

SHEET MANUFACTURING

Modernize, Connect and Optimize to Reduce Risks and Improve Operations

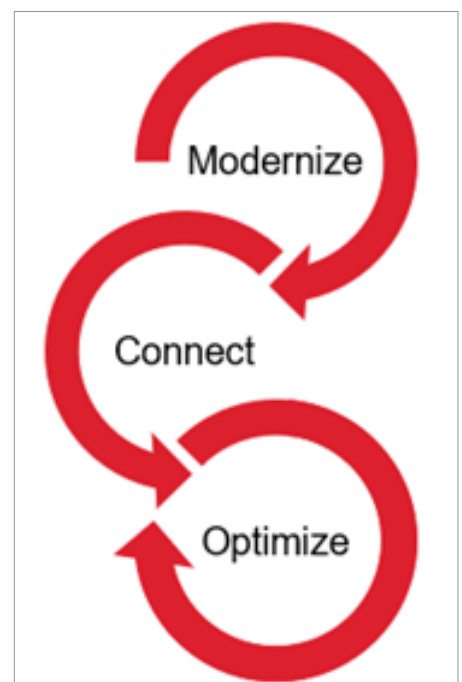


Sheet manufacturers produce a diverse portfolio of essential products, from tissue and packaging board to aluminum foil, biaxial film, and Lithium Ion Battery (LIB) anode, cathode, and separator film., Regardless of market, it is essential for manufacturers to ensure their output consistently meets a variety of business, performance and quality requirements.

Simplifying processes, driving faster and more accurate decision-making, and transforming employees' roles in an increasingly automated environment require seamless connection between data and people.

The challenge of leading global sheet producers is to reduce risks and improve operations, accelerate technology return on investment (ROI), address current business demands, and drive higher productivity and profits – while operating with fewer skilled operators. Current technology can accelerate benefits. Leveraging a proven Industrial Internet of Things (IIoT) platform that delivers robust and secure big data capabilities can bring immediate benefits. Honeywell offers an efficient strategy to modernize machine controls, connect them to the cloud, and provide efficient optimization. Employing the modernize, connect, optimize strategy, producers can continuously evaluate process operations, identify improvement opportunities and maintain peak performance.

Production sites are under growing pressure to elevate the quality of their processes and products. They must find ways to “future-proof” their machine operations with the goals of reducing risk, eliminating unplanned downtime and increasing production yields. The quality control system (QCS) is integral to meeting these goals, but many systems are outdated and need to be modernized.



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Honeywell is a recognized leader in automation and quality control technologies for sheet manufacturing and other process industries. By implementing its solutions for QCS modernization, sheet manufacturers are realizing several important advantages:

- Stepwise [QCS modernization](#) beginning with software migration delivers significant reliability and operational value, as well as a lower total cost of ownership (TCO).
- Expanded enterprise connectivity enables [condition-based monitoring](#) and maintenance, reducing both downtime and support costs. Coupled with [remote enabled services](#), producers can realize enhanced system support, agile service delivery and immediate access to value-adding technology.
- Remote expert-guided tuning and optimization helps to improve operating efficiency and increase yields, enabling higher profits and sustained peak performance.

Honeywell's stepwise approach to [QCS modernization](#), focuses on the valuable applications software and supporting software platform. Unlike a "rip-and-replace" scenario, small, affordable migration steps allow progress to be made even if the customer has limited or no capital expense (CAPEX) funding. Feature-rich control applications are delivered quickly, enabling improved machine control that reduces operational variation, improves quality, improves yield, and lowers

overall costs. Enhanced control automation compensates for the rapid decline in operator skills as experienced resources retire.

Honeywell's [QCS 4.0 solution](#) is at the heart of an IIoT-based connected enterprise strategy, providing the foundation for condition-based maintenance (CBM). CBM enables more efficient machine automation care and support. Producers can; utilize pooled resources across sites and systems; and leverage remote, expert-guided diagnostics, tuning and optimization.

[QCS 4.0](#) is purpose-built for sheet manufacturing production lines. The machine's on-site QCS securely streams essential data to the Honeywell cloud, where 24x7 analytics monitor machine health and performance. "Access anywhere" dashboards enable users to drill into product quality, machine controls performance, process variation, and QCS health. Call to Action alerts flag issues to operators, control engineers, and maintenance resources for immediate awareness and quick corrective response. Visualization guides QCS 4.0 users to areas needing attention, and to opportunities for improved machine performance. Improved productivity and focused-maintenance minimize TCO. System performance data in the cloud enables higher value services to be delivered remotely by Honeywell experts, with immediate improvements in machine performance: higher product quality

and consistency, reduced material and energy costs, and faster grade/recipe transitions drive profits.

Honeywell customers have found that [remote expert-guided optimization](#) with [QCS 4.0](#) eliminates many of the constraints of doing tuning and optimization onsite. By working in a remote environment with immediate access to data, continuous analytics, and powerful visualization tools from the cloud, support specialists can see and diagnose issues with [machine direction \(MD\) and cross direction \(CD\) control](#), pinpoint sources of process variations, and then confirm performance levels before and after tuning.

Sheet producers worldwide are now utilizing the [QCS 4.0](#) solution to overcome skills gaps and varied experience in their workforce, eliminate delays in on-site support, ensure a consistent operational approach, and benchmark results for ongoing evaluation.

Industry experience has shown that fast and affordable platform modernization can take QCS and machine performance to a higher level. New, innovative connection technologies facilitate global support and expert remote assistance for sheet manufacturing, while remote expert-guided tuning and optimization helps production sites achieve peak sustained quality, yield and efficiency.

For more information

To learn how Honeywell's Digitization Program provides economic benefits and flexibility to Sheet Manufacturing industries, visit hwl.co/SheetManufacturing or contact your Honeywell account manager.

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