The Network Infrastructure Revolution in Education

NEW CHALLENGES FOR HIGHER EDUCATION

Higher education across Europe has been seriously affected by the COVID-19 pandemic. University leaders are now focusing on how to transition to the next normal, how to efficiently organise a return to campus, how to avoid backsliding into another lockdown and how to improve the student experience. There are three main challenges that universities need to tackle.

Economic challenges:

- According to IDC data, around 55% of European universities have been significantly affected by the Pandemic or economic slowdown.
- Economic uncertainty is likely to persist for another few years, especially for universities with a high percentage of foreign students.

Proving the value proposition for students in the next normal:

- Students are increasingly questioning the value proposition of remote education. For many students, their level of comfort and their access to lecturers have been impacted by the pandemic, but their tuition costs have largely stayed the same.
- Students have also discovered that other, less costly avenues of education offer similar experiences in terms of remote learning, such as Massive Open Online Courses and other online sources.

Returning safely to campus:

- To transition to the next normal, universities need to facilitate a safe return for students through the use of innovative technologies.
- They also need to focus on less intrusive ways of doing so to minimise further disruption to the educational experience.

Key considerations for university chancellors:

- Balancing the budget in the short term without jeopardising the long-term development of the university
- Safely bringing students back to campus

Key considerations for heads of student experience/services:

- Providing a safe but exciting educational experience for returning students
- Leveraging the lessons learned from remote learning to improve the overall educational experience in the next normal

Key considerations for heads of campus estates/operations:

- Enabling the secure return of students via organisational measures and the adoption of new technology solutions
- Optimising campus technology to realise operational savings

RETURN TO CAMPUS — HOW TO RETURN SAFELY AND EFFECTIVELY

A safe return to campus is a prerequisite to transitioning to the next normal. Throughout 2021 universities will still need to adhere to strict health and safety measures while providing an on-campus educational experience. Universities unable to ensure this will risk having an outflow of new applicants and students.

Key issues for a successful return to campus:

Congestion management:
Creating a safe and secure environment to support the return to campus demands real-time insight and control and engagement to disperse congested spaces.

Location awareness and dwell:
To mitigate risk and minimise the impact of a staff member or student receiving a Covid-19 positive test location awareness and associated analytics can provide accurate contact tracing to identify and engage with anyone deemed at risk.

Hybrid learning options:
While most students will return to campus, those unable or unwilling to still need access to all education-related content. Universities need to provide a seamless transition between online and offline experiences for these students.

How modern cloud and networking infrastructure can help:
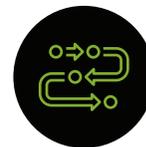
Advanced location capabilities for planning:
BLE location capabilities are a must for effective space management. Whether is be optimisation of study space or assuring social distancing, choosing the right IT infrastructure and enabling these capabilities is now essential.

Modern cloud scalability:
Modern cloud and appropriate infrastructure enable access to resources from anywhere, anytime. Students can learn in lecture halls and from anywhere else on or off campus.

AI-driven data analysis for health and safety:
Data without analysis cannot be transformed into insights and policies. Advanced location capabilities need to be accompanied by analytical capabilities. When it comes to positioning data, AI offers powerful tools to get the necessary insights from large, multidimensional data sets.

Call to action — the next steps for student-focused university executives:

Ascertain the need to manage movement on campus based on **health** necessity.

Have a conversation with your IT leadership about how IT can provide a technological basis for advanced location services, **modern cloud** and **AI-driven** analytics.

Create a plan utilising advanced geolocation to minimise disruptions from the **health and safety** measures on the student experience.

IDC ANALYZE THE FUTURE

STUDENT EXPERIENCE — HOW TO RETAIN HIGH LEVELS OF STUDENT SATISFACTION IN THE NEXT NORMAL

What are the key considerations for improving the student experience?

Access to learning resources:

- According to scientific sources, students restrained by technical poverty during the pandemic are more likely to delay graduation than those with the latest devices and high speed connectivity. Inequality of access is becoming more pronounced with the pandemic.
- This access needs to adhere to the "everywhere, anywhere" principle to mitigate the obstacles that students from different socioeconomic groups may face.

Health and wellbeing:

- The Global pandemic has sadly extended the volume of students suffering with anxiety, depression and other mental health issues across tertiary education. Technology and location analytics could hold the key in turning todays reactive support services into proactive early warning systems.
- The education sector around the world is stepping up. IDC estimates that 30% of higher education institutions worldwide will establish personalised well-being and digital counselling services to help teachers, parents and students cope with the demands of remote and hybrid learning.

Opportunities for social interactions with lecturers and peers:

- Today's Universities differentiate through student experience and faculty community. In the new world of Hybrid learning building strong communities will become paramount in creating student success and supporting wellbeing.

How modern cloud and networking infrastructure can help:

Advanced location capabilities for improved experience:

Geolocation capabilities can help students to navigate their way around campus and manage and optimise study spaces as well as improve engagement. Advanced geolocation, coupled with appropriate data protections, can make students feel safer, but also ease their access to premises as well as their peers and faculty.

