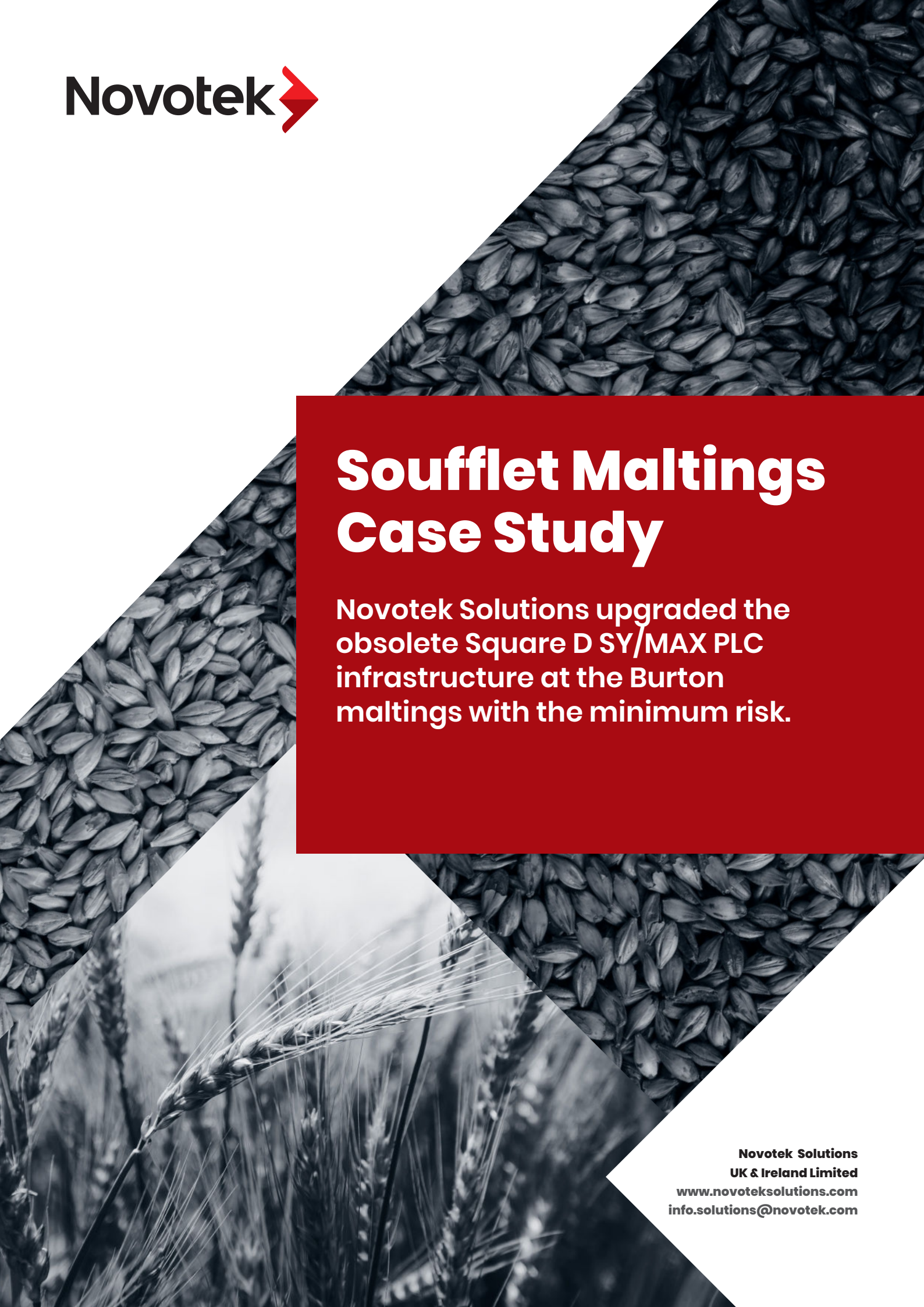
Novotek

Soufflet Maltings Case Study

Novotek Solutions upgraded the obsolete Square D SY/MAX PLC infrastructure at the Burton maltings with the minimum risk.



