



VEOLIA IMPLEMENTS NEW CONTROL TECHNOLOGY WHILE REDUCING ENGINEERING EFFORT WITH HONEYWELL REMOTE MIGRATION SERVICES

Case Study

Honeywell

OVERVIEW

Industrial organizations with a well-planned strategy for control system migration can improve performance, mitigate risks, and shorten project schedules without burdening on-site engineering resources.

BACKGROUND

Veolia Environnement S.A., branded as Veolia, is a French transnational company with activities in three main service and utility areas traditionally managed by public authorities—water management, waste management and energy services. Veolia is the benchmark company for ecological transformation.

Veolia North America provides solutions in water, waste, and energy that promote sustainability and the circular economy. The company's Regeneration and Recovery Solutions business is involved in sulfuric acid manufacturing and traces its origins to E.I. Du Pont de Nemours & Co. performance chemicals business.

Veolia's Red Lion manufacturing plant in New Castle, Delaware, was constructed and commissioned in 2005. The integrated, on-site acid regeneration facility processes spent sulfuric acid and acid gas streams from the adjacent PBF Energy Delaware City refinery.

Sulfuric acid is one of the most widely used chemicals in the world. It is commonly supplied to refineries for processes that enhance fuel octane and for use in household cleaning products, among other applications.

When first established as a Greenfield site, the Red Lion facility implemented a Honeywell Experion® PKS Distributed



Figure 1. Veolia's Red Lion plant was able to enhance its motor control capabilities by deploying new technology with Honeywell's Remote Migration Service.

Control System (DCS) for plant-wide process control. This system was periodically upgraded over the years to keep pace with current technology.



CHALLENGES

For today's industrial organizations, enhancing plant automation technology can present significant challenges. These range from the difficult task of justifying the automation investment in the first place, to implementing the solution and providing a roadmap for the future.

However, the importance and value of control system enhancement should not be overlooked. The DCS is often the central component that determines the productivity and flexibility of a process industry plant.

In 2020, Veolia initiated a project to install additional instrumentation and motor controls in tandem with an improvement project at its Red Lion plant. Part of this effort was focused on deploying EtherNet/IP communications for the new motor control solutions. Automation engineers at the site determined the best path forward was to purchase a Honeywell Unit Operations Controller (UOC) to enable new EtherNet/IP functionality in a compact package. However, the UOC could only be used with Experion Release 510 or higher, and the existing control system at the site was based on Release 501. This required an upgrade effort to bring the Experion platform to the current R511 level.

SOLUTION

Although Veolia had experience performing its own controls upgrades, it decided to enlist Honeywell's assistance with the migration at the Red Lion plant. The two companies determined that a remote migration strategy would be appropriate for implementing the enhanced motor controls capability. This project was one of the first remote migrations performed by Honeywell in North America.

Unlike migrations intended to address control system obsolescence, this effort was aimed at streamlining a modernization project that involved the installation of an EtherNet/IP communication network and associated UOC control equipment.

