Case study
University of KwaZulu-Natal, South Africa

The University of KwaZulu-Natal (UKZN) is a research-driven institution and one of the largest in-contact teaching universities in the country. The university on-boards approximately 9,000 new students each year across five campuses.

Four campuses are within the eThekwini Municipality whilst the Pietermaritzburg campus is located within the Msunduzi region.

UKZNs access control system was a legacy competitor product which was installed over a period of almost 20 years, and for much of its lifetime had served the university well. However, increasingly limited support, both in terms of hardware and software, meant maintenance was becoming a concern. Limited spares, obsolete hardware for the backend systems and vendor lock-in were also contributing factors to overhauling the system, along with the use of insecure legacy magstrip access cards.

Their needs
During the “FeesMustFall” protest, the issue of student access control reached the board level and questions arose regarding the capabilities of the existing solution. Once a due diligence report was concluded, a number of reasons became apparent for considering a new solution. These included:

- the system originated from a single incumbent contractor,
- the lifespan of the old system was limited,
- annual maintenance was costly,
- a lack of integration capabilities,
- the system was insecure,
- no encryption of the access cards was available,
- it used legacy architecture,
- there was difficulty in obtaining system spares, and
- very few companies in the market were able to provide or offer assistance when required as a result of a small support base.
UKZN required a web-based system that could seamlessly integrate with its ERP system for automated provisioning and de-provisioning of staff and students.

The hardware needed to be cost-effective, durable and carry a minimum warranty period of three years.

Furthermore the solution needed to be supported by a large installer base in KwaZulu-Natal. While, technical backup from the manufacturer and supplier of both software and hardware was a prerequisite.

The solution needed to be an IP-based system that was scalable and supported a centralised data centre environment.

Finally, it not only needed to be cost effective to deploy, operate, maintain, manage and scale, but there had to be the assurance that the solution was future-proofed in order to ensure integration with third-party products and systems, thereby preventing vendor lock-in occurring.

**The solution**

After an extensive survey of the access control market UKZN selected Impro Technologies’ Access Portal solution, coupled with HID’s R10 readers with next-generation Seos credential technology.

This selection was based on the solution meeting all the required needs for the university, along with the added benefit of being highly scalable, web-based, and with best-in-class credential encryption. In addition to the secure open standard offered by Seos credentials, a magstripe was included for students to utilize other services with one card.

The adoption of new technologies such as virtual credentials and Mobile Access is also easily deployed through this solution.

Further to this, Impro also offered certified training for all the university’s in-house staff members to ensure knowledge-sharing and rapid upskilling on the new system, to enable the quickest return on investment.

**The results**

The system, which was deployed in a phased approach to minimize disruption and reduce deployment costs, currently handles over 200,000 daily transactions and has resulted in an annual saving of over ZAR3-million for the university.

One of the benefits of Impro’s Access Portal software is the flexibility it unleashes for extensive integrations with third-party systems.

At UKZN this included their student management system, as well as the student printing solution (follow-me-printing/release on demand). This system uses integrated readers in the multi-function devices and cash kiosks, so students can make payments into their account which are reflected as printing credits. Students are then able to use any printer in UKZN and release the document with their student card.

Access Portal is also the authoritative source for identity management when issuing and managing laptops to qualifying students; while an integration with Hikvision has resulted in the deployment of facial recognition in key areas through the university.

Another strong feature of Access Portal is threat-level, which enables the university to pre-set actions in an emergency. For example, all access points can be immediately locked down, with nobody able to enter or exit, or all points are opened to enable evacuation. Whatever the choice, it simply takes a mouse click and it’s done – a critical time saving in an emergency situation.

Overall the project has been hailed as a success throughout the university, having met all objectives well within budget and timeframe, whilst ensuring the university has a solution that will grow with their needs and enable the adoption of new technologies long into the future.