

# Enhancing cyber security by upgrading System 800xA to the latest v6 with Automation Sentinel agreement Klabin paper producer, Telemaco Borba, Brazil



## Klabin

### The company

Klabin is Brazil's largest paper producer and exporter and is the leading manufacturer of paper and board for packaging, corrugated board packaging, industrial bags and timber in logs. It is also the only one in the country to simultaneously supply to the market, hardwood pulp (eucalyptus), softwood pulp (pine) and fluff pulp. It was founded in 1899 and currently has 16 industrial units – 15 in eight states across Brazil and one in Argentina. Klabin employs more than 16,000 employees and is listed on the São Paulo Stock Exchange.

### Customer challenge

For Klabin, continuity of production is of great importance in their process and disruptions have to be kept to a minimum. The 800xA system at their plant in Telemaco Borba in the state of Parana was installed in 2006 and controls equipment in the “kitchen”, where recipes of additives are prepared to be added to paper sheets in the production process in the paper machines no. 9 and no. 7.

The 800xA DCS was still running on the Windows XP operating system, which Microsoft had obsoleted and no extended support was available from Microsoft. End of support means that customers no longer receive upgrades or security updates to the operating system or get technical support from Microsoft.

PCs running obsolete Windows operating systems are targets for malicious software taking advantage of newly discovered vulnerabilities in these systems, now even more than before since no Microsoft security patches are available to protect against such threats. This could put entire control systems and personnel at risk and unsupported operating systems will affect stability and reliability of the whole plant.



Paper machine at Telémaco Borba site, Parana, Brasil

Retaining Windows XP was becoming untenable. It is an inevitable part of industrial IT life that an evolutionary software step has to be taken every so often and the move upwards from Windows XP is one of the more significant of these. The move will put users in a position where they are well placed to meet the security, hardware, software and compliance demands of the modern industrial IT world.

Klabin's management therefore decided that it was time to upgrade its existing 800xA DCS applications and engineering tools to the latest generation and to increase protection against cyber threats - in the most efficient and effective way.

Adding new features and reducing maintenance costs while improving overall reliability were also important requirements. The execution of this update project for this complex system should be done in a secure and transparent way for the customer. An even bigger challenge for the team to meet was the tight deadline, since the execution needed to take place during the general shutdown of the plant. Failing to meet this proposal requirement would have resulted in the entire project's cancellation. Additionally, technical problems were to be corrected, which have arisen over the years during production.

Based on the long partnership, offered services and support over the years during plant's operations, Klabin turned to ABB to provide a solution for these demanding requirements.



Paper machine control room at Klabin's Telêmaco Borba site, Parana, Brasil

### ABB's solution

The ABB response to Klabin's requirements was a recommendation to install new PC hardware running the current Windows operating system combined with an incremental upgrade of the control system software to the latest 800xA version.

System 800xA v6 has been specially developed to support upgrades of older DCS running on unsupported operating systems such as Microsoft XP. 800xA v6 provides customers with a more secure automation environment that lowers the total cost of ownership, while providing countless opportunities to improve productivity.

Cyber security is embedded in all phases of ABB's system life cycle (product, project, and plant life cycle), and is an integral part of System 800xA. It has been designed with cyber security in mind and provides a comprehensive set of embedded mechanisms to manage cyber security risks.

Adding to its industry-leading security features like Advanced Access Control, White Listing, and means to monitor and manage the control system's security integrity, the newest version of 800xA empowers users with the ability to operate an even more secure system with:

- Use of the latest Microsoft operating system Windows MS 8.1 / Server 2012 R2
- Improved system installation that automatically sets policies to simplify system hardening
- Digital Code Signing to ensure software legitimacy code
- Immediate access to approved anti-virus files

Special consideration has been given to ensure a significantly improved upgrade experience supported by an enhanced Automation Sentinel Life Cycle Management and Support Program. 800xA v6 includes a more intelligent installation and upgrade tools that reduce manual steps by over 80 percent.

