Dashboards Simplify Performance Reporting

By Stevan Gorcester and Rhonda Reinke

A performance dashboard was the key to restoring financial stability to an agency in dire need of a new approach.

Successful performance management requires that meaningful, current, and easily interpreted data are put in the hands of decision makers. If you then take that data and consider it, debate it, and heed it in making decisions, you are managing with data. If that happens in most decision making, your organization is well on its way to being a performance-managed agency.

Successful performance management demands effective performance reporting. Fortunately, technology has simplified the effort of communicating quality data to leaders and managers. Software dashboards in particular offer elegant simplicity to the otherwise difficult task of reporting performance for quick interpretation by both the numbers people and the ideas people. The use of dashboards to display decision-critical data has grown rapidly in the private sector and is catching on with public agencies.

Public sector data efforts are being driven in part by performance mandates from elected officials and administrators. Washington Governor Christine Gregoire adopted the government management, accountability, and performance (GMAP) directive for all state executive branch agencies soon after her election in 2004. GMAP follows the model of Baltimore's Citistat Program and tackles the difficult task of applying common performance principles across the vast organization that makes up state government. In other words, Washington state agencies must not merely report data, they must use the performance feedback provided by the data to direct improvements.

The Washington State Transportation Improvement Board (TIB) implemented its performance dashboard in 2003 and followed the GMAP directive in earnest after its adoption in 2004. Performance management became a key tool in driving the board's grant programs after years of over-programming. An internal performance dashboard was a natural extension of that focus because dashboards facilitate easy access to and interpretation of data and provide instantly updated information for management decision making. The TIB's dashboard delivered the high-level performance reporting that successful performance managers need.
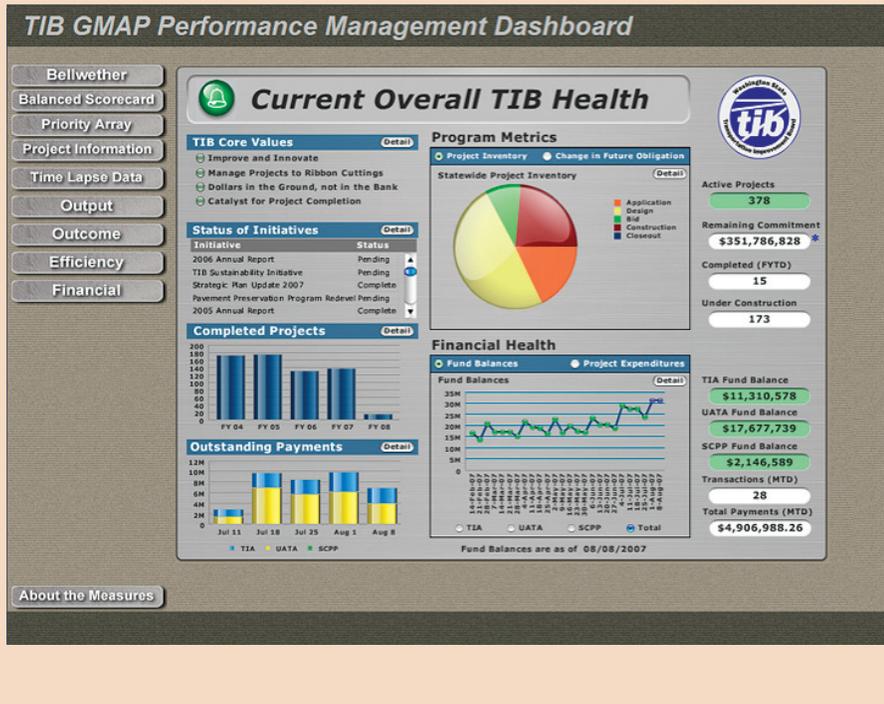
DASHBOARD IMPLEMENTATION AT THE TRANSPORTATION IMPROVEMENT BOARD

The TIB is an independent state agency created by the legislature in 1988 to address the escalating demand for roadways as urban development increased. The agency awards $80 million per year in competitive grants to cities and urban counties for street and sidewalk projects.

