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Emerging Stronger: Transforming with the Cloud

Practical pathways to leveraging the power of the cloud

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Summary

A new bar for higher education and finding the right pathway to change

Technology is a strategic asset for today's higher education institutions. To create a flexible technology ecosystem that can increase the insights gained from all of its data and deliver a better user experience, an institution must modernize and optimize the way in which its systems work together.

The international COVID-19 pandemic has not only accelerated the global need for organizations to move to remote working and cloud-based systems, illustrating the "opportunity to change the workplace," but has created a fast track for remote learning and opportunities to digitalize education and student information systems. In short, we emerge stronger from this imperative transition to remote education and hybrid learning.

We know now that moving to the cloud is more important than ever to future-proof and ensure scalability with minimal disruptions in order to support a continuous learning experience and high engagement. We also know that COVID-19 has expedited cloud investments, resulting in some immediate benefits for higher education organizations.

The ability of institutions to rapidly and cost-effectively leverage new technologies enabled by cloud services creates an environment conducive to resiliency and innovation.

Omdia view

Cloud technologies can make a significant contribution to overcoming some of the burdens of legacy infrastructure and systems, optimizing IT operations and enabling better user experiences.

While technology alone cannot enable institutional transformation, it is a powerful contributor, supporting campuswide collaboration in realizing the institution's vision. As a result, the IT department should consciously move from being a system delivery and support unit to becoming a business transformation partner.

The increasing range of challenges in the higher education industry, such as decreased budgets, offsite student bodies, or increased competition, requires institutions to take a new look at the technology solutions that support them. The questions are now not "Do we invest?" but "Which pathway to the cloud do we take?" "Who shall our organization partner with?" "How do we measure success?" Institutions must take a more flexible, adaptable approach to their systems and processes to meet Generation Z student expectations and leverage data effectively for organizational and student success.

Two primary paths lead to the generation of a suite of modern, adaptable systems: a purposeful program of modernizing the overall education ecosystem and the optimization of the way the existing systems work together. Finally, innovation can be accelerated by cloud services.

