



AASHTO Trns•port[®] Contractor's Report

November 6, 2002

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The Information Technology Company



Presentation Overview

- Some Trns•port Highlights
- Trns•port Long Range Work Plan
- Trns•port Licensing/Implementation Status
- Trns•port Module/Product Status
- Trns•port Related Work Status
- Conclusion



Some Highlights

- New product releases
 - SitePad 1.0 for Palm (April 2002)
 - SiteXchange 1.0 (April 2002)
 - Estimator 2.0 (August 2002)
 - SitePad 1.1 for PocketPC (November 2002 Beta)
- Automated Test Suite schedule acceleration
- Interactive Product Tour for Trns•port
- FieldManager Suite Receives Awards
 - Received CIO Magazine's "Value Enterprise Award" (February 2002)
 - Designated "Best of Breed" by the Center for Digital Government (November 2002)



Trns•port

Long Range Work Plan

(LRWP)



LRWP Contents

- Strategic Plan and Solutions
- Five year cost and revenue summary
- Trns•port Licensees and Revenue Projections
- Long Range Work Plan Items and Cost Estimates
- List of deleted work items
- Trns•port Architecture

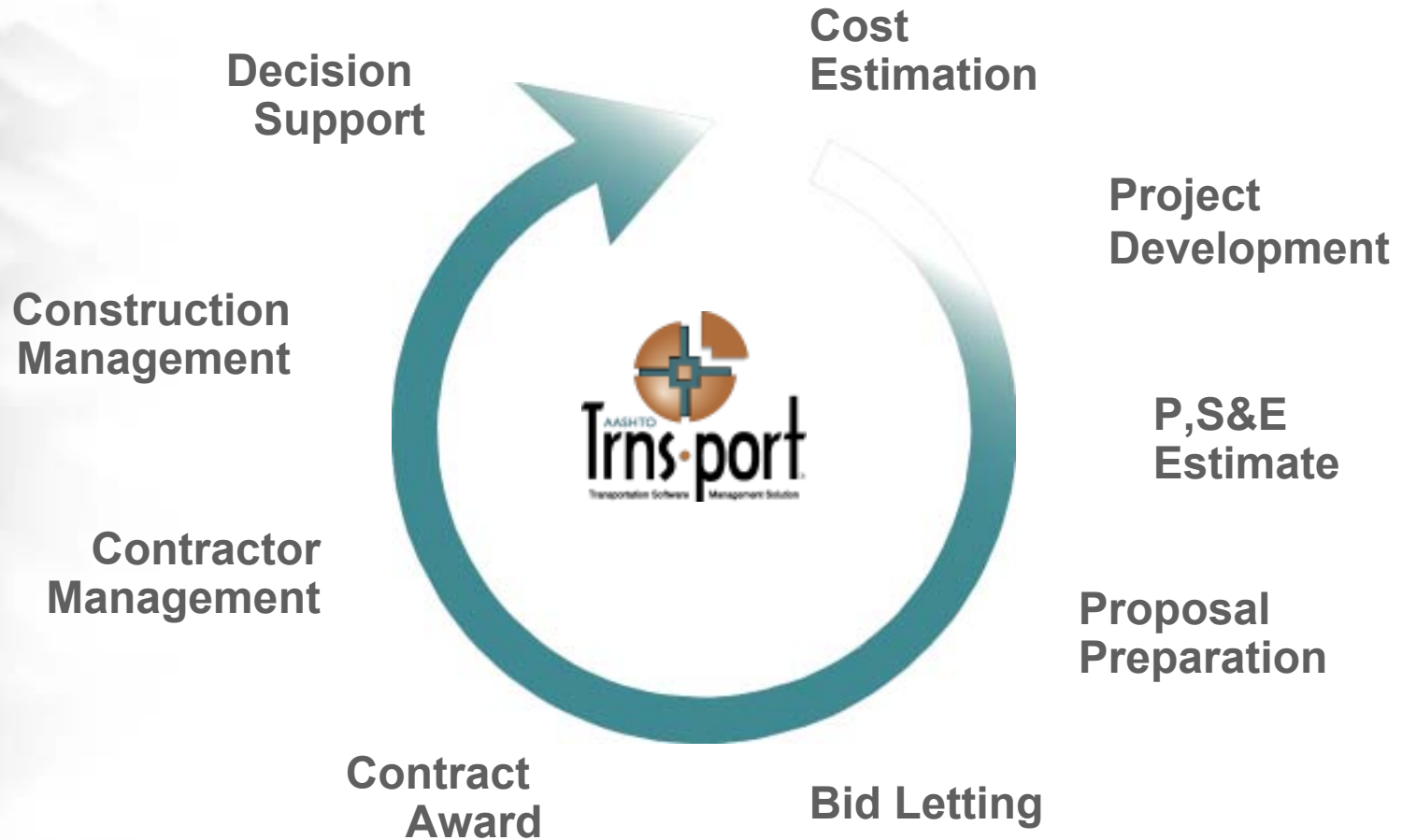


Trns·port Mission Statement

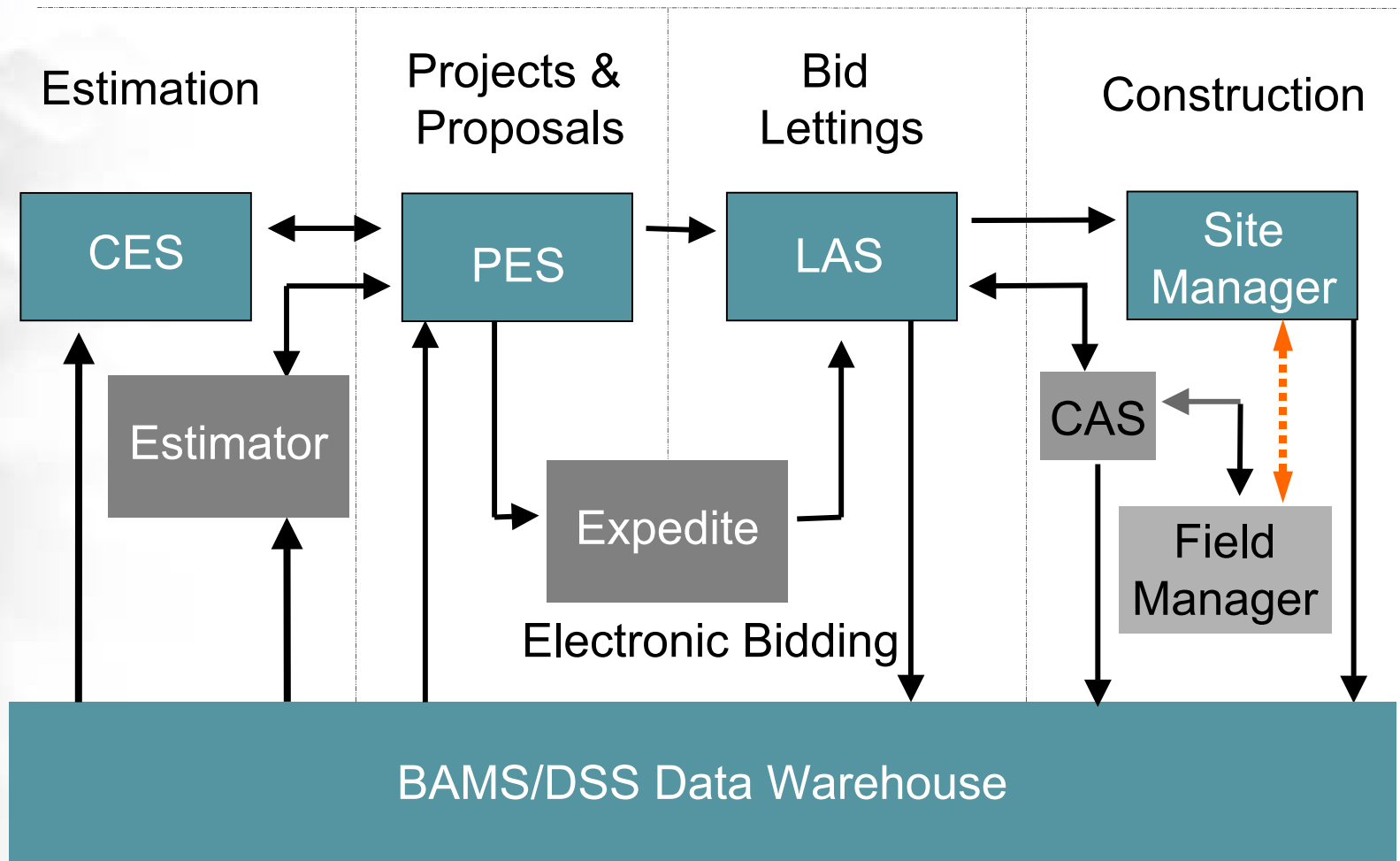
... to serve the operational and executive management information needs of the transportation agency associated with the **development and management of construction projects.**



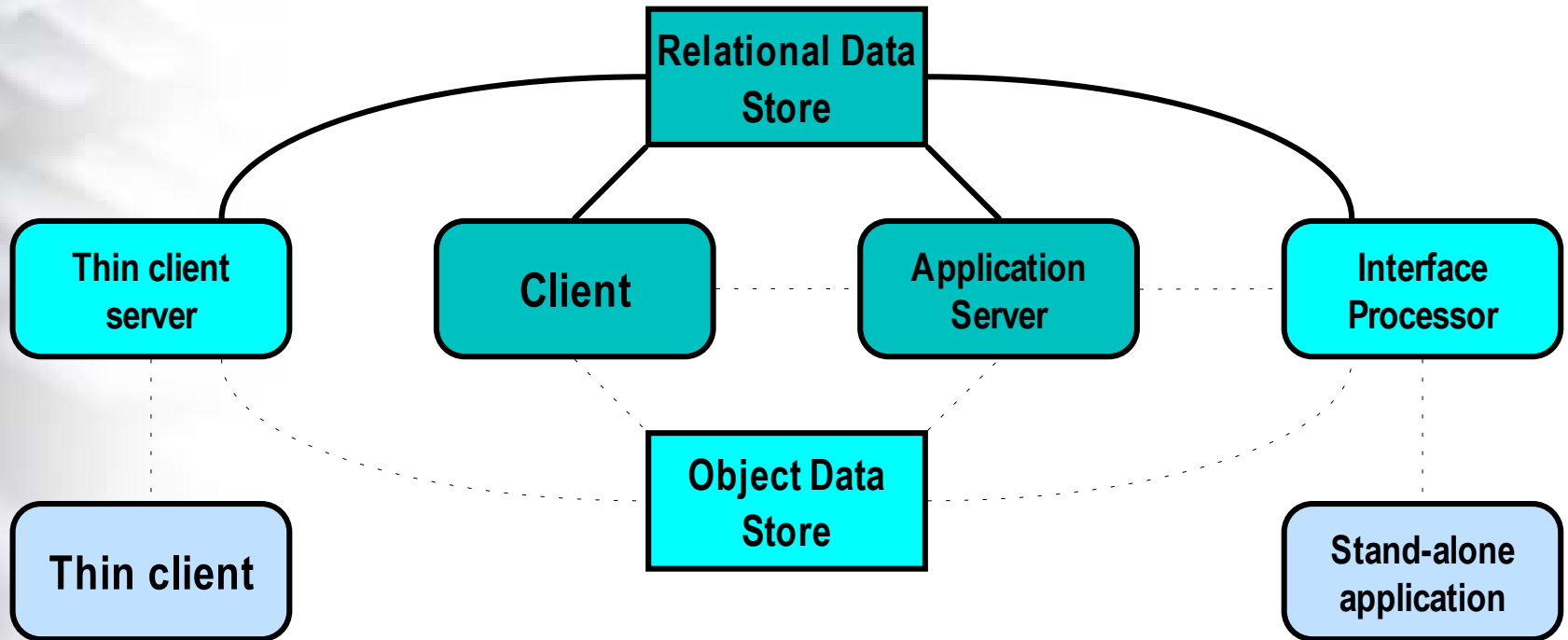
Trns•port's Integrated Solution



Trns•port Module & Data Flow



Trns•port Architecture Overview



Solid lines show ODBC connections
Dashed lines show HTTP connections



LRWP Strategic Focus

- Test Suite Initiative
- Web enabling Trns•port
- Support for Handhelds and Wireless Communication
- Process Improvement
- Functional Expansion



Test Suite

- Automated, uniform, integrated test suite for all of Trns•port
- Reduced costs in
 - Maintenance, support, and enhancements
 - Platform testing and certification
- Increased quality of software
 - Issues found early in engineering
- Support for onsite validation at agency



