

**Lianhete**ch

CASE STUDY

CONTROL SYSTEM UPGRADE IMPROVES CYBERSECURITY AND PERFORMANCE AT LIANHETECH EUROPE

Working in close partnership with Lianhete Europe, Actemium UK successfully modernised a critical process control system at the company's Seal Sands facility in Teesside in the United Kingdom. By upgrading an ageing Siemens PCS 7 environment to the latest supported version, Actemium helped improve system resilience, strengthen cybersecurity and futureproof plant operations, all while minimising disruption to production.

Sector: Chemical Manufacturing
Location: Seal Sands, Teesside, UK

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CLIENT & REQUIREMENTS

Lianheteck Europe is part of the global Lianheteck Group, a manufacturer of fine chemicals, custom synthesis products and chemical intermediates for industries including pharmaceuticals, crop protection and performance chemicals. Operating within this highly regulated sector, safe, reliable and continuous production is essential to maintaining quality, compliance and operational efficiency.

At its Seal Sands facility, the company identified the need to upgrade the legacy control system supporting operations in one of their main buildings. The existing platform was running on Siemens PCS 7 Version 7 - an industrial process control system used to monitor and automate plant operations - with ageing channel drivers that were no longer fully supported.

This presented several growing challenges. The legacy system was becoming increasingly difficult to maintain, compatibility with newer hardware was limited, and cybersecurity risks were increasing as software support declined.

Lianheteck required a trusted engineering partner capable of delivering a seamless migration to a modern control environment while maintaining operational continuity and minimising project risk.

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THE CHALLENGE

Upgrading a live industrial control system is significantly more complex than a conventional software update, requiring careful planning, rigorous testing and precise execution.

The project involved migrating critical channel driver configurations from PCS 7 Version 7 to Version 10 while ensuring all existing communications, parameters and system functionality were fully maintained throughout the transition.

Key challenges included:

- Maintaining plant uptime during the migration
- Preserving configuration accuracy across all connected systems
- Ensuring compatibility between legacy and modern software environments
- Reducing cybersecurity risk associated with unsupported software
- Delivering a controlled upgrade with full rollback capability if required

Because the control system supported critical plant operations, any unplanned downtime or configuration mismatch could have a significant operational impact.

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THE SOLUTION

Actemium Automation Teesside, part of Actemium UK, developed a structured migration strategy designed to reduce risk and ensure a smooth transition.

The project began with a full assessment of the existing PCS 7 architecture, including compatibility checks, system reviews and risk analysis. This enabled the team to develop a clear upgrade roadmap and detailed rollback procedures.

To minimise risk further, Actemium created two virtual machine environments mirroring the live project. This allowed engineers to test the migration offline before deployment.

Using these environments, the team upgraded PCS 7 libraries, migrated channel driver parameters and carried out extensive validation checks to confirm system integrity.

A particularly valuable part of the delivery involved exporting configuration data from both software versions and using structured comparison methods to identify discrepancies quickly. This provided full traceability and confidence that migrated parameters matched the original system.

Once testing and validation were complete, the upgraded system was deployed into the live environment with minimal operational disruption.

From advice to implementation, in this manner Actemium delivered a bespoke engineering solution built around the client's operational requirements.

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RESULTS & BENEFITS

Actemium's upgrade delivered significant benefits for Lianheteck, including:

- Successful migration from PCS 7 Version 7 to Version 10
- Improved system reliability and operational resilience
- Stable communications across connected systems
- Enhanced diagnostics and performance visibility
- Improved cybersecurity through supported software
- Reduced maintenance risk and easier long-term support
- Greater flexibility for future upgrades and expansion

By modernising its control infrastructure, Lianheteck has reduced operational risk while creating a more secure and future-ready platform for continued growth.

The project demonstrates Actemium UK's ability to deliver complex automation upgrades safely and efficiently in highly demanding industrial environments.

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