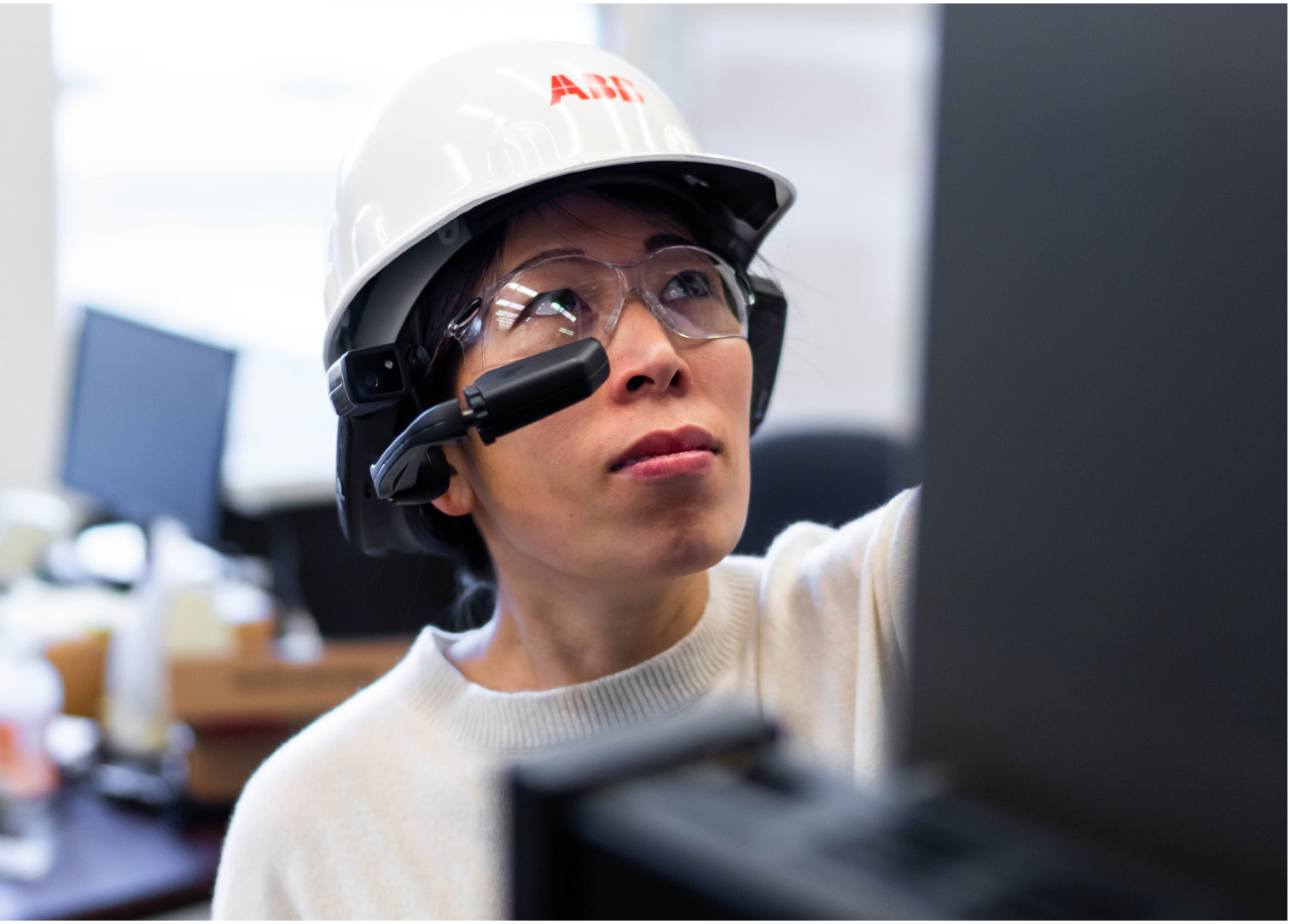
Beyond the Clipboard:
Elevating QCS Service

