Information Builders

Customer Profile

Colorado State University

Organization
Colorado State University (CSU) is a research-intensive public land-grant university located in Fort Collins, Colorado, with more than 33,000 students, nearly 2,000 faculty, and over 2,500 administrative staff.

The Challenge
As the university's analytics endeavors expanded to include many types of data and reporting tools, the institution's faculty and staff members had a difficult time obtaining consistent data.

The Strategy
Use Information Builders Cloud, a fully managed solution that combines data management and analytics technology, hosted on Amazon Web Services (AWS).

The Results
Consistent analytics are driving a high level of accountability and productivity across the university, along with dramatic reductions in capital and operating expenses for the IS department.

Information Builders Solution
WebFOCUS, InfoAssist, Information Builders Cloud, Professional Services, and Customer Education.

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.

Colorado State University Moves Enterprise Analytics to the Cloud

Amazon Web Services Anchors Scalable, Campus-Wide WebFOCUS Solution

Located in Fort Collins, at the base of the Rocky Mountains, Colorado State University (CSU) is a large, public, research-intensive university that, consistent with its land-grant heritage, offers a comprehensive array of undergraduate and graduate programs through eight individual colleges. By statute, there are also four State agencies assigned to CSU: the Colorado Agricultural Experiment Station, Extension, the Colorado State Forest Service, and the Colorado Water Center.

Data and analytics drive many of these academic initiatives and data is also critical to the many back-office administrative functions that keep the university running smoothly, from finance to human resources (HR), admissions to institutional research. As the university's analytics endeavors expanded, the institution's faculty and administration had increasing difficulty obtaining consistent data, due to inconsistent operational definitions and the lack of a central reporting platform.

"People were showing up at meetings with conflicting numbers," says Melissa Hein, an accounting and budget analyst in the university's College of Veterinary Medicine and Biomedical Sciences. "We needed one centrally supported platform that could deliver one version of the truth."

With the support of the vice president for Information Technology and dean of Libraries, CSU's Information Services (IS) department led the effort to select one enterprise platform that could fulfill the analytics needs of the entire university.

Campus constituents wanted a cloud-based solution that could improve student outcomes through predictive analytics, boost operational efficiencies, and differentiate CSU from other institutions with externally facing dashboards and fact books.

"Information Builders' collaboration with Amazon Web Services was the right answer for us. A SaaS solution was what we needed, as we didn't have the resources to invest in hardware platforms, system upgrades, and product maintenance," says Steve Juarez, a senior developer in the university's IS department. "With Information Builders Cloud, we could focus our resources on adding value to our business operations."

"Information Builders' collaboration with Amazon Web Services was the right answer for us."

Steve Juarez
Senior Developer
Colorado State University

Spreading Analytics Throughout the Institution With Interactive InfoApps™

Since going live with Information Builders Cloud, the university has created a centralized analytics platform that consolidates more than 15,000 financial reports from multiple data sources, departments, and reporting environments. The Office of Institutional Research, Planning and Effectiveness developed an externally facing dashboard that prospective students and their parents can use to get to know the various departments and majors at the university.

A portal built on Information Builders' WebFOCUS business intelligence (BI) and analytics platform includes InfoApps targeted to specific domains, such as student enrollment, degrees conferred, entering freshman characteristics, and student success.

"With our previous platform, we could only produce reports with limited interactivity," says Reena Khosla, a developer in the Office of Institutional Research, Planning and Effectiveness, who led development of the portal. "Now we have complete interactive control with far more options for display."