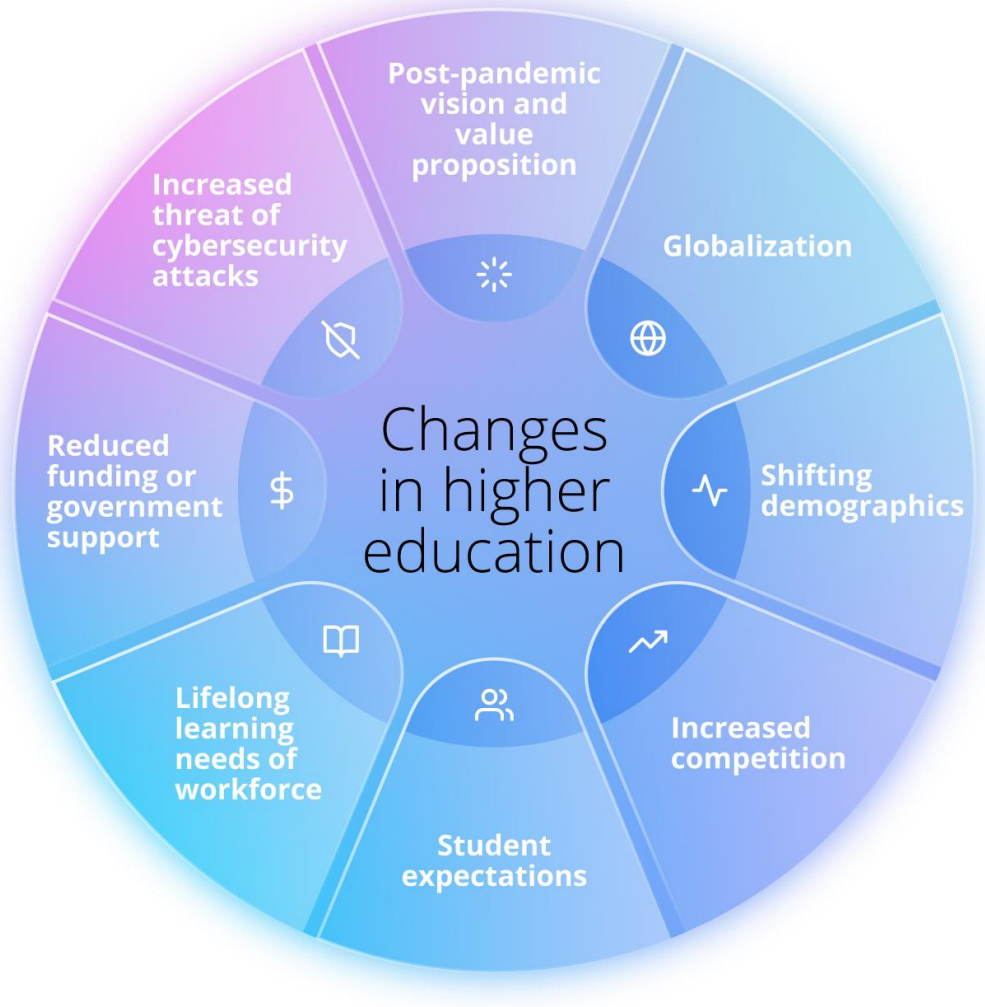
Key messages

- Higher education needs have now transformed; cloud services are key to supporting this improvement.
- Embarking on a program of change requires a strategic evaluation of current systems and technologies and how they align with constituents' needs and institutional goals.
- Institutions must look to modernize: ensure your IT systems are delivering maximum value to support institutional operations.
- Moving to a cloud system improves business resilience and business continuity.
- Being part of the wider ecosystem benefits higher education institutions.
- Optimizing the existing technology ecosystem to improve the overall user experience is another important element of the cloud journey.
- The end goal is innovation and agility, that is, the ability to use technology to support institutional transformation through new projects and initiatives.

Higher education is transformed

The higher education industry is facing myriad challenges as a result of COVID-19. This has included dramatic increases in offsite engagement, dynamic student expectations, increased competition, a more diverse student population, the need to upgrade systems and streamline IT resources (including staffing), and potential cybersecurity threats. These changes are affecting all institutions, regardless of size, mission, or degree offerings. Globally, institutions are being forced to close, consolidate with others, or reallocate their resources and funding in various ways to maintain their fiscal sustainability and support continuous learning.

Figure 1: Higher education's many challenges call for a change in IT and business practices



Source: Ellucian

Simultaneously, a student today—whether Generation Z, a digital native living on campus and working remotely while pursuing a four-year degree, or an adult learner pursuing a part-time MBA online while employed and balancing family life—has high expectations when it comes to their education technology experience. They expect student-centric engagement in which they will receive a fully personalized, efficient experience that is customized to their needs and preferences. This includes academic and financial advice, career preparation, and the on-campus experience.

Bryant & Stratton College is an online private college, headquartered in Buffalo, New York and with multiple locations, supporting 10,000 undergraduates. John Grieco, its IT director, agrees: "Higher education cannot afford to be flat-footed. The competition for students is real. They are diverse, and their needs are more varied than ever. We are focused on personalizing connections with students.

Yesterday, it was tradition for students to arrive on campus and walk through a physical door to access learning. Today, it is more important than ever to meet the students regardless of where they are, who they are, or when they want to learn."

The National Student Clearinghouse Research Center says that the higher education student population in the US is declining: in November 2020 it reported

- A 22% decline in high school graduates immediately enrolling
- A 4.4% decline in total enrollments

But among these students, expectations are rising:

- Eighty-seven percent of students said the technological prowess of colleges was important to them when applying (EdTech, 2017 survey).
- Seventy-nine percent of students expect both online and in-person teaching (Forbes, July 2021).

Efficiency and a "work anywhere" ethos was a core demand and expectation before COVID-19; now it is a necessity. It should be easy for any student to access administrative applications (e.g., financial aid and registration) at any time, from any device, with little to no downtime, and receive prompt confirmation of their choices. Students demand that the technology platforms and tools they use be as intuitive as possible and easy to access from any of their devices.

This evolving environment equates to a need for real-time data to be collected from a variety of sources such as the learning management system (LMS), the student information system (SIS), the financial aid system, and on-campus sensors. Moving online with remote management means that operations will not remain siloed but will be collected and shared across relevant activities while, at the same time, remaining highly secure and ensuring student privacy is respected.

These student-led expectations place high demands on institutional systems and IT resources. Unfortunately, some institutions may not have adopted newer functionality, leading to outdated user experiences or the inability to deliver a timely and seamless end-to-end experience, because business processes involve multiple, siloed applications.

To assure student and institutional success today, there is a pressing need to become a data-driven organization. The flood of necessary but mundane tasks is threatening to drown administrative, academic, and technical staff. As a result, major systems need updating to support everything from a better user experience to seamless back-office processes and modern systems integration capabilities. Timely resolution of all these issues entirely in-house is simply impractical for many schools. Many institutions turned to cloud services and partnerships that connect them to a larger ecosystem.

