

CBORD INSIGHTS STUDENT EXPERIENCE SURVEY

The Accelerating Shift Toward the Connected Campus



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Introduction

Administrators at colleges and universities have a lot on their minds, from maintaining enrollment to increasing security and keeping costs down. For many, the answer lies in using technology and connectivity to streamline operations, increase efficiency, and drive new revenue, according to a recent study. As it turns out, students agree: They believe that technology will

bring greater ease and convenience to the student experience, indicating that it can play a key role in helping institutions attract and retain students in a competitive environment.

Automation has rapidly become critical to the management of operations in higher education, where it has had a significant positive impact on efficiency

and flexibility. But now, institutions are leveraging that technology to create **connected campuses** that take advantage of integrated systems and data to bridge organizational silos, enable the central management of operations, and consistently deliver the right experience to students across the campus. From a student perspective, this means being able to use their IDs to purchase food

“Being able to purchase food with campus dollars off campus would make life just a little bit more convenient and improve efficiency.”

—Student at a Southern university

on or off campus, access buildings, buy books and supplies, order services such as delivery, and more.

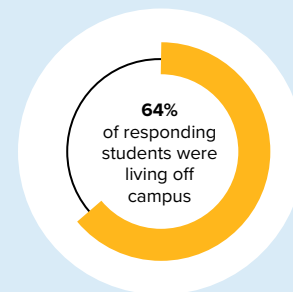
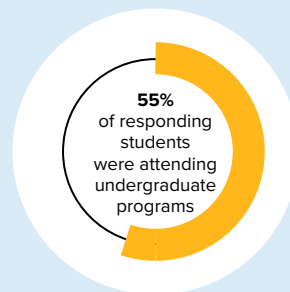
Today, decision-makers in higher education see the connected campus concept as being attractive to staff and students, and more than 8 out of 10 say they are “very interested” in building a more connected campus in the near future, according to a recent student experience study conducted by the market research firm KS&R for CBORD Insights. This study explored the views of various higher education stakeholders—C-level executives, department leaders, and students—about the connected campus. The upshot is that campus decision-makers see the connected campus as key to everything from addressing labor shortages to attracting and retaining students.

But while C-level executives and departmental leaders (administrators) believe that building a more connected campus is important, they also recognize a range of challenges. By definition, the

connected campus integrates systems and operations across an institution, from student credentials to foodservice, housing, and security. As a result, administrators are concerned about finding the best way forward.

Nevertheless, administrators see the connected campus as **critical to long-term competitiveness** and success.

About half of the institutions surveyed have already made significant progress on that journey, and the other half are planning initiatives within the next two years. Clearly, the connected campus will be an important differentiator for colleges and universities in the near term. But in the longer term, it will become “table stakes” that institutions should be planning for now.



Survey Methodology

Conducted for CBORD by KS&R, a market research firm, in February and March 2023. Respondents included 125 C-level, multi-site decision-makers, 54 front-line employees (working primarily in business operations, enterprise systems, IT and technical support, purchasing and procurement, dining and culinary services, and facilities), and 101 students. More than half of the responding students were attending undergraduate programs (55%), while roughly a quarter were attending junior or community colleges (27%) or graduate programs (23%). Nearly two-thirds of responding students (64%) were living off campus, while the others (36%) were on campus.



Higher Education's Evolving Challenges

Higher education operates in a changing world, and when administrators were asked about challenges they have faced in the past two to three years, they agreed that **sustainability** was a key concern. “This is important to them because it’s important to students,” says Heather Whitehouse, senior director of product and strategy at CBORD. “They are hearing about it from student committees who are asking, What are we doing about waste and pollution? And of course, universities want to be listening to their customers, the students.”

Administrators also cited **dining revenue streams** as a current top challenge. This came to the fore with pandemic-related foodservice shutdowns and now continues with the need to offset rising costs

and the expanding use of off-campus dining options. They also cited **physical security**, a growing concern for all organizations serving young people. C-level respondents noted that **staff retention** is one of their top challenges, while department leaders pointed to today’s regulatory environment.