In early 2001, the TIB was about 95 percent over-programmed; too many

runs on an Intranet Web site providing instant access to all staff. By the end of 2007, certain dashboard pages will be available on the external Internet pages to provide best practices and lessons learned to other agencies.

A dashboard is a reporting tool that must be fed by a data source. A data feed is used to link the dashboard to the SQL database in the same way CNN and other news organizations feed new updates to users subscribing to RSS feeds. The dashboard refreshes data each time a Web page loads, ensuring that the user always views the most current information. The TIB also employs several user interfaces to insert data directly into the dashboard to allow use of data not stored in the SQL database. For example, financial data from statewide systems are transferred to the dashboard through a user interface. Dashboards can be driven by Excel spreadsheets as well; however, connection to a database is highly recommended to achieve greater functionality and less duplicative data entry.

At the TIB, a single in-house information technology specialist with advanced coding skills built the dashboard using commercial software. In-house development provided advantages of high familiarity with agency business and the same programmer who developed the SQL database. Hundreds of hours of staff time went into identifying and perfecting performance measures and linking them to strategic initiatives. The total cost for the TIB's system was less than $50,000 and took about four months from procurement to initial rollout. Skilled external programmers can develop dashboards, but knowledgeable internal support should be provided. Using an outside

grants had been awarded and the bill was coming due. For 10 years, hundreds of project schedules were adjusted by hand on a huge pad of paper spreadsheets to control $600 million in expected billings. The new agency director discovered on his fourth day on the job that many agencies would not be paid until the new fiscal biennium, five months away. On day five, the new mission of the agency became clear, recover from the likely default and never allow this to happen again. Most importantly, decisions would have to be carefully rationalized against supporting data.

In 2002, the staff and board completed a balanced scorecard strategic plan and adopted new financial and project performance measures. Key benchmarks evolved from the scorecard initiative. The project inventory needed to

be reduced by about 400 projects. Total obligations, then at $655 million, should be no more than $380 million. The agency set performance targets and began to pursue the resolution of about 200 long-delayed projects. Excessive obligations were moderated through withdrawals and curtailing previously uncontrolled funding increases.

The data from 12 years of project activity represented a unique information warehouse that formed the foundation for the TIB's business intelligence initiative. By 2003, the TIB had automated many data reporting steps and this evolved by the end of the year into the agency's first performance dashboard. The TIB's dashboard displays metrics, graphs, and maps from data extracted from an extensive SQL project tracking system. The dashboard

consulting firm could save considerable staff time devoted to developing a system and could be well worth the cost for the expertise in balanced scorecard and performance measurement. Dashboard development at the TIB has continued throughout the four years since initial use. New applications, like Google mashups, have been developed and some charts have been discarded in favor of more useful data.

PERFORMANCE MANAGEMENT FUELS SUCCESS

Performance management and effective performance reporting clearly drove success at the TIB. In 2001, the chair of the Senate Transportation Committee in the Washington legislature assured that the TIB would receive no new future funding increases. In 2005, the same legislator sponsored both new funding and a new grant program at the TIB, citing a complete reversal in her opinion of the agency. At year end in 2006, all agency trend indicators were meeting performance expectations except account balance. Account balance indicators continue to trend downward as prior over-programming was retired. Account balance finally increased by mid-year 2007, six years into the TIB's performance management effort.

The dashboard allowed the TIB to monitor and correct negative trends. Dashboard financial reports presented at each meeting help the board to ensure proper fiscal policy and controls. The executive director uses live dashboard presentations to show legislators the status of the agency and projects in their districts. Just like effective communication in general, effective performance reporting builds confidence in the message and the messenger.