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Background

Soufflet owns and operates a maltings in Burton-upon-Trent, acquired from Molson Coors in 2015. Novotek previously completed an upgrade project to migrate a portion of the site's legacy Square D SY/MAX PLCs and iFIX SCADA to modern platforms. While the iFIX system had a straightforward upgrade path to the latest versions, the Square D SY/MAX equipment dated back to the 1990s and no clear like-for-like upgrade was available.

When PLCs such as those in place at the Soufflet maltings become obsolete, spares become limited to second-hand or refurbished equipment. Often these parts can be difficult to source, with websites such as eBay becoming the only option to purchase critical equipment.

The obsolete Square D SY/MAX PLCs posed a threat to the ongoing reliability of the operation. The malting process runs 24 hours a day, with any shutdowns resulting in significant loss.

Following the success of the previous project, confidence was high in producing a plan to seethrough the migration to a modern platform with minimal downtime.

Solution

Modern hardware has several benefits over the legacy PLCs at the Burton maltings. First and foremost, ease of repair. The latest cards mean direct access to spares and parts from the supplier, alongside the ability to seek third-party support from any solutions integrator. Before the project, Soufflet relied on a single operator with the knowledge of how to maintain and support their system.

Additionally, an upgrade offers increased connectivity and the ability to gather operational data. Accurate and timely information drives continuous improvement, a vital consideration in growing an efficient and profitable business.

Novotek selected Alan Bradley PLCs, the prefered site supplier, to replace the legacy Square D SY/MAX PLCs. The challenge posed by the migration was that the software for the legacy PLCs is not easily translatable into the code required for the modern hardware. The challenge for such a transfer is considerable and would likely result in a lengthy and costly project which would require extensive testing.

Modernise your operation without the headache.

Our proven proprietary tool has helped remove the headache from PLC upgrades. Proven over multiple projects, not only does our proprietary tool accelerate such a migration, it reduces the costs considerably.

Painfree Migration with Novotek Solutions

Novotek can leverage an in-house migration tool to produce software compatible with modern platforms from the legacy code. This process accelerates migration and enables the retention of existing functionality alongside the foundation of new capabilities.

As suppliers bring out new PLCs, 'upgrade paths' can help with migration. However, as PLCs have a multi-decade lifecycle, upgrade paths may no longer be valid when replacement occurs. Here Novotek's migration tool provides great value in retaining functionality when moving between obsolete cards and modern, supported platforms.

In Novotek's previous project, downtime was made available due to the COVID-19 pandemic. Soufflet was back running at 100% capacity and therefore wanted to avoid downtime. The confidence inspired by previous successes allowed Novotek engineers to work closely with the Soufflet team to create a unique plan.

The maltings process occurs in three stages, each utilising a different site area. The first is steeping, where barley is soaked in water to initiate germination. The second step begins converting starch into sugars and amino acids. The product is then drained and dried in a kiln to stop the germination process in the third stage, allowing for storage before the brewing process begins.

Novotek created a plan to complete the commissioning in a rolling wave, starting with the first stage, to achieve installation and testing without bringing the process to a complete stop.

Once a batch had cleared the first stage, the team completed the required work by the time the barley cleared the second stage. At this point, Novotek's team moved on to replacing the PLCs in the second area of the site while a new batch began behind them.

The maltings process is precise, with any delay causing costly product loss and requires manual removal of the spoiled product. In turn, the commissioning was accurate, fast and thoroughly tested to ensure full functionality before the next batch arrived.

Outcome

Thanks to close collaboration with the Soufflet team, Novotek engineers completed the installation flawlessly. Previous off-site software testing paid dividends and enabled a swift and confident installation that kept the lines running with minimal downtime. The project now serves as the blueprint for completing migrations for other site areas.

Soufflet now has access to all the benefits of modern PLCs. Novotek Solutions mitigated the risk of failure with ready access to spares and replacements, alongside readily available support.

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