Cloud platforms provide a path away from legacy systems

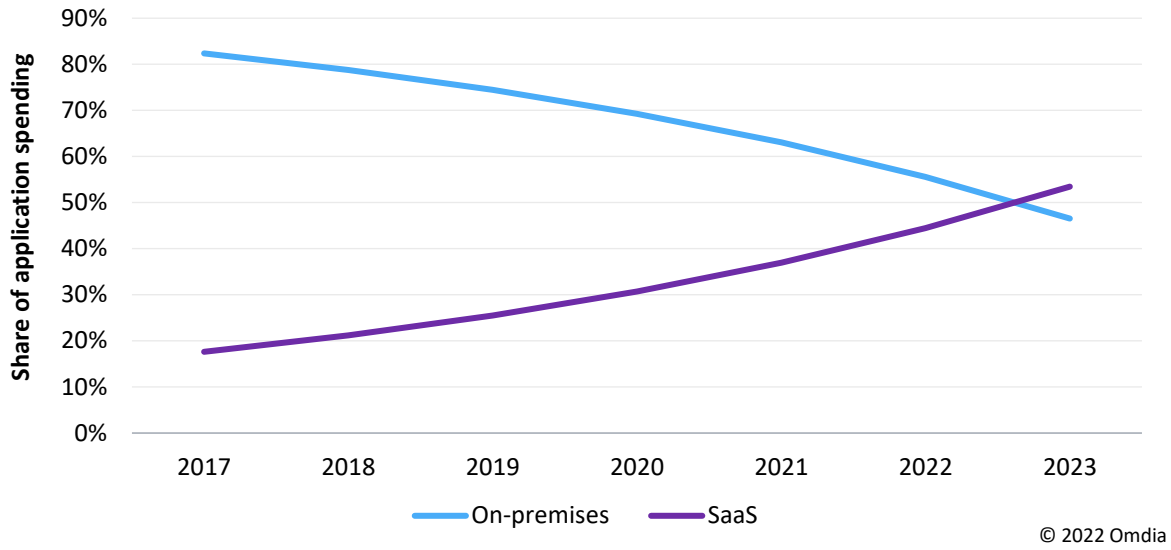
Cloud services are a powerful contributor to the flexibility and adaptability needed in today's higher education environment. Applications delivered via a software-as-a-service (SaaS) model offer several key benefits:

- New functionality is available more quickly than with traditional on-premises hosting.
- The latest user interface and engagement features enhance student satisfaction.
- Reliability is improved by the cloud provider's extended scale and extensibility.
- Savings accrue from a smaller infrastructure footprint and reduced management and maintenance.
- Integration costs are reduced thanks to modern APIs.
- Staff resources are freed up to focus on the business of student success and innovation in the delivery of education.

The one key learning that organizations have taken from the COVID-19 pandemic is that they need to be both agile and fast in their response to changing business models, operating processes, or entering new markets so they can deal with any disruption. According to the *Chronicle of Higher Education*'s "Strategic Tech Decisions During the Pandemic" survey, 64% of 665 respondents said cloud-computing services have been valuable during the pandemic. Before the pandemic, only 37% of higher education institutions globally had prioritized the adoption of cloud services as one of their top three drivers.

According to Omdia research, although institutions would allocate most of their applications to on-premises systems (approximately 75% in 2019), the rate was rapidly declining even before 33% of the population embraced remote working. SaaS growth, at 23% per year, was closely mirrored by the decrease in on-premises software (see **Figure 2**). Since the beginning of the pandemic, we have learned that technology is the key to assessing why we use technology and how to enable technology to continue to operate, innovate, and save money. We know that use of hyperscale cloud solutions will be key.

Figure 2: SaaS is rapidly eclipsing on-premises application spending



Source: Omdia

Finding the right levers for change

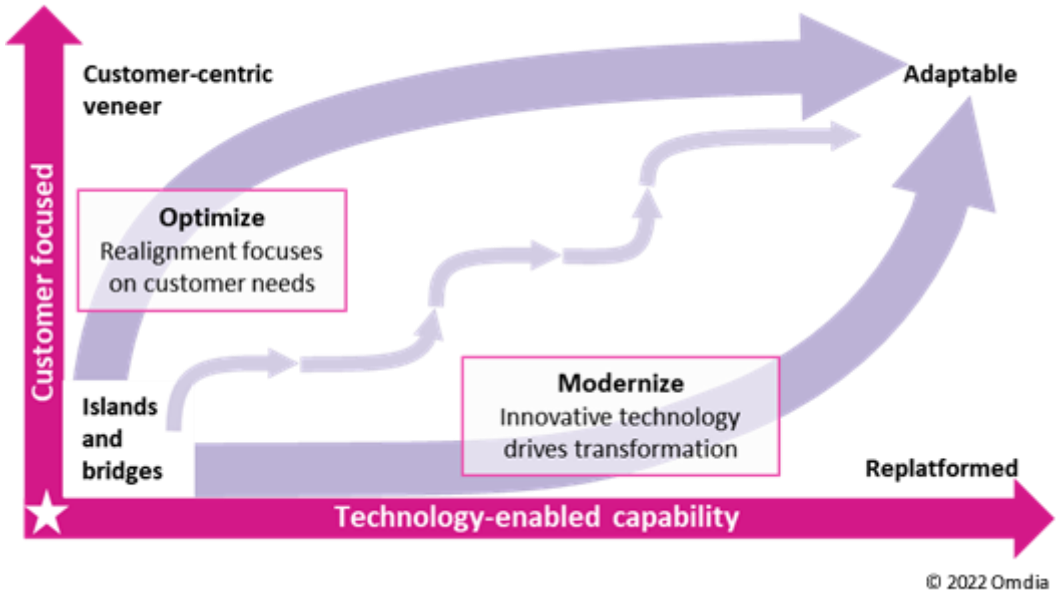
An Omdia study on digital transformation illustrates the different reasons for engaging with the cloud. Two core drivers emerge as primary reasons:

- The transformative possibilities of new technologies (45%)
- Meeting the demands of changing customer needs (37%)

Now modernizing and optimizing are recognized as two pathways to the end goal rather than separate things. These two drivers for change generate different behaviors (see **Figure 3**):

- **Modernizing:** improving foundational systems and processes to support contemporary operations and innovative service delivery
- **Optimizing:** employing unused features of existing systems, often supplemented with some new client-facing technologies

Figure 3: Two drivers prompt different transformation paths



Source: Omdia

Focusing on improving the student experience while ignoring the need to modernize the underpinning systems creates a thin veneer of applications that become increasingly misaligned with core systems and a growing burden to maintain. However, taking the other path and putting all the effort into platform modernization might result in student-facing benefits being delayed until late in the systems renewal program.