The challenges facing institutions continue to change, and administrators expect a somewhat different set of issues in the coming two to three years. C-level respondents expect that ensuring **physical and cyber security** will be a challenge along with declining enrollment and staff retention. Department leaders pointed to student wellness and success as well, but their greatest concern is **inflation and cost control**. They were also somewhat more likely than

Key Challenges Institutions Have Faced Over the Past 2–3 Years According to:

C-suite

- Dining revenue streams
- Sustainability
- Overall staff experience and retention
- Physical security
- Need for connected systems

Department leaders

- Sustainability
- Physical security
- Changing regulatory environment
- Dining revenue streams
- Need for connected systems

C-level respondents to cite shortages of supplies and labor.

Finally, the survey asked administrators what outcomes were critical to their success. For C-level respondents, **attracting and retaining students** topped the list—which is not surprising, given declining enrollments and

increased competition for students. This was followed closely by interest in reducing labor requirements for student services and in creating new revenue streams. For their part, departmental leaders said that using technology and automation to reduce costs is a key outcome—one that is closely tied to their priorities of reducing labor

requirements for student services and providing frictionless service/payment experiences. Overall, says Whitehouse, “administrators are focused on delivering a **good student experience**, as well as on student success and safety. They want to make an impact where it matters to their primary customers.”

Key Challenges Institutions Expect to Face in the Next 2–3 Years According to:

C-suite

- Student wellness and success
- Cybersecurity
- Declining enrollment
- Overall staff experience and retention
- Inflation/cost controls

Department leaders

- Inflation/cost controls
- Student wellness and success
- Supply chain disruption/food shortages
- Labor shortages
- Overall student experience

“[The connected campus concept is] very interesting and innovative, and it sounds like something I would want to change to in the future.”

—Student at a Midwestern university





Growing Interest in the Connected Campus

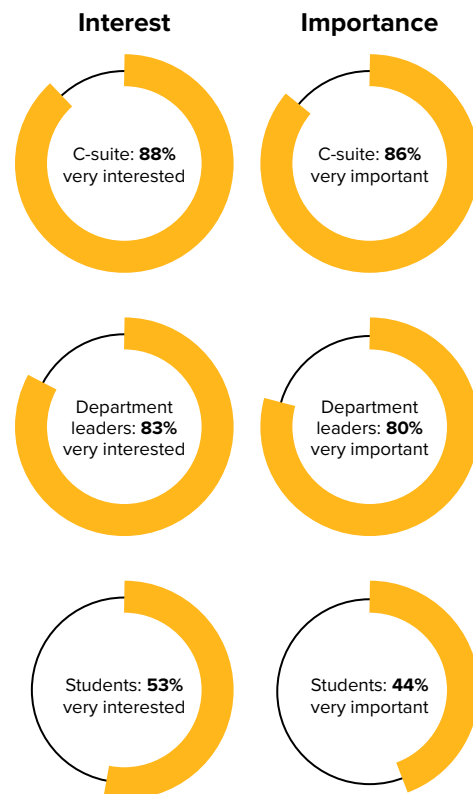
Many institutions have successfully implemented various forms of automation in recent years, and the CBORD Insights research found that they now see the connected campus as a way to address their challenges and achieve desired outcomes. The vast majority of administrators said they were very interested in building a more connected campus, while less than 1% said they were not interested. C-level respondents expressed a somewhat higher level of interest than department leaders (88% vs. 83%).

More than 8 out of 10 administrators said that a more connected campus would be important to both students and staff. **Perceived benefits** include improved ability to attract and retain students, reduced labor requirements, the creation of new

revenue streams, improved operating margins, reduced security risk, and the ability to provide frictionless service and payment experiences across campus.

At first glance, students don't appear to be quite as enthusiastic about the connected campus, with only 53% saying they are very interested in it. At the same time, they are very interested in what a connected campus can provide. For example, when asked why they might want to use integrated credentials for food-service, commerce, and building access, students cited greater convenience in their daily lives. They also thought that a connected campus would provide more options for ordering and paying for food, as well as increased security. Not least, they acknowledged the "cool factor." But students have some reservations

How interested are you in building a more connected campus, and how important do you think it is to students and staff?



“Better connectivity can help schools grow more vigorously, improving a school’s brand image and attracting more students.”

