



Microsoft Windows Server 2003 Customer Solution Case Study



Web-Based Academic Administration System Increases Operational Efficiency on Campuses

Overview

Country or Region: United States

Industry: Manufacturing: high tech and electronics, higher education

Customer Profile

Founded in 1985 as a research and software application development company, Three Rivers Systems now serves more than 300 academic institutions nationwide.

Business Situation

Three Rivers Systems sought to provide higher education institutions with a cost-effective, low-maintenance solution for end-to-end academic administration.

Solution

The company used Microsoft® development tools to create the only all-Web-based campus-management solution, which runs on components of Microsoft Windows Server System™, including Microsoft Windows Server™ 2003 and SQL Server™ 2000.

Benefits

- Increased operational efficiency
- No maintenance required on client workstations
- Low, predictable total cost of ownership

“Basing our solution on a Microsoft integrated server infrastructure enabled us to produce a full-fledged, scalable enterprise application that has driven more sales and larger sales.”

Amir Tajkarimi, President, Three Rivers Systems

Three Rivers Systems wanted to build a system for institutions of higher education to expedite operational processes, from the time students first apply for admission through their alumni years. The company chose a 100-percent Microsoft® development and operating environment to produce its Comprehensive Academic Management System (CAMS) Enterprise, the only all-Web-based academic-management solution on the market. CAMS automates the flow of academic information such as grades, course schedules, accounting data, integrated portals, and e-learning, thereby eliminating copious paperwork and the accompanying potential for human error. Running on components of Microsoft Windows Server System™, CAMS has met colleges' and universities' needs for a low-cost, low-maintenance solution for increasing operational efficiency and is already in use by more than 300 academic institutions.



Situation

Three Rivers Systems, headquartered in St. Louis, Missouri, was founded in 1985 to bring the benefits of emerging technologies to academic administration. Institutions of higher education, as nonprofit organizations, run on tight budgets and need solutions for increasing their operational efficiency while keeping tight control on the costs and maintenance of those solutions.

Solution

Three Rivers Systems developed its first version of Comprehensive Academic Management System (CAMS) in 1985 to run on the MS-DOS® operating system and continued to upgrade the product as technologies advanced. “Initially, we did not use Microsoft® development tools,” says Amir Tajkarimi, President of Three Rivers Systems. “But when it came time to create our next-generation product, we decided to move over to a 100-percent Microsoft development environment.”

Tajkarimi explains that Three Rivers Systems considered competing technologies and chose Microsoft development systems and tools because they gave the company an all-inclusive solution with dependable, streamlined support. “The alternative would have been to combine a lot of different technologies from disparate vendors,” he says. “We wanted to eliminate the potential for finger-pointing about which piece was not working when something went wrong, as well as the hassle of going to multiple vendors for support.”

Three Rivers Systems developed the current version of CAMS, CAMS Enterprise, by using the Microsoft Visual Studio® version 6.0 development system. CAMS Enterprise uses an n-tier architecture, with a database layer built on Microsoft SQL Server™ 2000, a middle tier containing Microsoft Component Object Model objects, and a presentation

layer built with Active Server Pages technology for building applications. CAMS typically operates on two servers running the Microsoft Windows Server™ 2003 operating system; one server houses the Microsoft SQL Server 2000 database, and the other houses Internet Information Services version 6.0 and the CAMS application. The solution requires no dedicated client software and, therefore, can be accessed by way of Microsoft Internet Explorer or other Internet browsers.

All users—students, faculty, staff, or general public—enter the CAMS system by way of self-service portals that lead to needed functions and services. The fully integrated solution provides modules for every major aspect of campus management, including, but not limited to:

- Admissions, registration, and placement
- Student billing and financial aid
- Health records
- General ledger, accounts payable, and payroll
- Human resources and faculty
- E-learning

For accounting functions, CAMS uses Microsoft Business Solutions—Great Plains® software and can also be integrated with other financial software that the educational institution might already have in place. The application also integrates fully with the Microsoft Office System servers, programs, services, and solutions and with Microsoft Exchange Server 2003, so users can easily perform tasks such as merging addresses and letters in Microsoft Office Word 2003 for a mass mailing or extracting data into the Microsoft Office Excel® 2003 spreadsheet software for analysis.

Through the integration capabilities built into SQL Server 2000, Three Rivers Systems can typically implement CAMS within nine months—although the company has deployed the solution in as little as three months.

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Fred Phillips, Director of Information Services,
Nazarene Bible College

Three Rivers Systems migrates all of the data from the customer's disparate, existing systems to SQL Server 2000 by way of SQL Server migration scripts.

“The implementation of CAMS Enterprise on our campus was painless,” says Fred Phillips, Director of Information Services at Nazarene Bible College, a Three Rivers Systems customer since 2002. “Our plan was to go live in six months. Software installation, training, and setup took approximately a week. For the next few months, while we input data, we ran CAMS and the old systems in parallel. About a month before the scheduled cutover, we went over our to-do list and realized we were already done. We shut off the old system a month before schedule; in fact, we could have shut it off even sooner.”

Benefits

Three Rivers Systems has grown to serve more than 300 higher education institutions, with campuses ranging from 100 to 15,000 students. The CAMS Enterprise solution has proven capable of making it possible for Three Rivers Systems to meet its goal of helping colleges and universities to gain new operational efficiencies while keeping total cost of ownership and maintenance demands manageable.

