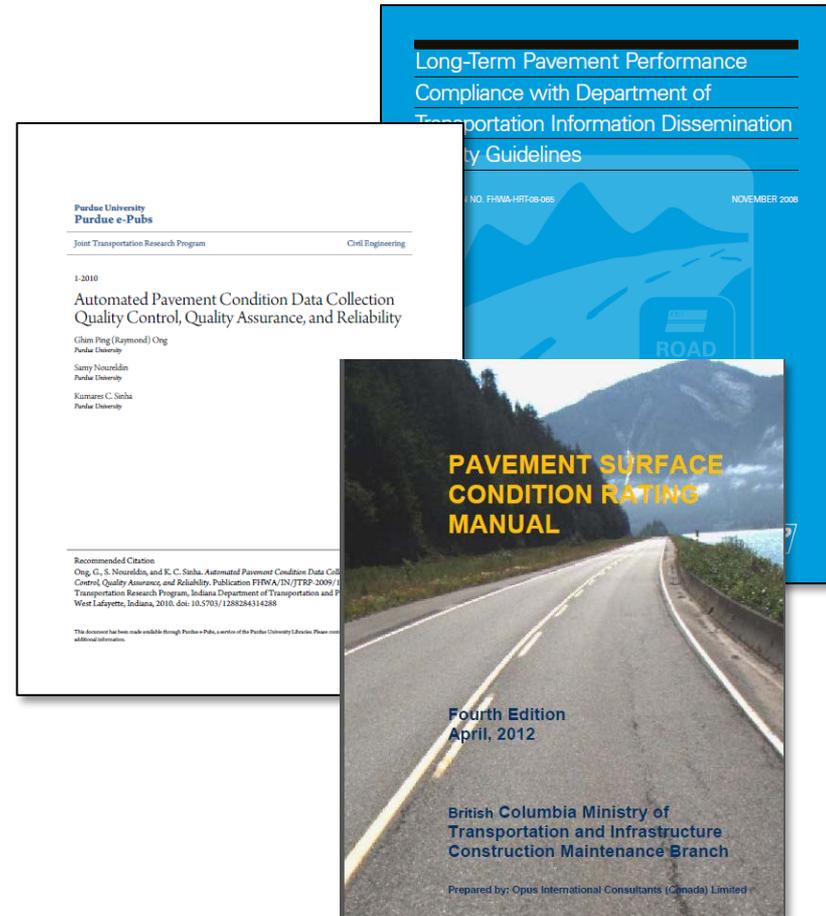
- Retrain
- Rerate
- Recalibrate
- Replace defective equipment
- Re-collect

Reporting

- Calibration results
- System check results
- Control, verification, & blind site testing results

Agency Procedures

- British Columbia MOTI
- Louisiana DOTD
- Oklahoma DOT
- Pennsylvania DOT



Additional Contents

- Agency criteria
 - Quality control
 - Acceptance
- Quality management plan template

Getting a Copy

www.fhwa.dot.gov/pavement/management/qm/data_qm_guide.pdf

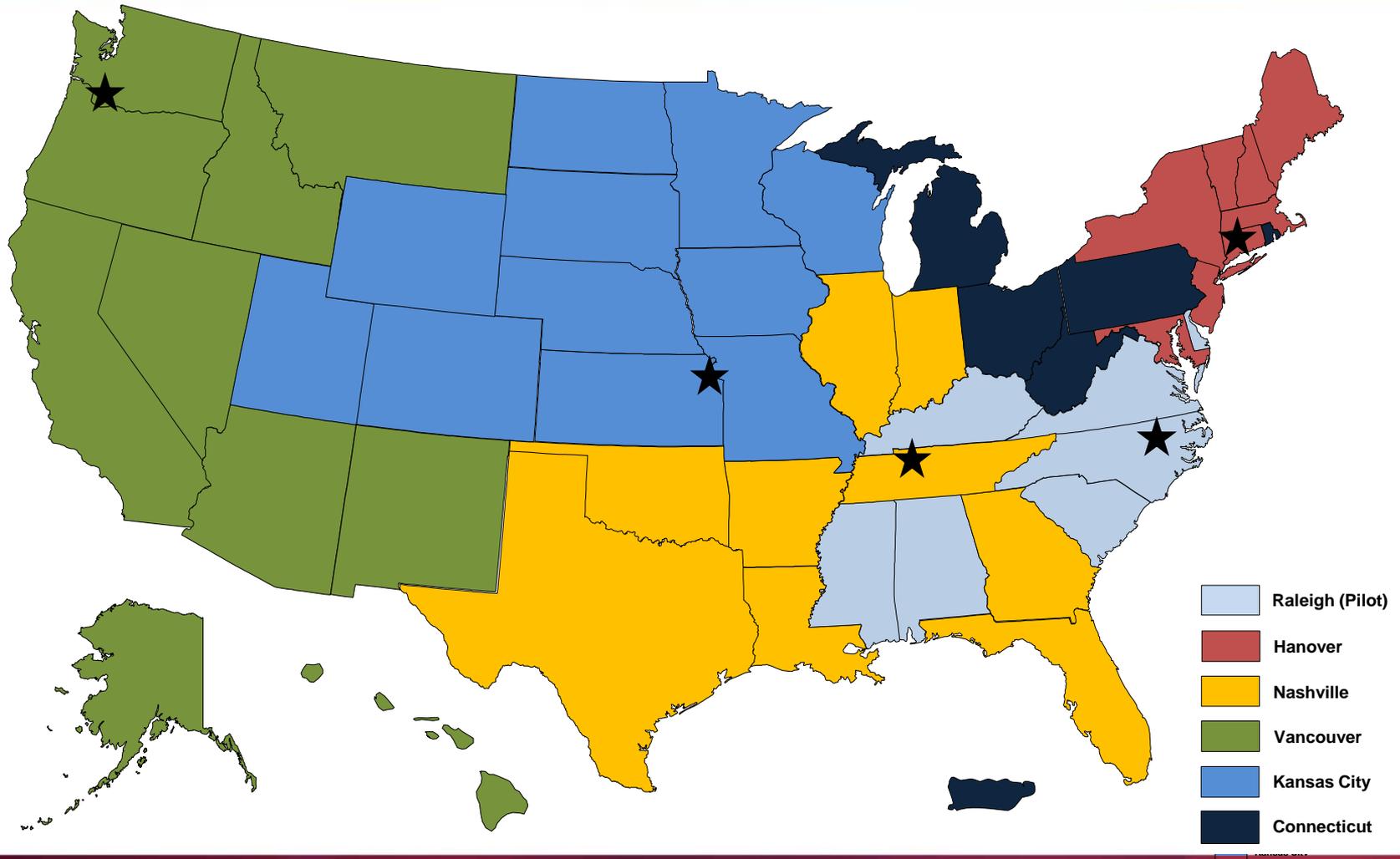
or search for
“pavement QM guide”

