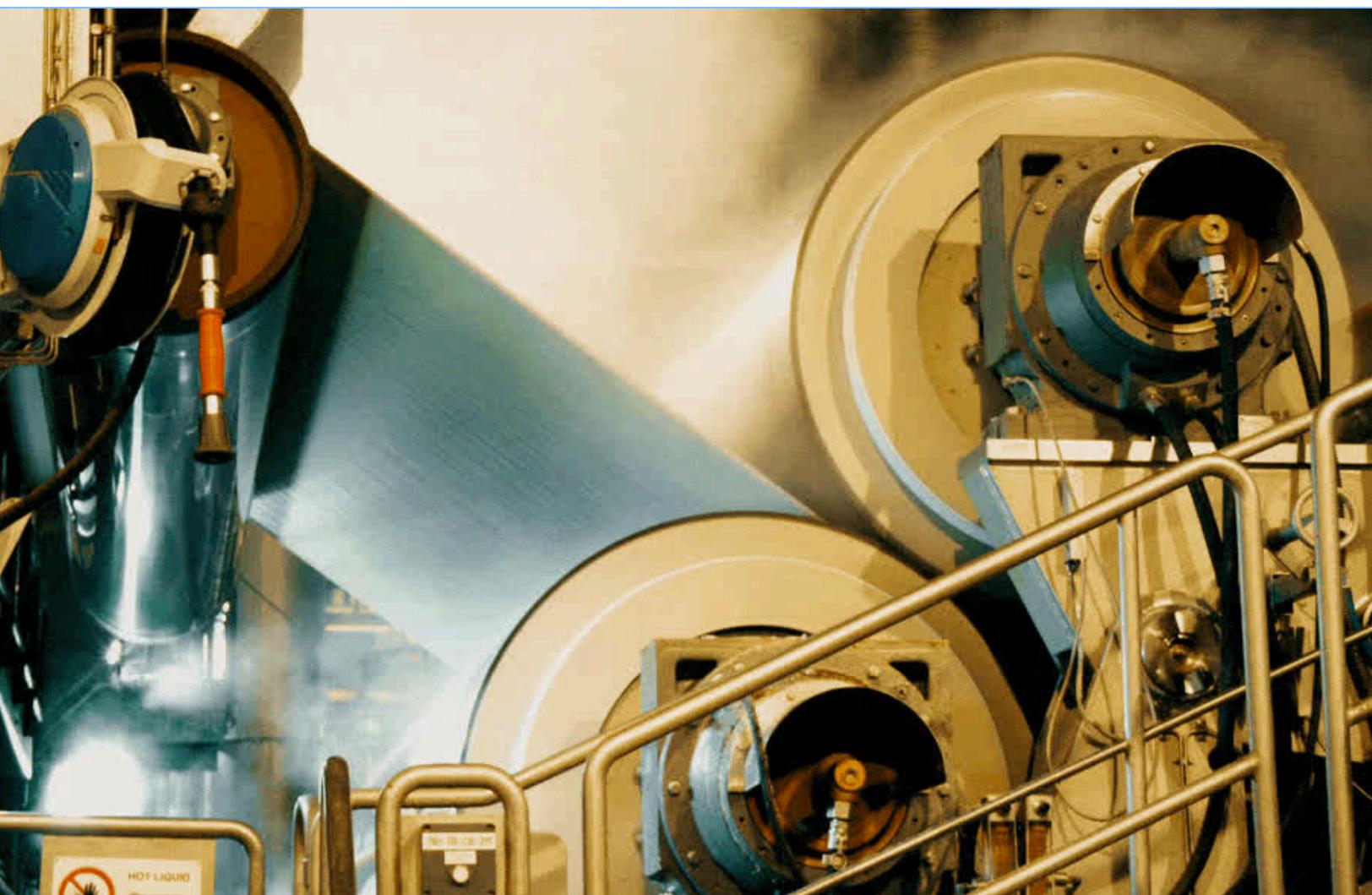

PULP AND PAPER

Amcor Australasia achieves record increases by reducing run-time variability with ABB



Amcor diagnoses problems before they impact performance

ABB Ability™ Advanced Digital Services diagnose run-time issues and improve efficiency on two aging paper machines

01 Papermakers achieve sustained equipment performance improvements through ABB's results-driven automation services programs. Using ABB Ability™ Advanced Digital Services, paper mills run machine and process in an ideal state.