Web Architecture Overview

- Still a multi-tier client/server system
- Today's Windows client will be split
 - Client logic moved to a web server
 - Presentation moved to a web browser
- Doesn't require everything to move
 - Definitely still a place for local applications
 - Probably still a place for "thick clients"
- Can coexist with current clients
 - But we won't want to duplicate future work



Handheld/Wireless

- Decision to develop for Windows CE
- Maintenance of Palm OS continues
- Rapid changing technology
- Keep functionality tightly focused
- Use web browser with wireless connectivity when feasible

Process Improvement

- Testing
- Installation and Configuration
- Security
- External Interfaces
- Documentation
- TMR management



Functional Expansion

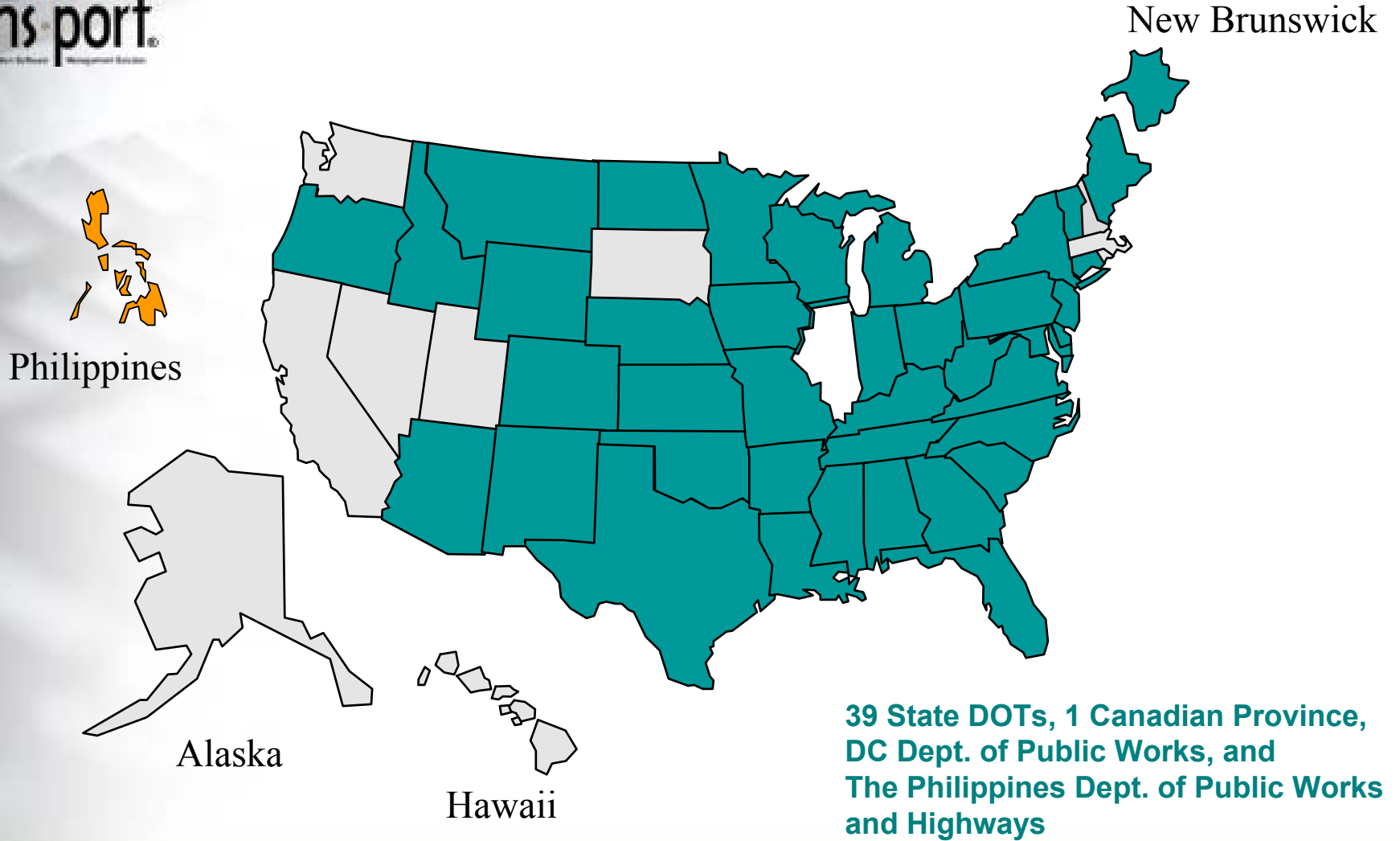
- FM/SM Interface
- Materials Enhancements
- Parametric Estimation/Tracer
- Civil Rights/CHAMP
- SPMS
- BAMS/DSS



Licensing and Implementation Status



Trns·port Licensees





Agency Licensees by Module

- Trns•port Expedite[®] 36
- Trns•port BAMS/DSS[®] 35
- Trns•port PES/LAS[®] 31
- Trns•port Estimator[®] 22
- Trns•port CES[®] 14
- Trns•port Intranet[®] 11
- Trns•port SiteManager[®] 21
- Trns•port CAS[®] 12
- Trns•port SitePad[®] 8
- Trns•port FieldManager[®] 7
- Trns•port SiteXchange[®] 4
- Trns•port FieldNet[®] 4



Beyond State DOTs

- **Trns•port Licenses**
 - Washington D.C. Dept. of Public Works (Licensing)
 - Philippines Department of Public Works and Highways (Licensing)
 - NY Thruway Authority (Evaluating)
 - Bureau of Indian Affairs (Evaluating)
 - U.S. DOT Federal Lands (Evaluating)
- **FieldManager Licenses**
 - Over 150 Local Government
 - Over 400 Consultant/Contractor



Service Unit Activity

- 88 trips to 16 states
- Initiated Philippines Trns•port Implementation in August
- Completed 333 Service Units, a 25% increase over the previous year
- On-site dedicated teams in 3 states
- Completed 15 Evaluation License Units in 6 agencies



Client/Server Implementation Status

- 22 states in production with one or more modules
- 23 states implementing one or more modules for first time
- 8 states migrating from mainframe
- 2 states on mainframe that haven't started migrating yet
- **June 30, 2004 is Mainframe Sunset**



