

TYPE
CASE STUDYINDUSTRY
AUTOMOTIVELOCATION
MILAN, ITALY

PROMETEON TYRE GROUP UTILIZES PLEX QMS TO DRIVE EFFICIENCY, COMPLIANCE AND SUSTAINABILITY THROUGH DIGITAL INNOVATION

Prometeon Tyre Group manufactures and sells tires specifically for industry, transport of goods and passengers, and Agriculture (AGRO) and Off The Road (OTR) applications. Officially established in 2017 as a spin-off from the industrial division of Pirelli Tyre, Prometeon started its path producing and selling PIRELLI branded tires. Today, the company is progressively developing a multi-brand and multi-product approach, widening its technological expertise.

RESULTS



Achieved greater levels of compliance and standardization across its four plants



Provided Prometeon Tyre Group with a competitive advantage in the market, marking an important milestone in their digital transformation journey and opening the potential for more digital services and future automation projects



Improved data visibility and operational efficiency, leading to increased asset utilization and productivity



A CALL FOR DIGITAL CHANGE

The tire manufacturing industry is undergoing a significant transformation. The relationship between Prometeon Tyre Group (PTG), Rockwell Automation, and Plex, by Rockwell Automation, exemplifies the power of collaboration in spearheading industrial innovation. This alliance, grounded in a mutual commitment to technological excellence and sustainability, aims to set new industry standards and shape the future of global tire manufacturing.

Founded in 2017, Prometeon Tyre Group is embracing a new digital strategy. The company is transitioning to a more sophisticated, standardized, and technologically advanced framework. This

change reflects a strategic move to harmonize operations across different regions while enhancing productivity and labor efficiency.

Central to the collaboration with Rockwell Automation is the goal to harness integrated Manufacturing Execution Systems (MES), Quality Management Systems (QMS) and Internet of Things (IoT) technologies. This initiative represents a fundamental shift, modernizing manufacturing processes across multiple sites in Italy, Türkiye, Egypt, and Brazil. Addressing evolving challenges in tire manufacturing, such as operational efficiency, environmental sustainability, and smarter, data-driven practices, the collaboration marks an important milestone for both companies.



TRANSFORMING THE MANUFACTURING LANDSCAPE THROUGH DIGITALIZATION

Confronted with challenges from their internally built legacy systems, Prometeon Tyre Group recognized the significant opportunity that comes with a digital transformation. The existing processes and custom solutions were constraining their operational capabilities and adaptability. The need for an operational framework that brought transparency and consistency across its global network of facilities necessitated a strategic overhaul in digital infrastructure.

Key Challenges:

- **Overcoming legacy systems and customization risks:**
The inherited, highly customized MES solution posed the risk of low standardization, outdated technology, and limited integration with enterprise software.
- **Operational inefficiency and compliance issues:**
The existing systems lacked the agility needed for modern

manufacturing, making compliance with evolving customer and industry standards increasingly difficult and affecting market competitiveness.

- **Addressing global integration challenges:**
As a global business, Prometeon Tyre Group needed a scalable solution that could integrate seamlessly with various enterprise platforms, including ERP and PLM, for cohesive global operations.
- **Limited data visibility and asset utilization:**
Without a robust digital framework, Prometeon Tyre Group struggled to gain real-time operational insights, leading to underutilized assets and missed optimization opportunities.

In response to these challenges, Prometeon Tyre Group sought a partnership capable of delivering a comprehensive digital solution, addressing their immediate needs while paving the way for future technological advancements. The solution required global scalability, integration, and the ability to drive significant improvements in operational efficiency, compliance, and decision-making.



Rockwell Automation, with its global presence, deep tire industry knowledge, and visionary approach, emerged as the ideal partner. This collaboration aims to further enhance Prometeon Tyre Group operations, supporting them on their path towards even greater efficiency.