Upgrade or replace?

Many papermakers mistakenly believe that by simply investing and installing a distributed control and quality control systems, paper production and quality will remain constant. But the reality is that machine processes and operation conditions fluctuate. Machines, equipment, instruments, valves and pumps all deteriorate over time. Left undiagnosed, these issues will negatively affect operations and product quality.

This was the challenge faced by Amcor Australasia (now Orora, Ltd.), one of the world's largest packaging companies. Located in Botany, Australia, the company had plans to shut down and replace two aging paper machines that had been operating since the 1960s. Amcor decided to work with ABB to upgrade the existing machines since ABB was already maintaining the units. Amcor's objective was to reduce the variability on paper machines BM7 and BM8.

Customer challenge

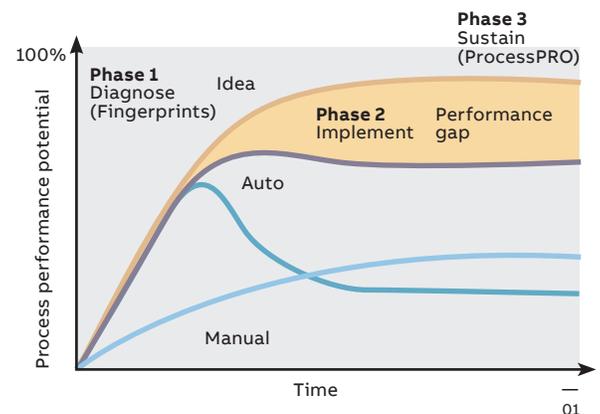
- Keep aging machine in production
- Improve performance
- Reduce downtime
- Reduce sheet breaks

Solution

To solve these issues, ABB deployed ABB Ability™ Advanced Digital Services and ABB Ability™ Performance Optimization for QCS process optimizing tools for detailed data analysis, tuning, reporting, and control loop simulation and remediation. These tools are used for machine direction as well as cross direction controls and can be used with any and all competitor control

systems. After performing an on-site performance review and benchmark, ABB's engineers generated a set of improvements prioritized by economic benefit:

- Control modifications to avoid sheet breaks
- Remove unnecessary filtering on the measurements and tuned controls
- Modify control logic to avoid process breakdowns and improve process control response
- Operational changes to avoid process breakdowns and disturbances
- Changes to the control strategy
- Tune controls to reduce process variability
- Modify control setup to avoid frequent actuator changes that can damage motors, drives, and valves



Actions taken ranged from recalibration and servicing of instruments and valves, tuning controls, modifying processes and control logic, the addition of equipment and a change in operating practices.

Results

ABB's optimization services reduced sheet breaks, increased throughput, reduced quality variations and rejects and provided savings in raw materials and chemicals. ABB began its work in September 2009. By June 2010, Amcor had achieved a record production increase of 2,570 tons over forecast.

Benefits

- Kept aging machines in production
- Achieved record performance
- Reduced costs
- Decreased raw materials and chemicals usage

Featured Solutions**ABB Ability™**

ABB Ability™ is our unified, cross-industry digital capability — extending from device to edge to cloud — with devices, systems, solutions, services and a platform that enable our customers to know more, do more, do better, together. ABB Ability™ connects our customers to the power of the Industrial Internet of Things (IIoT) and, through our services and expertise, goes further by turning data insights into the direct action that "closes the loop" and generates customer value in the physical world.

ABB Ability™ Advanced Digital Services

ABB Ability™ Advanced Digital Services identify sources of issues that inhibit peak performance in equipment and processes and provide recommendations to resolve issues quickly and systematically.

ABB Ability™ Performance Optimization for QCS

ABB Ability™ Performance Optimization for QCS provide a range of services to ensure the high-availability of quality control systems, improve plant performance and to proactively alert users to impending issues so they can be addressed before they become problems that affect quality or production.

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