Increased Operational Efficiency

CAMS Enterprise gives students, faculty, and staff access—anytime, anywhere—to the tools and information they need, and the system is helping to increase productivity for thousands of people and to accelerate the flow of information around campus. As a comprehensive, integrated campus-management solution, CAMS Enterprise automates many processes that institutions used to have to perform manually. Three Rivers Systems' collegiate customers no longer have to occupy a huge campus hall at the beginning of each semester to register

students; the academic institutions can now have students register online, thus eliminating copious paperwork and data entry along with the accompanying risk of clerical errors. Another of the many modules in CAMS is a Degree Audit Program, which not only calculates what courses a student still needs to take in order to fulfill requirements, but also produces a list of current offerings that both meet those requirements and fit into the student's schedule. This automatic processing of administrative tasks reduces clerical, paper-based work and helps enable staff to focus on more important human concerns.

Case in point: At Nazarene Bible College, CAMS Enterprise has cut staff time spent on registration by at least 75 percent. “We used to spend three long days doing fall registration,” recalls Phillips. “Everyone had to be there—our full IT staff, all the business people, the financial aid personnel, the admissions team, faculty, and even the secretaries. We would all start first thing in the morning and go until 10 o'clock at night, and our IT staff would be running around, fixing things the whole time. Since implementing CAMS Enterprise, we only have to set aside a day and a half for registration, and it all runs so smoothly that less than half the staff needs to be there. And the IT department doesn't have to be there at all. I'm on call the whole time, but my phone just doesn't ring. It's astonishing.”

Ease of Maintenance: Zero on Client Workstations

Three Rivers Systems designed CAMS Enterprise to minimize the burden and costs of system maintenance on institutions.

■ As an entirely Web-based solution, CAMS eliminates the need for implementing and managing client software and hardware. “We don't have to do any maintenance on client workstations for CAMS to function properly,” says Phillips. “We deploy

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standard PCs with the Microsoft Windows® operating system, a browser, and the required Microsoft ActiveX® controls and, then, merely go on with life.”

- By consolidating all of the institution’s data into a single SQL Server 2000 database environment, CAMS removes the need for complex data integration processes and gives users easy access to their information.
- The SQL Server 2000 infrastructure also precludes the need for excessive administration. “We do very little in the way of maintenance with SQL Server 2000 for the CAMS database,” comments Phillips. “We set up the backup utility to automatically throw off a copy every few hours just to be safe, but that is about it.”
- With its open architecture and point-and-click interface, CAMS is simple and intuitive to manage, and therefore reduces the need for institutions to hire specialized engineers and consultants or to depend on the IT department to implement system changes.
- Three Rivers Systems has used Web services to build an auto-update feature into CAMS, so the system can be patched automatically without need for customer intervention.
- The application and its infrastructure based on Microsoft Windows Server System™ integrated server software operate with exceptionally high uptime. “Simply put, CAMS Enterprise is rock solid,” comments Phillips. “We have found it to be completely stable and reliable.”

“Our IT department spends very little time dealing with CAMS,” Phillips summarizes. “Once the program has been set up, it works flawlessly. Adding and maintaining users is extremely easy, and Three Rivers Systems does almost all of the updates. We spend a little time helping with custom reports and integrating our own user-defined routines, but

this is all so easy, it is hardly worth mentioning.”

Low, Predictable Total Cost of Ownership

The stability and ease of maintenance of CAMS ensure that customers can keep their ongoing costs for the system low—a significant concern within an academic environment where budgets are fixed. “Our customers pay upfront for the system and then have a 15 percent annual maintenance fee—no surprises,” says Tajkarimi. When it comes time to expand CAMS, its tiered architecture enables customers to scale up simply by adding extra processors and servers—the load automatically rebalances itself. Furthermore, CAMS customers find that their training costs are minimal because most users are already accustomed to the Microsoft Windows operating system, and IT staff are familiar with SQL Server 2000 and Windows Server 2003.

“Before deciding on CAMS, we considered several other solutions,” says Phillips. “During our site visits to look at competing technologies, we found a common theme: huge learning curves. One place told us that it would take our admissions department a month’s worth of training just to get started, and six months to a year to actually use it well. In contrast, CAMS users told us that if you already know how to use Microsoft Office and a browser, the rest is fairly intuitive—and it is. The speed in which users are able to learn the system is incredible. Very little time and effort is required for new hires.”

Benefits to Three Rivers Systems

Three Rivers Systems has been very satisfied with its choice of a 100-percent Microsoft development and operating environment for its product. “Our partnership with Microsoft has worked out well,” concludes Tajkarimi. “First, it has streamlined our product development by giving us an all-inclusive set of tools and solutions that are already fully

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For more information about Three Rivers Systems products and services, call (636) 386-8616 or visit the Web site at: www.threerivers-cams.com

integrated with each other. Second, it has made it easier for us to attract talented developers who, because they know the technology already, start working productively from day one. Finally, we encounter nearly 100-percent acceptance from our market for Windows Server System. Basing our solution on a Microsoft integrated server infrastructure enabled us to produce a full-fledged, scalable enterprise application that has driven more sales and larger sales.”

Windows Server 2003

The Microsoft Windows Server 2003 family helps organizations do more with less. Now you can: run your IT infrastructure more efficiently; build better applications faster; deliver the best infrastructure for enhancing user productivity. And you can do all this faster, more securely, and at lower cost.

For more information about Windows Server 2003, please visit:

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