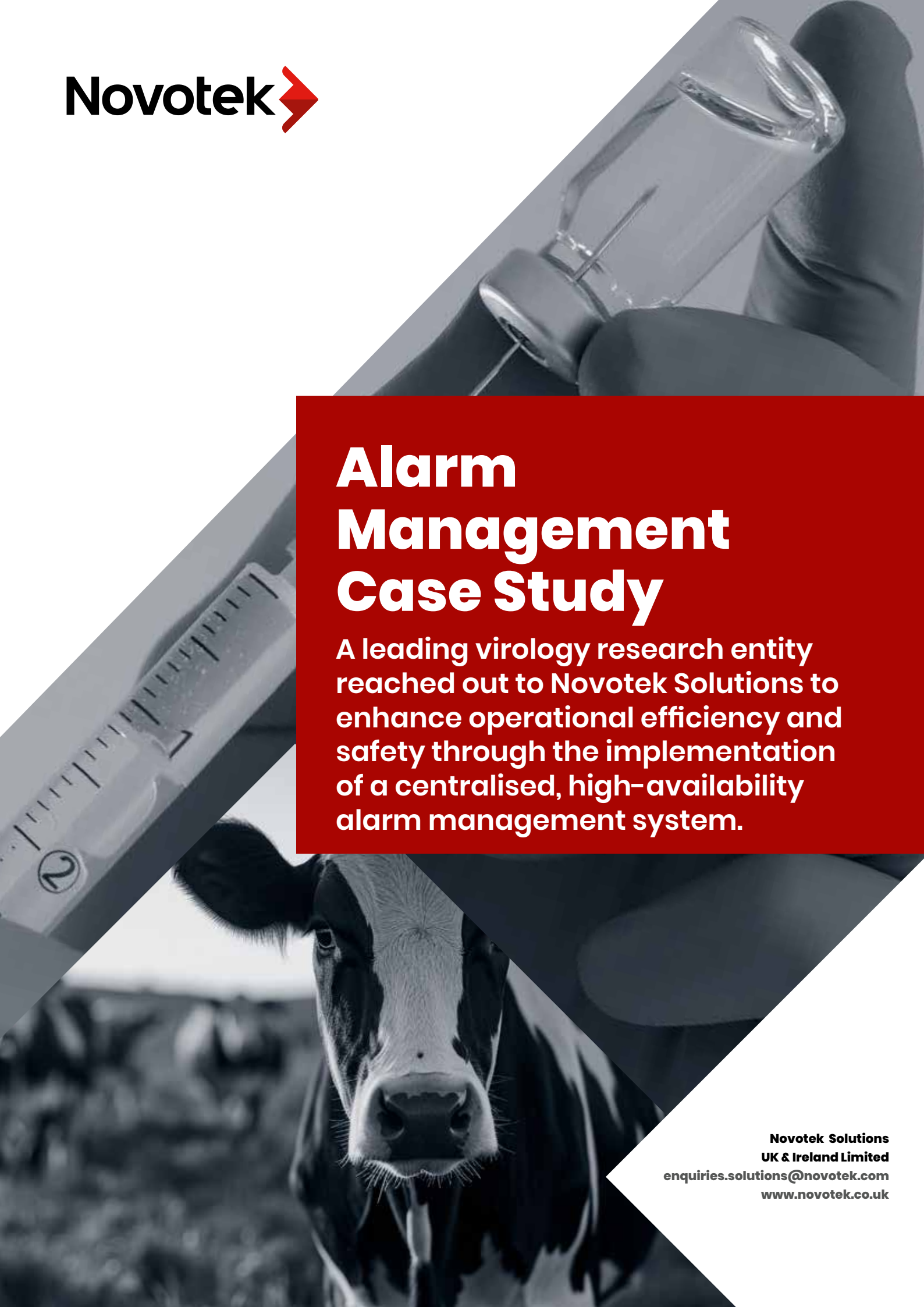
Novotek



Alarm Management Case Study

A leading virology research entity reached out to Novotek Solutions to enhance operational efficiency and safety through the implementation of a centralised, high-availability alarm management system.

Novotek Solutions
UK & Ireland Limited
enquiries.solutions@novotek.com
www.novotek.co.uk

Supporting Critical Outcomes

Our customer, a UK-based entity specialising in virological research and vaccine development, conducts critical studies on animal pathogens. Their operations involve cultivating viruses onsite within a high-biosecurity framework to develop effective vaccines. An inspection by the Health and Safety Executive (HSE) revealed shortfalls in how operators managed alarms related to their control systems, prompting an urgent need for system enhancement.

Challenge

The facility operated with a central control system and several disparate subsystems, each responsible for various scientific processes and building management tasks. Each system utilised a unique configuration and presented alarms differently, complicating the operators' ability to monitor and respond effectively. The facility also used a Keyboard Video Mouse (KVM) setup to navigate these systems without overwhelming operators, allowing a single set of input devices to control multiple systems. However, this arrangement limited visibility, as operators could only monitor one system at a time.

Solution

The customer approached Novotek Solutions to create a more cohesive and efficient alarm management system. After a thorough evaluation, Thingworx, known for its vendor-agnostic capabilities, emerged as the ideal solution. Thingworx's ability to aggregate data from multiple systems into a single browser-accessible interface promised significant improvements in accessibility and response times, enabling operators to manage alarms from any device without reliance on specific Building Management System (BMS) suppliers.

Implementation

The implementation featured a high-availability setup of the on-premises Thingworx system to ensure zero downtime, which was critical for the continuous operation to maintain scientific processes and security. We leveraged standard IT hardware and virtualisation technologies to enhance system resilience and flexibility. The Thingworx platform was configured to provide a unified alarm visualisation interface, simplifying the monitoring process and allowing for immediate responsiveness to any operational anomalies.

Innovation and Flexibility

The customisation capabilities of Thingworx allowed us to introduce innovative display options for alarms, such as graphical presentations, which were well-received by the operators for their clarity and ease of interpretation. Additionally, the platform's flexibility facilitated future enhancements, including advanced analytics for predictive maintenance and decision support.

Outcome

The new system transformed the client's operational capabilities, providing a consolidated view of all alarms with robust sorting, filtering, and grouping functionalities. This integration significantly reduced the cognitive load on operators, enabling quicker decision-making and more effective management of the site's critical biosecurity measures. The operators expressed high satisfaction with the system's intuitive interface and comprehensive functionality.

Future Prospects

With the successful implementation of Thingworx, the client is well-positioned to extend its capabilities in predictive analytics and root cause analysis, further enhancing operational safety and efficiency. Our ongoing support and maintenance agreement ensures the system remains up-to-date with the latest cybersecurity measures and software updates, safeguarding against potential vulnerabilities.

By understanding and integrating our client's specific needs into the Thingworx platform, we provided a scalable, secure, and highly efficient alarm management system that aligns with the client's long-term operational goals.

Novotek

Novotek Solutions UK & Ireland Limited
Edric House, Towers Plaza,
Wheelhouse Road,
Rugeley, WS15 1UW
+44 (0) 1543 888 134
enquiries.solutions@novotek.com
www.novotek.co.uk