West Virginia University sees improved IT governance with resource planning and cost accounting from IBM Rational Portfolio Manager.

Overview

- ***The Challenge***
  WVU directors lacked adequate means to determine if proposed initiatives could be completed with available IT resources. It was also difficult to assess project costs and keep projects on schedule.

- ***The Solution***
  WVU began using IBM Rational Portfolio Manager to better assess proposals and schedules. It allows WVU to better allocate resource requirements, monitor project progress, track capital costs of projects, and improve governance of the proposal process.

- ***The Benefit***
  Vital project information, that previously required a week to collect, can now be accessed instantly by the team at any time. Rational Portfolio Manager enables accurate evaluation of resource needs and utilization, and makes it possible for the university to track project work costs for the first time.

With more than 26,000 students, West Virginia University (WVU) relies heavily on its Office of Information Technology (OIT) to implement new systems and upgrades, maintain legacy systems and networks, and deliver new online services. In the past, the OIT staff of approximately 130 full time employees has taken a decentralized approach to project management. Although large proposals had to be approved by a central committee, individual teams used a disparate set of tools and processes to create proposals presented to the committee and manage projects approved by the committee.

Ultimately, this approach led to several challenges, including the inability to effectively estimate and manage resource needs for IT projects. The OIT also found it difficult to evaluate project portfolio status and costs across the organization. "Although we had a process in place for submitting and approving project proposals, there was no ready way to determine whether the projects approved really could be handled by the number of people we had available to work on them," recalls Robert Haring-Smith, Senior Project Consultant at WVU. "We needed a way to assess the resource demands of project proposals so that approved projects would not exceed our resource supply."

Hunting for project information

In years past, when the Academic and Administrative Information Management System (AAIMS) committee met to consider project proposals, they relied on reports assembled manually from disparate tools and formats. "Information about proposed and active projects was scattered across project managers' workstations in Microsoft® Word documents that listed the resource needs of a proposed project or Microsoft Project files that held the project plan and what portion of it had been accomplished. Any attempt to analyze the project portfolio as a whole involved a substantial effort just to bring the information together," notes Haring-Smith. "Because there was no consistency, it was an extremely cumbersome process that

took a week or more. When we were done, we could not be very confident about the results of the analysis."

Difficulties in resource planning and allocation manifested in many ways, including over-tasked teams and missed deadlines. "There was one project in particular that really highlighted the problems we faced. State government had mandated an update to our course management system. As the deadline loomed, we realized that there was no way we could complete the project with the resources currently assigned. We had to pull people off of multiple other projects, which fell behind schedule as a result. With better resource planning and management, we could have taken corrective action much earlier," Haring-Smith explains.

Choosing IBM Rational Portfolio Manager

With three primary objectives in mind, WVU began evaluating alternatives to address the challenges OIT faced. The first goal was to achieve better resource planning and utilization. In addition, the university sought easy access to project portfolio status and the ability to accurately determine costs of IT projects.

In addition to IBM Rational® Portfolio Manager, OIT considered several competing solutions. OIT selected Rational Portfolio Manager based on its strength in management of project staffing, reusable project templates, and what-if analysis capabilities. "Our need for better planning for, and execution of, resource allocation drove not only our decision to obtain a portfolio management system, but also our selection of Rational Portfolio Manager and our focus during its implementation," says Haring-Smith.

Keys to early success

According to Haring-Smith, critical elements of the team's initial success included a focused implementation plan and getting buy-in from the OIT team. "One of our earliest decisions was not to try to do everything at once. Instead, we focused the effort on defining resources and setting up the system to do some essential analysis on the resource demands versus resource supply," Haring-Smith notes.

He continues, "It also helped to have a project approval process in place, mandated by the AAIMS committee. In addition to that senior management buy-in, the resource managers of the groups that were most heavily used saw Rational Portfolio Manager as a way to protect against overwork and as a means to justify possible new hires."

Members of the AAIMS committee, along with assistant directors within OIT, were granted portfolio manager status within the Rational Portfolio Manager. The initial implementation also included 35 project managers, and 72 OIT staffers classified with various competencies, including database administrators, developers and testers.

A more efficient proposal process

With Rational Portfolio Manager in place, the AAIMS committee is now able to make better-informed decisions, based on estimated resource requirements and resource availability. The process begins when a proposal form is submitted that outlines the business case for a particular project. Based on a template, this proposal cites any legislative or administrative mandates that are driving the project, as well as the problems it is intended to solve or the risks that it would mitigate. There are no cost or resource estimates in this initial round of review.

If the AIIMS committee agrees with the proposal, it asks the group that submitted it to develop a more detailed project plan. Developed in Rational Portfolio Manager, this plan includes a detailed description of the project and a step-by-step plan along with resource requirements for each step. The group works with resource managers to estimate how much time a particular resource will need to accomplish the steps enumerated in the plan.