Customer Support Activities

- Improved on-line electronic support
 - Call Ticket and TMR Search
 - Electronic Reporting Forms
 - Posting of Product Updates
 - VPN Connections
- Handled **3,297** Call tickets
- Resulting in **617** TMRs
- Developed On-line ballot for TUG

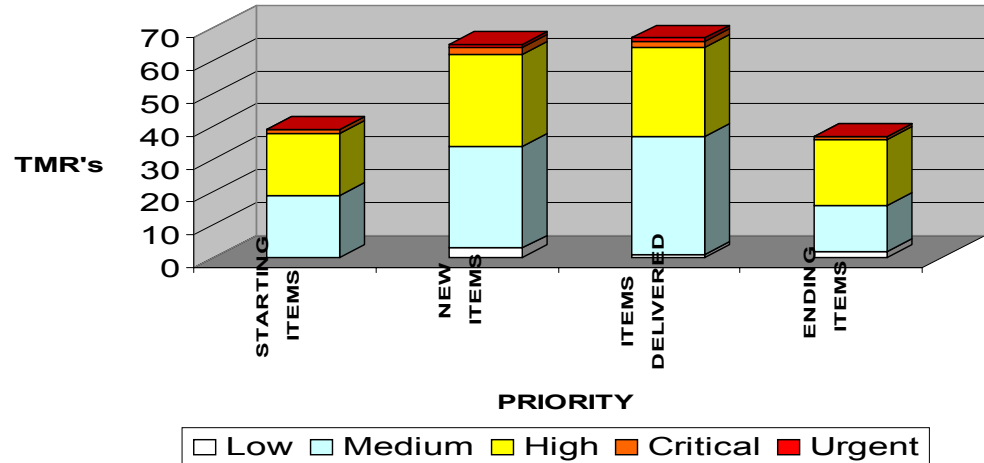


Trns•port

Module/Products

Status

CES MSE 2001-2002 TMR's



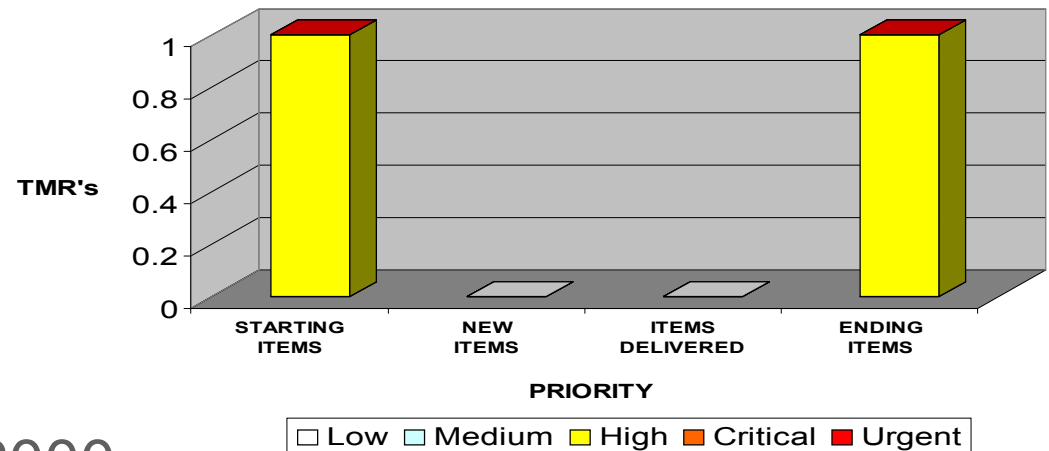
- 1 MSE Release (Latest C/S CES 5.1a)
- 2 Product Updates
- 67 Resolved Error Reports
- Technology: PowerBuilder 8, Win2000, Oracle 8i
- State Status: 4 in production, 9 implementing, 2 evaluating
- Highlights:
 - 2001-02 Enhancement -- Access to Formulas from Job Header Fields



Estimator

- 1 MSE Release (Latest Estimator 2.0a)
- Technology: C++, Win2000
- No product updates for Estimator 1.8
- State Status: 22 licensees
- Highlights for Estimator 2.0:
 - Support for Win32 environment
 - Better integration with Internet technology
 - Enhanced interfaces with other modules
 - Two year rewrite Project Completed in August 2002

Estimator MSE 2001-2002 TMR's

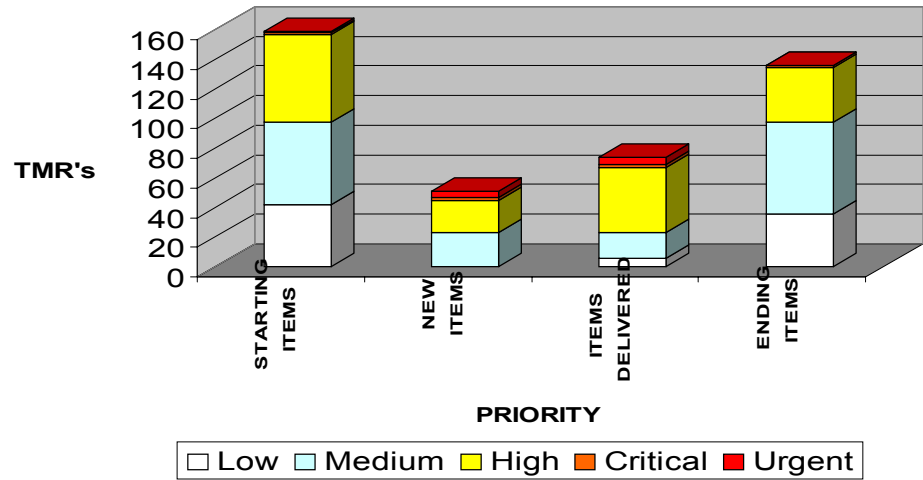




PES/LAS

- 2 MSE Releases
(Latest C/S PES/LAS 5.5a)
- 1 Product Update
- 74 Resolved Error Reports
- Technology: PowerBuilder 8, Win2000, Oracle 8i
- State Status: Several States Implementing
- Highlights: 2001-02 Enhancements:
 - Remove breakdown ID requirement
 - Pay Item Drop-down box
 - Item List Filter
 - GEOPAK XML Interface

