

Oregon State Treasury
Debt Management Division



Bond Tracker

Financial Leadership for Oregon through Advanced Technical Solutions

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State of Oregon

Project Manager
Alice Bibler, Debt Program Manager

Project Sponsor
Laura Lockwood-McCall, Director, Debt Management Division

Project Participants

Project Oversight

Larry Groth, Deputy Director, Debt Management
Darren Bond, Deputy Treasurer
Ron Pope, Director of Internal Services
Linda Haglund, former Deputy Treasurer

Project Team

Andrea Belz, Internal Auditor Representative
Nancy O'Halloran, IS Representative
Sarah Berg, IS Representative
Curt Hartinger, Risk & Compliance, Quality Assurance
Martha Kellams, Investments Representative
Natalya Cudahey, Banking Representative
Katie Roth, Banking Representative
Doug Bovee, Project Management Office

Debt Management Team

Lee Anaya
Matthew Harris
Nicki McMillan
Jennifer Bingham

DevMecca Programmers

Dave Baker, Project Manager, Database
Dean Takahashi, Server
Jeremy Wadsworth, Web Page
Jesse Mabon, Programmer

Oregon Legislative Representative

Representative Nancy Nathanson

RFP Review & Contracts

Oregon Department of Justice

Beta Testers

Oregon Department of Veterans' Affairs
Oregon Housing & Community Services Department
City of Portland
K&L Gates
Seattle Northwest
D.A. Davidson

Executive Summary

Oregon State Treasury's (OST) mission statement is "Financial Leadership Today for Oregon's Tomorrow." OST strives to provide top notch customer service, communicate with and educate our clients, stakeholders and partners, and drive efficiencies through innovation balanced against risk. OST's Debt Management Division (DMD) has incorporated Treasury's strategic goals into the development of the Bond Tracker system.

Historically, the DMD tracked outstanding bonds with a system that was adequate at the time of its creation, but by 2009 had reached the end of its useful life. The system tracked needed data, but used the PowerBuilder language that would no longer be supported by OST IS staff. Users of the system had to be very computer savvy and have a clear understanding of quirky naming conventions, and become masters in the creation of reports through a product called Crystal Reports.

In January 2010, our contractor, DevMecca presented the DMD with a prototype of what we believe to be one of the most powerful bond tracking programs in the United States. This new program, the Bond Tracker, has individual logins allowing outside agencies and private sector businesses access to data. Simple and advanced filters along with canned and custom reporting allow users quick and easy access to information. Validation rules and set procedures for entering and approving information help to ensure the quality of the data entered. Powerful tools like the Amortization Schedule generator allows governments to look at debt service payments across multiple programs and make critical decisions regarding future bond issuance.

After sufficient beta testing, the Bond Tracker achieved full system implementation as a standalone system in November 2010. By June 1, 2011, the project was completed with most large municipalities and private sector businesses successfully using the Bond Tracker system.

Bond Tracker is a prime example of how OST provides proactive financial leadership. The implementation of Bond Tracker has driven efficiencies in an innovative way, and has allowed the DMD to improve communications, provide better customer service, and educate State and local governments and private sector businesses. In addition, the ease of accessing information using Bond Tracker enhances government transparency, the analysis of information, compliance with federal and state mandates, and ultimately provides a greater cost saving to Oregon taxpayers.

As a leader in this arena, the Oregon State Treasury's DMD has been promoting and sharing the innovative, cost cutting, and flexible nature of Bond Tracker with other states, as well as the Municipal Securities Rulemaking Board (MSRB).

Since most states do not have sophisticated software for tracking debt, the DMD envisions that Bond Tracker will continue to lead as a model nationally for other states.

Description of the Project

The Debt Management Division (DMD) initially used a custom-designed software system developed by an external contractor in 1995 to track and report on Oregon's state and local government debt activity. In 2006, the Oregon State Treasury (OST) determined that significant modifications were needed to track and report on new types of financial products such as variable rate bonds and interest rate swaps, as well as expand the ad-hoc reporting capabilities of the system. A consulting firm was hired to research and document DMD's business processes, and develop requirements for a new statewide debt tracking system.

The consultants identified several "off-the-shelf" software packages that might have met DMD's business requirements at a lesser cost than a fully-customized software solution. However, upon review of the various software products, it became clear that none could meet both DMD's business needs and OST's technical requirements. While "off-the-shelf" products were designed to track newer financial products for single municipalities, OST needed a solution capable of tracking approximately 1,700 borrowers in its current debt system and allow room for growth.

Barriers, Challenges, Opportunities

The old system was not user friendly and access to information was limited to DMD and Information Services (IS) staff. Data was manually entered by staff from Adobe files, filled out by state and local government organizations. Data contained within the system resided in a relational database, and output was typically provided through standard, hard-coded reports created by IS staff. Ad-hoc report writing was limited, and calculations needed to report debt activity were performed only in standard reports.

Users of the old system needed a firm understanding of naming conventions for the Issuers (state and local governments), in order to properly extract and compile useful data. Reporting features were limited unless the user was thoroughly trained in the use of Crystal Reports software. Aging system issues included a lack of validation rules for data quality, and procedures that were not uniform for recording redemption information (early payments of principal) in the debt service schedule. While there was a feature to calculate interest, the result was not always accurate due to inconsistent procedures.