A three year Automation Sentinel Maintain Plus service agreement for Klabin not only provides access to the latest control system software license versions and enhancements, it also provides for better protection of their ABB control system against malware infection and cyber-attacks. As part of the service agreement, Klabin receives validated patches and anti-virus files. The Automation Sentinel service agreement supports Klabin in keeping their installed software products up to date and improves production through enhanced functionality.

ABB recommends to regularly update the virus scanner software and install the latest Microsoft Windows™ security patches. Current security updates on site are a key factor to reach the next level of cyber security.

For relevance and system compatibility with the installed ABB control system software all files are verified by ABB, therefore reducing Klabin's risk of introducing an unauthorized patch into a running system. In addition, user efforts in evaluation, installing and testing of security patches and updates minimized and information about the latest validated patches is available for Klabin's operators. An Automation Sentinel agreement is the exclusive way for ABB control system users to receive these validated Microsoft security patches and Anti-virus verification reports.



Manufacturing process of cellulose at Klabin's Telémaco Borba site, Parana, Brasil

### Project scope and delivery

The project scope included the software and services necessary to upgrade the operating levels and engineering tool of the existing 800xA system in the area of Cozinha Couche from version 4.1 to the newly released version 6.0.1.

During project execution, the team was pushed to the limit, as the delivery of IT equipment purchased by the customer was delayed by 25 days and the time available for completion was even less. With the redistribution of activities and the group's commitment to a "task force", also this obstacle was overcome and the project was delivered within the agreed project period of 18 weeks.

"As coordinator of the project for the upgrade and virtualization of the System 800xA version 4.1 to version 6.0.1 in Cozinha Couche, I understand that the involvement of ABB with the project exceeded the common barriers between customer and supplier. It was noticeable that the team's involvement in the project has always been proactive in order to make it viable. Attention and concern for the good progress since the formulation of the proposal, the constant support of the technical area, the management team and the implementation team were essential to overcome all the barriers that appeared during all stages of the project", explains Klabin's project coordinator, Luiz Roberto Gentilin Junior.

[https:// www.klabin.com.br](https://www.klabin.com.br)

### Customer benefits:

- Higher productivity through enhanced software functionality and improved system availability, performance and reliability with predictable costs over the next three years
- Klabin receives control software technical corrections, service packs, software revisions, updates and upgrades to continually optimize the control system
- Klabin receives Microsoft® security patches and 3rd party Antivirus files verified by ABB for relevance and system compatibility to secure their systems against cyber threats with minimized user efforts in evaluation, installing and testing
- Enhanced security against cyber-attacks and cyber threats
- Virus scanner software and operating system software always updated according to ABB's recommendation
- Operators and plant management have access to detailed information about the installed system software, system health status, safety and security reports, field alerts and service contacts through myABB/My Control System, a secure web-based platform

### Improving operational efficiency with comprehensive service solutions built on a strong customer relationship

ABB and Klabin have been working together since the early 80s, across many disciplines and projects, such as medium and high voltage, process electrification, motors, quality control and automation systems. ABB supplied the control systems of the paper machines 1, 9, 7, and the area of Utilidades and Recuperação, Patio de Madeiras and Cozinha Couche.

The recent successful upgrade project reinforces the partnership and mutual cooperation between the companies and Klabin was now one of the first customers to sign an ABB Paper Care Rapid Response Agreement to service ABB process automation and drives equipment at the Ortigueira factory in the Brazilian state of Parana.

### ABB Paper Care

ABB Paper Care is a global standardized service agreement framework that helps ABB customers cut complexity, control costs and maximize capital. It is comprised of three Care Packages: **Rapid Response**, committing to fast and flexible service response to maximize equipment availability; **Lifecycle Management**, providing tools and knowledge to optimize and extend equipment life; and **Performance Improvement**, increasing productivity through optimization of equipment and processes. Each level includes a common scope of services so that customers can quickly and easily choose an option that best suits their needs.



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