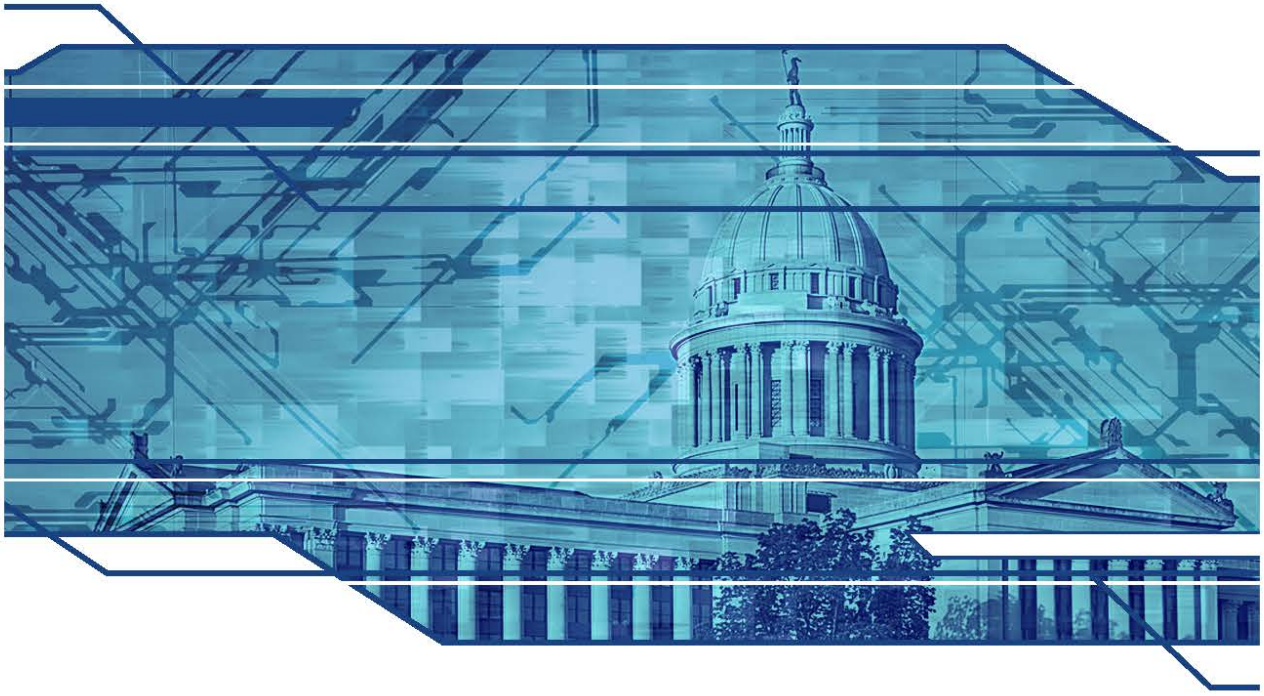
Construction Project and Portfolio Management Tool Implementation

Digital Government: Government to Business (G to B)



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Office of Management and Enterprises Services
Information Services Division (OMES ISD)
State of Oklahoma

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Project Initiation: May 20, 2013
Project Completion: Sept. 20, 2013

Executive Summary

Managing the pre-construction process and its reporting requirements was a cumbersome and daunting task for the Oklahoma Department of Transportation (ODOT). With more than 15 full-time project managers administering in excess of 2,000 pre-construction projects for the state, it became increasingly difficult to enforce standard processes, deliverables and reporting.

The pre-construction process encompasses all the work required to develop a construction project plan that ultimately will become a component of the state's eight-year construction plan. The process consists of more than 16 high-level deliverables. In the area of transportation, the deliverables required are quite varied. Examples could include:

- Preparing plans for construction of a bridge;
- Developing traffic plans;
- Applying for the transportation commission's approval; or
- Awarding a contract.

Tracking deliverables required a tremendous amount of time and effort for the pre-construction team to document with their manual processes.