PES/LAS MSE 2001-2002 TMR's

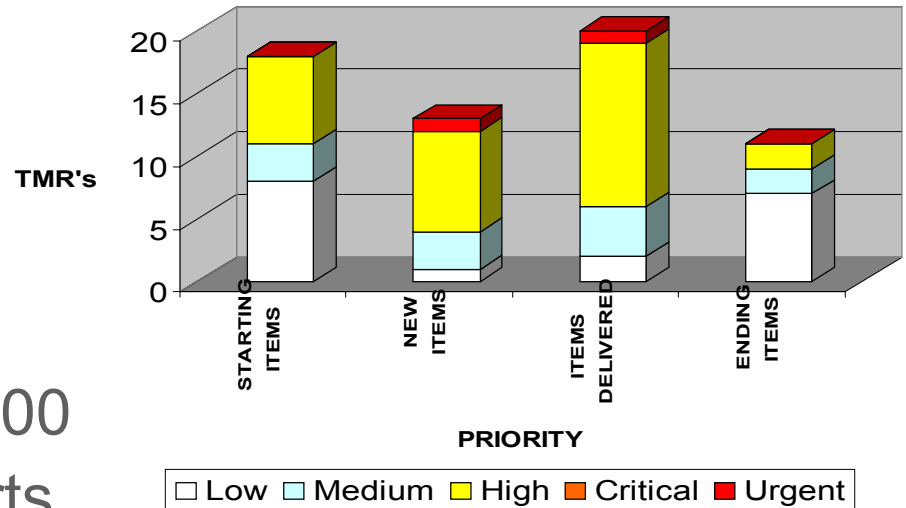




Expedite

- 2 MSE Releases (Latest Expedite 5.1a)
- 1 Product Update
- Technology: C++, Win2000
- 20 Resolved Error Reports
- State Status: Over 30 states in production
- Highlights:
 - 2001-02 MSE Enhancements
 - Ability to load an entire letting
 - Customize Button Labels and Screen
 - 2002-03 DBE Enhancement

Expedite MSE 2001-2002 TMR's





SiteManager/ SitePad

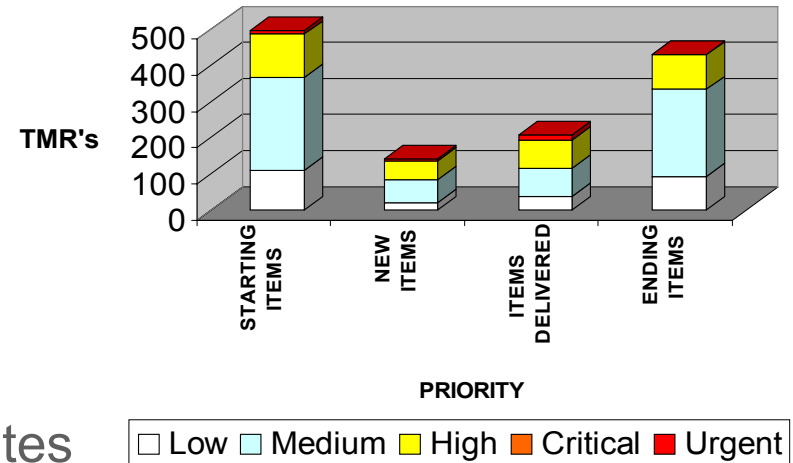
SiteManager

- 2 MSE Releases, 3 Product Updates (Latest 3.1a)
- Technology: PowerBuilder 8, Win2000, Oracle 8i, DB2 testing environment
- 188 Resolved Error Reports

SitePad

- 1 SitePad MSE Release, 2 Product Updates (Latest 1.0b-1)
- Technology: Palm OS
- State Status: 8 Implementing, 7 Evaluating
- 29 Resolved Error Reports

SiteManager MSE 2001-2002 TMR's





SiteManager Implementation Status

- 10 Agencies in Production
- 11 Agencies in Implementation
- 4 Agencies planning to add materials functionality
- 3 Agencies in preliminary analysis
- 16 Agencies showing interest

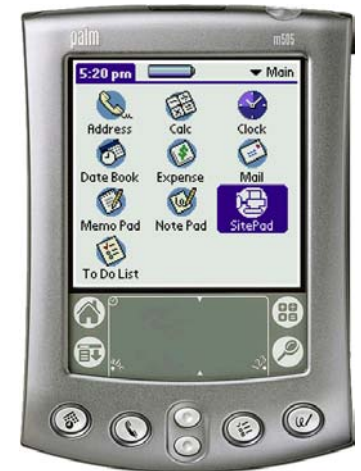


SiteManager Highlights

- 2001-2002 Enhancements
 - Supplemental item descriptions
 - Subcontract Data Load Interface with SiteXchange
 - DWR/Work Item Tab
 - Materials Discrepancy Adjustment Payment
 - Change Def of “qty installed to date” and Add Field
 - SiteManager Verify Contract Authority by User Group
 - Protection of Reference Loaded Code Tables and Addresses
- 2002-2003 Enhancements
 - Enhanced assignment of Producer/Supplier to testing reqs
 - Pending enhancements for Materials

What is SitePad?

- SiteManager handheld data collector, including:
 - Exporting contract and reference data files from SiteManager
 - An application for the inspector to collect all current SiteManager Daily Work Report (DWR) data except attachments and templates
 - Importing DWR data back into SiteManager
- Palm OS version released in 2001-02





SitePad for Windows CE

- Implementing same functionality on Pocket PC running Windows CE
- Ability to indicate a contractor is on site without entering other data
- Beta release in November
- Production release in Q1 2003
- Available in Info Tech Demo Room