—Chief financial officer at a Midwestern university

as well. Almost two-thirds said that they were worried that the costs associated with building a connected campus would be passed along to them, while 29% seem to view increased convenience as a double-edged sword, saying the connected campus could make it too easy to overspend. They are concerned to a lesser extent about privacy and the possibility of being tracked, which was cited by 37%. Altogether, these findings point to an opportunity for institutions to help students under-

stand what the connected campus will mean to them and keep them posted on their efforts.

Overall, the difference in student and administrator views of the connected campus may be smaller than it seems—and those differences may be traced to the more **strategic perspectives of administrators**. Students are thinking about their near-term experience. “They haven’t really thought about what’s involved in delivering the con-

venience they want,” says Brett Africk, director of sales for CBORD’s platform systems group. Administrators, on the other hand, are thinking more strategically about how to implement the capabilities students want. “They see the connected campus as important to their future—to staying relevant to students and meeting the challenges of recruiting,” he says. “They see that their peer institutions are moving in that direction and understand that they will need to keep up.”

What would be the benefits of a more connected campus?

C-suite and department leaders

1. Attract and retain students interested in cool convenience
2. Reduce labor requirements and increase staff satisfaction
3. Create new revenue streams and improve margins
4. Reduce cyber and physical security risks

Students

1. Greater convenience
2. More food options
3. Greater cool factor
4. Greater physical and cyber security





Making Progress with the Connected Campus

Higher education administrators have been pursuing a variety of initiatives to connect operations. C-level and department decision-makers alike cited their efforts to move to the cloud and **cloud-based automation** as important initiatives. Beyond that, C-level respondents tend to focus on broad technology efforts, such as enhancing network security and implementing mobile credentials, while department leaders emphasize operational initiatives such as foodservice automation and implementing biometric and facial recognition technologies, which can be used to support payment- and access-related identification.

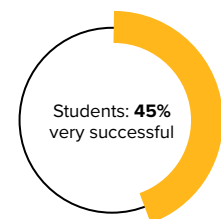
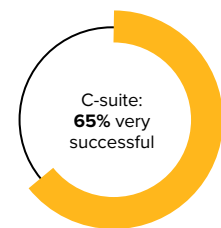
When researchers asked which of their many connected campus-related initiatives they are most satisfied with, administrators pointed to the improved ability to provide frictionless transactions. C-level respondents also pointed to the implementation of **mobile-based capabilities and credentials for students and staff**. Also on the list was increased

ability to maximize purchasing strength, typically accomplished by centralizing data across operations to gain economies of scale and volume discounts. For their part, department leaders said that they were pleased with the progress made in creating new revenue streams and reducing costs through automation.

Looking ahead, administrators are planning to invest in **automation to reduce staffing**—helping to address both rising costs and labor shortages—and expand into new revenue streams. Respondents agreed that reducing manual data entry and duplicative work is as important as gaining new capabilities. Both are motivating investments. Department leaders say they plan to add more mobile food ordering and delivery capabilities. They also note that they expect to update physical security and location-tracking capabilities.

In the mix of initiatives being pursued by colleges and universities, there is a growing emphasis on **mobile capabilities**. In

How successful has your institution been at building a more connected campus?



many ways, mobile credentials are the heart of the connected campus—a key enabler that allows students and staff to access and interact with various campus services and operations, from housing to foodservice. Among both C-level and department leader respondents, 49% said their institutions had already launched mobile credentials initiatives, and 94% were satisfied with the progress made on that front. In addition, another 40% expect to start such initiatives in the next two years.

Students are driving that trend, with 90% of student respondents expressing interest in using their phones to

purchase food, access buildings, and use campus services. Such expectations were evident at the University of Tennessee, Knoxville, which launched a pioneering mobile credentials initiative in 2019 in response to requests from student government. Instead of traditional plastic cards, students and staff now use contactless mobile wallets on their smartphones as campus IDs—and the effort has been a clear success.

“Since we launched the program, we’ve handled close to 30 million transactions, and of course that’s growing,” says Mike Henderson, VolCard technology manager at the university. The mobile

credentials system, he says, is “connected across the campus—to housing, building access, dining services and even food trucks, restaurants like Panda Express, and Grubhub delivery—tying it all together.