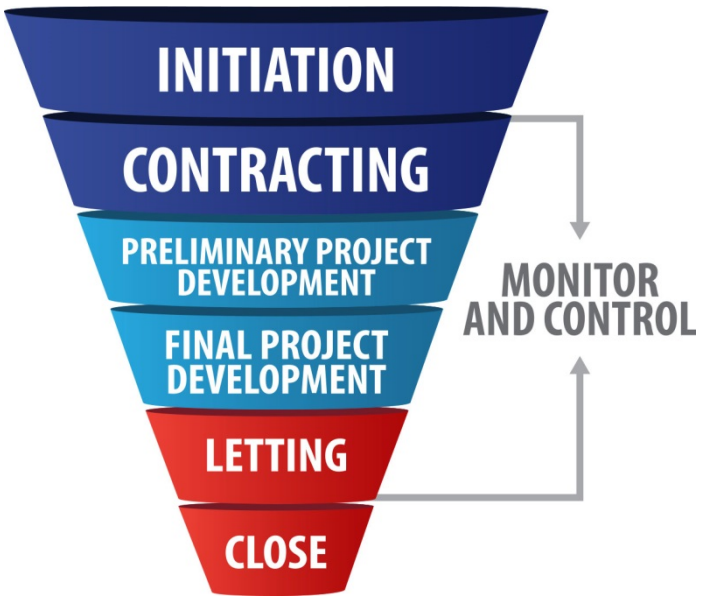
In 2013, ODOT partnered with ISD's IT Project Management Office to develop a customized application that would address workflow, project plan templates and dashboards, which would provide project managers and executives a comprehensive view of all pre-construction projects. The project kicked-off in May 2013 and went live with all project managers in September 2013.

For the first time in history, ODOT can provide a complete view of all pre-construction projects, including common workflow and work plan templates for all pre-construction projects. The dashboard feature provides state executives a complete view of all transportation projects by area, project manager, fiscal year or project type.

Business Problem and Solution

One of the challenges the pre-construction team faced, considering the volume of construction projects, was getting a clear overview of each project and its status within the process. It was extremely difficult to ensure standard processes were being followed and standard deliverables were being tracked. The manual reporting process was an antiquated and time-consuming process, yet there was no alternative.

To remedy these issues, the pre-construction management team developed a standard workflow and work plan templates. The workflow was automated using the IT Project and Portfolio Management (PPM) tool, and work plan templates were developed for both state, city and town construction projects.



The new workflow tool allowed for a central repository that all project managers could access. The software as services (SaaS) feature provided access to all staff.

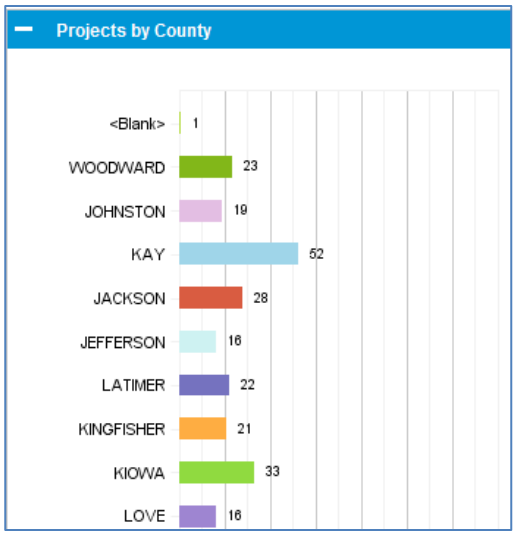
Customized training was developed, and all project managers were required to attend a one-day training class. Topics addressed in the course included:

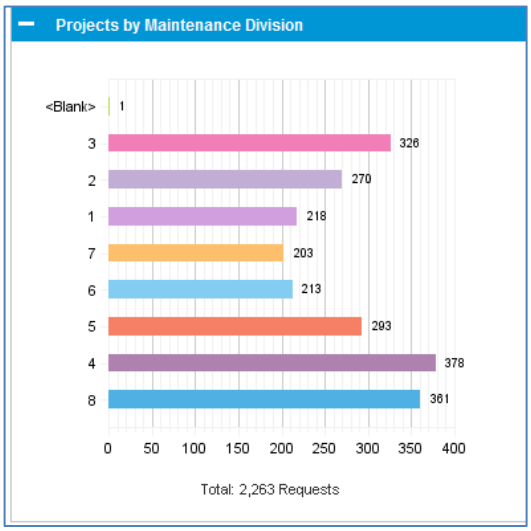
- Work plan development;
- Dashboard customization;
- Reporting tools management; and
- Workflow management.

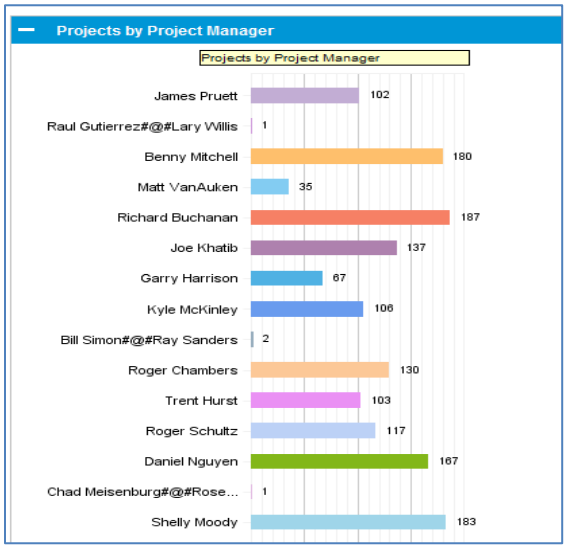
With the implementation of the new application, the transportation department's administration and management can view the entire pre-construction project portfolio anytime anywhere.