Recognizing that neither driver can be ignored, many organizations proceed down both paths together (see the "stairs" in **Figure 3**), coupling improvements to the customer experience with an underpinning modernization agenda. The decision behind this can be just to decide which model suits you: hybrid, managed cloud, or Ellucian SaaS, for example. Successfully navigating this journey requires a clear vision of the future, tempered by a willingness to invest in some solutions that will need to evolve as modernization proceeds.

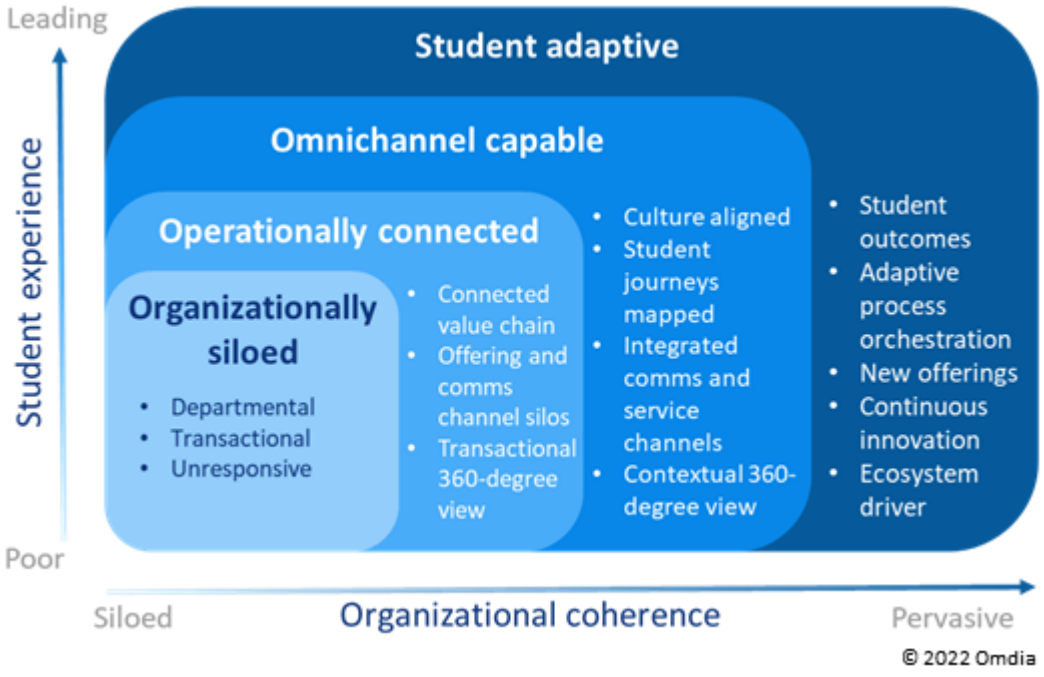
Setting out on a program of change

A program of change shares several characteristics with any other journey: it must have a destination in mind, the route must be planned, and the necessary resources must be gathered.

Improving the student experience

The starting place for many organizations is at the bottom-left corner of **Figure 4**, "organizationally siloed." Student engagement is characterized by unconnected, department-level interactions. The crisis caused by the pandemic has illustrated how institutions with cloud-based systems can offer seamless, off-campus experiences to students instead of poor, disjointed interactions (that occur at a transactional level and cannot be tracked at the institutional level). Seamless university experiences off-campus will continue to become increasingly prevalent.

Figure 4: Phases in increasing student engagement



Source: Omdia's State of Customer Experience research

Through the stages to becoming student-adaptive, several themes mature:

- The student value chain is better understood and integrated, providing a better view of the student's overall interactions with the institution. Transactional information is supplemented with broader context and ultimately aligned with outcomes.
- Communications become more coherent, consistent, and integrated.
- Interaction moves from being reactive to being proactive, using data-led insights. Processes progressively move from the pure application of policy and procedure to those that adapt to an individual student's circumstances, generating higher levels of student retention and success.
- Offerings become more personalized, customer focused, and responsive.
- Innovation, based on data insights, creates and captures new opportunities to drive excellence in terms of the offerings and the student, faculty, and staff experience.

Architect for a data-driven and student-centric future

While analysis of historical data from enterprise resource planning and student systems was the backbone of the business intelligence era, today's institutions have access to a far wider range of data, including social, interaction, and environmental data, and the opportunity to utilize it in more diverse ways.

Growing the ability to capture, curate, and deliver insights from an ever-broadening data palette is critical for providing the kind of consistent, informed experience that modern students expect and the institution requires.

The dual challenges of providing an integrated student experience and drawing actionable insights from the entire institutional data estate suggest that some system elements are better delivered as foundational services that span institutional capabilities than within functional silos.