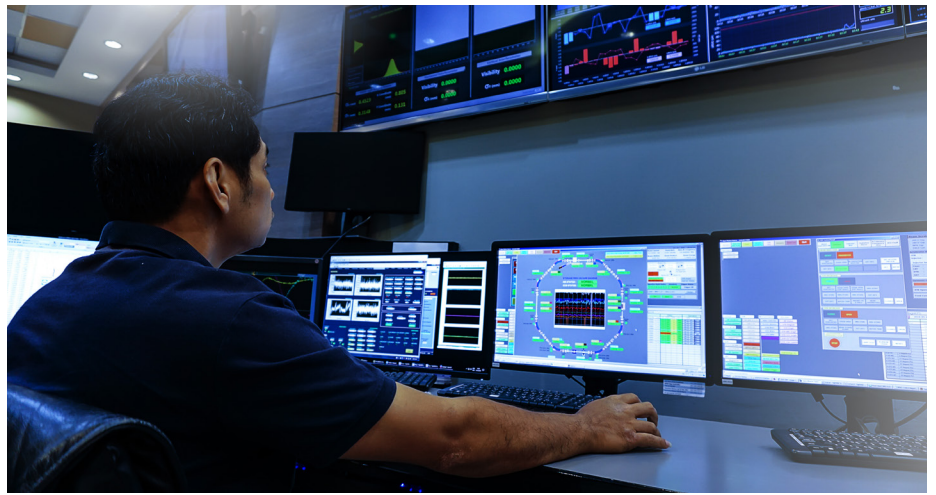


Figure 2. Veolia significantly reduced its plant engineering effort with a remote migration strategy.

The UOC is designed to provide powerful DCS capabilities in a smaller, more flexible form factor. Veolia considered the controller to be an ideal solution for adopting EtherNet/IP at the Red Lion plant and for controls expansions or upgrades at its other production facilities.

Honeywell's Remote Migration Service is intended for Experion and Experion TotalPlant™ Solution (TPS) users who need to modernize their control system to the latest Experion release. Remote migration is done in-house on Honeywell's Datacenter, which can be accessed remotely by technical support specialists along with local Honeywell staff and on-site customers—during a time that suits all parties—to enable the most efficient migration possible.

Veolia considered the Remote Migration Service to be a convenient and easily managed solution, which would be very similar in nature to a conventional migration. The remote solution was also well-suited for the tight timeline required to complete all control technology upgrades.

The remote migration project began with pre-migration data collection by Honeywell field service specialists. A robust data aggregator tool was used to collect relevant configuration items for review and launch the on-process migration process. This approach enabled migration specialists to detect database inconsistencies and minimize site preparation activities prior to image deployment and migration.

Before completing the migration, Veolia's automation staff was given an opportunity to review the external validation step involving their control system database. They were also able to view the migration of virtual nodes to Experion R511.

RESULTS

From Veolia's perspective, the control system upgrade at the Red Lion plant was a complete success. The use of a Honeywell's Remote Migration Service helped to reduce potential risk, minimize operational downtime, and make upgrade an advantageous experience rather than a burdensome requirement. Beyond traditional on-process migration, this approach allowed system enhancements to be performed on the cloud—it was a simple update.

The key benefits of the remote migration solution were:

- Reduced overall risk from upgrades
- Improved productivity
- Enhanced project workflows
- Minimal disruptions to normal operations
- Improved engineering efficiency

For Veolia, the biggest advantage of Honeywell's Remote Migration Service versus a traditional on-site migration was the elimination of lengthy steps needed to rebuild servers and complete other related tasks. In many cases, failures with these steps can make it necessary to restart—a frustrating and time-consuming process.

With the remote strategy, Honeywell specialists took care of all the detailed steps involved with migration, so that site engineers and technicians were freed to focus on other activities. They delivered a migrated machine image after all the migration work had been completed. The image was then loaded to the server without any of the worries that normally accompany such a complicated procedure.

Honeywell's Remote Migration Service helped the Red Lion facility to shorten its control system upgrade project by approximately one week including plant engineering time and reducing associated risk. Unlike a traditional migration, the site automation staff did not have to read software change notices, migration guides, and other documentation to prepare for the technology upgrades. The detailed steps in the migration process, including rigorous data collection tasks, were assigned to Honeywell, enabling plant personnel to maintain their normal schedules and perform other value-adding work for the business.

CONCLUSION

Honeywell customers like Veolia that enhance their system, can respond to new business opportunities, expand capacity, and make use of new applications and solutions for advanced process control, asset management, and production management.

Going forward, Veolia's long-term Lifecycle Management (LCM) contract with Honeywell will allow all control system migrations to be handled via the Honeywell Remote Migration Service solution. This approach will help preserve the company's limited workforce resources while ensuring that future technology upgrades are implemented on time and within budget.

For More Information

To learn more about how Honeywell Solutions can improve performance, visit www.honeywellprocess.com or contact your Honeywell Account Manager.

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