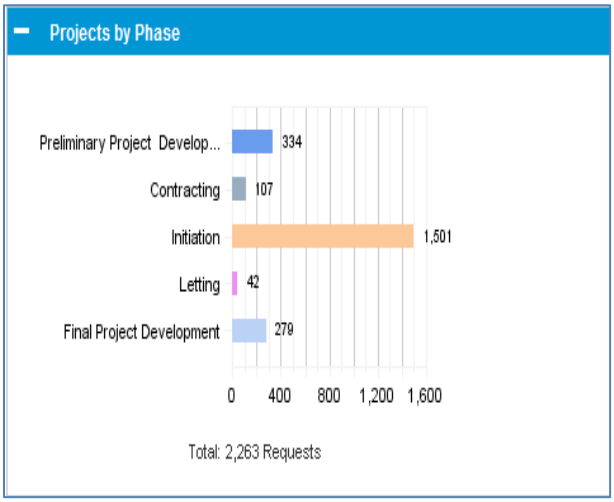
Significance and Benefits

For the first time, the pre-construction team has a comprehensive view of its more than 2,000 projects. They also possess the capability to completely drill down to view the details of each project. The tool allows any field to be searched and reported by providing easy-to-view portlets and dashboards, and each project manager has the ability to customize their personal dashboards.

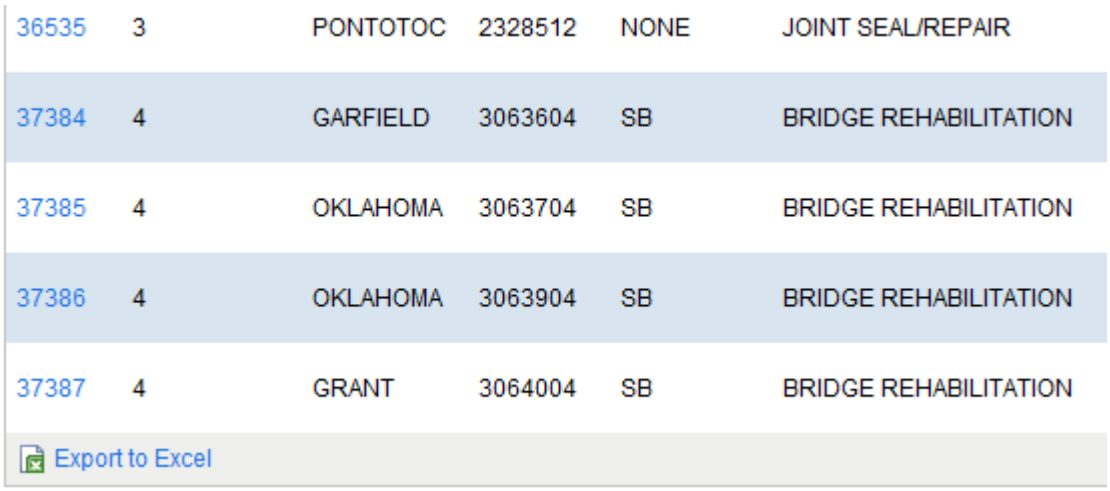








Creating reports is simple and easy for the end user. Information can be exported to Excel from any portlet within the customized or shared dashboards. Reports can now be compiled in minutes by any system user, which is far more efficient than the previous system.



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37386	4	OKLAHOMA	3063904	SB	BRIDGE REHABILITATION
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Export to Excel

The tool's ease of use has reduced the time it takes to move projects from one project manager to another. Mass update tools allow end users to reassign projects within seconds.

This new tool has allowed the department to adopt a production schedule and project status tracking elements that are viewable by anyone with access to the PPM tool. Several factors had to be considered during the development of the production schedule component, such as:

- The year a project is scheduled to be funded for the right-of-way, utilities and construction;
- The time required for all project development processes to be completed by either in-house production personnel or outside service providers.

Status meetings are held to validate the schedules so all divisions involved in the project agree upon a viable timeline. The production schedules also provide a baseline that is very useful in the development of ODOT's eight-year construction plan and help ensure projects are delivered according to the agreed upon schedule.

The solution did not involve overly innovative technology, but instead, involved leveraging existing tools, primarily utilized for IT, to help pre-construction processes become much more efficient and effective.