

County of Santa Barbara, CA

Microsoft® Project enabled a small engineering department to automate a scheduling system for an annual workload of 2,000 tasks for 150 projects. The costs required to manage these resources fell by 20%.

Vital Statistics: Road Engineering Division Department of Public Works County of Santa Barbara, CA Robert Ooley, Analyst

Industry: Municipal Public Works Engineering

Employees: 250

Software Programs: Microsoft Project Microsoft Schedule+ Microsoft Word Microsoft Excel Microsoft Access

Hardware: Pentium PCs

Results of Using Project: "Microsoft Project allowed us to effectively deliver resources and manage them in a timely fashion."

The Road Engineering Division of the County of Santa Barbara, CA handles approximately 2,000 projects annually with only six engineers and a small staff of supporting personnel. A paper tracking system used for project scheduling and staff assignments proved to be inadequate for managing the division's limited resources. The agency needed a system that could quickly assess the impact of new projects on the existing workloads of engineers and other available resources.

Analyst Robert Ooley used Microsoft Project as the planning tool to create a scheduling system that automated and improved upon the existing paper tracking system. Robert's challenge was to develop a system that created a master schedule for all department projects and standardized procedures for data input.

A new system was needed that would correct problems inherent in the existing paper tracking system. A major shortcoming was the lack of centralized project management scheduling. Engineers kept their own schedules, which required frequent meetings to coordinate dates and details when managing large projects. Another problem was that the paper tracking system did not allow the division manager to see a comprehensive view of the workloads and schedules for all engineers. This was essential to accurately forecast future staffing and resource needs.

The existing scheduling system was not able to accommodate the changing availability of staff resources within the division. Staff contingency assignments made it difficult to predict how many engineers would be available to take on new projects. Two engineers take on specialist roles in the event of severe weather or other emergencies, which requires that their workloads be shifted or postponed on short notice.

Robert selected Microsoft Project to develop an automated scheduling system for the division because it was able to resolve all of these problems and more.

Improves Resource Management Control

Robert explains that the most useful feature of Microsoft Project is its ability to create centralized resource pools. This provides planners with a snapshot view of all available resources for the division. The allocation of resources for every project is linked to the master schedule. Presenting the total amount of available resources as a central pool allows planners to maximize their use.

Microsoft Project can also present only selected information when required. Filters can be used to show only the resources that are allocated to specific projects. This facilitates communication with other team members working on the same project.

As new projects are added to individual schedules, the overall resource allocation is tracked within the master schedule. Microsoft Project indicates when an internal resource is overallocated. This is particularly useful for evaluating the workload of the division's only environmental coordinator before taking on any new projects.

Increases Scheduling Efficiency

Microsoft Project allows planners to make informed decisions for scheduling projects that make the most efficient use of available resources. The Road Engineering Division must continually monitor total available resources, given its small staff size and limited budget.

The division manager uses Microsoft Project to show the current workload allocation for all staff members and to determine whether engineers have available time to take on additional projects. The start date of a new project can be delayed if staff engineering resources are overallocated at that point in time.

Engineers and support technicians found Microsoft Project easy to use and were able to quickly update schedules with all important data. As a result, the division was able to schedule new projects more efficiently than in the past.

Communicates Priorities

Robert explains that another benefit of using Microsoft Project is that projects can automatically be ranked according to priorities. This is a particularly important feature for a small engineering department with limited staff and financial resources to manage a large number of projects. Engineers must be able to prioritize new projects to work within these constraints.

Microsoft Project helps to communicate priorities by allowing the user to assign rankings to individual tasks as they are entered into a schedule. Planners can grade tasks with values ranging from low to high according to their importance. Tasks can then be sorted to schedule high-priority projects for completion before lower priority projects.

The Road Engineering Division has used Microsoft Project's capability to prioritize tasks to improve cash flow management. Payment dates are entered as high-priority items into the master schedule. Copies of the payment schedules are then sent to the division's accounting department, ensuring that both engineering and accounting staff are kept informed of important payment dates.

Future cash needs can be assessed with increased accuracy and coordination, eliminating problems of missed payments. This is especially important for the Department of Public Works, which receives funding from government agencies with lengthy periods of time needed to process funding requests.

Robert reports that Microsoft Project will be used in the future to expand the use of project management systems to other divisions in the Department of Public Works. He plans to revisit the existing scheduling system model, make some adjustments, and implement it in the Water Resources and Flood Control and Solid Waste and Utilities sections.

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