"After resource managers sign off on the estimates, the project management office uses Rational Portfolio Manager to look at the proposal in the context of

other projects that have been approved or started, and determines how the resource demands of the various projects mesh. With Rational Portfolio Manager, the group produces reports for the AAIMS committee showing what is feasible for the staff to accomplish," explains Haring-Smith.

"We use what-if analysis with Rational Portfolio Manager to get a picture of the overall resource demands of different collections of projects. We can see particular months when certain resources are being demanded to excess, look at the projects demanding those resources, and try to adjust the schedule as needed. With that information, the AAIMS committee sets the priorities for the projects," he adds.

From proposal to project

Once a proposal is approved in this second round of review by the committee, it is converted to a project. At this point, the resources required by the project have only been described in terms of profiles. The next step is to assign real individuals to those profiles. Using Rational Portfolio Manager, a resource manager makes those assignments, based on the project's implied schedule and resource availability. The project is then published, so that individual team members can see the project tasks.

The project manager also begins working with the project in Rational Portfolio Manager, making minor adjustments to the schedule or adding detail to the project plan. OIT staff report their effort on each project task in Rational Portfolio Manager, recording the number of hours spent in timesheets. Team members can also use Rational Portfolio Manager to easily view and track the tasks they should be working on. "Some of our teams had been recording their time in other ways. They have been quite enthusiastic about doing it in Rational Portfolio Manager instead of filling out a spreadsheet and e-mailing it into somebody who would have to open and compile them all," says Haring-Smith.

The non-project project

Because some groups within OIT perform a significant amount of maintenance work on existing systems, WVU needed a way to track that time and to reserve time for day-to-day maintenance activities as schedules were developed. Haring-Smith explains, "The same people that work on projects are also supporting and maintaining existing systems. So, we realized early on that, to get a realistic view of resource availability, we had to have advanced estimates of the time people would spend on daily support. When we were setting up Rational Portfolio Manager, we asked for estimates from each of the resource managers for the time their staff spends on daily support. This time was tracked in a 'Non-project project' for each resource group."

With the time spent on support tracked in Rational Portfolio Manager, WVU has a reliable metric for determining maintenance costs for various systems. In addition, the team can refine their estimates based on actual measured results. "We compared daily support estimates to the actual time spent, and found the estimates to be quite accurate. Knowing how much time is spent on daily support helps us develop more realistic schedules for each project," Haring-Smith adds.

Tracking costs

WVU has always been able to monitor hardware, software licensing, and consulting costs for a given IT project. But, until now, determining the cost of WVU employees working on the project has been difficult, and at times, impossible. "The university wants to have a better accounting of what IT projects cost. With Rational Portfolio Manager, our people can report their effort for each task, and that simplifies the process of determining the cost of a project. We also have confidence that the numbers we are reporting are accurate," says Haring-Smith.

He continues, "Although it was not done much in the past, accounting for the cost of time spent by WVU staff is

now expected of us, as it is frequently one of the biggest components of total project cost. By developing project plans in Rational Portfolio Manager and enabling our team to record their actual effort, we can now provide accurate cost accounting for completed projects, and produce more accurate cost estimates for similar efforts in the future."

Planning with templates

In addition to leveraging cost data on future projects, OIT plans to reuse project plans by creating templates. "Templates have already been helpful in the creation of project proposals. Going forward, we plan on taking project plans from successfully completed projects and turning them into templates to be used on comparable projects that we may need to complete in the future," says Haring-Smith. "Using completed projects as templates will be valuable and a big help in developing accurate estimates on future projects."

Looking ahead, the team is developing scorecards to be used with Rational Portfolio Manager to assist in the evaluation of project proposals. OIT is also planning on leveraging built-in workflows in Rational Portfolio Manager to improve IT governance processes and ensure proposals move through the process efficiently. In addition, based on the success of OIT, WVU is considering implementing Rational Portfolio Manager in other departments of the university.

A consistent process and better informed decisions

Rational Portfolio Manager enabled WVU to implement substantial improvements to a number of core IT processes. "Prior to implementing Rational Portfolio Manager, we ran the risk that projects would fail because too much had been asked of the resources available. It was also possible—but less likely—that resources would be idle because too few projects were approved. Gathering all the data to make informed decisions on resource planning and allocation for a single set of proposals used to take a week. Now, all that information is in Rational Portfolio Manager, readily accessible to the project management office and to key decision makers. As a result, we can spend more time analyzing data and drawing conclusions from it, as opposed to trying to round it up from dozens of different people," says Haring-Smith.

He adds, "With Rational Portfolio Manager, we no longer have each person doing their own project in their own way. We have consistency. We are producing very solid statistics of what is being demanded of our busiest groups. We are also able to calculate capital costs much more easily and accurately. Using Rational Portfolio Manager, we are better able to monitor our project portfolio with data-based analysis of resource needs and utilization. It has also led to a re-examination of our entire project approval process. It has encouraged more discussion about project and portfolio management, and we expect continued improvement in project management and resource utilization as a result."

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