Due to the complexity of the system and the lack of IS staff support to create a new system, a Request for Proposal (RFP) was sent out to solicit for a contractor to design and implement a new debt management system. The new system was envisioned to be accessible to users over the internet, and replace the 13 year-old debt tracking system.

Length of Time in Operation

After considering many of the issues, options, and deciding if the timing was right to move forward, the Bond Tracker project was formally initiated in January 2010, with the introduction of a prototype of the bond tracking program. The contractor, along with DMD staff, worked with approximately 30 private sector professionals and state and local government agencies to initially beta-test the new system. The second phase of

beta-testing was conducted by DMD staff alone, and ran from May 2010 through October 2010. During this phase of testing, the old system ran simultaneously with the new. In August 2010, with the new login features, the DMD allowed system access to the private sector businesses as well as local government agencies that regularly issued bonds. In November 2010, the DMD retired the legacy system and began using the new Bond Tracker as a stand-alone system, achieving full system implementation. By June 1, 2011 the project was completed, as most private sector businesses and large municipalities had completed their training and were successfully using the new Bond Tracker. As of June 1, 2012, Bond Tracker has been in operation for twelve (12) months.

Through this project, the DMD was able to increase its business processes efficiency, convert a manual process into an electronic, and increase governmental transparency and accountability through advanced reporting features.

Innovative Characteristics

Initially, the DMD's goal was to replace a database that met basic business needs, but would soon lose user support from OST's IS department. Support Staff who had a vast amount of knowledge and experience with the old system were ready to retire. The DMD needed to proactively transition out of an obsolete technology, and saw an opportunity to create a product that would ultimately benefit not only OST, but other state agencies, local governments, and private sector businesses. Bond Tracker was designed to have the common look and feel of Excel, with similar features to help users feel comfortable when using the system. The following user-friendly features were included:

Individual Logins – Any government agency that issues bonds or a private sector business working on an issue on behalf of a municipal customer, can now obtain a login and password specific to their organization. OST has access to all information within the Bond Tracker system. In comparison, state and local government agencies only have access to data related to their organization, and private sector businesses only have access to the data pertaining to their clients.

Simple & Advanced Filtering – Bond Tracker utilizes two types of filters, simple and advanced. The simple filter is located at the top of each data column and allows the user to type in key words or numbers combined with simple operators such as “Starts with,” “Contains,” “Ends with,” etc., to narrow down search responses. The advanced filter utilizes enhanced Boolean Logic (AND, OR, NOT, etc.) allowing users to filter by multiple complex criteria and then save the filter for later use.

Canned & Custom Reporting – Canned reports are used by the DMD regularly to provide information to state and local government agencies, private sector businesses, and the general public. They include items such as: overlapping debt reports (reports local government agencies use for determining how much debt from other agencies is “overlapping” their tax base), and listings of all upcoming state and local bond sales. In addition, Bond Tracker is set to automatically update the Bond Calendar in real time, on OST's website anytime a bond issue is added or modified.

The Bond Tracker also allows sophisticated users to create “Custom Reports.” This tool allows a user access to every table contained in the database, from which they can then fully flesh out a complex report, then save the filter and format for future use. Users can also generate data compilations on an adhoc basis, rather than relying on IT staff. This saves users time and money and also allows DMD time to create specialized reports and readily respond to unanticipated inquiries.

Calculate Interest – This feature was included in the legacy system, and has been enhanced in Bond Tracker. Users are able to calculate interest on any debt service schedule in the system. The feature accurately calculates interest records when interest rate information is available. The tool is flexible in that it will calculate over any number of years, and any term of payments, for various interest rates. It will also produce accurate results if multiple payments of varying interest rates are due on the same day, a semi-common occurrence in the bond finance world.

Import and Export of Debt Service Schedules – Using an Excel template, users have the option of importing to, or exporting debt service schedules from, Excel. This has provided users with a quicker method of data entry and data retrieval.

Amortization Schedule - The Bond Tracker contains an Amortization Schedule calculator. It is used to generate payment data for bond issues and allows a user to calculate aggregate payment schedules across different data sets. As the database displays all payments for a bond, this allows an issuer for example, to display payments owed annually (fiscal or calendar year) for all their bonds. It also allows the State to calculate an entire program’s payments across many issuers (such as our School Bond Guaranty Program) by bond types, county, etc.

Automatic Sums – On the Issue screen and for each individual bond issue, there are auto sums for the amounts originally issued, total outstanding principal amounts and interest amounts, and the total of all outstanding principal and interest. This becomes a very quick and useful feature when filtering information – and the summations adjust automatically on the screen.

Leverage and Transferability

Bond Tracker aligns with the NASCIO State CIO priorities in the areas of budget and cost control, consolidation, shared services, security, transparency and infrastructure. In addition, it also aligns with the priority technologies: applications and tools of virtualization, document and records management, cloud computing, Enterprise Resource Planning, identity and access management, social media, and networking.