Recognizing each other's strengths, Rockwell Automation and Prometeon Tyre Group began working together in 2022 to support a new digital strategy. Rockwell Automation provided a comprehensive vision for manufacturing digitalization. The primary goal of this collaboration was to support Prometeon Tyre Group, enhancing their processes through the implementation of Rockwell Automation's digital manufacturing solutions. This would be achieved by iteratively replacing existing systems with advanced solutions that could ensure higher efficiency, standardization, and integration across global sites.

IMPROVING QUALITY, COMPLIANCE AND SUSTAINABILITY THROUGH COLLABORATIVE INNOVATION

The collaboration with Rockwell Automation introduced a comprehensive digital fabric across Prometeon's operations. The cornerstone of this collaboration was the deployment of Rockwell Automation's FactoryTalk® ProductionCentre® platform, enriched with PTC ThingWorx and the Plex Quality Management System (QMS), integrated with ERP software. This ecosystem was instrumental in achieving a harmonized, scalable, and interconnected IT/OT solution, setting new benchmarks in manufacturing digitalization.



The solutions implemented through this collaboration highlight the impact of digital transformation on efficiency, quality, and sustainable growth. As Prometeon Tyre Group continues to leverage these innovative solutions, the company is positioned to pursue its ambitions to become a leader in technological and operational excellence in the global tire manufacturing sector.

The relationship underscores the importance of quality improvement and compliance in manufacturing. By implementing an integrated set of solutions, Prometeon Tyre Group can achieve full compliance and standardization across its plants, enhancing product quality and operational efficiency.

Another core priority is sustainability. Historically confronted with environmental concerns, particularly in waste management, the tire industry is now shifting towards more sustainable practices. The collaboration involves developing technologies that enhance industrial efficiency while minimizing environmental impact. This includes proactive measures to minimize scrap, enhance energy efficiency, and adopt circular production methodologies, including the innovative repurposing of waste materials.

Solutions and Outcomes:

- **Comprehensive MES Integration:**

Utilizing Rockwell Automation's industry-ready MES, Prometeon Tyre Group achieved unprecedented standardization and compliance across its major plants. This integration will lead to enhanced asset utilization and productivity.

- **Seamless Enterprise Software Integration:**

The new solution allowed for easy deployment and smooth integration with existing enterprise software and PLM, ensuring efficient information flow and enhanced reporting capabilities for informed decision-making and operational efficiency.

- **Improved Data Visibility and Operational Efficiency:**

The advanced systems will provide Prometeon Tyre Group with unparalleled data visibility, optimizing efficiency across key areas including operations, labor efficiency, productivity, and sustainability.



EMBRACING INNOVATION, LEADING THE FUTURE

The collaboration between Rockwell Automation and Prometeon Tyre Group demonstrates the transformative power of digitalization in manufacturing. Marked by the implementation of a comprehensive IT/OT manufacturing digitalization framework, the relationship has been pivotal in shifting from manual processes to a more efficient, data-driven operational model.

So far, the results have included improvements in critical areas such as coordinated decision-making, labor efficiency, operational efficiency, scrap reduction, and compliance cost reduction.

These successes highlight the effectiveness of cloud-based solutions, scalability, integrated workflows, and multilingual support, creating a strong foundation for harmonized operations across multiple sites.

Together, Rockwell Automation and Prometeon Tyre Group represent a commitment to sustainable development and operational excellence. Both organizations remain dedicated to leveraging their combined strengths, expertise, and innovative spirit to drive further advancements in the tire manufacturing industry.

ABOUT PLEX

Plex, by Rockwell Automation, is a leader in cloud-delivered smart manufacturing solutions, empowering the world's manufacturers to make awesome products. Our platform gives manufacturers the ability to connect, automate, track, and analyze every aspect of their business to drive transformation. The Plex Smart Manufacturing Platform™ includes

solutions for manufacturing execution (MES), ERP, quality, supply chain planning and management, asset performance management, production monitoring, process automation and analytics to connect people, systems, machines and supply chains, enabling them to lead with precision, efficiency and agility. To learn more, visit www.plex.com