



A College Puts Its Trust in the Cloud

Facing outages and other threats to continuous service, Illinois State crafted an affordable digital solution

July 2022



Illinois State University (ISU) several years ago saw the need – and opportunity – to use technology to create a personalized, highly engaging campus experience for their students that would help them stay competitive in the higher-education market.

But Illinois State also realized that it faced challenges. The enterprise resource platform (ERP) it was using to connect students with services frequently let them down, especially during one of the most hectic times of the year: course registration.

“We could never spin up enough servers to get us through those busy days,” Jon Cramer, application administrator at Illinois State, says, referring to the registration travails from 2015-18. “The best we could do was to tweak up what we had, but it was never enough. We prepared for failure.”

The university had experienced inadequate software application performance in other ways too. Its tech officials worried it was not meeting the immediate needs of its 20,000 students. Administrators were also concerned over the safety of sensitive academic, personal, operational, and research data in the event of a disaster; Illinois State, in Normal, Ill., is situated within Tornado Alley and needed a more resilient ERP that could recover in the event of a natural disaster.

What’s more, Illinois State had staffing concerns echoing those of leaders at colleges nationwide, many of whom have reported challenges hiring and retaining quality technologists. ISU sits in a region that includes State Farm, Rivian, and Cat-

erpillar amongst other major corporations some of which utilize the same ERP. University officials wondered whether they would be able to maintain enough staff to fully manage a new system given the competition for IT talent.

The university had already tried several ways to work with the PeopleSoft ERPs it had installed in 2014. To meet a growing demand, it had revised the platform, but still found that it didn’t meet the performance needs of the campus. A long list of service requests to its vendor was only intermittently dealt with, if at all. A management “solution” offered by a second tech company early on proved to be as big a headache as the original system. For years, the frustration continued.

“Our students would keep score of our outages and then tell us what the score was—and it wasn’t good,” says Todd Smoak, executive director of technology solutions at Illinois State. “We’re in this super-competitive higher-ed landscape where we need to make sure students are getting a substantial return on their investment. We knew that being able to quickly meet their needs would give us an advantage.”

Illinois State’s technology wish list echoed ones held by many institutions. “Our systems have to be affordable, transformative, and capable of increasing the focus on a better experience for our students, faculty, and staff,” says Charley Edamala, Chief Information Officer at Illinois State.

To make sure the university received the proper tools and around-the-clock services to keep them up and running, it sought out a tech

partner. “We weren’t so much interested in another entire system as we were in finding a partner that our higher-ed contacts spoke highly of,” says Smoak. “We didn’t want to be the guinea pig for another system.”

Finding the Right Partners

The university’s expectations were clear. Leaders and students sought a platform that was responsive at all times—including during the registration crush—and could simultaneously handle up to 7,500 users. But that was just the beginning. Smoak wanted a transparent system where he “could see everything that’s happening everywhere, and in real time,” he says. That included the status of tech updates, what current data looks like, what security logs were showing, and the cost of tech services.

The partner would handle problems as they arose—and not just when Illinois State sent in a repair ticket, as had been the case previously. It wanted a system that could help the university manage the cloud environment without having to add more features or undergo another migration.

After reading a half-dozen proposals from tech companies, Illinois State signed with ERPA in 2019, a partner of Amazon Web Services (AWS), to help it convert its ERP system.

After assessing the university’s needs, ERPA saw AWS as the right fit for Illinois State’s infrastructure. Following a series of architecture design meetings in the summer of 2019, ERPA and Illinois State technologists developed a migration plan within five months and then implemented it over one weekend.

Affordable Transformation

The system was immediately more reliable, Smoak reports. The tech office once received hundreds of complaints, particularly during course registration weeks, about outages or sluggish system availability. Now, it gets fewer than 100. “People have stopped counting how often we’re down or face glitches,” Smoak says.

Another major advantage was cost savings. Because the ERPA/AWS cloud-centered solution removed the need to purchase more hardware, or create a whole new system, it saved the university about 30 percent in total ownership costs.

“It is easily that much,” Smoak says. “AWS pricing is public. You can go online and find it.” At a time of delivery disruptions, when the availability of hardware has become unpredictable, relying on the cloud made much more sense, he adds.



