

# Laboratory Information Management System (LIMS) in Michigan



AASHTO Trns•port  
Users Group Conference  
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# Requirements

- Requirement sessions - spring, 2000
  - ◆ Make data available long-term for research/forensics/performance analysis
  - ◆ Standardize processes to more efficiently manage lab functions and personnel
  - ◆ Improve quality control for testing procedures
  - ◆ Centralized Oracle database

# History

- Invitation for Bids - Fall 2000
- Contracted with Beckman Coulter spring 2001 for an “off the shelf” configurable system – Lab Manager
  - ◆ Client server and Web based access
  - ◆ Includes Central and Regional Labs
- Summer and Fall 2001
  - ◆ Established standards and procedures
  - ◆ Developed Functional Specification

# History

- Summer and Fall 2001 (cont.)
  - ◆ Developed Design Specification
  - ◆ Initial Client Server version configuration and installation
- Winter and Spring 2002
  - ◆ Setup materials and testing protocols
  - ◆ Conducted user training
  - ◆ Web access Design Specification

# Current LIMS Status

- Summer and Fall 2002
  - ◆ Conducted Client Server User Acceptance Testing
  - ◆ Web access configuration
  - ◆ Installation of Web access
  - ◆ Conduct Web access User Acceptance Testing

# Current LIMS Status (cont)

- Winter 2002 and Spring 2003
  - ◆ Implementation
    - ◆ Client Server and Web access
      - Central Labs
      - Regional Labs
- Target full implementation for spring 2003

# Future



A link is needed  
between  
FieldManager  
and  
LIMS

# Meeting Our Business Needs

- Recently defined business requirements
  - ◆ Share material information between existing and future systems
  - ◆ Improved tracking of Tested Stock information and Material Quality Assurance
  - ◆ Provide management with more timely and accurate material information
  - ◆ Reduce manual entry of materials data

# Project Initiation Flow

- Fall 2001 - received approval for the Initiation Phase
  - ◆ Business and Technical Requirements
  - ◆ Alternative Analysis
  - ◆ Scoping and Estimating
  - ◆ Executive Review

# Objectives

- Standardization of material information
  - ◆ Materials are managed differently between construction and laboratories
    - ◆ Construction
      - Usage and approval documentation
      - Material Assemblies
    - ◆ Laboratory
      - Detailed testing documentation
      - Individual material components

# Objectives

- Automate the flow of material information between LIMS and FieldManager
  - ◆ Electronic load of material approvals
  - ◆ Test reports
  - ◆ Material usage

# Objectives

- Material information availability
  - ◆ MDOT management
  - ◆ Construction and Lab staff
  - ◆ Contractors, Suppliers, Manufacturers
- Supply MDOT with requirements to evaluate options
  - ◆ MDOT, AASHTO

# System Features

- Electronic transfer of material information
- Statewide materials tracking
- Improved Independent Assurance Testing certification
- Centralized material/pay item association

# Features

- Standardized material descriptions
- Automated Quality Assurance Manual and Material Source Guide
- Automated Material Testing Order
- Capture and manage Tested Stock usage
- Track Certifications – MDOT, Supplier

# What's Next

- Scoping and Estimating - December 2002
  - ◆ Develop detailed cost estimate
- Executive Review - March 2003
  - ◆ Request management approval to continue on to next phase
- Possibilities
  - ◆ MDOT Initiative
  - ◆ AASHTO Initiative

# Questions?



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