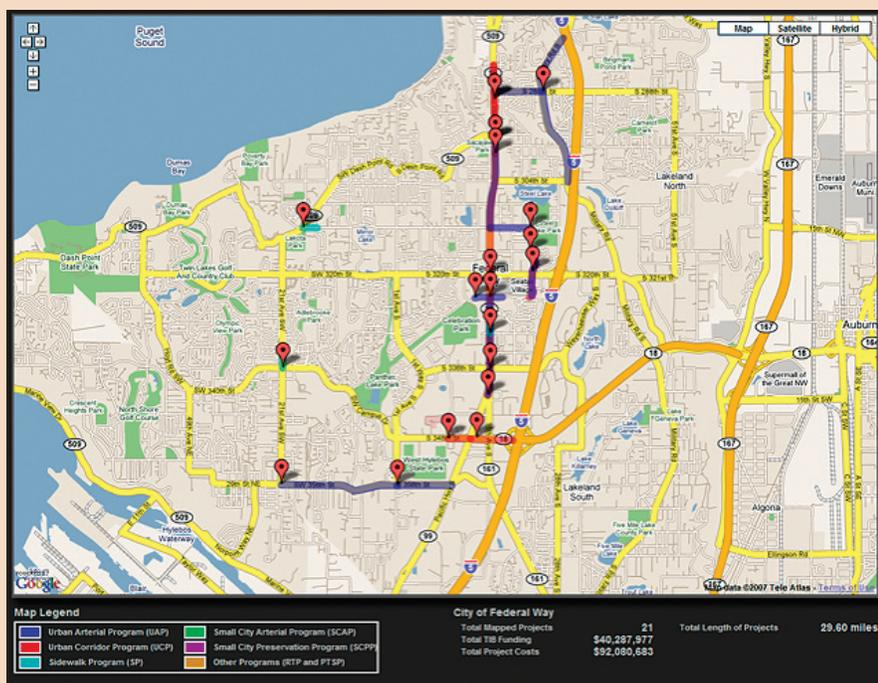## GETTING STARTED AND WHAT TO MEASURE

The first step to a performance dashboard is not the programming. Successful dashboard development begins with the data. A data readiness assessment consists of an inventory of existing data sources, format, location, quality, and completeness. In most cases, needed data resides in different physical locations and formats. Modification to data collection and storage will certainly be necessary.

Dashboards are very effective at displaying financial data, but they can be adapted to report project information too. The TIB displays information to keep track of its inventory of projects including which projects have significant delays or funding problems. Asset management and maintenance management components can be incorporated, as the case requires.

Expect to spend significant time determining what to measure. This effort can proceed parallel to initial dashboard development, but the two efforts need to come together in order to refine the dashboard. The TIB uses an ongoing performance team of managers and staff to maintain dashboard quality and develop new measures. In initial development, the performance team identified existing measures and evaluated their usefulness. It is important to question the value of a measure before developing the data in order to

Exhibit 2: TIB Data Using Google Mashups

A Google "mashup" is an integration of your own data with the full functionality of Google maps. Google provides a free license to developers for this purpose. Google mashups allow display of TIB data on maps and satellite images.

ensure focus in the development effort. Just because a given measure is available from the data does not mean it is useful. Avoid cluttering the dashboard with extraneous or false measures. "Under-budget and on-time" performance is not very useful if preceeded by doubling the budget and timeline.

SUMMARY

The Intranet-based dashboard has been the key to restoring financial stability to an agency in dire need of a new approach. The TIB has corrected its financial condition and eliminated the extensive project backlog. The dashboard supports an active management approach where problems can be avoided by analyzing and responding to warnings ever present in the data. ∎

STEVAN GORCESTER is the executive director of the Washington State Transportation Improvement Board. He has worked in the public and private sectors of the transportation industry for more than 25 years and is a graduate of the University of Washington. He may be reached at SteveG@tib.wa.gov. RHONDA REINKE is the chief administrative officer of the Washington State Transportation Improvement Board. She is a graduate of Washington State University and holds a Certification in Project Management from Boston University. She may be reached at RhondaR@tib.wa.gov.