QUALITY MANAGEMENT WORKSHOPS

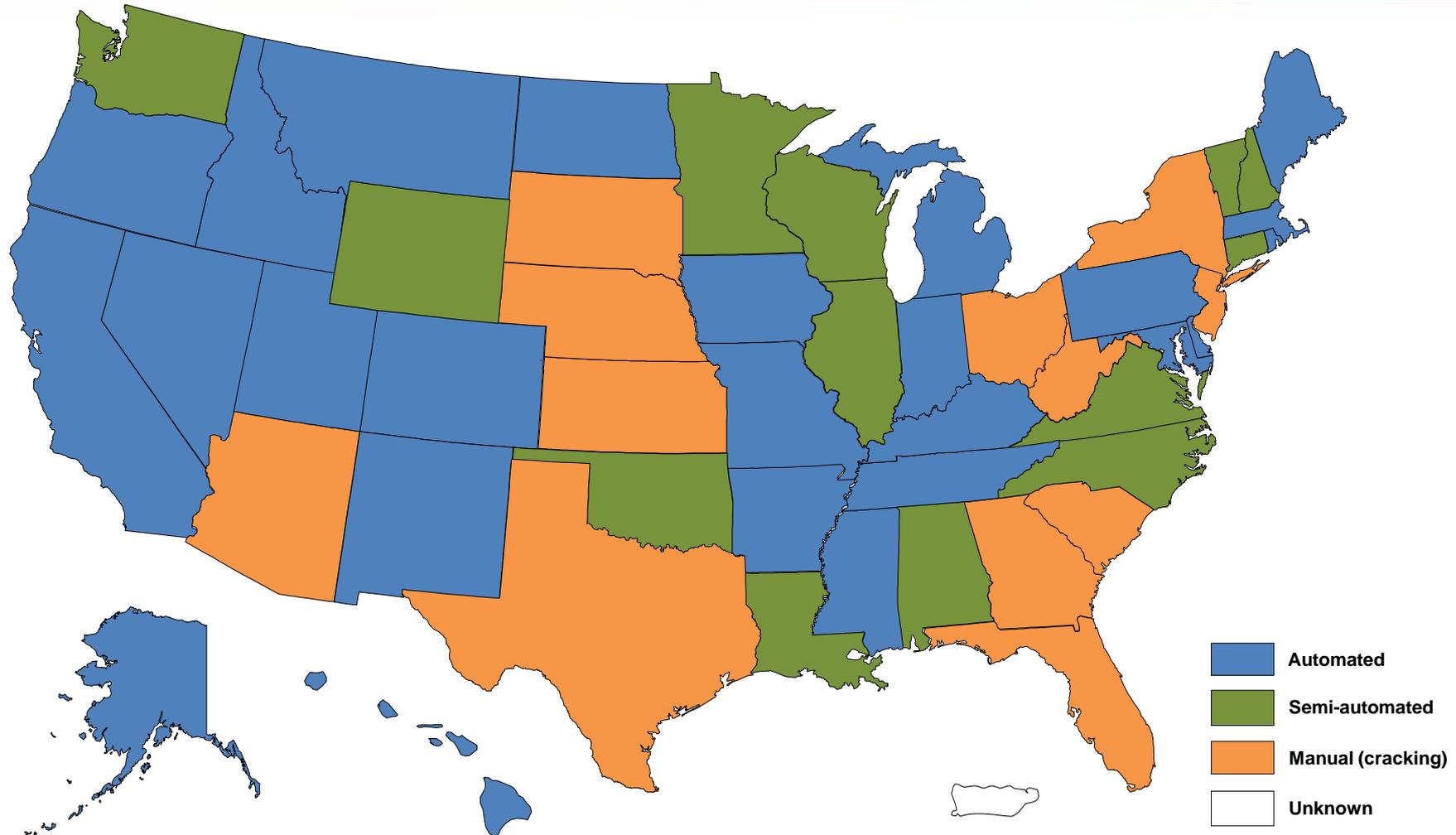
Objective

- Opportunity for agencies to learn about the *QM Practical Guide*
- Focus on practical application
 - Participant interaction
 - Activities

Agency Workshops



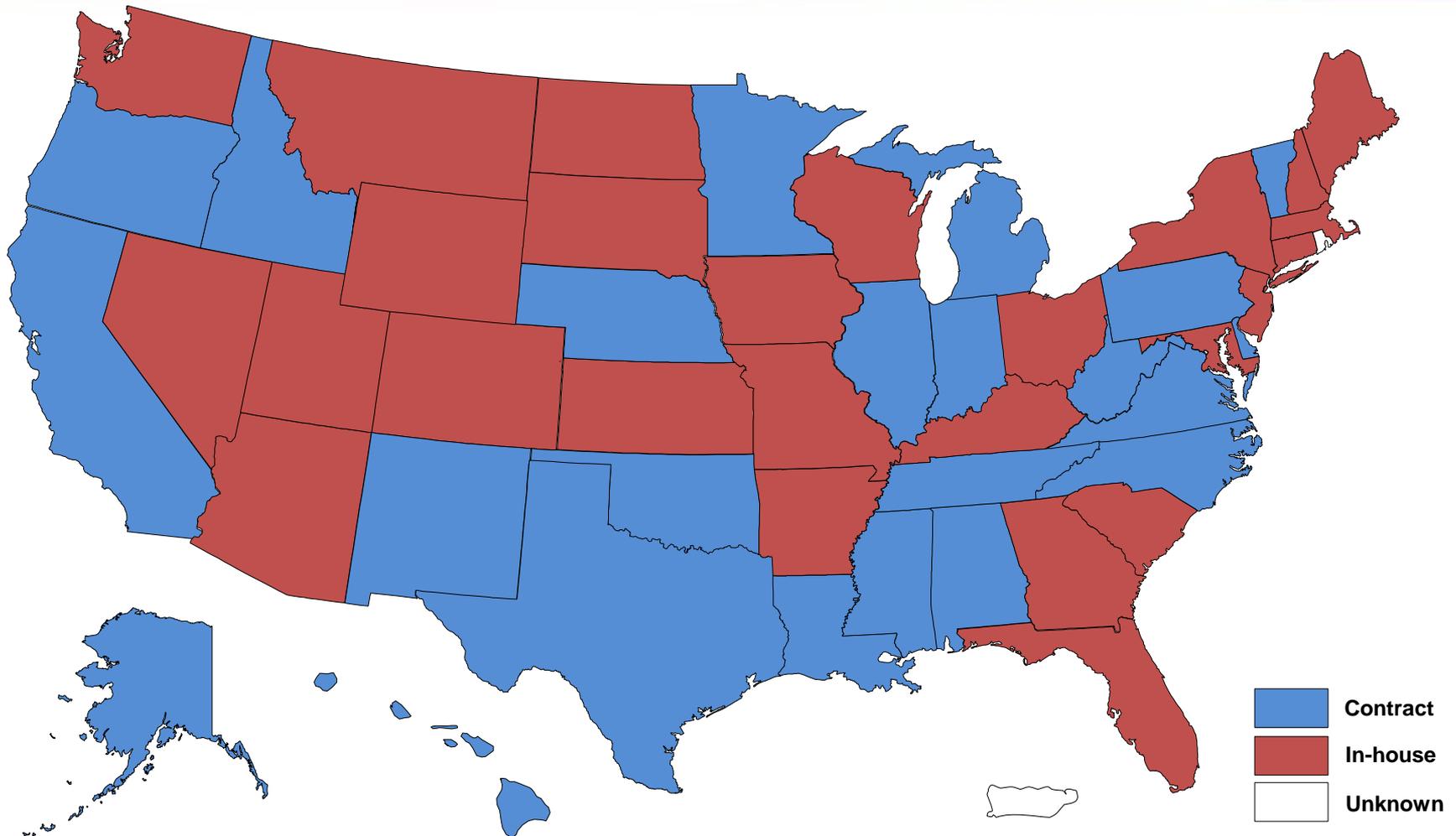
Cracking Data Collection



Data Collection Cycle

- NHS
 - 78 percent annually
 - 14 percent every 2-years
 - 9 percent other or unknown
- Non-NHS
 - 42 percent annually
 - 39 percent every 2-years
 - 19 percent other or unknown

Contract vs In-House



Workshop Information

Contact

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Thank you for your attention

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