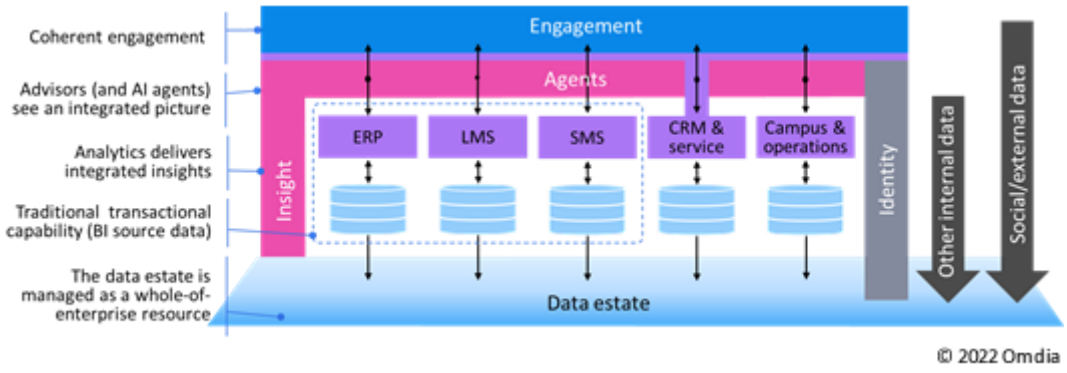
Four critical areas dominate (see **Figure 5**):

- Institutions need to deliver coherent engagement with students. Smart services must integrate who they are (identity), their activity (engagement, structural and transactional data), where and how they are interacting (location, operational, and Internet of Things data), and what they should do next (insight) and present relevant information at all points of interaction.
- Insight and agent technologies, using analytics and increasingly enriched by artificial intelligence (AI), are rapidly evolving and will increasingly become a keystone of intelligent, personalized services. While these services may be embedded in applications, they should utilize all relevant data.

- Identity is at the heart of personalization and core to the protection of student privacy. Authentication and general access control are best implemented at the institutional level.

- Management of the underlying data estate needs to be considered as a foundational service that spans a variety of institutional data sources including administrative systems, learning environments, engagement (CRM and service management), campus operations and activity, and social and environmental (Internet of Things) data. While the data may be stored in multiple systems (federated), all relevant data needs to be available when insight into the student and the institution is sought.

Figure 5: It takes an entire ecosystem to deliver the benefits



Source: Omdia

Embedding these concepts in policy and architecture will provide a framework that enables individual business processes and systems to collaborate to best effect.

Take stock at the start of the journey

Aligning the academic vision and institutional strategy with a practical technology program is not a trivial task. Assessing the current state, from both the business and technology perspectives, provides a baseline for the program of change needed to achieve the desired future state.

The next step is prioritization: some areas of functional mismatch will have a substantial impact on strategy and delivery, others less so. Identifying the areas that strategically differentiate your school from others will indicate where beyond-the-mainstream capabilities may be required from your systems and service and where standard practices, and therefore standard functionality, will suffice. The outcome is a business-focused view, easily understood by technical and nontechnical staff, showing where change is most needed.

Where there is a clear deficit in the current experience, there are two basic remedies:

- Where the system cannot provide what is required, upgrade the system to gain the needed functionality or add complementary technologies (modernize).

- Where the core functionality is supported but the business process or user experience is not optimal, create a “skin” over the underlying system (optimize).

It is likely that both approaches will contribute to the overall program of work: the “stairs” in **Figure 3**.

Benefits are best delivered in digestible portions

Whether Agile or traditional project management is employed, it is important to think about delivering benefits as early as possible in the program. While it might be convenient for IT to hand over all the outputs at the end of the program, business imperatives and good change management both suggest that regular delivery of smaller units of change is better practice. Stakeholders may be less resistant to incremental changes because business processes can be changed little by little instead of drastically. New capabilities can also be implemented faster.

Define several intermediate points in the overall program, aligned to business cycles, where specific value will be delivered to the business or within IT). Assign specific outcomes or benefits to these intermediate goals, ensuring that any required business and organizational change activity is included in the program.

Clarify the program’s value drivers to create the right business case

To maximize outcomes for students, faculty, staff, and the broader community, institutions need to be financially sustainable. Clear alignment between financial goals and an institution’s mission is a powerful argument for transformative change. Mission, cost, quality, and risk are important value drivers that can trigger the need and business case for change. Each should be adequately addressed in both the change proposal and the program plans.

Mission

Higher education is focused on the delivery of education, student experience, and research and development, all of which have an impact on reputation and revenue. A specific trigger occurs if technology is inhibiting the institution to pursue and attract students or compete in the market with new programming, resulting in plateaued or declining revenue. Institutions can enable student learning and personal growth through state-of-the-art transformative technologies. A robust cloud platform allows schools to excel in support services, ensure compliance and security, and have the agility to respond to new trends or requirements.