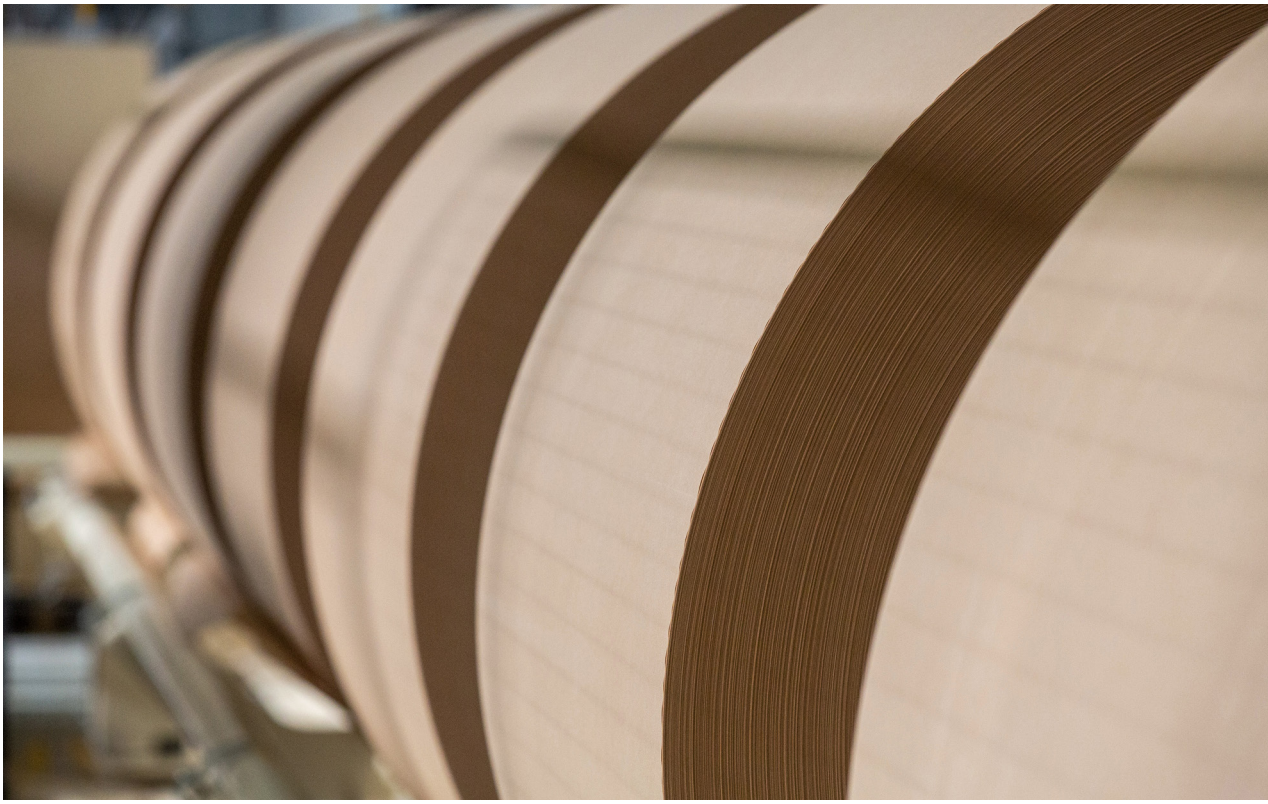


As the paper processing industry modernizes, the Quality Control System (QCS) plays an increasingly important role in driving efficiency and productivity. This comes down to its crucial function of enacting measurement and control, from the headbox to the reel which is integral to the equipment coordination, requiring complex and labour-intensive preventative maintenance to stay in peak condition.

Quality control key to increasing industry demand

Quality is more critical than ever, especially as consumer shopping habits have changed significantly and the demand for robust packaging options has grown. Alongside this is the competitive manufacturing environment, with companies expecting production to be of a high quality and as cost effective as possible, with minimal tolerance for downtime. This expectation also comes with a need for continuous improvement, to enable mills to remain competitive, indicating a future where customer requirements have never been more important.

Achieving quality is vital but overly complicated testing routines adds time and cost. More significantly; a 'clipboard'-based approach to data gathering is not necessarily in tune with modern industry 4.0-driven operations and has limitations in timeliness and efficiency. This is where QCS can really shine. By routinely analysing real-time data from QCS equipment, predictive maintenance monitoring software can detect anomalies as they occur, alert qualified personnel to the nature of the problem, and identify suggested mitigation steps. The way this technology is implemented is key to how it improves and optimizes maintenance scheduling, intervention and manages downtime.