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Benefits Today and in the Future

Today, maintaining a relationship with a solutions-minded implementation partner has been a benefit to Illinois State as it mines the cloud for operational and student services improvements. “We’ve found a brighter future, honestly,”

“We wanted more flexibility and we got it,” Smoak adds. “We have customizable dashboards and can craft a playbook so we can refresh the system every week. We now have the ability to take over our cloud environment without having to do another [system] migration.”

Smoak says of Illinois State’s relationship with ERPA. “We’ve been able to meet the demands of our users and keep our environments patched and up to date. It’s much easier to staff and manage and it’s much faster to implement when you hire a third-party company. Especially now with the supply-chain issues we’re seeing and likely will see for the next few years, leveraging companies that know how to do this is really important.”

Illinois State can now connect with data centers, test environments, and storage solutions that provide improved performance, while expanding the capabilities of what clients can do with them.

As part of its agreement with Illinois State, AWS provides the university with several direct services, including data backup, disaster

recovery strategies, and help with implementing a comprehensive and secure credit-card payment system.

AWS’s cloud platform increases colleges’ tech capabilities. That includes the ability to scale up and use other services.

“Every single arrow in our quiver is available to all of our customers, carte blanche,” says Eric Wassehaar, senior account manager at AWS. “And with the help of an ecosystem of partners like ERPA, they can customize them to suit their needs.”

AWS, ERPA, and Illinois State continue to work together to add range to the ERP platform. The team is searching for ways to use the cloud to accelerate campus research, create virtual labs, and help students bridge the digital divide. That last element dovetails with another university inclusion program that offers free laptops to financially needy students.

Illinois State will open its College of Engineering in three years and expects the cloud services will help support it.

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Enriching the Student Experience

Ultimately, the goal of a campus tech transformation is to enrich the student experience. Moving data to the cloud helped the Illinois State simplify its administrative processes resulting in a smoother pathway for their students. Students can now pay bills, make advising appointments, register for classes, and access financial aid information much more quickly. “This gives them more time to focus on their overall experience,” says Smoak.

The new system helps instructors help students in more ways too. The addition of learning metrics data and advising dashboards give educators an idea—and quickly—of how they can intervene to help students succeed.

Mitigating IT Staffing Challenges

The ERP migration has helped the Illinois State tech team as well. Besides helping staff get more done during a time of tight labor supply, the IT team members can now think about offloading much of the university's student-engagement infrastructure to the cloud, including communications to students about campus activities, career information, disability services, and housing help.

"As we evaluate new services in student affairs, we're not cloud-only, but we're definitely cloud-first," says Rob Bailey, executive director of IT for Student Affairs at Illinois State. "The AWS cloud provides us with a secure environment where we can plan ways to improve what we offer students. It also saves me and my staff a lot of time and money. We can focus on the 13 departments we serve."

This transition has not only saved the university time and money, it has also allowed the team to think big about the next step in the institution's use of technology to support its mission.

"We see this as a step toward digital transformation," Smoak says. "We're not quite there yet, but the migration has enabled us to move faster. We now spend a lot of time leveraging applications and hooking up new ones to fill gaps in our ERP. We constantly look for ways to increase our horsepower. That's in contrast to what we used to do, which was spending all our time figuring out how to keep things running."

Edamala agrees, "The collaboration between Illinois State, ERPA, and AWS has gone very well and continues to increase operational excellence."

Subject matter experts at AWS say this is a common story for institutions that have made the switch to the cloud and experienced the benefits.

"A lot of colleges and universities find themselves in this space. They move into the cloud and can quickly access new tools to enrich the student experience inside and alongside the classroom," says Kristi Wellington-Baker, higher education student experience strategy lead at AWS. "The cloud gives higher education institutions the ability to grow capacity while managing costs. Technologists and institutional leaders can foster an innovation mindset and scale effective tools up quickly that support a personalized, engaging, and seamless student experience."

For Jon Cramer, the groundwork for an all-encompassing transformation is in place.

"Now," he says, "we can spin up all the capacity we need."



As colleges and university leaders look to design a personalized, engaging student experience, consider these questions:

- Where can your institution begin a digital transformation process?
- What metrics can you use to demonstrate success with an initial project to build momentum for future technology enabled improvements to the student experience?
- How can you engage student voices in your strategic planning to build a student-centered technology roadmap?

For more information on how AWS can help, please visit: <https://aws.amazon.com/education/higher-ed/>.