Dr. Iman Megahed, associate vice president for digital transformation and chief strategy and knowledge officer at the American University in Cairo, explains a driving force behind the school’s decision to migrate to cloud: “We are always looking to support student learning and personal growth through state-of-the-art transformative technologies. A robust cloud platform allows us to excel in our support services, ensure compliance and security, and have the agility to respond to new trends or requirements.”

Cost

When the total cost of ownership (TCO) of running the system in-house is greater than the TCO of outsourcing it, there is a clear case for change. All related costs, such as infrastructure, staffing, licensing, upgrade projects, and a proportion of data center capital and operating expenses, should contribute to the calculation. A specific trigger occurs when the time comes for an infrastructure renewal, a capacity uplift, or a substantial upgrade project. At that point, a determination should be made on whether further capital investment in the status quo is warranted.

According to John Grieco, IT director at Bryant & Stratton: “For Bryant & Stratton it was much more cost-effective to join Banner Cloud than to build an entirely new data center. Avoiding this cost easily made the case for Banner Cloud. In addition, we are getting other benefits: real-time upgrades, enhanced 24/7 support services, a more resilient environment, a platform that supports more innovation, and fewer third-party service providers. We continue to see returns on our initial investment.”

Quality

A significant proportion of IT effort goes into keeping systems running. If the load of infrastructure and systems management was reduced, a greater proportion of IT’s overall effort could be employed more directly in business support and transformation.

Risk

Discussion of managing system risk is too often limited to system reliability, disaster recovery, and cybersecurity. While these are critical, two other risks also need to be addressed: the difficulty of acquiring and maintaining the depth and breadth of skills needed to effectively operate the system and the risk that an aging system’s functionality will be unable to support the institution’s future educational and administrative needs. In 2020, McNeese State University, a four-year public school in Lake Charles, Louisiana, needed an urgent replacement for its legacy campus platform, which crashed amid back-to-back hurricanes. Now a cloud-based platform supports students, faculty, and staff. Chad Thibodeaux, CIO, explains: “[With a cloud portal solution] we get more done now, more efficiently, more quickly than we ever did before.” The institution can redirect the time and expertise of its IT team away from managing a complicated legacy platform. With a cloud portal solution: “Things have been quiet. In my world, when things are quiet, that’s a good sign.”

Modernize

Educational offerings, business processes, and supporting technologies deserve continuous examination to ensure they are fit for purpose. It is a critical practice to conduct a periodic assessment including

- Matching existing systems with future business needs
- Revisiting feature adoption or technical updates delayed by project scheduling or prevented by extensive system customizations
- Assessing the state of the institution's disaster recovery capabilities
- Considering security and privacy
- Evaluating system performance

While it is important for the modernization program to be technically manageable, the academic strategy's timeline should drive the agenda, because timely delivery of the right technology-enabled capability is critical to institutional success today.

Steps to modernization

Many reputable vendors now offer cloud alternatives to applications that have been traditionally hosted on-premises. These come with multiple benefits:

- There is a decreased need for internal skills, both in breadth and in depth.
- Updates and upgrades are managed by the vendor, avoiding costly and time-consuming projects.
- Costs and capacity are often usage based, allowing capital expenditure and idle infrastructure capacity to be avoided.

Modernization may occur in several stages:

- The current configuration is moved to the cloud and managed by the vendor or a partner that has the required breadth and depth of specialist skills.
- Customizations are removed, and necessary process or business-rule variations are reimplemented by expert vendor staff using "nonblocking" configuration tools.

- An upgrade to the most modern version is then possible, using well-tested tools and processes and undertaken by expert vendor teams.

While some may argue that a multi-tenanted cloud solution is the only viable target configuration, equivalent benefits are realized from single-code-base, single-tenant cloud hosting where there is a high level of automated testing and deployment shared across installations.

Reducing customizations creates a tailwind for change

Customizations will need to be attended to when an existing system is upgraded. When asked about what they want in a new system, staff often answer, “It needs to do exactly what the current system does but be easier to use.” This makes it difficult to assess which local enhancements are still adding value.

Examining the different types of customizations and the reasons for them provides some clues as to how they might be most profitably addressed:

- Technical customizations have been introduced to allow the system to run on platforms for which it was not originally designed or to improve performance. These become irrelevant as the system is moved to a standardized platform.

- Customizations were needed in an earlier software version but are now available in the baseline product. Some effort is required to de-customize and to reimplement business processes using new baseline functionality.

- Customizations arose from unique needs or differentiating factors for this institution and need to be carried forward. It is critical to clearly identify and prioritize these customizations, because reimplementation of equivalent functionality will not be without cost.

- Some process or presentation customizations deliver little future value. It is desirable to “rip off the Band-Aid” with these customizations, because they deliver little if any enduring value.

Addressing technical customizations will not generally affect the end user. For each of the other three categories, some business change management effort will be required. While a reimplemented process might be functionally equivalent, it is unlikely to be presented identically. Staff will need to be informed and, possibly, retrained. When a low-value customization is removed completely, policy or procedures may need to be updated and some staff reeducation delivered.

Optimize

Particularly in the case of systems that have been in place for some time, there are often valuable existing features that are unused: either they were not needed when the system was implemented, or they were added subsequently in updates.

