

Transportation Research Program Management Database: *Lessons from a Pooled Fund Project*

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- Project established in 2008 after close to two years of discussion
- Partners: AK , CA , IN , MI , NE , NY , WA
- Lead by Washington State
- Total contributions: \$542,000
- Intent:
 - Explore modification of the Caltrans Research Program Management Database for other states.
 - Identify needs and proposed modifications for participating states
 - Develop enhancements for Caltrans including a module for managing Transportation Pooled Fund projects/contributions.

<http://www.pooledfund.org/Details/Study/407>

Inspiration

- No standard databases among state DOTs to track and monitor research projects
- Caltrans had recently developed a robust database for this purpose and wanted enhancements
- Cost of database development prohibitive for many DOTs
- Recognized other state DOTs also had other databases.
 - The opportunity for nearly free kittens
- FileMaker platform constrained some participation
- Survey of databases conducted in 2008
 - [ResearchdatabaseSurveySummary_04172008.pdf](#)

Project Tasks

- 1) Review the Caltrans RPMD and identify general modifications needed by participating states
- 2) Modify the Caltrans RPMD based on WSDOT needs
- 3) Prepare a summary of business needs to manage TPF projects.
- 4) Develop the TPF module.
- 5) Test the new module and address necessary changes
- 6) Convert Caltrans to the new system as needed. Assess the cost of converting WSDOT to the new version.

Modified Tasks

1. Convert the Caltrans RPMD into a Web-based System
2. Identify and Implement Caltrans-specific Upgrades, Modifications, and Enhancements for the New Web-based RPMD System
 - Part 1 Enhancements
 - Part 2 Enhancements
3. Identify and Implement WSDOT-specific Upgrades, Modifications, and Enhancements for the Existing FileMaker-based RPMD System
4. Develop Cooperative Research Projects Module for the New Web-based RPMD System
5. Develop Transportation Pooled Fund (TPF) Module for the New Web-based RPMD System

Modification for Washington

There's no free kitten

- Caltrans RPMD and FileMaker – the affordable choice
- Caltrans is much larger with more tiers of decision-makers. Needed to “turn off” some features
- Needed to rename/re-purpose features to accommodate agency differences
- Report features did not meet our needs and modification wasn't part of the project.
- Populating the database was labor-intensive
- Limited IT support – and that individual retired
- Hired a consultant to develop reports – mostly completed
- Working with IT to automate migration financial information

Vision, Benefit, Needs

Vision

- A system that captures research needs, problem statements, contract and financial information, project projects, and uses.
- A one stop resource to capture information, track workload, generate input for summary documents

Benefit

- Knowing what we know.
- Knowing where to put what we know.
- Streamlined reporting

Needs

- Experience with the reports
- Consistent use of the resource, and withdrawal of old tools
- Regular review to identify challenges, identify gaps

ChChChChanges....

After the project cleared, the scope of the Caltrans RPMD project changed.

- Additional business procedures were identified that needed to be incorporated
- Funding was insufficient to accomplish this and documentation requirements
- Efforts to reduce costs with state force were superseded by other priorities
- New Annual Work Program expectations focused attention back to enhancing the original FileMakerPro
- Overall, scope changes, changing expertise needs, and additional costs, resulted in funding limitations
- The project was terminated with only one task fully realized.

Challenges on the Path

- Varied platforms
- Varied roles in managing contracts and budgets
- Need to involve IT early and often
- Strongly recommend a clear business need and functional outline before pursuing database development

Discussion for NRAC

- Do we have a common vision?
 - Could we support analysis of work programs to understand changing trends in state research trends? (subject shifts, trends in project cost/#, how well we leverage UTC programs)
 - Could we link to RPM/HVR? RiP? TRID?
 - Can we create dashboards? Is there a information we should generate for MAP-21?
- What functionality do we want?
 - Who enters information? Who generates reports? Who reads material?
 - Web access?
- Content management
- AASHTOWare?