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Summary

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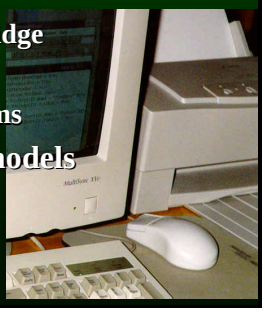
What We've Covered

In the past three days

3

How to Get Started

- Define elements, states, and actions
- Set up the bridge database
  - List the elements on each bridge
  - Computer systems
  - Integration with other systems
- Develop expert judgment models
  - Deterioration
  - Costs



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How to Build Bridge Programs

- Inspect bridges
- Develop network-level policies
  - Optimization
- Generate an initial project list
  - Prioritization
  - Simulation
- Plan projects

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How to Get the Best Results

- Understand the key definitions
  - Costs and benefits
- Monitor data quality
  - Sensitivity analysis
- Maintain and improve the models
  - Recording of work accomplishments
  - Updating procedures

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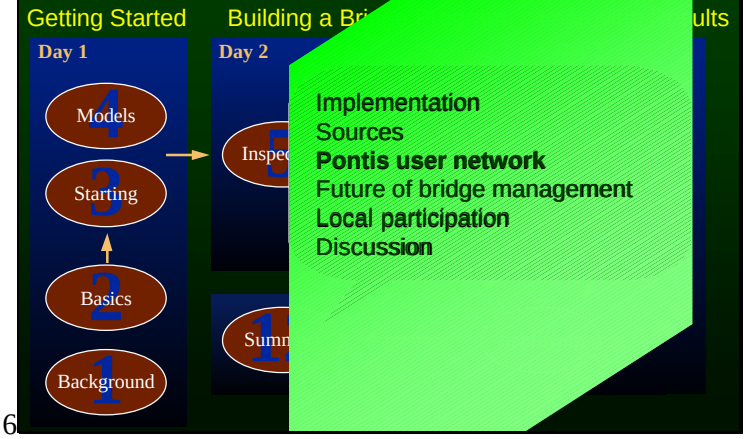
What's Left



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Implementation

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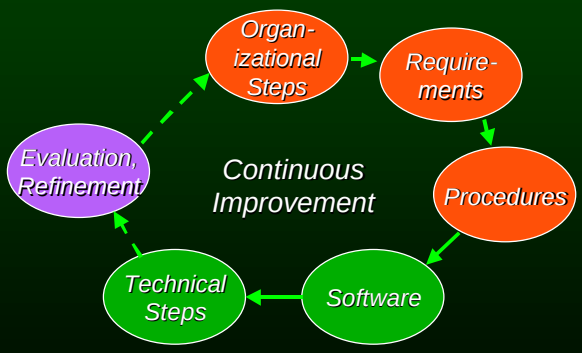
Implementation Strategy



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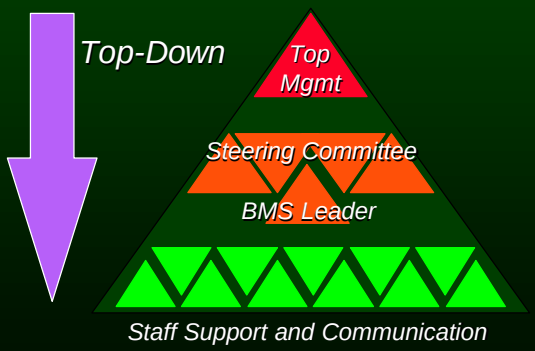
Organizational Strategy



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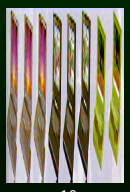
Technical Implementation Steps

- Installation
  - Hardware
  - Software
  - Training
- Model Preparation
  - Deterioration
  - Costs



- Database setup
  - Bridge inventory
  - Roadway data
  - Element data
- Inspections
  - Training
  - Full cycle needed