Users must pay careful attention to the current system's actual capabilities rather than those that technical or business staff believe it may have. Also, where the underpinning system's capability is still well aligned with current needs, it is often possible to deliver an updated user experience by adding vendor modules or third-party tools. Mobile apps, improved analytics, and engagement capabilities are common examples. Workflow tools may be able to improve process flow and the user experience, particularly where multiple systems are involved.

Making the most of data

For many institutions, actionable data is splintered across multiple systems and departmental silos. It is maintained in spreadsheets and documents on file shares, web content management systems, social media services, and even video libraries. Bringing disparate data together to deliver new insights can be difficult, and the results can be suspect if the quality and provenance of the data are not well managed.

While analytics can be effectively applied within a functional (or system) silo, it is campuswide capability that provides the greatest benefits. Consider a student arranging accommodation for their first semester. For the institution to locate and secure the most appropriate accommodation, the student's enrollment, sociodemographic, and financial data all need to be taken into account. Likewise, even the best-designed curriculum can be undermined if poor timetabling means that other important resources such as private-study spaces, washrooms, and dining-hall seating are unable to cope with peak demand.

Institutions should gain an overview of their overall data estate (see **Figure 5**) and mandate effective data management practices for it. Provisioning a repository, possibly comprising several technologies as part of an overall data lake, to curate this actionable data should also be considered.

While capturing and curating data is important, no value is gained until it is in the hands of end users, preferably embedded within their line-of-business systems. Dashboards and visualizations are commonly used to present analytic insights, and natural-language interpretations are becoming increasingly common as AI is applied.

Ellucian's Ethos and Analytics platforms provide a good example of how greater value can be gained from existing data, even with a mixed vendor landscape. Ethos provides a unifying platform for enterprisewide data management and integration. Its data model defines a common language across institutional applications and platforms, including third-party systems. The data repository manages near-real-time data updates to ensure that data is accurate and relevant for all roles. Ellucian Analytics leverages Ethos's enterprisewide data capability to unlock analytic insights across

financial, HR, and student data and deliver them wherever they are needed: to the desktop, tablet, or smartphone.

IT as a transformation partner

Moving to the cloud shifts the balance of IT responsibilities away from directly managing infrastructure, platforms, and applications and toward directly supporting the evolving college or university, designing, and transforming the user experience, reforming business processes, and turning data into insight. With a greater focus on business design and change management, it becomes possible to start thinking about IT sharing responsibility for an initiative's business outcomes and not just the technology outputs. This is paramount if IT is to become a transformation-enabling business partner rather than simply a technology supplier.

Innovate

While modernizing and optimizing their technology ecosystems, institutions should not miss opportunities to innovate. As the door to the cloud is opened, several enablers of innovation arise.

Freeing the IT organization from mundane tasks releases capacity for innovation

The modernization pathway frees up staff over time from managing technologies, and these resources can be refocused on supporting innovation. That was seen at Royal Holloway, University of London, a public research university in the UK, which simplified its technical ecosystem when it migrated to cloud. As a result, faculty and staff were enabled to focus on mission-critical activities. In the move from on-premises to the cloud, Royal Holloway reduced in-house functionalities and integrations from 1,400 to 600, thereby reducing reliance on niche internal resources. It moved away from “keep the lights on” activities, and as a result the IT team can spend more of its time on strategic activities. “Our migration to the cloud has given us a set of crucial capabilities that help unlock our ability to truly focus on what matters to us and our core business,” says Robert Johnson, CIO.

Sparking availability, more collaboration

Cloud enables institutions to more effectively engage their employees to ensure maximum impact on innovation and strategic priorities. In a rapidly evolving higher education market, agility is the key to remaining responsive, efficient, and competitive. Cloud supports collaboration among employees and encourages ambitious projects that cut across business functions and geographies. John Grieco, IT director at Bryant & Stratton, says: “By moving to Banner Cloud we’ve increased our system availability to a 97% success rate. That means we are providing our students, faculty, and staff with access at all times of the day and night regardless of where they are.”

Offering an array of technologies

The broad range of ready-to-use cloud components can be potent enablers of business innovation. Time to market can be cut to a fraction of traditional development time by leveraging modules with powerful and well-defined behavior. SaaS offers ready-to-use capabilities, which is an excellent proposition when your organization has a business idea that has relatively mainstream needs but is beyond the capability of your current systems. Many leading cloud vendors provide a platform on which to create extensions to the core system, allowing unique business needs to be satisfied as well.

Enabling deeper security capabilities and data protection and confidence

Cloud offers a new generation of modern security tools that simplify the institution's experience by combining signals and automating responses to catch threats that would otherwise go unchecked. Jerry Korea, executive director ITS at Wilkes University, a four-year private university in the US, explains: "Ransomware attacks and other security threats are top of mind for presidents, COOs, and CIOs. A good way to protect your data against ransomware attacks is to back it up on cloud. Cloud is also a key strategy to negotiate lower cyber-insurance premiums, which continue to rise across all sectors. Having a cloud solution led by a team at Ellucian helps us defend against cyber-adversaries. We get more security coverage, benefits, and expertise than if we were to do it on our own."

