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CASE STUDY

University of Worcester and Thorlux

Project: To integrate Archibus software with Thorlux's lighting management system, SmartScan.

Objective: To improve efficiency and ensure greater consistency across University of Worcester's estate management systems

Results: Improved compliance and faster response times as Archibus converts failure notices from SmartScan into work requests. A move towards predictive maintenance and more accurate occupancy management.

The University of Worcester welcomes around 10,000 students across four campuses. Facilities are extensive and include The Hive, a £60 million, award-winning library and the University Arena, Britain's first major indoor sports arena specially constructed to meet the needs of wheelchair as well as able bodied athletes.

Managing the University's 175-acre estate is the responsibility of the Estates and Facilities team. To support the efficient operation of such a diverse and complex estate, the University relies on a range of integrated digital systems. Leading this work is Simon Dutton, Head of Building Information and Digital Systems, supported by his team and Archibus integrated workplace management system (IWMS) software provided by Service Works Global.

A recognised leader in sustainability and climate change research, the University uses its campus as a living laboratory to develop and test solutions that improve the health of people and planet.

Also based in Worcestershire, Thorlux has designed and manufactured lighting and lighting control systems for more than 90 years. Sustainability is central to the business, with a target of achieving net zero greenhouse gas emissions by 2040.

The University of Worcester is the first organisation in the UK to integrate SmartScan with IWMS software.

A smarter approach to lighting management

The University needed a lighting management system that could deliver tangible operational and financial benefits across the estate. The priorities were improving energy efficiency, automating emergency lighting testing, and gaining better insight into room occupancy and space usage.

“Thorlux’s SmartScan system stood out because it combined proven reliability with the functionality we needed. The system provides automated emergency testing, real-time visibility of lighting status, and stronger control over lighting performance across campus buildings. Importantly, it is a mature and well-established solution, giving us confidence that it could be depended on for day-to-day operations,” says Simon Dutton.

The SmartScan lighting management system is designed around two key points: compliance of the emergency lighting through automated health checks and reporting, and energy-efficient control of the main lighting. Movement detection can switch off lights on and off when rooms are entered or exited, as well as dimming lights when natural light is detected to save energy.

Phil Hill, Director for lighting controls at Thorlux adds: “SmartScan gives clients confidence that their lighting is operating efficiently and that emergency lighting remains compliant. Beyond that, it provides valuable operational insight, including energy use, luminaire performance and occupancy data through interactive building plans.”

Dutton adds: “Heat mapping shows us how a space is being used. When departments request additional space we can now see how they’re using it over any time period – it’s a powerful tool to inform accurate decision-making on space management.”

Connecting lighting data with day-to-day FM operations

SmartScan automated the self-testing of emergency lighting across the university, generating large volumes of data on the performance of each asset. However, any faults, failures or other issues identified by the system had to be manually reviewed by the estates team through the SmartScan portal. For a busy team responsible for managing a four-campus university estate, this meant that critical issues were not always identified and addressed as quickly as needed, creating potential compliance risks.

To improve efficiency and ensure greater consistency across its estate management systems, Dutton wanted to integrate SmartScan with Archibus. As the university’s long-standing IWMS partner, SWG was chosen to deliver the integration.

“I realised that if we could bring the SmartScan data into Archibus, any alerts would reach our electricians much more quickly, helping us stay compliant,” says Dutton. “It also eliminates the problem of incomplete or inconsistent data between the two systems. After an initial meeting to discuss our requirements, SWG worked directly with Thorlux to develop the integration, so I didn’t have to act as the middleman. We’ve worked with SWG for several years and have built a great relationship. They’re always willing to help, and they found this project particularly exciting because we’re the first organisation in the UK to integrate SmartScan with CAFM / IWMS software.”

Hill adds: “This is a really exciting development because the University of Worcester is leading the way in creating a truly smart campus. Integrating systems and enabling them to share information is exactly the direction the industry needs to take, and it’s fantastic to see that vision becoming a reality.”

SWG integrated SmartScan and Archibus using APIs, validating incoming data before updating live records to protect the integrity of information already held within Archibus. Automated workflows now convert failed emergency lighting tests, battery warnings and communication faults into work requests, complete with precise asset locations. This ensures electricians receive actionable information immediately, enabling faster response times, improved maintenance efficiency and stronger compliance across the university estate.

Delivering value beyond compliance

“For us,” says Dutton, “compliance was the primary driver behind this project. However, integrating SmartScan with Archibus has delivered benefits well beyond what we originally expected. It’s given us valuable insights that are helping us manage the estate more effectively.”

1. Supporting sustainability goals

Sustainability is a strategic priority for the University of Worcester, which has committed to reducing carbon emissions by 50% against its 2018–19 baseline by 2030. Electricity-related emissions have already fallen by 18% year on year, driven by a combination of a lower grid emissions factor and operational improvements across the estate, including building performance enhancements, HVAC optimisation and lighting upgrades delivered through the Thorlux SmartScan system.

By integrating SmartScan data into Archibus, the University has greater visibility of asset performance and maintenance activity, enabling more informed decisions that support its long-term sustainability objectives.

2. Enabling predictive maintenance

SmartScan automatically identifies when an emergency lighting battery has reached its expiry date through routine duration testing. By combining this information with battery expiry dates stored in Archibus, the estates team can now plan battery replacements before failures occur, reducing reactive maintenance and improving system reliability.

Following the success of this approach, the University is exploring similar predictive maintenance strategies for its battery-powered access control system. Looking ahead, it also plans to integrate its building management system (BMS) with Archibus, allowing minor faults to be identified and investigated before they develop into more significant failures.

3. Keeping the asset register up to date

“Another major benefit has been the way we manage our asset data,” explains Dutton. “Whenever emergency lighting is installed as part of a refurbishment or a new building project, the SmartScan data now flows directly into Archibus. We no longer have to update the asset register manually, which saves the team a significant amount of time while ensuring our records remain accurate.”

4. Improving network visibility

The estates team regularly uses SmartScan occupancy profiling to understand how buildings and spaces are being used across the campus. Previously, communication issues such as power outages, network interruptions or gateway failures could go unnoticed for extended periods, resulting in gaps in occupancy data.

With the SmartScan and Archibus integration in place, communication faults are automatically converted into work requests, giving the estates team immediate visibility of any issues. Most are resolved the same day, minimising data loss and ensuring occupancy information remains accurate, complete and reliable for ongoing space planning and estate management.

Building a smarter estate with SWG and Archibus

By integrating SmartScan with Archibus, the University has transformed how lighting information is managed across the estate. Rather than monitoring a separate portal, the estates team can now manage compliance, maintenance and asset information through the system they already use every day, ensuring issues are identified quickly and acted upon before they become bigger problems.

Working closely with Thorlux, SWG delivered the integration Worcester required while keeping implementation straightforward for the University. The project has not only strengthened emergency lighting compliance but also improved data quality, reduced manual administration and created new opportunities for predictive maintenance and operational insight. As Worcester continues its journey towards a smarter campus, the integration provides a strong example of how connecting best-of-breed technologies can deliver measurable value today while creating a foundation for future innovation.