

CASE STUDY: HOW A FOOD MANUFACTURER IMPROVED JUST-IN-TIME DELIVERY VIA A MODERNIZATION PROGRAM



OBSOLETE SHOP FLOOR HARDWARE AND SYSTEMS HAVE BEEN UPGRADED TO THE LATEST TECHNOLOGY FOR MAXIMUM RELIABILITY AND UPTIME



THE COMPANY

When a Canadian bread and bun manufacturer built a plant in the 1980s they decided on PLCs that have since become obsolete.

THEIR CHALLENGES

Bread is high demand and high volume. Bread has to be delivered fresh, and retailers can't tolerate empty shelves due to manufacturer downtime.

THEIR PROBLEMS

1. There aren't any spare old PLCs in the plant. Getting hold of them on the second-hand market is expensive and risky
2. Waiting for failures to happen causes unacceptable downtime and high maintenance spending on labour and parts
3. The burden is on the maintenance team, who work with limited budgets

THE RISKS OF OBSOLESCENCE

Obsolescence in manufacturing occurs when a vital part of a shop floor system that has been a proven workhorse over the years has matured to a point that it is no longer available or supported by the original hardware manufacturer.

As control system platforms mature and products such as Programmable Logic Controllers (PLCs) move to an 'End of Life' status, manufacturers are faced with managing the risk.

Obsolescence of vital hardware and systems has major implications for manufacturers:

- Ongoing maintenance of the production line is costly and unpredictable
- It is impossible to enhance the line with new features and to optimize production based on changing needs
- Over time, uptime of the line decreases with every failure, and more planned downtime is required to fix problems and for routine maintenance

This case study looks at a typical manufacturer that faced these challenges, and how they were solved.

THE BREAD MANUFACTURER WEIGHED UP THREE OPTIONS:

1. **Continue to Band-Aid the plant:** The advantages were that there would be no capital spend or disruption to the business caused by modernization, but the risk of “do nothing” was deemed to be too great to the overall business
2. **Upgrade the PLCs internally:** The advantages were that the staff were already on payroll therefore the cost was limited to buying new hardware, however there was considerable risk to the business because the staff didn't have the expertise or bandwidth. Also the staff didn't have up-to-date technology or vendor knowledge, or any experience of best practices to do a successful in-service upgrade
3. **Choose a partner to perform the work:** This was initially more time-consuming because the company had to write down their exact needs, issue an RFP, and hold meetings with prospective partners. However those partners brought a wealth of knowledge and insight with them, and saved the company a significant amount of time and mis-steps once they became engaged.

Callisto, a leading Systems Integrator in the manufacturing sector, presented its customized Modernization Services package to the manufacturer, while emphasizing the values that an SI like Callisto can bring to any upgrade project:

- Experience
- Expertise
- Execution
- Excellence



THE SOLUTION

A 3-phase plan as a team effort by Callisto and the customer:

1. **Technology and Site Assessments**, where Callisto looked at the customer's present environment to identify risks and priorities for the business
2. **Analysis and Recommendations**, where Callisto's experts provided a phased modernization roadmap, ROI calculation and project execution plan
3. **Turnkey Implementation Services**, where Callisto procured the hardware and software, and performed all of the on-site controls and automation upgrade work

THE RESULTS

The upgrade solved the manufacturer's challenges and addressed their problems in the following ways:

- ✓ **Unplanned maintenance and outages have dramatically reduced**, resulting in 8% more uptime for the production lines
- ✓ The ROI for the modernization program was 18 months, now the business is benefitting from **lower and more predictable operational costs**
- ✓ **A state-of-the-art controls system** enables the company to optimize production in real time as needed, resulting in **additional productivity**
- ✓ They now have a partner to help them create and execute a **strategic technology roadmap** for the plants, to eliminate obsolescence in the future

If you have outdated controls equipment in your plants, contact Callisto to discuss your specific needs.

You can reach us via our LinkedIn page <https://www.linkedin.com/showcase/callisto-modernization-services>

or email sales@callistointegration.com