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# Cummins Revs up Production with Apriso's FlexNet

The demand for power products that deliver greater energy output, use less fuel and exhaust fewer emissions can only be met through product innovation and technological advancement. This continuous pace of change requires a new standard for manufacturing agility on a global scale. Relentless focus is needed on production efficiency, delivery of zero-defect products and mastery of supporting emerging market expansion.

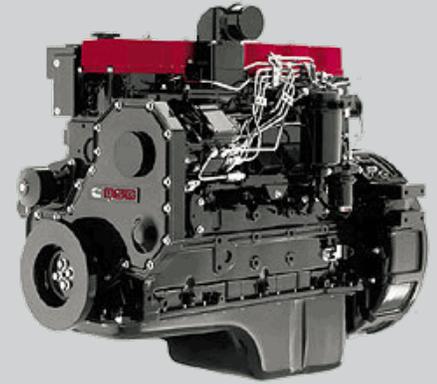
As an industry leading global power provider operating in approximately 190 countries, Cummins understands the complexity of today's innovation cadence when planning and managing their growth. Cummins turned to Apriso to take a more enterprise, holistic approach in supporting company growth by improving real-time visibility and control across their global manufacturing operations. As a direct result, Cummins is both leveraging emerging market growth trends while improving legacy plant performance with an enterprise manufacturing platform that can accommodate change faster and easier while enabling manufacturing performance at the highest levels of excellence.

## Managing to an Order-of-One

Cummins is globally deploying Apriso's FlexNet, an enterprise Manufacturing Execution System (MES), to manage its manufacturing operations across machining, engine assembly and component technologies, such as fuel systems, controls, air handling, filtration, emission solutions and electrical power generation systems. By replacing disparate, legacy systems with FlexNet, Cummins can now more effectively support complex Make-to-Order (MTO) assembly as well as Make-to-Stock (MTS) component manufacturing using a single solution from Apriso to manage their global manufacturing operations requirements.

Apriso's FlexNet and its OPC-certified integration to shop floor equipment support Cummins' directed manufacturing processes that are synchronized with product conveyance systems and in-line, order-specific quality measurement, test-cell and camera systems. Coupled with FlexNet's strong support for sequenced production, Cummins can precisely align both kitting and sub-assembly operations with final assembly production processes in a complex assembly environment where no two engines in a row on the line are typically the same.

The automated synchronization of these processes – while ensuring all quality tests are performed satisfactorily – translates into greater efficiency, higher manufacturing productivity and competitive differentiation. In one assembly plant, Cummins has improved throughput by over 25 percent, due in part to significant quality improvements and waste reductions, extending periods of zero-defects for key customer orders.



## Benefits Achieved

- Throughput improved by 25 percent from increased operational efficiency
- A Center of Excellence (COE) has been implemented to simplify process improvement across multiple locations
- Integration to existing ERP and PLM systems has been streamlined, resulting in greater agility and responsiveness
- Retired a 20+ year old legacy application, resulting in reduced IT support costs
- Achieved zero defects to key customers for months at a time

## Accelerating Global New Product Introductions

As a manufacturer pursuing emerging markets for growth opportunities, the accelerated launch of new products with minimal defects translates into higher profits and competitive advantage. This objective is especially challenging when operating under joint venture relationships with companies in emerging markets, such as Brazil, Russia, India and China (BRIC).

Using Apriso's global manufacturing execution platform, FlexNet, Cummins is accelerating the release of new, innovative products and its entry into new markets by leveraging Apriso's multi-lingual, common business process platform for delivering electronic line-side work instructions (WI) with integrated multi-media visual aids. FlexNet's support for in-line error-proofing and comprehensive traceability expedites root-cause analysis and identification, helping to further accelerate new product introductions. Using the FlexNet process-driven execution platform to synchronize with planning and design systems, Cummins is leveraging the Apriso solution to drive higher quality at a lower total cost while reducing time to global market for their new product innovations.

## Standardizing Business Processes to Improve Performance

At the start of their Next Generation MES project (NGMES), Cummins focused on replacing a variety of homegrown MES systems with a single, global platform capable of managing and governing standardized business processes. At the time, Cummins was at the forefront of a manufacturing transformation towards enterprise-wide process collaboration. Plant-centric MES solutions that operated primarily within the "four walls" of a plant simply couldn't support this vision.

By selecting Apriso and beginning the process of their global deployment, Cummins is streamlining their global operations at existing and new, emerging market facilities. Cummins is deploying a library of common, standard and site-specific processes that support both assembly and other manufacturing operations. This is helping Cummins reduce implementation and management costs while achieving higher operational consistency across operations.

## Rationalizing IT Systems to Reduce Costs

The decision to implement FlexNet has increased efficiency across Cummins by rationalizing IT systems to a more manageable quantity. Support costs have been reduced. And, as legacy MES deployments age, the time, effort and resources that were necessary to support these older hardware and software configurations began to escalate. Not only has flexibility improved to respond faster to changing customer and market conditions, but both manufacturing and IT costs have been reduced. In one of Cummins' early deployments, Apriso's FlexNet replaced a 22-year-old assembly management system that was difficult to maintain.

## About Apriso

Apriso Corporation is a software company dedicated to helping manufacturers achieve and sustain operational excellence. Apriso serves nearly 200 customers in 40+ countries across the Americas, Europe, Asia and Africa.

Apriso is an integral part of Ready To Make Industry Solution Experience.

Learn more at [www.3ds.com/industries/industrial-equipment/ready-to-make/](http://www.3ds.com/industries/industrial-equipment/ready-to-make/).

*"As a next-generation solution for manufacturing operations management, FlexNet enables Cummins to take a more global perspective on continuous improvement for higher quality, greater efficiency and lower costs by delivering better real-time visibility and control over our operations."*

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