A QCS digitally driven future

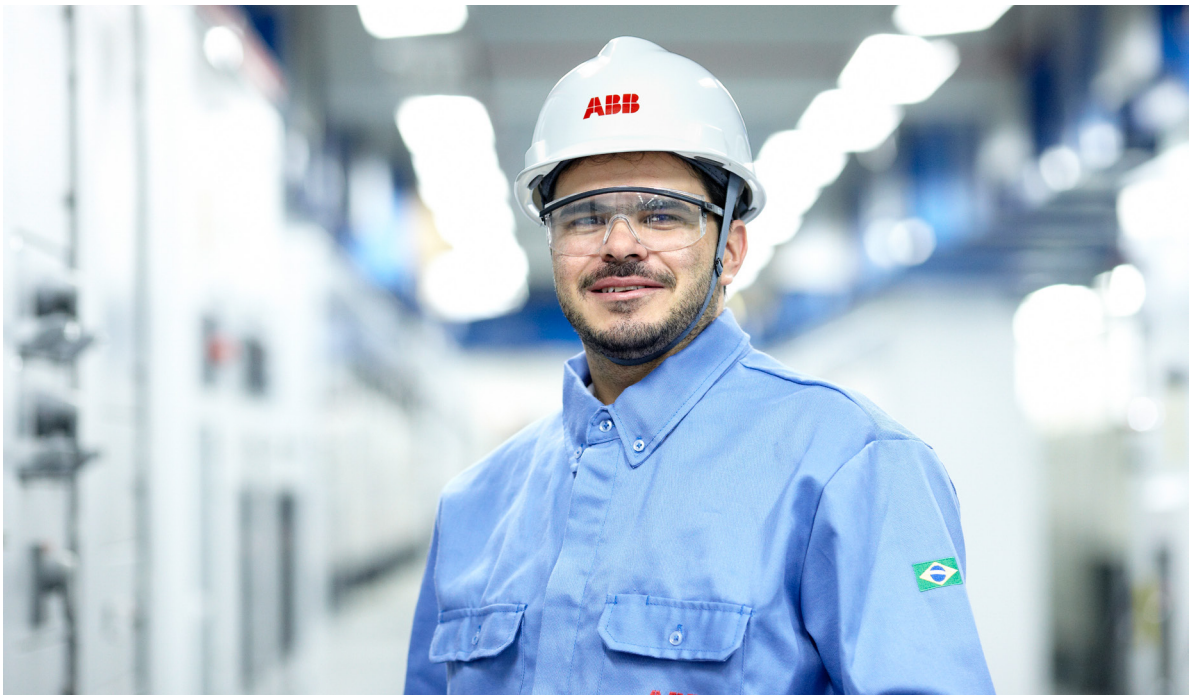
What does the future of the industry look like with the use of QCS? The current methods of using a QCS service exists as a manual process, predominantly performed by on-site technicians. Visual inspections carry out a series of hands-on, preventative maintenance duties and activities alongside regular reporting, including checking equipment functionality and cleanliness. There can be challenges to this 'clipboard' approach; including the physical limitations of how many checks a service person can do in one day and the technical constraints to take a quick snapshot of a mill's QCS that may not have the data resolution to capture an issue, taking additional time and experience from technicians to identify trends and dive into the root causes of them. Yet the human element remains a key driver. Mills can continually optimize operations by monitoring mechanical, electrical and calibration signals, but success won't be achieved if disciplined physical inspections are not put in place.

With the digital revolution now beginning to influence QCS services, it's likely that it will become vital to always be connected to machines' processes and data in real-time, by being able to distribute information remotely to experts who can help problem-solve. This will not only significantly reduce resolution time but also accelerate

programmes to become more proactive and fight fires before issues even occur. The benefits of digitally enabled systems and solutions, when installed and maintained in collaboration with a specialist technology provider, are extensive. By successfully bridging the gap that has traditionally existed between information technology and operations technology, mills can reduce production and maintenance costs and maximize uptime and quality control. When it comes to monitoring and optimizing resource consumption to reduce the carbon footprint, digital solutions can also be enormously beneficial.

Whilst data and its measurement are important; Big Data can have its limitations when looking at how to drive real business value for pulp and paper, given the industry doesn't necessarily need large quantities of historical data, as much as it needs solutions that keep pace with the rapidly changing operating environment in a mill.

Digital can adapt to such requirements quickly and seamlessly and utilizing powerful tools to help automate daily and weekly tasks will also help decrease down time spent on routine maintenance without reducing quality of output or increasing production issues. If data can be extracted from the QCS digitally and reported directly to key stakeholders, the team on the ground can be freed up to work on the bigger picture of production. The extraction of this data can also be provided off-site experts in real-time to remotely aid in the troubleshooting process which will serve to greatly improve service delivery. The importance of human capital shouldn't be underestimated. It is also crucial to maintaining service levels and preventative maintenance. Bringing these alerts directly to the field service team is key to improving service delivery, in place of the team having to search for issues themselves. By implementing a system where KPIs are monitored and alerting thresholds are set, the service team can reduce the amount of time spent on reviewing data and more time fixing issues and performing value-added actions.



The symbiosis of QCS and clipboard

With paper mills focused on ways to achieve production, quality and efficiency, understanding and connecting with the data that the machine is producing is key. To use a QCS in as comprehensive a way as possible, is to leverage the synergy between the strengths a field team, traditional clipboard approach and emerging technology can all bring to the table.

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