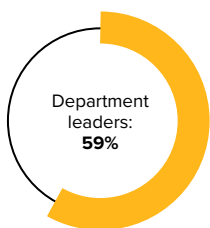
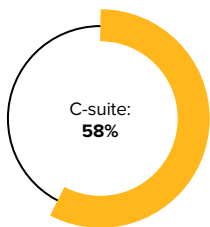
“The use of mobile credentials has made it easier for students to do their daily activities—everything from checking things out of the library and accessing their building to ordering food,” Henderson says. And from the university’s perspective, it has helped strengthen security and reduced the need for labor. With such benefits, he says, “mobile credentials are here to stay.”

“It allows us to build new revenue streams and expand into nontraditional services to gain revenue and cut costs.”

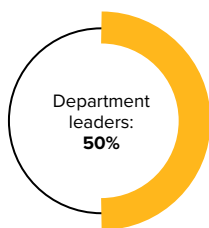
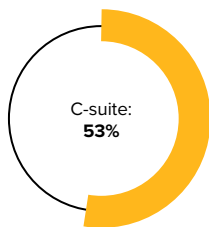
—Director of operations at a Western university

Where have you made the most progress in moving toward a connected campus?

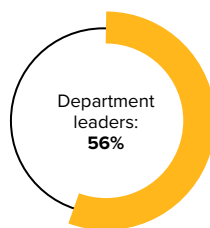
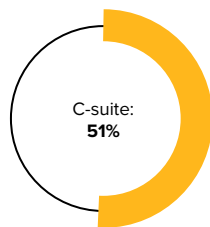
Providing frictionless service and payment experiences



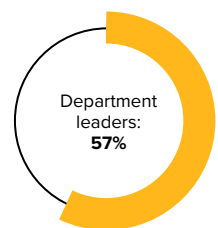
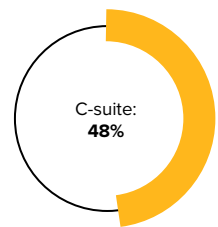
Maximizing economies of scale and purchasing strength



Reducing costs via technology and automation



Creating new nontraditional revenue streams





Identifying the Barriers

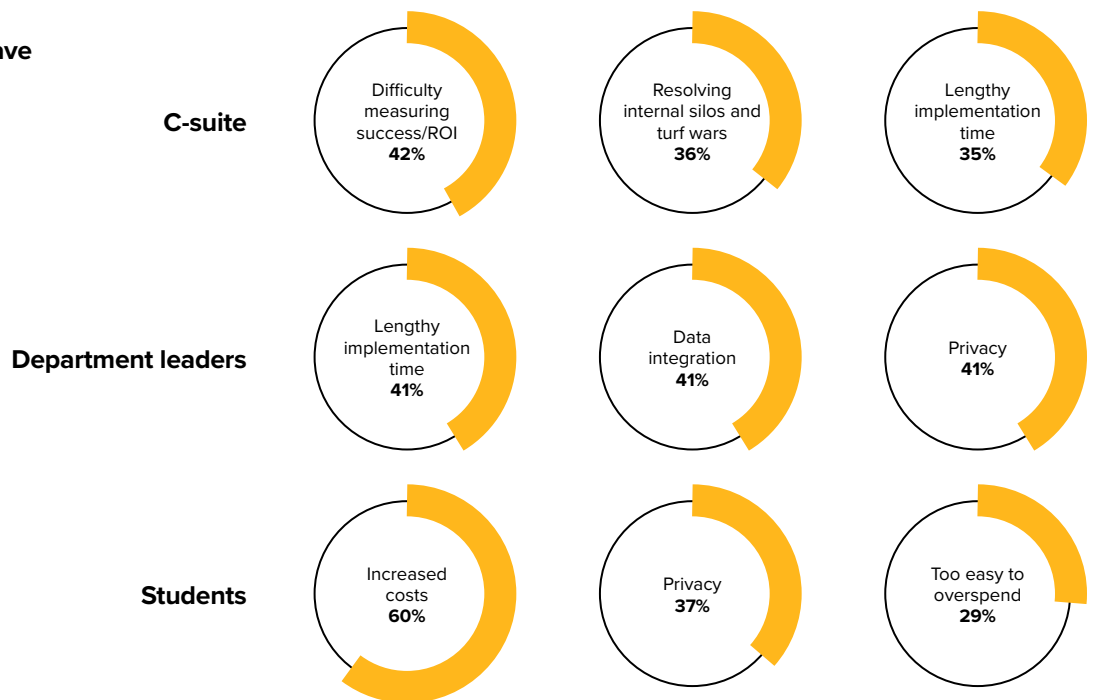
Overall, administrators are satisfied with their progress toward the connected campus ideal—as indicated by 65% of C-level respondents and 70% of department leaders. Both groups are very interested in further connected campus initiatives—and executives are highly optimistic about the steps they are taking.

