

Organization

Central Washington University is a four-year public university with approximately 11,000 students and 478 full-time faculty.

Central Washington University**The Challenge**

Implement a university-wide BI solution for predictive analytics, organizational decision-making, internal and external reporting, and compliance.

The Strategy

Acquire an integrated BI platform that combines analysis, data management, information delivery, and reporting into one cohesive environment.

The Results

CWU gained more efficient federal and state reporting and more accurate data for student retention, strategic planning, accreditation, and admissions. Reports that used to take months are now generated in minutes.

Information Builders Solution

WebFOCUS Bundle for Higher Education, ReportCaster, RStat, and Active Technology.

Information Builders provides the industry's most scalable software solutions for data management and analytics. With one smart platform for integration, data quality, and analytics, we help companies manage their data, generate insights, take action, and deliver impact.



Central Washington University Gets SMART With WebFOCUS

Statistical Analysis, Reporting, Compliance – CWU Does It All With Integrated BI Environment

Established in 1891, Central Washington University (CWU) is a four-year public university located about 100 miles from Seattle. This prestigious institution of higher education has approximately 11,000 students, offers more than 150 majors, and graduates about 2,500 students each year. CWU has 478 full-time faculty, 174 part-time faculty, and 500 administrative staff.

Until recently, CWU relied heavily on an Oracle PeopleSoft enterprise resource planning (ERP) system for most of its reporting activities, but it was a slow, laborious, and paper-intensive process. Some queries took 20 minutes or longer to execute, which impacted the performance of the ERP system and sometimes caused it to crash.

Keeping up with state and federal compliance requirements was particularly difficult. For example, one report for the Public Centralized Higher Education Enrollment System (PCHEES) included hundreds of pages and took eight months to produce. The university also had to create large reports for U.S. News & World Report, ACT, and Petersons. This meant the reporting team had to respond to dozens of public requests from state agencies and create more than 100 internal reports each year.

To provide more speed and flexibility to these reporting activities, the university acquired business intelligence (BI) technologies from Information Builders in one integrated package. The WebFOCUS BI platform permits them to sort, summarize, drill into, and visualize data through interactive displays.

"As our reporting requirements escalated, there was an acute demand for an analytics and reporting system that could provide a historical perspective, allow for trend analysis, as well as support custom self-service analytical and dashboard reporting," notes James DePaepe, executive director for Accreditation, Comprehensive Planning, and Organizational Effectiveness at CWU. "We credit Information Builders for supplying a strong technology platform and for helping us build a strong base of technical expertise in-house."

An Integrated Environment for Reporting and Compliance

Since installing WebFOCUS, DePaepe and his team have dramatically streamlined campus-reporting activities. They have developed WebFOCUS dashboards as part of a self-service BI environment called Student Metric Analytic Reporting Tool (SMART).

These dashboards include standard reports as well as a self-service reporting environment that allows the faculty and staff to help themselves to the information they need.

Available to all faculty and staff on campus, SMART currently includes 18 WebFOCUS dashboards and four WebFOCUS Active Technology reports. Data is derived from a data warehouse and three data marts that contain data from PeopleSoft, Data 180, MAP-Works, and Adirondack, as well as from external sources such as Pearson, National Survey of Student Engagement (NSSE), and Faculty Survey of Student Engagement (FSSE).

The new BI environment permits faculty and staff members to examine admissions, course enrollment, student retention, academic programs, graduation statistics, finance, and HR. Users appreciate the ease with which they can access the information and that it is a secure environment.

"Since we have developed the data warehouse and acquired WebFOCUS, external reporting has become fairly standard," explains Dan Matthews, director of analytics and research in the OE department. "We complete many reports ahead of the deadlines, which gives us time to deal with internal demands."

In some cases, it only takes a few minutes to produce reports that formerly took months. As Matthews explains, previously they had to run multiple queries to extract data from PeopleSoft, and then merge it externally into a Microsoft Access database. "It became very cumbersome to do all the historical reporting as well as all the day-to-day reporting. It might take 16 queries to populate one report, clean up the files, and merge it all together. It was a long, intensive process."

Today, WebFOCUS generates the reports and submits them electronically, including compliance reports for the Integrated Postsecondary Education Data System. Internal reporting is also much more efficient. CWU produces about 100 self-service reports per year and numerous legislative reports, such as comparisons among student populations. SMART lets them filter the data and select the variables of their choosing, as well as determine the output options they want: HTML, Microsoft Excel, PDF, and Active Technology reports.

"Users like the self-service reporting environment because it gives them more control than they ever had in PeopleSoft," says Matthews. "WebFOCUS ReportCaster delivers reports to subscribers by e-mail, and WebFOCUS Active Technology allows for local data visualization and drill down. It's easy to run Excel pivot tables and pivot charts. People can do sophisticated work and get quick results."

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**James DePaepe
Executive Director
for Accreditation,
Comprehensive Planning,
and Organizational
Effectiveness
CWU**

“Everybody talks about data-driven decision-making, but it is all based on the quality and relevance of your data. Our data warehouse and BI tools enable us to produce better information and make better decisions.”

**Dan Matthews
Director of Analytics and
Research
CWU**

Rapid Statistical Analysis With RStat

As the user community gains proficiency and independence, the OE team has more time to develop useful analytics related to graduation rates, student retention rates, admissions, and other business domains. Using WebFOCUS RStat they have created a risk model to predict which students are at risk for dropping out of school prior to graduation. The system automatically generates reports for college counselors so they can call these students in for intensive advising. It even predicts the academic quarter in which their status is deemed to be most fragile.

“We have a good national ranking in these areas but we want to do better,” DePaepe says. “WebFOCUS, ReportCaster, and RStat are making our job much easier.”

For example, one student retention study required a repetitive cycle of extracting data from the data warehouse, loading it into an IBM SPSS predictive analytics environment for analysis, and then loading the results back into the warehouse for reporting. “It took two years to build our first SPSS model,” admits Matthews. “With RStat we can build new models in one day and change them on the fly. It’s a much simpler approach because we don’t have to extract, manipulate, and reload the data. WebFOCUS automatically grabs the correct variables, runs the stats, and generates the reports.”

RStat has a GUI interface that allows the OE team to build and run these statistical models without doing any R scripting. According to Matthews, this user-friendly approach allows them to focus on the statistics and the results rather than on complex analytical process. “It is easy to use RStat and the output looks amazing,” he notes.

“The nice thing about RStat is that we can change our models on the fly,” adds DePaepe. “As the variables change, we can easily update the model, and it will impact our risk index accordingly. With SPSS, once you pick your model, you are pretty much locked into it.”

Mobile BI for Tablets and Smartphones

WebFOCUS has replaced many aspects of PeopleSoft Reporting and supplanted the IBM SPSS environment. The university’s next WebFOCUS initiative involves mobile-enabling the entire BI environment. “We are now building everything in WebFOCUS App Studio and utilizing auto-sizing so our reports and dashboards can work with any kind of device,” Matthews says. “Our users like Active Technology reports because they render nicely on tablets. They don’t have to be connected to the Internet so they can do off-line analysis,” he adds.

“Everybody talks about data-driven decision-making, but it is all based on the quality and relevance of your data,” Matthews concludes. “For many institutions, this is a very difficult process. We’ve simplified it considerably and dispersed it throughout the organization so that everybody is seeing the same numbers and the same information. Our data warehouse and BI tools enable us to produce better information and make better decisions.”

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