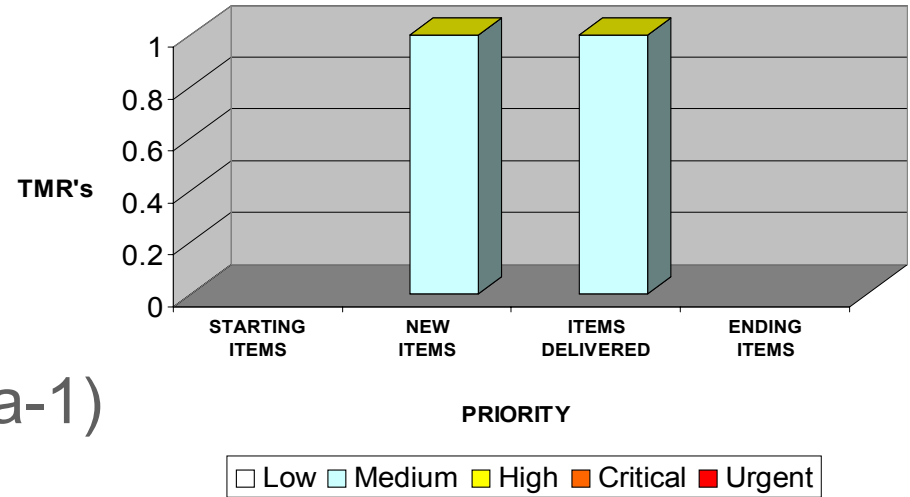
SitePad Future Initiatives

- SitePad 2.0 – Add attachments, DWR templates, and material sampling and testing capabilities to the Windows CE version of SitePad
- The Palm version of SitePad will continue to be supported with no future enhancements planned



SiteXchange

SiteXchange MSE 2001-2002 TMR's



- 1 MSE Releases (Latest 1.0a-1)
- 1 Product Update
- Technology: C++, Windows 2000
- 1 Resolved Error Report
- State Status: 4 Agencies Implementing
- Highlights: Warranty period complete

What is SiteXchange?

- Standalone program to manage subcontractor data flow between agencies and prime contractors.
 - Exporting contract and reference data from SiteManager
 - An application for the prime contractor to enter subcontractor information and build an electronic file for submission to the agency
 - Importing subcontractor data into SiteManager with integrity checks
 - A method for handling contract modifications
- Production released in April 2002
- Future: Fully automating transfer of subcontractor data via online mechanisms



Item#	Line	Item	Quantity	Unit	Unit Price	Extension	Drawing
11	318-3000	101,637.500 LN			\$79.30294	\$4,895,582.24	AGGR SURF CRS
0005	202-00240	144.00000 SY			\$5,000.000	\$5,000.00	Flow Asphalt Mat (Paving)
0010	202-01000	0.00000 LF			\$2,300.00	\$0.00	Flow Fence
0015	203-00000	42,126.00000 CY			\$4,100.00	\$1,727,274.00	Emb Matl (C/P)
0020	208-00001	71.00000 LF			\$10,000.00	\$700.00	5th Dia
0025	208-00100	0.30000 L S			\$3,300,000.00	\$990.00	Sediment Removal and D
0030	208-00200	0.00000 L S			\$4,000,000.00	\$0.00	Emission Control Equipment
0035	208-00300	0.00000 EACH			\$1,000.00	\$0.00	Valve
0040	210-00010	0.00000 EACH			\$105,000.00	\$0.00	Res Sound Sign
0045	212-00006	0.00000 ACRE			\$615,000.00	\$0.00	Seeding (Native)
0050	212-00047	0.00000 ACRE			\$3,300,000.00	\$0.00	Soil Preparation (Spec)
0055	213-00050	0.00000 SF			\$37,000.00	\$0.00	Soil
0060	213-00063	0.00000 ACRE			\$450,000.00	\$0.00	Mulching (Wood Free)
0065	213-00065	0.00000 CF			\$7,721.25	\$0.00	Mulching (Wood Chip)
0070	213-00080	0.00000 CF			\$2,000.00	\$0.00	Mulching (Wood Chip)

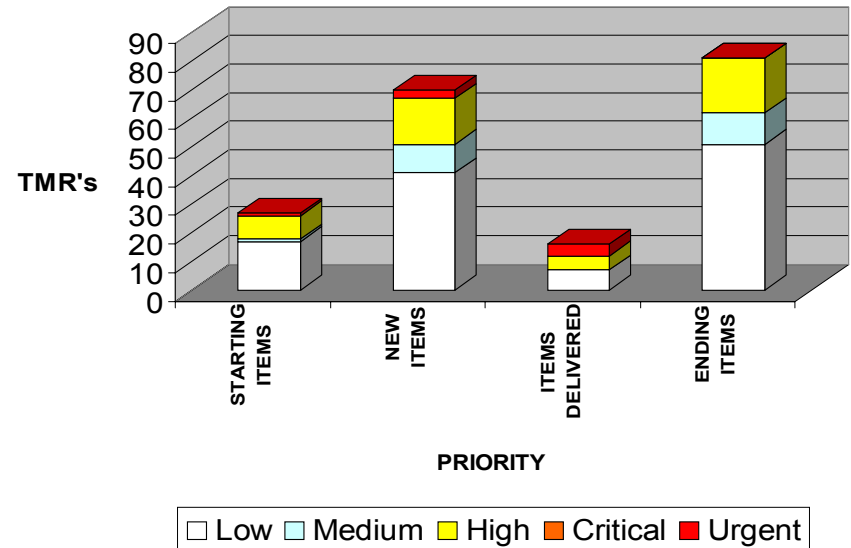
Subcontract this item to the vendor		<input type="checkbox"/> Partial Item
Vendor	AGGREGATE INDUSTRIES	
Line #	B 005	
Description	SAND	
Quantity	1.00	MGAL
Unit Price	\$1,000.00	Total \$1,000.00
Notes:		



FieldManager/ FieldNet

- 1 MSE Release (Latest 3.1e)
- 0 Product Updates
- Technology: PowerBuilder 6.5.1, Win2000, SQLAnywhere
- 16 Resolved Error Reports

FieldManager MSE 2001-2002 TMR's





FieldManager Implementation

- 6 State Agencies In Production, 125+ Additional agencies covered under DOT extended site licenses
- 136 Local Government Agencies
- 100+ Consulting Firms Licensing
- Pilot Programs – WY DOT, Cincinnati OH, Columbus OH, City of St. Peters MO
- Shown Interest - HI DOT, Summit County OH, City of Akron OH, Dekalb County GA, Gwinnett County GA, Fayette County GA, BIA nationwide, several large consulting firms



FieldNet Implementation

- Oklahoma in Production
- Wisconsin migrating from FieldNet Service to AASHTO FieldNet Product
- Michigan in Pilot Production
- Shown Interest - OH/MI Consultant, BIA



FieldManager/FieldNet Highlights

- FieldManager 3.1e August 2001
 - New reports and inquiries, performance and usability improvements, updated FieldPad
- Michigan DOT funding 2-year enhancement project
- Received for CIO Magazine “Value Enterprise Award” by Michigan citing
 - \$21.8M annually in reduced cost of managing construction
 - Faster completion of construction projects
 - Quicker payments to contractors
 - Improved internal construction project communication
- FieldNet rewrite planned to migrate to Internet technology

