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Three Reasons to Shift Your Higher Education Institution to the Cloud

As your higher education institution determines its digital transformation strategy, you have to navigate the narrow path between opportunity and risk. Strategic transformation has to consider student preference and choice needs, as well as instructional design and the academic outcomes faculty seek to achieve. Systems and technologies can help institutions target and support their students from application to graduation and beyond.

In addition to academic and research considerations, you must also factor in digital resiliency in the face of future climate events—like hurricanes, flooding, wildfires, which are increasing in frequency and severity due to climate change—and your ability to rapidly adapt to disruptions and both restore operations in a timely manner, and also capitalize on the changed conditions.

Here are three reasons you should shift your institution to the cloud:

1. More Choice and Student-Centricity in Teaching and Learning

Transforming teaching to meet learner needs

Digital transformation strategies and investments in instructional delivery will enable you to reach new populations. Institutions around the world are embracing a variety of delivery methods including primarily online instruction, hybrid flexible (HyFlex) delivery, leaving the choice to individual instructors or fully resuming in-person learning.

- Online Delivery - Removes the barriers of cost, commuting and rigid scheduling (in the case of asynchronous classes) for employed learners, those with family obligations and learners whose distance from campus would otherwise prevent enrollment

- Microcredentials - Often delivered virtually, these programs serve learners who already have degrees, don't see the need for a traditional degree to achieve their career goals or may not have the finances to complete a traditional degree

Innovating the student experience

While shifts between online and in-person delivery is an obvious pandemic-related change, instructional mode is only one aspect of the digital transformation of higher education. Irrespective of modality, you may be asking, "What does a contemporary great student experience look like?" and "How can I deliver and iterate quickly with initiatives like microcredentials or web-based student services—without making a big up-front investment in hardware that I will be stuck with if we learn that a particular idea didn't work?"

The cloud can improve and automate processes to increase convenience and eliminate friction for your students. These new tools and technologies can also positively impact student engagement and the overall student experience, as well as drive additional revenue.

2. Need for scalable security in the research community

Digital threats to research data

Computational research has become ubiquitous across all scientific and social scientific disciplines. Analysis of large sets of data delivers new discoveries in almost every field, particularly the fastest-growing disciplines, such as genomics. Moreover, the trend of international research collaboration continues, bolstered by computational research in
the cloud.

Globally, education and research organizations face more cyber threats than organizations in any other sector. In the third quarter of 2022, the academic research sector experienced an average of 2,148 attacks per organization every week, an increase of 18 percent compared to the third quarter of 2021.

In many attacks on research data, the target is the information itself: intellectual property with medical, commercial and military applications. Servers that individual researchers have provisioned on their own outside the campus IT structure are a common point of entry for attackers. "Thefts of sensitive data are not just orchestrated by cybercriminals operating from afar," notes Jennifer Sparrow, a senior manager with AWS's U.S. higher education team and former deputy chief information officer for Penn State University. "Many research data thefts are happening physically on campus." When valuable research data is scattered around dozens of different physical locations—with varying and often minimal levels of security—safeguarding each and every location becomes a formidable and costly challenge.

Policy imperative for protecting research

A shifting policy environment is also increasing the pressures on institutions, as governments ramp up efforts to prevent malicious actors from stealing the research they are funding. For example, the Department of Defense's Cybersecurity Maturity Model Certification (CMMC) makes funding contingent on compliance with strict security protocols.

These pressures leave chief academic officers and other senior executive leaders with yet another addition to your job descriptions: aligning the research enterprise to a modern and uniform approach to data security and governance. Achieving security for research data is particularly challenging because of the need to unify practices of individual researchers working in different ways in different and siloed parts of the institution.

Driving alignment in computational research is no small task even at institutions with centralized research administrations. For universities across the country with radically decentralized operating models, the task of unifying processes across researchers - who are accustomed to near total independence - has become a top-of-mind priority for senior executives, not just the chief information officer. Leadership expertise on cybersecurity has become key to an institution's success.

3. New urgency applied to sustainability by institutional leadership

Aligning Sustainability and Digital Investments

A variety of factors are likely driving your higher education institution to incorporate sustainability into its transformation strategies, including governance, institutional strategy, funding and student demand.

Perhaps one of your university's drivers is higher energy or supply chain costs. By transitioning to the cloud, institutions can reduce electricity consumption and stress on building HVAC systems created by on-site data centers. Additionally, servers employed by cloud data centers are more energy efficient than those individual institutions can maintain on-premises, and the facilities that house cloud data centers are designed, built and operated with energy-saving approaches (such as specialized cooling and ventilation systems).

Additionally, academic institutions can use cloud capabilities to drive data-informed decisions and actions to make your university more sustainable. For example, you can collect and analyze data to understand campus performance and optimize class scheduling, space use efficiencies, building heating, cooling and lighting schedules, and even capital investments.

To learn more about these top innovation drivers for higher education institutions like yours around the world, download the full report from AWS. For more information about AWS' Education and learning solutions, visit the AWS Education solutions page.