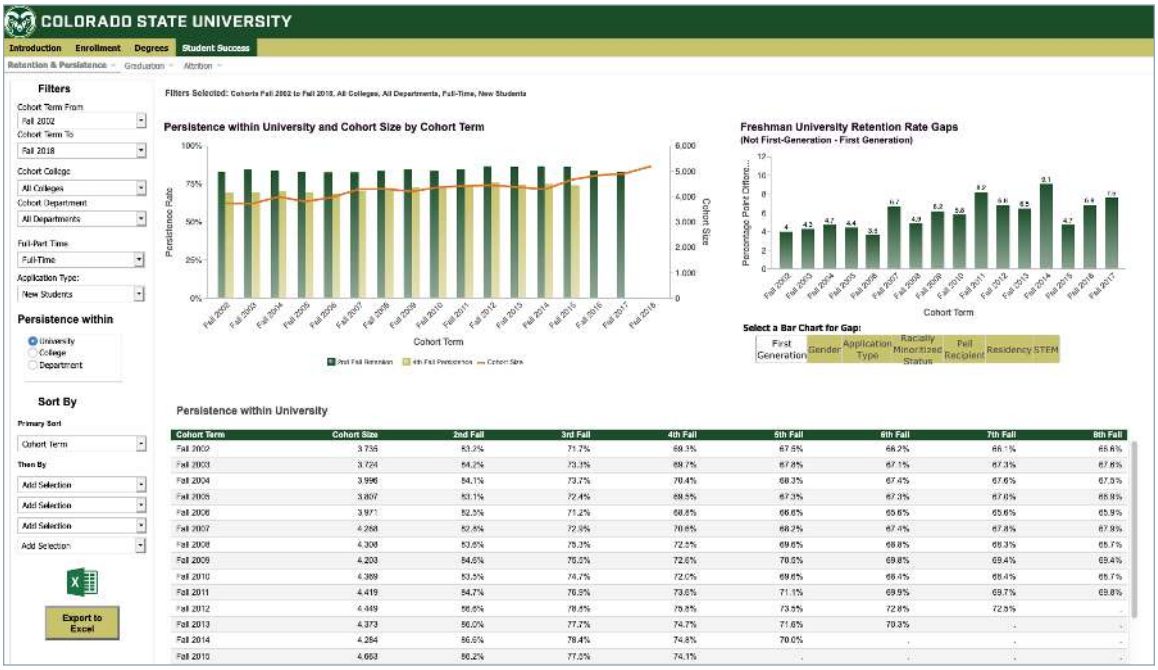

Figure 1. The Student Success InfoApp.

For example, the Student Success InfoApp™ (See Fig. 1) allows administrators to study student success in terms of retention, graduation rates, and attrition. Users can see how students are persisting year to year, as well as monitor how long it takes for students to graduate, broken down by various filters and sorting variables, so the university can better allocate its resources.

The Degrees InfoApp (See Fig. 2) shows degrees conferred by year, gender, ethnicity, and degree category, sorted by college, gender, ethnicity, and other variables:

