

INDOT Scheduling / Project Management System (SPMS)



- Indiana Department of Transportation
- Info Tech, Inc



Status of SPMS



- INDOT offered to transfer SPMS to AASHTO as a product in the Trns•port suite.
- AASHTO TTF reviewed SPMS and agreed to assess an evaluation project for all states. TTF and TFJD have approved the evaluation project and the last step is SCOSS approval
- AASHTO Evaluation Project of SPMS, including interactive product tour, functional demo, and guide is scheduled to ship in November 2000 to all states pending final AASHTO approval.
- If there is sufficient interest from states, TTF will recommend adoption of SPMS and begin creation of a generic product that can be easily modified to fit all states needs and completely integrate with Trns•port.



SPMS Background



- **INDOT Evaluation of Existing Mainframe Project Scheduling System**
- **INDOT Identification of Need for Improved Scheduling and Project Management System**
- **INDOT Research of Existing Software Solutions**
- **INDOT and ITI Identification of State Requirements and JAD Sessions**
- **INDOT Joint Design and Development with Info Tech leading to production release of SPMS 1.0a**



SPMS Project Goals



- **Design / development of an n-tier C/S project management and scheduling product**
- **Complement the existing functionality of Trns•port CES, PES, LAS, CAS, DSS, and SiteManager using the same development tools and guidelines accepted by AASHTO and keeping in mind the alignment with Trns•port data model**
- **Migration from existing INDOT mainframe Project Scheduling System and associated stand alone products**
- **Improve the Scheduling and Planning activities of DOT from conception to closure of projects**



SPMS Overview



Project Data Management -- General information (e.g., location, length, key static dates) on construction Projects (e.g., Proposed, Authorized, Eliminated, and Historical) is entered and maintained in SPMS through the Proposed and Maintain Project Tab-Folder Windows.

Project Scheduling and Record Keeping -- Upon authorization, an appropriate schedule template is selected (e.g., Bridge Rehab, Railroad) as a baseline for list of activities with baseline start/finish dates and durations. As the project progresses, scheduling information will be cataloged to inform management on the status of each project stage.

Project Fund/Cost Management -- As the project progresses (e.g., proposed, authorized, design, land acquisition), cost estimates will be entered for each applicable phase (e.g., pre-engineering, ROW, utility, construction). As a new stage starts, the previous stage estimates are locked. You will be able to assign a funding program and amount by fiscal year as well as assign funding priority and associated appropriation codes.



