



Customer Success Story:

Kansas Department of Transportation

Overview

Established in 1917, the Kansas Department of Transportation (KDOT) has implemented and managed the Sunflower State's highway system since the dawn of intrastate travel. Today, more than 3,000 employees are leading this agency's 21st century efforts to serve the citizens of Kansas.

Challenge

Optimize Portfolio of Processes, Applications and Technology

With a \$1.4 billion budget, KDOT's wide-ranging responsibilities include road and bridge maintenance, transportation planning, data collection and evaluation, project management, and contract compliance. As the role of technology became increasingly important to these varied business processes, department officials recognized the need to implement an Enterprise Architecture (EA) to ensure KDOT's portfolio of processes, information applications and technology is optimized. The challenge was for IT to impact and improve business processes, thereby helping business operations make the agency more responsible and effective. The tool of choice to facilitate this significant undertaking was the Metastorm ProVision for Enterprise Architecture solution.

Metastorm ProVision's web server repository of integrated strategy, process and system models provides the framework to effectively model all dimensions of the KDOT enterprise. It provides a dynamic enterprise modeling environment to document and analyze all components of an EA so that IT solutions can be intelligently aligned with business needs.

Highlights

Government,
Transportation

Challenge:

- To implement an Enterprise Architecture to ensure KDOT's portfolio of processes, information applications and technology is optimized

Customer Benefits & Results:

- Developed a one- to ten-year high-level plan
- Developed a long-range evolution strategy
- Integrated short-term needs for system maintenance and enhancements

Solution

Driving to Make KDOT More Efficient

KDOT's EA initiative began when officials embarked on an intensive strategic planning effort. The team wanted to capture data and information gleaned during the planning process for use in the future. An EA was the perfect structure for doing this.

"Our customers are ultimately the citizens of Kansas, who benefit from our applications, whether it is through an engineering design application that affects state highway designs, or a financial application that ensures contractors and vendors are paid in a timely manner," said Bill Roth, KDOT's Enterprise IT Architect in the Bureau of Computer Services. "The Enterprise Architecture process provides a methodology and mechanism that allows the internal business users to understand the IT systems and add value to the process of selecting and integrating application systems that evidentially support our citizenry."

KDOT engaged the Ken Orr Institute to help develop the EA, and Mr. Orr recommended Metastorm ProVision (formerly Proforma ProVision) as the solution.

"I had used ProVision for two years on other projects," he said. "I recommended it for this Enterprise Architecture initiative because it is a powerful modeling tool that is also user friendly, highly customizable, and easily facilitates the import and export of data."

Results

EA Provides a Roadmap for the Future

The KDOT EA development process began with 14 day-

long sessions, each facilitated to encourage debate about specific function areas of KDOT, such as the finance systems, preconstruction activities and safety programs. They involved more than 200 individuals from various divisions and levels who shared information about the department's IT systems and learned from each other what their roles are in the bigger picture.

"The exchange of information was of great value to us," Mr. Roth said. "Never before did we have key players in a room talking about the businesses processes from end-to-end. That alone provided return on investment for the sessions."

During the sessions, Mr. Orr captured all the business processes and supporting information in Metastorm ProVision's web server repository. He estimated that 90 percent of the information was captured in the first two hours.

"With the tool, we quickly illustrated how we got from 'a to z,' which established a rational result for the strategic planning," Mr. Orr said.

The individual business topic deliverables (context charts, data models, work flows, reporting views/"radar charts") that were created within ProVision were rolled up to an enterprise level view to provide KDOT with its first enterprise data model and enterprise internal/external data flows. This allowed managers to integrate strategic IT planning with operational plans and budgets.

"By comparing these models with best of breed, we can easily see how to modify and evolve our systems to bring more value over time to KDOT and our business partners," Mr. Roth said.

Metastorm ProVision's workflow diagrams –or swim lanes – documented how data flows from one user to another and how each user is affected. In many cases, this was the first time this information had been documented, and the first time some business users had seen how their input impacted the rest of the process. Meanwhile, the radar charts highlighted in-coming requirements, enhancements or technologies on one side of the chart and outgoing issues or technologies on the other.

"Not surprising to many IT professionals, there are many incoming needs, issues and opportunities, but very few issues that will be eliminated. This understanding alone was a major benefit to the activities to date," Mr. Roth said.

The radar charts allowed KDOT to put a one- to 10-year high-level plan into place and gave KDOT a long-range evolution strategy, while still integrating the short-term needs for system maintenance and enhancements.

Other benefits of the sessions and Metastorm ProVision included a complete set of Data Model Diagrams, Context Diagrams and Workflow Diagrams for all of the major functions

performed in KDOT, and an initial effort to implement portfolio management to manage the functions, applications and technologies that are part of the agency.

KDOT's Success Paves the Way for Other Agencies

EA has already become an important part of KDOT's strategic planning process by helping to identify needs, opportunities for integration, and implementation of technologies. Some early design and development standards based upon the EA are already being incorporated into the daily development process in KDOT. The EA allows KDOT to move into model-based application development and to have high productivity early on.

"Using automated tools like ProVision to store information about systems, data and workflow will make it easier to maintain and incorporate it into the agency's IT culture," said Mr. Roth. "The resulting graphics have provided visuals easily understood by business partners and users, leading to opportunities for open discussion and view."

The project leaders also recognize that all state departments of transportation should have a similar set of models, as those models are very specific. In addition, the business management model should be consistent for almost all government organizations with only a few changes.

"Other agencies in Kansas, as well as other departments of transportation have expressed interest in the work we are doing," Mr. Roth said. "We believe our use of tools and techniques has resulted in an innovative plan for IT which will continue to evolve."

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