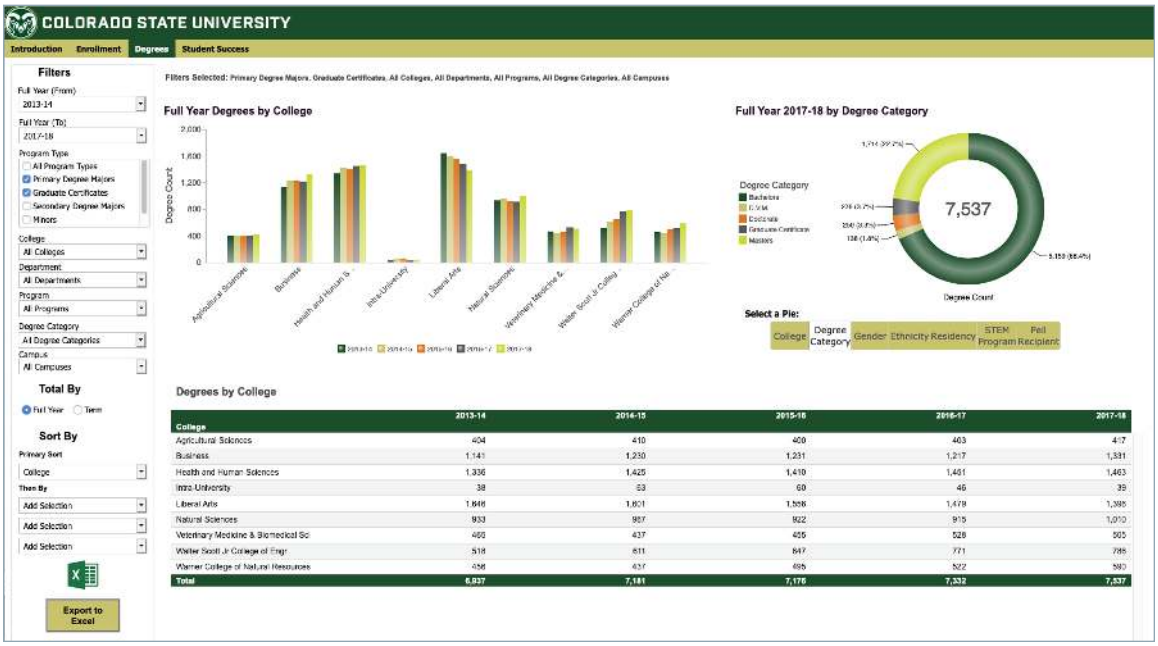

Figure 2. The Degrees InfoApp.

Khosla calls these InfoApps "guided analytics," because users can filter the data simply by selecting variables from pull-down menus. "We have data going back 20 years, which is important for federally mandated reporting and to provide data to inform campus discussions," she notes. "It's easy to sort, summarize, and visualize the output in dynamic charts and graphs. It's truly interactive; you can slice and dice the data however you like."

In a related effort, a small team of people from across the university migrated key HR, finance, and student reports to the new analytics environment, based on a database schema that enables business users to query and visualize the data through InfoAssist. Data flows from the university's transactional systems into an Oracle data store. From there, it is immediately available to WebFOCUS, which populates the InfoApps and other interactive displays.

"Even people who have a modest level of technical proficiency can get the data they need," Hein says. "Power users in finance, HR, at the college level, and other areas are taking analytics into their own hands. When people come to meetings all the numbers are correct and consistent. We have standardized our reports and we no longer have data consistency issues."

"Our nightly data movements are much simpler than before. By moving to Information Builders Cloud, we have reduced our ETL loads by at least 30 percent. The reporting servers are in the cloud and the data is on premises."

Steve Juarez
Senior Developer
Colorado State University

Data On-Prem, Logic in the Cloud: A Successful Hybrid Deployment

Initially, the IS team was concerned that if they kept their data on-premises, and hosted their analytics applications in Information Builders Cloud, that the performance would not be adequate, but this has not been an issue with Information Builders Cloud.

"Our nightly data movements are much simpler than before," Juarez says. "By moving to Information Builders Cloud, we have reduced our ETL loads by at least 30 percent. Some of our reports are rather large but the WebFOCUS adapters do a great job generating SQL queries."

The innovation continues, anchored by the variety of software tools available in Information Builders Cloud. For example, the Admissions department is exploring the use of RStat predictive models that will help them monitor fall enrollment numbers week by week, as well as indicate which types of students are most likely to enroll, based on data in their applications.

AWS Auto Scaling, combined with the ability of WebFOCUS to expand hardware usage on demand, improves surge capacity without requiring any administrator support.

"It's pretty much hands-off on our side," Juarez continues. "It was an easy conversion, with lots of communication with our stakeholders. Both vendors have been very responsive whenever questions or issues arise."

"We don't have to think about server hardware, performance, capacity, or tape back-ups and restores," Juarez concludes. "We can easily access the reporting servers if we need to, but we don't have to worry about lights and power and data centers and geographical distributions. We put the keys in the ignition, and we drive."

Find Out More

We can help you succeed. Talk to your local Information Builders representative to learn how. Visit us at **informationbuilders.com**, e-mail **askinfo@informationbuilders.com**, or call **(800) 969-4636** in the U.S. and Canada. To improve your skills, visit **education.ibi.com**.

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