SPMS Overview, cont'd



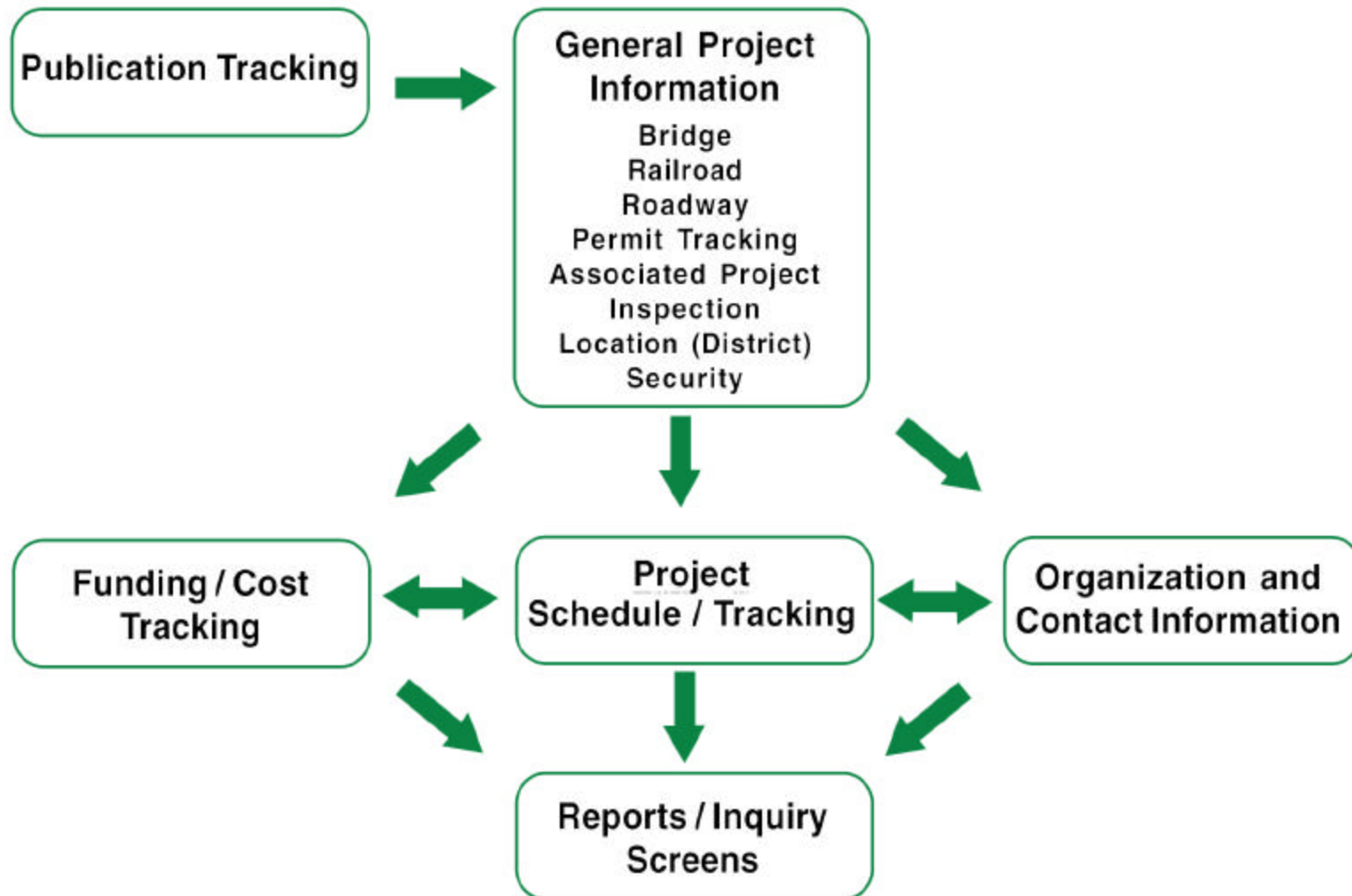
Organization Management -- SPMS users will have access to listings of organization contacts (e.g., Consultants, Utility Companies, Government Agencies). Listings will provide information on a position basis (e.g., name, title, primary address, contact numbers, and position). Data will be used for resource allocation by associating contacts with project tasks.

Inquiry Screens and Reports -- Management will have access to various inquiry windows, to better manage projects and deal with public inquiry of specific projects. Reports will be generated summarizing the data from various aspects, including current activity schedule baseline v. actual dates, & current project cost actual v. budgeted.

Route and Bridge Inventory Management -- SPMS users will have access to National Bridge Inventory (NBI) information including structure number, sufficiency ratings by year. In addition to route type and number, SPMS users will also have access to State route inventory data, including reference post, route direction, number of lanes, and traffic volume.



SPMS Components





Development Approach



- **AASHTO standards being adopted for nomenclature and Graphical User Interface (GUI) design including Info Tech GUI Object Model (GOM)**
- **Object Oriented Development**
- **Database Management Systems (DBMS) Transparency**
- **Scalable Multi-tier Architecture**
- **Infrastructure for Customizable Reports and Windows**
- **Infrastructure for Interfacing via Object Linking and Embedding (OLE) and relational DBMS (RDBMS) Technology**



SPMS 1.0a Demonstration





Independent Market Analysis: *Project Management Information Systems*



(NCHRP, March, 2000)

- **35 States and 1 Province responded to a survey on PMIS**
- **Major trend is to “strong project management”, not coordination**
- **“Unfortunately, PMIS’s have not kept pace with change in management direction.”**
- **“Fewer than 1/3 states are satisfied with their current PMIS.”**
- **“Within the next 3 years, 74% of the states expect to change their PMIS...more than 40% of those expect to replace their systems.”**
- **“The total cost of system installation is often misunderstood and underestimated. Although...system design or purchase costs are normally (accurate), implementation and maintenance/upgrade costs are often overlooked.”**