Administrators are aware of the challenges that will be involved. By nature,

integrating numerous systems can be complicated and needs to be done with minimal disruption to operations. C-level respondents said that they were worried about **measuring success/ROI** on their investments and about overcoming internal silos and organizational turf wars. Department leaders expressed concern over handling data integration and addressing privacy issues. Both groups are worried about the time it would take to implement the necessary technologies.

Overall, these challenges can indeed be complex. “A connected campus doesn’t mean having one overall system, because a lot of specialization is required,” says CBORD’s Africk. For example, he explains, “point-of-sale systems for dining, for a bookstore, for a campus golf course, for a post office—those can all be different. And all the different systems across the campus, which often come from different vendors, need to be integrated.”

What concerns do you have about building a more connected campus?

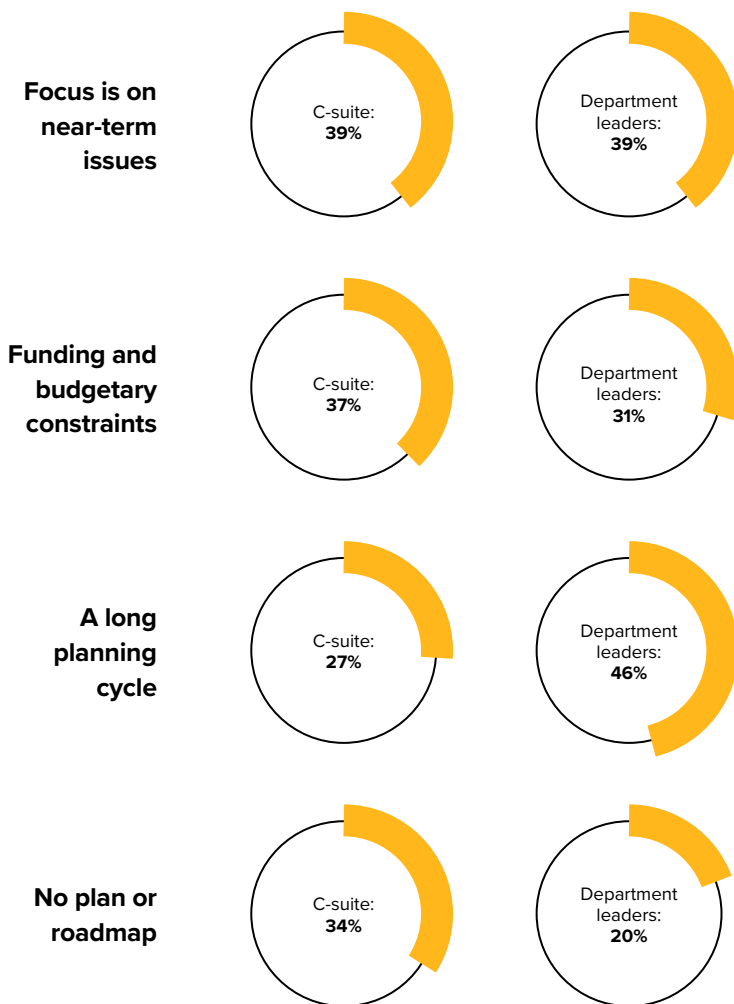




“This could effectively increase overall awareness and innovator income to increase employee recruitment and retention. And it improves both student and employee satisfaction.”

—Managing officer at a Midwestern university

What barriers are standing in the way of a more connected campus?



