Universities can cut costs without cutting corners
How three tech advances are helping higher education reverse its financial losses

By Leon Sayers

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COVID-19's powerful impact on higher education is accomplishing action that many university CIOs and CTOs have long urged sometimes skeptical or reluctant leaders to take: it has propelled the sector along its digital transformation journey. When COVID-19 caused more than half of in-person education programs to be postponed or cancelled around the world, it exacerbated the financial difficulties that universities already faced, finally driving adoption of technologies to support the spike in remote learning.

The revenue impact has been harsh. Universities Australia conservatively estimated a revenue loss of between $3.0 billion and $4.6 billion in 2020 and a loss of around 21,000 full-time employees university jobs, plus a further loss of $5 billion to $6 billion by 2030. Kearney Consulting anticipated a 2020 decline in domestic students of between 15-20% and international students 30-50%, resulting in a reduction of $7 billion to $9 billion for Australian universities.

Hopes that COVID-19's impact on the Australian tertiary education sector would subside after a year did not eventuate due to ongoing international travel restrictions into Australia and multiple lock-downs forcing students at all levels into remote learning. Instead, universities are under pressure to adapt to these conditions by operating more efficiently and productively. Experts predict that some degree programs could be jettisoned while some universities may be forced to close and others to seek merger partners.

Fortunately, powerful, proven advances in technology hold tremendous promise for that purpose. In our work with one of the world's largest university systems, our secure, analytics-driven hybrid cloud technology and services produced a 33% reduction in IT infrastructure costs in concert with a 90% improvement in data delivery and data access performance to the campuses, while supporting student enrolment rate increases of more than 40%. These outcomes help the client integrate hybrid cloud information resources to deliver more innovative educational and administrative services across more than 20 campuses, and provide a better user experience to more than 440,000 students and 52,000 faculty, while enhancing operational efficiencies and reducing costs.

In other words, when we talk about efficiency and productivity, we are definitely *not* talking about cutting corners, reducing services, or sacrificing quality. We are talking about expanding universities' ability to deliver value and a better student/faculty experience while reducing operating costs. How? Through cloud optimisation, operational intelligence, and application modernisation – three technology advances that have already created tremendous improvements in businesses of all kinds and are now being adapted to higher educations' specific needs. These technologies have been driving financial successes for years, COVID-19 simply made them urgent priorities for universities.

Universities are especially prone to siloed stores of vital information that prevent leaders from making decisions in real time to avert problems, seize opportunities, mitigate risk, or develop effective strategies.

Operational Intelligence

In any organisation, one of the most frustrating impediments to efficiency and productivity is leaders' lack of instant access to all the information that should inform their business decisions. Delays in gathering such data means they can't make decisions in real time to avert problems, take advantage of opportunities, mitigate risks, or develop effective strategies. Universities are especially prone to siloed stores of vital information because of their federated structure. Each of their many departments or functions tend to have its own way of operating and assembling data.

When leaders are hindered from taking quick action, the organisation suffers in a myriad of ways. University leaders might, for example, be unable to identify or predict service failure, detect and isolate cyber intrusions before damage occurs, or compete for grants in a timely manner. With their heavy compliance obligations, mistakes in regulatory reporting might go unnoticed. Unnecessary costs can mount steadily and go unmanaged for long periods.

The solution to this impediment is Operational Intelligence (OI), a wide-ranging analytics approach that enables prompt decisions and actions by using real-time data. OI relies on automated data gathering, artificial intelligence, and machine learning to deliver information in real-time so that leaders can be proactive rather than reactive. It focuses on repeated processes and incidents so that, by maintaining continuous observation and analysis of massive amounts of relevant data, it can reveal opportunities for better decisions and performance. Microsoft's AI solutions for higher education are a prime example.

For the university seeking to make the momentous changes that today's turbulent environment requires, OI is an essential management tool. With OI, administrators can provide the kind of detailed, reliable, real-time information that helps overcome individuals' natural resistance to change. They can quickly see when something is working or what remedial action is needed. They can quickly identify new needs that are going unmet or safety issues that are endangering students. IT can detect indicators of a potential outage or intrusion and take steps to prevent it. It's not an exaggeration to say that without OI, leaders are forced to either delay decisions or make them blindly and suffer financial and other losses as a result.

Cloud Optimisation

Cloud adoption, whether public, private, hybrid, or a combination, has enabled universities to realise welcome benefits for students, faculty, researchers, and staff: easy access to the resources they need, better collaboration among all parties, and learning opportunities for students no matter their location or device. It has also been a major gain to university finances, with predictable monthly expenses instead of capital expenditures, less hardware to purchase and maintain, and lower data center storage and maintenance costs.

However, adoption is not a one-and-done event. Adding, upgrading, integrating, and removing applications and components can introduce lag-time and friction into the cloud environment. Costs can escalate, vendor pricing can change, peak usage can fluctuate unexpectedly, performance can degrade, and security vulnerabilities can creep into the environment. Moreover, cloud technology changes rapidly. The cloud you deployed last year may not have the timesaving, performance-enhancing features for your business you could benefit from today, or the new technical designs and configurations that would streamline management. Lapses in governance creates risks.