Future of SPMS



- Phase 2 is in the initial stages with INDOT, Functionality planned:
 - Expand Existing Scheduling Features and address any issues
 - Permit Tracking
 - Geographic Information System (GIS) Interface
 - Continue and Enhance Transport Interface Infrastructure
 - Report Template Facility (RTF) and Customizable Reports
 - OLE/COM Interface Infrastructure
 - Distributed Processing Services (DPS) and Batch Processing



Future of SPMS, cont'd



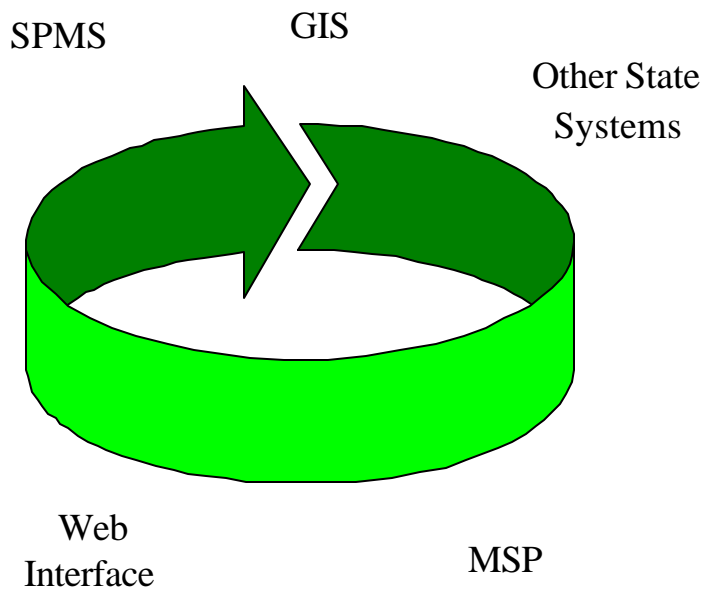
- Future Phases Functionality
 - Expand Existing Features and address any issues
 - Publication Management
 - Customizable Screens
 - MSP Interface
 - Web Interface
 - Trns•port Interface and genericizing
 - Land Records System (LRS) Interface
 - FHWA FMIS EDS Interface
 - Maintenance and Minor Enhancements



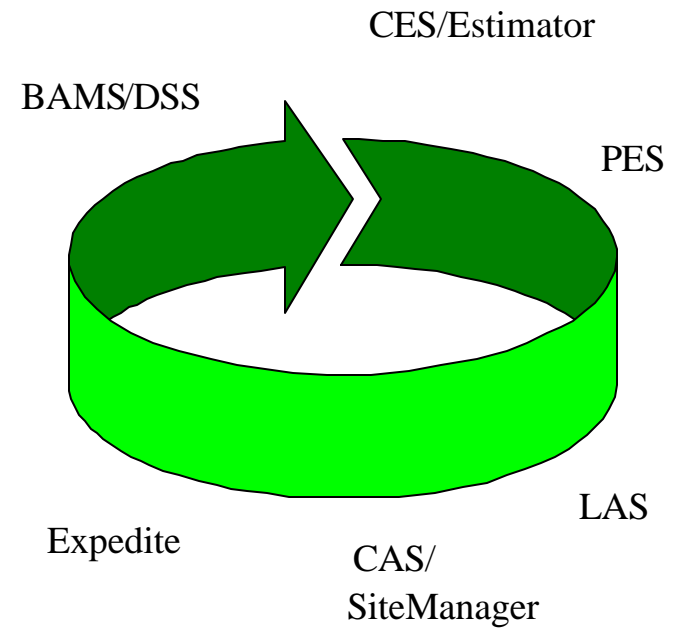
Conceptual Diagram



SPMS



Trns.port





Summary



- **SPMS Phase 1 is complete and INDOT is committed to continuing with Phase 2**
- **SPMS Complements Transport architecture and functionality**
- **SPMS is Consistent with TTF Strategic Plan to improve project management**
- **PMIS are Major need for State DOT's including districts and locals**
- **Potential integration of SPMS into AASHTO's Transport product suite would reduce individual state development and maintenance costs**
- **Upon final approval this month, AASHTO Evaluation project for SPMS will be delivered to state representatives selected**



SPMS Contacts



Additional information may be obtained by contacting:

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or the following members of INDOT:

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