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Sources of More Information

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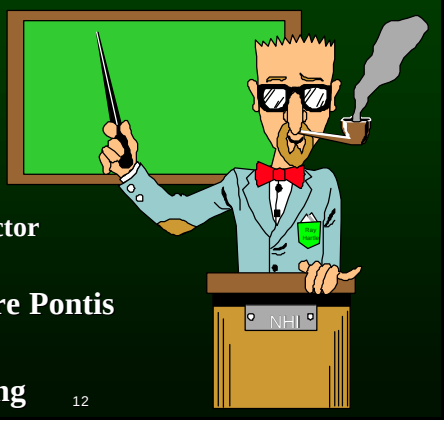
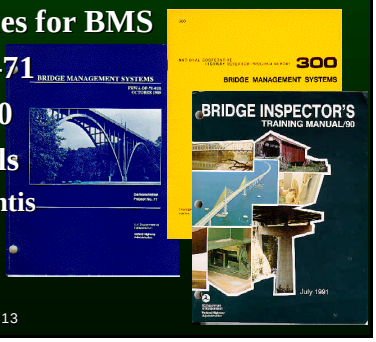
Further Training



- NHI Courses
  - Bridge inspector training
- AASHTOWare Pontis
  - Service units
- Special training

Further Documentation

- Bridge Inspector's Training Manual
- AASHTO Guidelines for BMS
- FHWA Report DP-71
- NCHRP Report 300
- BMS Users Manuals
  - AASHTOWare Pontis
  - NCHRP Bridgit



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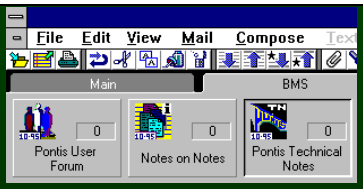
Lotus Notes



Service provided to Pontis licensees

- Pontis User Forum
  - Free-form discussion of users' issues
- Notes on Notes
  - Help with the Notes software itself
- Pontis Technical Notes
  - Software tips and updates

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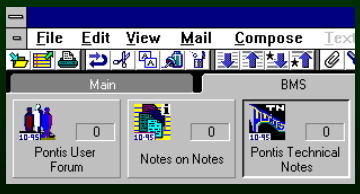
Lotus Notes Demonstration



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Future of Bridge Management

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Major Unsolved Issues

- Fatigue and scour
  - How it develops
  - Cost and effectiveness of remediation
  - Preventive measures
- Management of structurally deficient bridges

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New Data Collection Equipment

- Wrist-top computers
- Global positioning system
- Deck chloride sensors
- Strain sensors
- Scour hole sensors

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Complexity of Cost Estimation

- Contract vs. Force Account
- Fixed vs. Variable
- Project vs. Network-Level
- Type of Work
- Level of Detail of Accomplishment Data Collection

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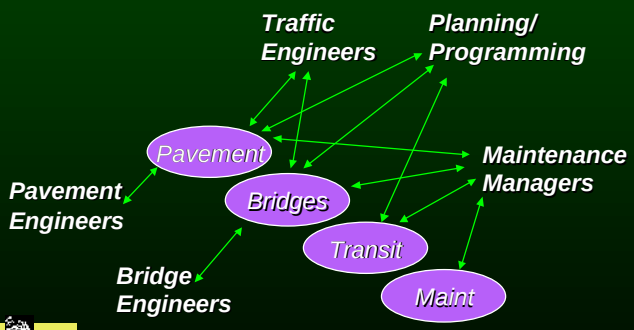
Effect of Management System Integration



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Team Decision-Making Support

- Out:
  - Military decision-making
  - Single-criterion choices
  - Primacy of experts
- In:
  - Consensus decision-making
  - Multiple stakeholders
  - Complex tradeoffs

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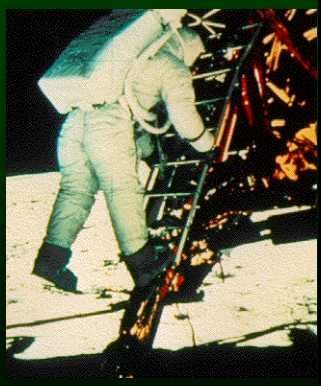
Improving BMS to Support Group Decision Making

- Threaded unstructured discussions
- Widespread access with security
- Flexible generation of performance measures



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Making BMS Useful to Locals

- Two-way discussions
- Access to technical support
- Integration of management systems
- Simple, quick

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Discussion

Your own state's BMS implementation plans

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