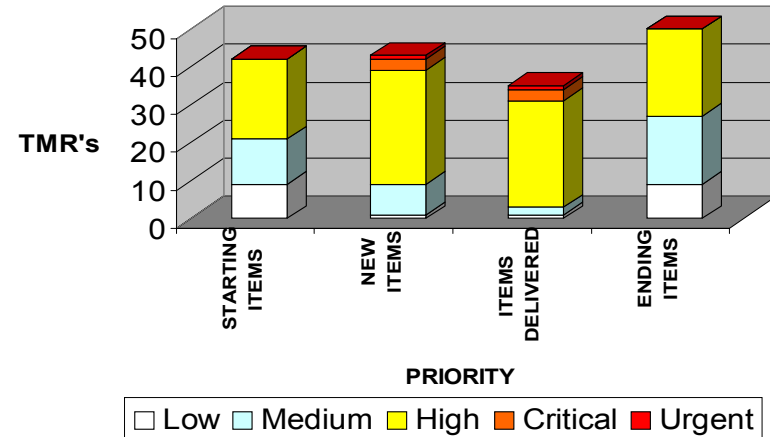


FieldManager 2002-03 and beyond

- Migration to PowerBuilder 8 and Sybase SQL Anywhere 7
- Add support for Oracle DB
- Copy IDRs
- Allow multiple subcontractors associated to one bid item
- Read-Only Copy of Contract to Contractors
- Increased security measures
- Enable FieldBook to interact with multiple FieldManager machines

- 2 MSE Releases (Latest C/S CAS 5.2a)
- 1 Product Update
- 35 Resolved Error Reports
- Technology: PowerBuilder 8, Win2000, Oracle 8i
- State Status:
 - 6 In C/S Production, 6 In Mainframe Production
 - 4 migrating to C/S
- Highlights: 2001-02 Enhancements
 - Remove breakdown ID requirement
 - Pay Item Drop-down box
 - Item List Filter

CAS MSE 2001-2002 TMR's

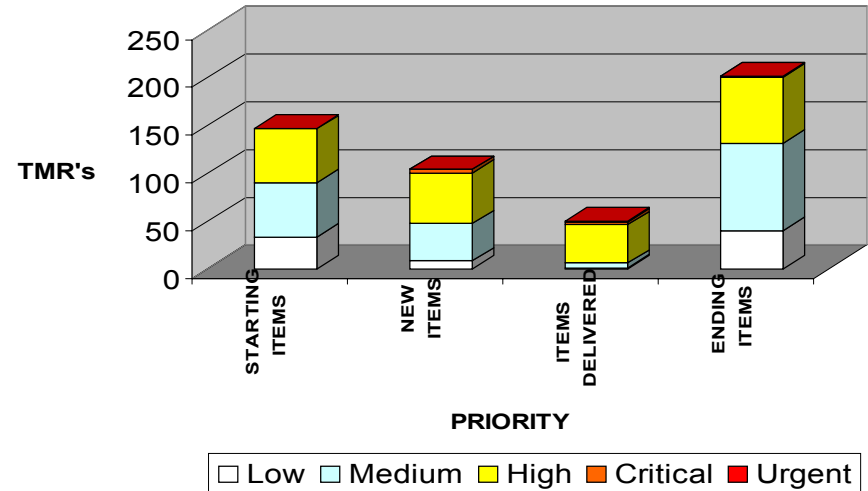




BAMS/DSS

- 2 MSE Releases (Latest C/S DSS 6.2a)
- 1 Product Update
- 50 Resolved Error Reports
- Technology: PowerBuilder 8, Win2000, Oracle 8i
- State Status: 35 licensees
- Highlights:
 - BAMS/DSS 6.2a certified on 7 platforms
 - MySQL Relational Database
 - Add Item Group Types for Bid Histories 2001-02 Enhancement
 - **DSS 6.2a Presentation and Available in Info Tech Demo Room**

BAMS/DSS MSE 2001-2002 TMR's





Trns•port Intranet Highlights

- 1 MSE Release resolving 2 Error Reports
- Web browser access to Trns•port data
- Utilizes the Trns•port Security Model
- Works with all modules of Trns•port
- Designed to run existing Trns•port reports
- Several representative functions/reports/queries provided with module
- 2002-03 Enhancements
 - Data Update Infrastructure and Screens
 - Potential Integration as part of each C/S Module Release



2001-02 General System Enhancements

- Cost Plus Time Bidding
 - BAMS/DSS
 - PES/LAS-SAPW
 - CAS
 - Expedite
- DPS (Middleware) enhancement
 - Modules can now share one application server
 - Can run multiple application servers on one machine
 - Use one server machine for both production and test environments



2002-03 General System Enhancements

- Currency Field Width Expansion
 - BAMS/DSS, CES, Estimator, Expedite, PES/LAS-SAPW
- Trns•port Interactive Product Tour (IPT)
- Trns•port Test Suite, Phase I



Updates/Release Summary

- In 2001-2002 there were 33 Updates/Releases
- In 2002-2003 the plan is for 22 Updates/Releases
 - 3 CES
 - 2 Estimator 2.0
 - 3 PES/LAS/SAPW
 - 2 CAS
 - 2 Expedite
 - 3 SiteManager
 - 1 FieldManager
 - 3 BAMS/DSS
 - 1 SitePad CE
 - 2 SiteXchange



2002-2003 Platform Upgrades

- Oracle 9i on Windows 2000
- DB2 7 on Windows 2000
- Sybase 12.5 on Alpha UNIX
- Sybase 12.5 on Windows 2000
- SQL Anywhere 8
- Windows XP clients



Trns•port Components



XML Initiatives

- eXtensible Markup Language (XML)
 - Provides a standard way of formatting data
 - Using it for all new Trns•port data interfaces
- Currently Used in SitePad and for Estimator 2.0/PES/CES communications
- Will be Used in the CHAMP/ SiteManager and FieldManager/SiteManager Interfaces
- Working with AASHTO and aecXML to develop industry XML standards for data interchange between applications



Object Store

- Common, web-based storage for shared files
 - Attachments (documents, spreadsheets, etc.)
 - RTF template libraries
 - Import and export files
 - Other system files
- Currently available in SiteManager 3.x
- Adding to PES, LAS, CAS, CES, and DSS in the future