Modern cloud for equity of access:

Modern cloud, coupled with the right networking solutions, should mitigate inequities in access to education resources. Success will rely not only on adequate SaaS learning management solutions, but also on service assurance. The opportunity to engage with peers and learn needs to be provided almost everywhere on campus, as in the next normal students are likely to be more dispersed across the campus.

AI-driven data analysis for mental health:

Health counselling can only be properly provided if the person in need is identified in a timely manner. While personal interactions and insights from faculty and peers play a crucial role here, the early warnings and the need to reach out can be established by analysing data on class attendance and by using geolocation data to show if students are shutting themselves out of university life. Recognising students in danger will be increasingly driven by data analysis as much as personal insights.

Call to action — the next steps for student-focused university executives:

Create a plan to ensure equal access to education resources and social interactions based on **enhanced IT capabilities**.
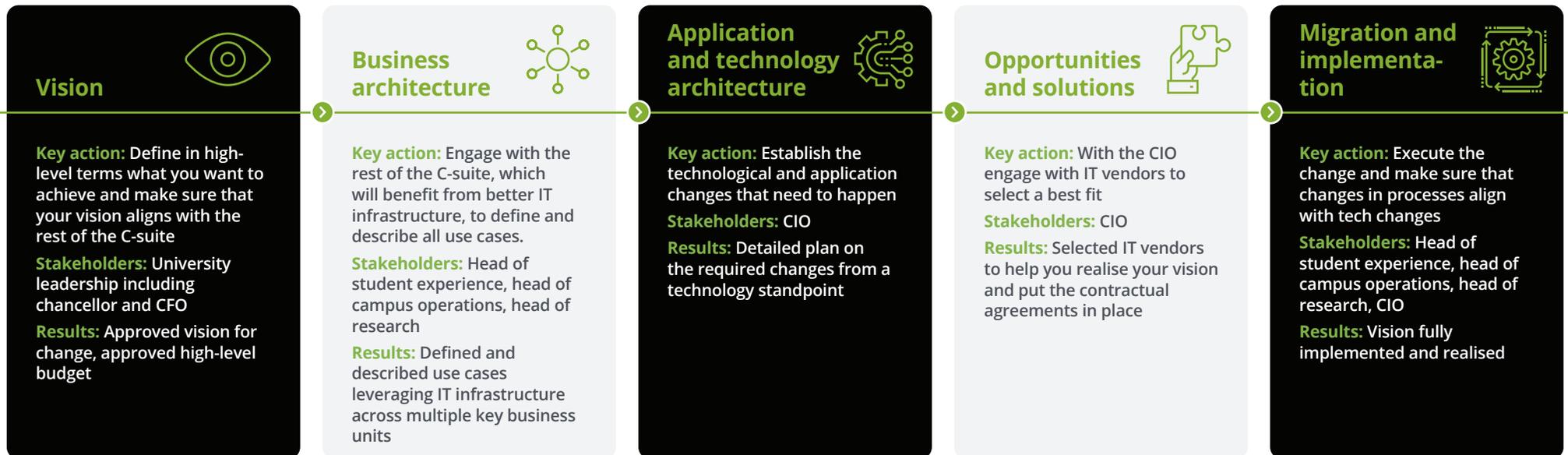
Seek inspiration from **innovative case studies** to help you improve the student experience with better IT infrastructure.

HOW TO ENABLE NEW USE CASES WITH IMPROVED IT INFRASTRUCTURE — FRAMEWORK FOR STEP-BY-STEP IMPLEMENTATION

University chancellors, heads of student experience and heads of campus operations can struggle to turn their vision into reality. For successful implementation of new use cases based on improved IT infrastructure, there are several steps that need to be made. For each step, there is a **key action** to execute, a different set of **stakeholders** to work with and different results that need to be achieved. In each step, there are also opportunities to leverage the know-how of IT infrastructure vendors.

From vision to reality — how to improve the student experience with better IT infrastructure

Vision

Key action: Define in high-level terms what you want to achieve and make sure that your vision aligns with the rest of the C-suite

Stakeholders: University leadership including chancellor and CFO

Results: Approved vision for change, approved high-level budget

Business architecture

Key action: Engage with the rest of the C-suite, which will benefit from better IT infrastructure, to define and describe all use cases.

Stakeholders: Head of student experience, head of campus operations, head of research

Results: Defined and described use cases leveraging IT infrastructure across multiple key business units

Application and technology architecture

Key action: Establish the technological and application changes that need to happen

Stakeholders: CIO

Results: Detailed plan on the required changes from a technology standpoint

Opportunities and solutions

Key action: With the CIO engage with IT vendors to select a best fit

Stakeholders: CIO

Results: Selected IT vendors to help you realise your vision and put the contractual agreements in place

Migration and implementation

Key action: Execute the change and make sure that changes in processes align with tech changes

Stakeholders: Head of student experience, head of campus operations, head of research, CIO

Results: Vision fully implemented and realised

How vendors can help — what you might want from your IT infrastructure vendor

Ask your vendor to inspire you on new, innovative use cases that will help you innovate and make the overall business case.

Ask your vendor to demonstrate changes that similar projects brought in other universities. This will help you to better define your own use cases.

Ask your vendor about its experience with suitable technological and application approaches to avoid later problems with implementation.

Ask your vendor to demonstrate that its solutions are the best fit for your needs.

Work with your vendor to execute the change.