Cloud journeys to success

The benefits of working with a broader ecosystem speak for themselves. Collaboration has been the watchword of inclusive working over the last few years, and we know that future strategies need this built in.

Few institutions were prepared for the rapid change that the pandemic demanded. Adoption, change, and experimentation have led to innovations in the short term, but now a reflective strategy is needed. As some campuses free up seminar rooms to maintain online webinars as standard, the whole sector is looking to one another for inspiration and new ways of working. The demand for best practice and experience in future-proofed cloud systems has never been greater.

This all leads to an ecosystem that is not closed but an open, SaaS-enabled system that is cloud-first, extensive, and open, putting the needs of organizations at the center of the technology:

- An ecosystem that is configurable, interoperable, and allows all of your technologies to work together seamlessly
- A simple, frictionless user experience and data that flows throughout and delivers actionable insights
- A partner that can enable your strategy, no matter how it evolves and can be a seamless connection between your existing technologies or offer APIs and data integration for you to start again

Part of this includes student-advising, meal planning, housing, and all of the student-led demands of modern student populations, today and tomorrow.

Institutions are empowered to choose from different technology deployment models. The pathway an institution takes to SaaS should be informed by its goals, operational priorities, available resources, timeframes, and overall change readiness. Options include the following:

- **Software as a service.** A shared software instance on a cloud infrastructure is fully managed by a cloud partner. With standardized, best-practice deployment, SaaS provides automatic upgrades resulting in continuous innovation with minimal disruption, minimal customization, and business process improvement.
- **Managed cloud.** A dedicated software instance deployed on cloud infrastructure is managed by a cloud partner. This offers all the benefits of management in the cloud with the ability to maintain customizations.
- **On-premises.** All applications and data live on campus and are fully managed and secured by the institution, allowing it to retain full control over systems, upgrades, and customizations.

- **Hybrid.** Some data and applications remain on-premises, while others reside in the cloud.

Both managed cloud and SaaS deployment options have significant operational benefits, moving day-to-day operations for availability, security, application management, and infrastructure management to a cloud partner. Institutions can move to SaaS from on-premises directly or choose to use a managed cloud deployment model before evolving to SaaS.

Core criteria for choosing a cloud partner

Institutions seek to attract best-fit students, deliver experiences that meet rising expectations, and graduate a higher percentage of students. Institutions also want to demonstrate operational excellence, and IT can play a critical role in delivering change leadership and redesigning business processes to improve overall efficiency.

The factors schools consider when deciding to move to cloud

- How effectively teams are introducing improvements and driving toward achieving strategic goals
- Evidence of inefficient systems leading to inefficient outcomes and lost opportunity: “good enough” is no longer good enough
- Recognition that technology is the underpinning of the operations and is an inhibitor preventing progress toward those goals
- The need for flexible, open IT systems that deliver a comprehensive solution today with the agility to support tomorrow
- A mounting concern for cybersecurity breaches
- A culture that demonstrates change readiness and willingness to embrace technology innovations

There are also several considerations when choosing vendors to support the institution on its cloud journey. Institutions look for a cloud environment to run software and for system integrators that will implement or manage that software on behalf of the institution. In some cases, institutions choose partners that can in effect do both and provide end-to-end support, including software development, implementation, and ongoing operations.

School leadership can weigh these requirements when choosing a cloud partner:

- Solutions explicitly and comprehensively focused on higher education requirements
- Solutions developed by the vendor and driven by R&D investment; in support of a continuous improvement cycle, customer feedback is provided back to the vendor for solution refinement

- Multiple deployment options—hybrid, managed cloud, and SaaS—available that can adapt to the institutions business objectives and desired pace, providing the option to migrate immediately to SaaS or to make the transition from managed cloud to SaaS when ready and with the least disruption
- Demonstrable track record of delivering cloud migrations on time and on budget
- Ongoing in-house management advisory services available including continuous assessment of value delivered and recommendation on optimization strategies
- A philosophy of enabling clients to succeed and avoiding long-term consulting engagements
- Exclusive focus on higher education customers and demonstrable track record of customer satisfaction with cloud migrations
- Security expertise

According to John Korea at Wilkes University: “Using cloud ERP providers [that service multiple sectors] can feel like fitting a square peg into a round hole. Their solutions are generic, built to suit multiple industries. Vendors such as Ellucian, however, develop software only for higher education. They understand what makes higher education unique. Their teams have deep higher education knowledge, and many have worked directly for colleges and universities. That gives me confidence that Ellucian cloud solutions will do more for us than any other ERP provider.”

Appendix

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Omdia consulting

Omdia is a market-leading data, research, and consulting business focused on helping digital service providers, technology companies, and enterprise decision makers thrive in the connected digital economy. Through our global base of analysts, we offer expert analysis and strategic insight across the IT, telecoms, and media industries.

We create business advantage for our customers by providing actionable insight to support business planning, product development, and go-to-market initiatives.

Our unique combination of authoritative data, market analysis, and vertical industry expertise is designed to empower decision-making, helping our clients profit from new technologies and capitalize on evolving business models.

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We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Omdia's consulting team may be able to help your company identify future trends and opportunities.

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