



Case Study

Astec Solutions enabled DuPont Teijin Films' manufacturing site in Dumfries, Scotland, to continue to benefit from a control system investment made in the 1990s by migrating its legacy SCADA system to a modern, supportable platform. By providing a comprehensive migration path, DuPont were able to benefit from improved product functionality with the minimum process change, operator training or disruption to production.



Partner
Intelligent Platforms

Astec IT Solutions Ltd
Venture Point
Towers Business Park
Wheelhouse Road
Rugeley
WS15 1UZ
United Kingdom
+44 1543 888134

enquiries@astecsolutions.com
www.astecsolutions.com

Improving The Good, Revitalising The Old

Background

DuPont Teijin Europe designs, develops and manufactures a range of polyester films, including bespoke solutions, for use in the healthcare, alternative energy, durable media, electronics and packaging industries as well as for applications in electrical insulation and capacitors. Its production facility in Dumfries, Scotland, is one of two; the other is in Luxembourg. It also has a Global Innovation Centre in Teesside, England.

The primary control system at the Dumfries plant was based on Siemens S5 PLCs, with Intellution FIX32 SCADA. The SCADA system had not been supported for some time and could not, in its current form, be upgraded to be supportable by the in-house IT team. As well as preventing computer system upgrades, it was unable to meet the demands of a modern manufacturing environment, which led to 'ad hoc' work arounds being adopted in order to keep the factory running. The client was seeking to upgrade the SCADA setup without changing the PLCs.

"While the PLCs were obsolete, Siemens is very good at supporting quite a lot of its older hardware," said Andy Tripp, Managing Director of Astec Solutions. "The SCADA system was not reliable but the PLCs themselves were, and continue to be."

Analysis, diagnosis, prescription and implementation

While there were good reasons to look to upgrade the entire control system, the client did not want to commit to such a significant upgrade. Such a project would have been expensive and extremely disruptive.



"We undertook an analysis and recommended migration to the natural successor of FIX32," said Andy. The FIX32 SCADA system, which was originally provided by Intellution, has not been developed since 1999. Upgrades and patches are no longer available but it is still widely used in manufacturing across the world. "iFIX took over from FIX32 in the late nineties and has been sold ever since by GE Intelligent Platforms since their purchase of Intellution in 2003. It is mature, proven and reliable and has a very strong product development roadmap, which means that it is fully supported, today and into the future. It is compatible with the latest 64-bit operating systems and computer hardware, so it greatly reduces risk in the event of a software or hardware failure when compared with legacy systems."

Astec is the most experienced Premier Solutions Partner for GE in the UK and has a range of tried, tested and proven tools to facilitate migration from FIX32 or MX32 to iFIX, in addition to tools available from GE.

"We were able to provide DuPont Tiejin Films Europe with a cost-effective way to achieve its objectives," said Andy. "We were able to automate the migration from one SCADA envelope to the other. Once the process was set up it was a case of pressing a button to migrate the screens, for example. The PLC hardware – the reliable part of the existing system – remains in place." Astec put in new hardware and software to enable communications between the new SCADA and the PLCs, and offered targeted engineer training to upskill the operators in using the new iFIX system, with reference to their existing system.

"The company now has a migrated system that is not functionally different but performs much better and, with the new screens, is easier to use," he explained. "It can run on the latest operating systems and therefore enables the client to upgrade to contemporary hardware at its own pace."

Outcomes

The DuPont Tiejin Films Europe factory in Dumfries now has a supportable system. It can upgrade in order to improve functionality, at its own schedule and with very little disruption.

The operators can use the system in exactly the same way as they are used to, because it looks, feels and operates in exactly the same way.

The system is reliable, locally supportable and scalable.