Summary of Electronic Services

- Cloverleaf
 - Portal for Trns.port Information
 - Trns•port software updates
 - Error reporting, Call tracking and TMRs
 - Electronic Balloting
- Hosting for TUG Web Site
- List Servers for User communication
- VPNs for on-line support



Trns•port Related Activities



Third-Party Interfaces Emerging

Bentley

- Geopak Quantity Manager

Washington & Rice

- CHAMP (Civil Rights Software)

Surety 2000/InsureVision

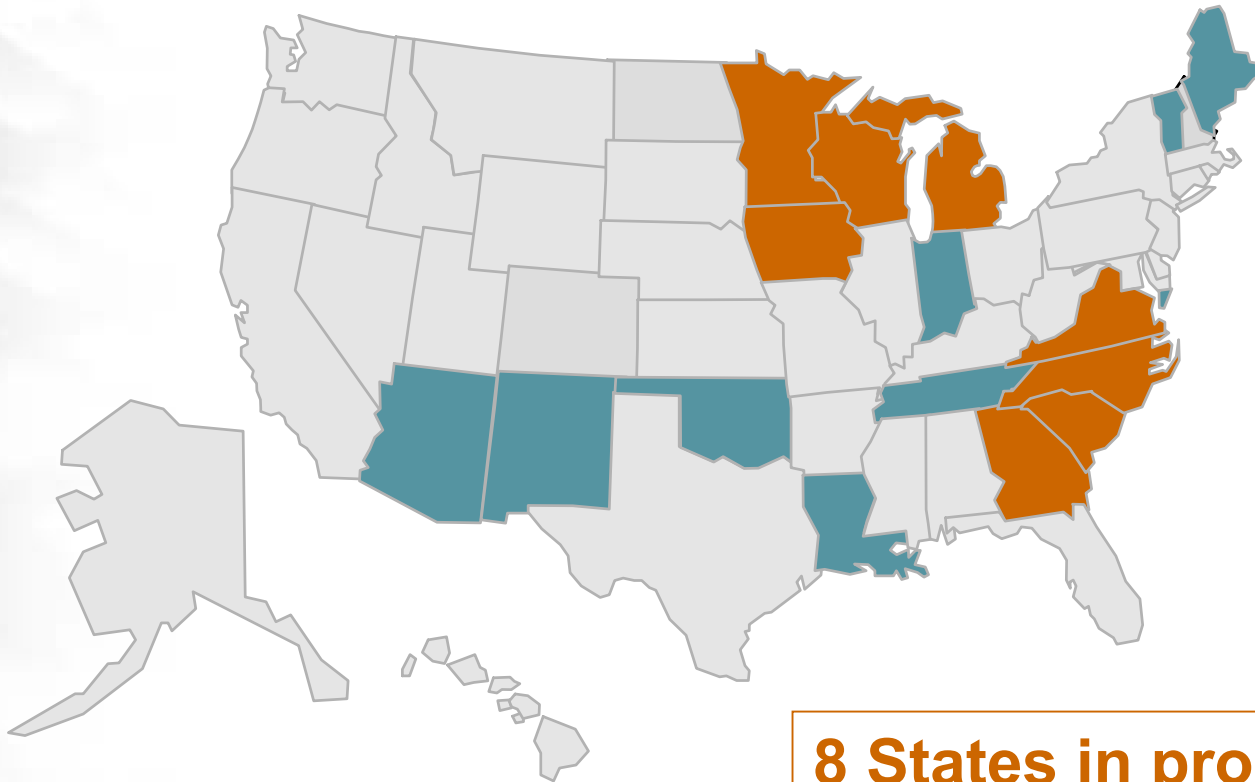
- Electronic Bid Bonds



Electronic Bidding

- Becoming centerpiece for states' e-commerce initiatives
- Digital Signature law in place
- Support coming from contractors
- Improves efficiency & lower costs for agency as well as contractors
- Increases competition
- Support for Electronic Bid Bonds

Bid Express Status



8 States in production
8 States implementing



Collusion Detection Training Workshops

- Held every February at Info Tech office in Gainesville, Florida
- Average attendance of 15
- Provide hands-on, in-depth training using BAMS/DSS with case studies using real state data
- Our 8th Annual workshop will be held on February 25-27, 2003
- Sign-up available on Cloverleaf



FHWA HERS Project Status

- Updating the FHWA Highway Improvement Cost Model
- Project data for 1997-2000 collected from six States
 - IN, NE, OH, OK, OR, VT
- BAMS/DSS served as the primary data source
- Other data sources:
 - Roadway, Accounting, ROW and Utilities databases
- Data uniformly classified:
 - Improvement, Highway class, Urban size, Rural terrain
- Line items collapsed to common Major Item classifications
- Statistical Modeling used to determine Cost per Lane Mile



FHWA HERS Project Status – cont.

- Updated Urban & Rural Cost/Lane Mile Tables developed
- Provides a basis for Parametric Estimation using Cost/Lane Mile and Major Item Classifications
- Future Plans:
 - Expand data collection to include more States
 - Regular updates to the Lane Mile Cost Tables
- Instructions available for States to collect data and build their own Lane Mile Cost Tables from BAMS/DSS



SPMS Status

- Scheduling/Project Management System
 - Enterprise level coordination, tracking and reporting
 - Client/Server, Windows 2000, Oracle 8i
- Indiana Phase I Maintenance and Support since 2000
- Indiana Phase II Enhancements September 2002
 - Interface to Trns•port CES
 - Permit Module
 - Scheduling Improvements
 - Distributed Processing and Customizable Reports
- Proposal for Full Trns•port Integration
- Available in Info Tech Demo Room and during Info Tech Reception

Conclusion



Lessons Learned

- Fewer releases
- Better Testing
 - More time set aside for testing
 - Automate most testing
- Continuous user interaction (TRTs)
 - Frequent Builds
 - List Servers
- Standard architecture across client/server modules



Info Tech Improvements

- Project Management
 - Formal Training Classes
 - Enterprise Project Management Suite
- Systems Development Methodologies
- Recruiting senior resources
- R&D Investments
- Quality Initiatives



AASHTO Trns•port[®] Contractor's Report

November 6, 2002

QUESTIONS?



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The Information Technology Company