When asked about the barriers they face in connecting operations—and more generally, in meeting the challenges their institutions face—administrators pointed to the organization having **too strong a focus on near-term issues** and the long planning cycles needed to move forward with projects. They also cited the difficulties in working across departmental boundaries and budgets—both of which complicate the long-term, holistic approach that is key to the connected campus. A closely related challenge was the lack of an overall plan. To help address this range of challenges, 9 out of 10 are actively engaging partners that can help them architect and build a connected campus.



Taking the Next Steps

Although administrators cite a long list of challenges, the research points to a number of steps that institutions can take to move forward with the connected campus. For example, to help justify and focus investments, they can explore the range of potential benefits associated with automation and the connected campus. These are often **win-win outcomes** that improve internal operations and the student experience alike. Consider the ability of mobile credentials not only to ease labor shortages in the student ID department, but to open the door to streamlined dining point-of-sale processes and security operations—while making life easier for students.

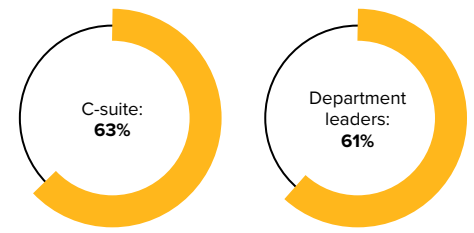
“When you’re balancing the cost of a solution against paying multiple full-time employees for a year, things can quickly

start to add up in automation’s favor,” says Scott Jerabek, director of product management at CBORD. Even small changes can pay off in surprising ways. “When a university installed new food ordering kiosks,” he says, “they added bacon as an upsell option for their sandwiches—and over the course of the year, that extra bacon paid for the entire system.”

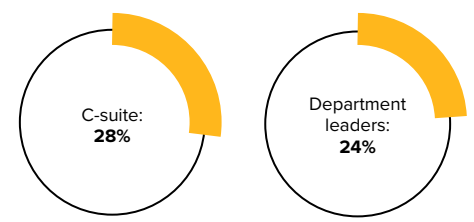
Connected systems also enable more centralized management across operations, which helps **increase efficiency and agility**. Jerabek points to the value of integrated data for decision-making and analytics. “In terms of cost control and dealing with supply shortages in foodservice, pulling together data from point-of-sale and inventory solutions helps you understand what you’re selling and how much to prepare for the next service, so

Do you have a partner to help build a more connected campus?

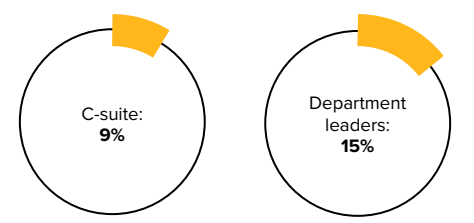
Yes, one partner



Multiple, unconnected partners



Not aware



“By enhancing safety and data, it improves campus security and stability.”

—Director of human resources at a Southern university

there’s less food waste.” The effectiveness of that approach can be seen in the University of Wisconsin-Madison’s food-service operations. When the university began gathering accurate, timely data about those operations to enhance decision-making, the result was a 14% reduction in food costs and a 40% increase in revenue. With reduced inventory requirements, the university was able to close and sell a food storage warehouse.

The connected campus can be a complex undertaking, but today’s technology makes it possible to move forward in an incremental manner, adding systems and capabilities as needed and taking advantage of existing infrastructure. To support that approach, institutions can assess where they are today, determine

where they want to go, and develop comprehensive **roadmaps** for implementing the various elements over time. This makes it possible to break the work and budgets into phases, gradually develop more and more capabilities, and ensure that technologies implemented along the way will ultimately work together to produce the outcomes they want. “You can start by addressing your current pain points, such as rising costs or labor shortages,” says Jerabek. “That makes for a clear ROI value proposition.” In addition, it enables the institution to begin seeing results right from the start, and then track benefits as work progresses.

Each college and university is different, and each roadmap will reflect a specific

institution’s needs, budgets, challenges, and current state of technology maturity. Working with partners that have experience in applying industry-leading practices and executing such roadmaps can help streamline the process and accelerate the connected campus journey.

Students are largely happy with campus services and automation, but today’s extras can quickly become tomorrow’s necessities. Higher education institutions have a window to build the connected campus experience that future students will require—and that will provide a variety of branding and business benefits. With the right foresight and planning, they can position their operations to attract, serve, and retain the students who are the heart of their missions.

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