Cloud adoption is not a one-and-done event. Universities can continue to save costs by regularly reviewing and fine-tuning the cloud environment to improve overall performance.

So, regular reviewing and fine-tuning is necessary to optimise the cloud environment and ensure it operates at peak efficiency. This allows administrators to discover over-provisioned or abandoned resources as well as opportunities to automate manual efforts, improve governance and minimise risk. In other words, they can continue capturing cost savings while improving overall performance.

Application Modernisation

COVID-19 exposed that many university legacy applications are not digitally ready to support a long-term, high-volume, virtual education experience. Aging applications don't just prevent organisations from making the most of new opportunities and meeting the demands of the new digital environment and the surge in distance learning. They are also expensive to maintain, demand skills that are aging out of the workplace, and hinder recruiting top-notch new IT workers who spurn them in favour of modern technologies.

But despite being a key feature of higher education IT strategy, application modernisation lags intentions, largely because of fears that the major changes they require will lead to service interruptions and security vulnerabilities. Moreover, many such efforts have failed for various reasons, including a lack of alignment of the parties involved. The developers who see the solution clearly may not fully understand the business processes it must serve. The processes themselves may need to be improved before the application is made cloud-ready. The system owners may not see the value of the proposed solution and resist large-scale change. The different ways end users actually use the system have not been taken into account. Critical dependencies may be overlooked. The cost of the effort is easily underestimated and underbudgeted, especially when these challenges draw out the project timeline.

These challenges require a concerted approach if universities are to meet the ever-expanding needs of the current environment. To do so, you have to operate swiftly, with a targeted plan that ensures you choose your modernisation priorities according to your strategic needs.

This will determine whether the business process itself needs to change before the application is modernised. With that knowledge, you are ready to adopt a lean, fast, agile delivery model that builds in security at every stage. This model can prevent those problems of cost overruns and delays along with worries about disruptions and intrusions.

Above all, this rapid execution enables universities to quickly reap the value of application modernisation, namely cost savings, improved performance, faster market responsiveness and innovation, and IT talent available for priority business needs.

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Leon is Director of Advisory at Unisys APAC. He is a cloud evangelist who recognises the unique opportunity today's virtual environment extends to higher education.

Drawing on his 20-plus years in Information and Communications Technology, Leon has developed deep, first-hand insight into how organisations can leverage technology to achieve improved efficiencies, employee cultural change, and enhance productivity and performance. By sharing these insights with client organisations, he helps them achieve their change management goals by transforming people, processes, and technology.

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Summary

In summary, our advice is:

- Leverage operational intelligence to make data driven decisions

- Adopt cloud optimisation as a continuous process, not a one-time event

- Take a phased approach by focusing on small projects that can deliver faster returns and enhanced experience for users

By doing so, universities will be able to fast track cost reduction, performance improvements and enhance ways to deliver services to students and faculty.

For cloud evangelists who have long commended cloud's vast potential to university administrators, the pandemic has provided the impetus they need to accelerate the realisation of cloud's benefits to support the spike in remote online learning. With cloud optimisation, operational intelligence, and application modernisation, universities can turn the challenging new environment to their competitive and financial advantage.
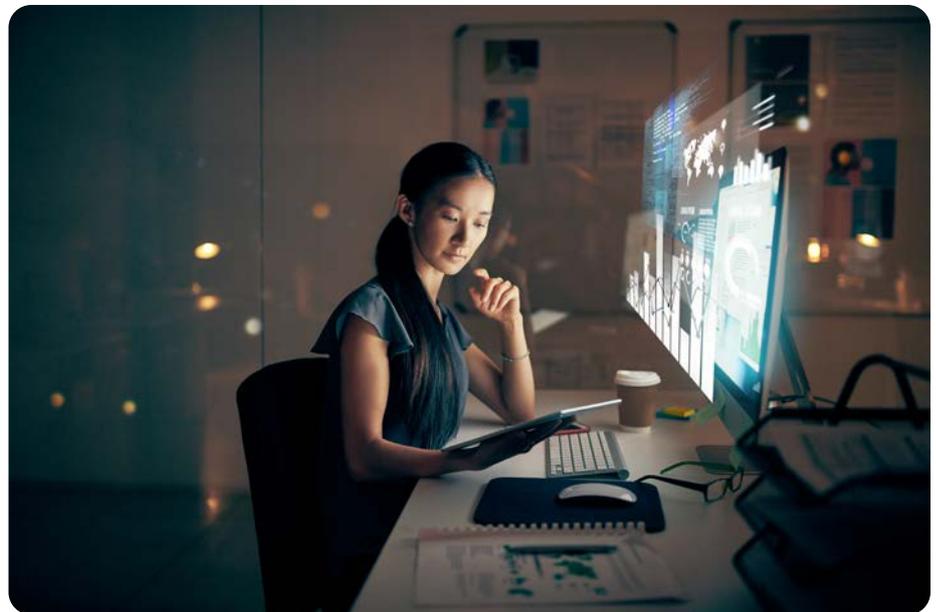
To learn more about how Unisys cloud solutions and services can improve your university's services, reduce costs and drive agility contact us here

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