The DMD has been in communication with other state treasury departments who are facing similar issues and challenges with their bond tracking processes and systems. Since most states do not have sophisticated software for tracking debt, the DMD envisions that Bond Tracker will continue to become a model nationally for other states.

Communications Plan

Throughout the development of the software, the DMD accepted suggestions for system improvements from state and local governments and private sector businesses, and incorporated many of their suggestions. Their feedback was valuable and provided input for continuous improvements during system development, and enhanced the quality of a product that will serve many different customers.

In addition, the DMD staff has made numerous Bond Tracker presentations, and has provided one-on-one training opportunities for agencies and private sector businesses, who expressed an interest in becoming regular users of the Bond Tracker database.

Significance of the Project

OST strives to be a trailblazer for best practices in financial management and the Bond Tracker is no exception. Bond Tracker is a unique and innovative bond tracking system that can serve as a nationwide model for tracking debt.

Currently, the system serves OST, the Oregon Legislature, all state and local government agencies that issue bonds (including school districts and special districts), private sector businesses, and citizens. The strong reporting features of Bond Tracker assist the legislature in making key financial decisions for the state. These features also assist state and local governments with easily tracking outstanding debt, and assists bond professionals in evaluating potential cost savings for these agencies. Ultimately, these decisions and cost savings efforts benefit Oregon taxpayers and provide greater transparency to Oregon citizens.

As a leader in this arena, the Oregon State Treasury's DMD has been promoting and sharing the innovative, cost cutting, and flexible nature of Bond Tracker with other states, as well as the Municipal Securities Rulemaking Board (MSRB).

Benefits of the Project

Compliance with Federal mandates – The Municipal Securities Rulemaking Board (MSRB) and Securities and Exchange Commission (SEC) have been tightening federal regulations regarding secondary market disclosure requirements. Through Bond Tracker, the DMD recently added a module within the system that will drastically improve the ability of State and local government agencies to accurately submit required reports to the MSRB and SEC.

With the old system, local government issuers were required to pay for any requested reports, and their usefulness was limited. With Bond Tracker's filtering and reporting mechanisms, issuers are now able to access the data and reports they need to better comply with federal mandates quickly, easily, and inexpensively. In 2010, before Bond Tracker, out of the 574 local Oregon bond series that were required to be filed annually with the MSRB, only 62% completed filings on time, with an additional 17% filing late. In 2011, with Bond Tracker, the DMD improved on-time compliance to 93% with only 2% filing late. Overall, between 2010 and 2011, compliance with federal mandates improved 31%.

State mandates – Oregon State law [ORS 287A.640](#) requires the DMD to verify outstanding debt with all local government agencies. Using Bond Tracker, local governments were able to receive a link to a web page in order to comply with this mandate, resulting in a response rate of 100%. The debt verification ensures that all financial data remains accurate and that contact information remains current. Bond Tracker also provided supporting data on debt levels for the Governor and State Legislature (who make decisions based on the data provided). Other reports, including overlapping debt reports are used widely in securities offering documents, secondary market disclosure filings, and Comprehensive Annual Financial Reports (CAFR).

Innovative Funding - The DMD has restructured how fees are charged to pay for the ongoing maintenance and improvements to Bond Tracker. The DMD is self supported by fees collected from local governments and state agencies. Prior to Bond Tracker, local governments were charged fees for ordering overlapping debt reports and any remaining costs were split among state agencies issuing debt. The report fees did not cover the cost of staff and the system, so initially it was subsidized by state agencies.

Upon approval from the Municipal Debt Advisory Commission (MDAC), the DMD no longer charges for reports, but now charges a MDAC fee to local governments who issue bonds. The fee is 0.01% of the total of each bond issue with a minimum charge of \$800, up to a maximum of \$5,000. State agencies pay set fees each time they issue bonds. These fees are wired to OST at closing, are easier to track, and allow the DMD to properly fund the costs and allocate them fairly among local governments and state agencies who are actively selling bonds.

Reduction in data entry time – In the old system, MDAC forms submitted by local governments and private sector businesses took DMD staff 1-2 hours on average to enter. With Bond Tracker, these forms are electronically entered by the local governments and private sector businesses, and take DMD staff about 5 minutes to review for accuracy before approving.

Reduction in processing time - Annually, the DMD receives from the Department of Revenue (DOR) the Real Market Values data from around the State. The DOR Load process allows the Oregon State Treasury's DMD to import an Excel spreadsheet directly into Bond Tracker. As a result, complex reporting on the indebted tax burden of a municipality is readily available. This annual process previously took the DMD and IS staff about 20 hours to complete. With Bond Tracker, it now takes about 2 hours and only requires DMD staff to complete this annual process.

Bond Tracker is a prime example of how OST provides proactive financial leadership. Implementing Bond Tracker has driven efficiencies in an innovative way, and has allowed the DMD to improve communications, provide better customer service, and educate State and local governments, and private sector businesses. In addition, the ease of accessing information using Bond Tracker enhances government transparency, the analysis of information, compliance with federal and state mandates, and ultimately provides a greater cost saving to Oregon taxpayers.