

# Moving At The Speed of Innovation: How Lamborghini is accelerating innovation and steering into digital transformation

With Windchill and Codebeamer, Automobili Lamborghini is managing complexity, improving quality, and powering its future through digital continuity.



Automobili Lamborghini S.p.A. is a symbol of performance, precision, and passion. Known for creating some of the world's most iconic supercars, Lamborghini is constantly evolving to meet new challenges in sustainability, innovation, and customer expectations. To maintain its leadership position in luxury automotive design and production, the company has made digital transformation a strategic priority.

## Challenge: Balancing innovation and tradition

While Lamborghini occupies a niche space in luxury performance sport cars, it faces many of the same pressures reshaping the global automotive industry today, most notably the need to bring complex, software-driven products to market faster, without sacrificing quality or brand identity. But unlike many of its peers, Lamborghini also builds every vehicle as a bespoke expression of craftsmanship, often with customer-defined materials, colors, stitching, and component configurations. That level of customization requires absolute precision across the value chain.

Every vehicle produced is a reflection of Lamborghini's brand promise, a brand that is built on emotion, experience, and performance. Like any innovation to its operations, Lamborghini understood that digital transformation had to enhance, rather than dilute its brand reputation.

This degree of bespoke customization required robust traceability, data integrity, and coordination across functions, a key reason Lamborghini took a digital thread approach for its internal product development process, known as software Connected Product Lifecycle.

"The entire automotive industry is in a challenging position. We are facing a lot of changes and regulations, yet at the same time, the product is more complex and sophisticated than ever before," said Gabriele Ferioli, IT Process Management – Engineering Processes at Automobili Lamborghini. "But these pressures affect Lamborghini in a unique way; we must deliver the same level of peerless quality, innovate game-changing features and accelerate our time to market. We must continue our mission in the face of these pressures, which is no small task."

With increasing model complexity, global regulatory demands, and a hybrid/electric roadmap underway, Lamborghini needed a digital foundation that would allow it to:

- Manage the growing interaction between hardware and embedded software
- Reduce time to market through more efficient collaboration
- Maintain product quality and traceability across functions
- Enable data continuity between engineering, production and service

## Solution: Powering a fully Connected Product Lifecycle

Lamborghini's Connected Product Lifecycle approach, powered by PTC Windchill, is used across multiple departments, including R&D and production. Centralizing product data gives every stakeholder visibility into the latest designs, parts, and configurations.

The recent addition of PTC Codebeamer for Application Lifecycle Management enables structured Requirements Management with the addition of Test and Validation to follow shortly. This allows traceability between requirements, test cases, and source code, which is particularly important as cars become increasingly software defined.

"The challenge was not just to implement new tools, but to support a new way of working," explained Ferioli. "By using Windchill and Codebeamer together, we are able to connect people, data, and decisions."



According to Nicola Pasquali, IT Coordinator—Industrial Company Processes at Automobili Lamborghini, both PTC tools are used together to improve the work of the R&D department by speeding up and ensuring connection between all steps of the manufacturing process.

"Connecting our processes from initial requirement collection to design and then to the test and validation on the same platform allows us to have clear and simple traceability. This is one of the big benefits of a Connected Product Lifecycle strategy," said Pasquali.

PTC has been a trusted partner to Lamborghini for more than 25 years and is more than just a technology vendor to Lamborghini. Through workshops, collaborative roadmap planning, and process optimization, the partnership supports Lamborghini's ambition to continuously improve its operations and prepare for a more connected future.

Lamborghini's Connected Product Lifecycle strategy has become the central nervous system of its innovation-driven operating models, seamlessly connecting product development, manufacturing, customer experience, and internal processes.

"By integrating both our physical and digital realms, we can accelerate product development while still maintaining our brand-defining craftsmanship and customization," said Ferioli. We're improving process traceability across departments and suppliers while also boosting customer engagement with hyper-personalized digital platforms. It's important not just for customer service, but also as a business for balancing global regulations with our design and electrification strategies. From a commercial perspective, it means we are better able to anticipate and adapt to market shifts because we now have real-time data across all our touchpoints."



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## Results: Greater efficiency, traceability, and speed

With Windchill and Codebeamer integrated into its product development workflows, Lamborghini is already seeing measurable benefits, such as:

- Improved collaboration between engineering and manufacturing
- End-to-end traceability from requirements to production
- Shorter development cycles and fewer late-stage changes
- Better data quality and reuse, reducing cost and improving consistency

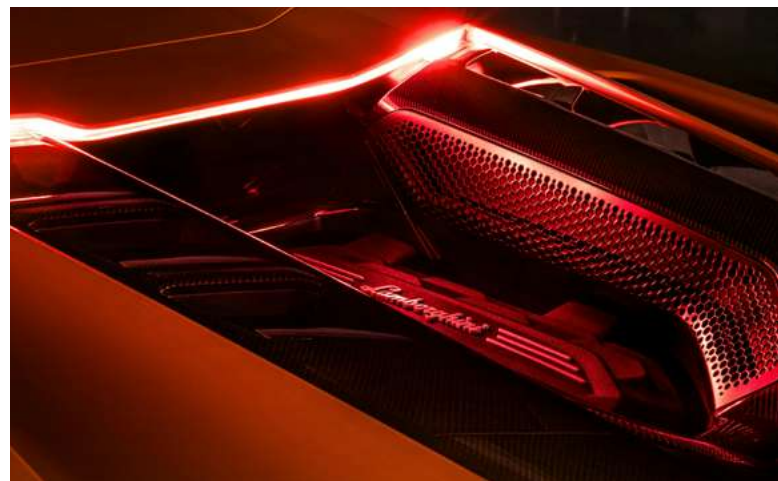
This integrated approach also supports Lamborghini's sustainability objectives. For example, enhanced reuse of parts and simulation capabilities are helping reduce waste while maintaining performance standards.

According to Ferioli, "Codebeamer and Windchill are the pillars of our IT landscape and are at the heart of our Connected Product Lifecycle approach, ensuring full traceability throughout the development process. This helps us preserve our brand values while shaping the future of mobility. We are now basing all our processes for product development on PTC technology."

Lamborghini's Connected Product Lifecycle strategy is driving transformation across the enterprise by weaving together product development, manufacturing, customer engagement, and operational processes into a unified ecosystem.

"We can track everything from concept to validation, with performance attributes like weight and cost tracked in real time across engineering and manufacturing, supported by a central dashboard for agile collaboration," Ferioli said.

In production, the company's Digital Manufacturing Suite now harmonizes GRP, MES, logistics, and quality control to manage highly customized builds with efficiency. On the customer front, platforms like Unica and Lamborghini's commercial backbone offer immersive, personalized digital experiences, while internal apps empower employees and streamline change management. Connected vehicles further amplify insights through telemetry and predictive analytics, all underpinned by an integrated data foundation that sets the stage for scalable AI-powered innovation.



## Looking ahead

Lamborghini continues to expand its use of PTC's Connected Product Lifecycle technologies to enhance cross-functional collaboration, simulation, and product personalisation. Windchill and Codebeamer provide the backbone for scalable and secure product development, which is key to Lamborghini's readiness for hybrid, electric, and software-defined vehicles.

With the increasing use of simulation and digital twin capabilities, Lamborghini can now iterate faster, validate earlier, and reduce material waste, supporting its sustainability goals without compromising performance or identity.

"Our customers rely on Lamborghini to be the leader of the unexpected," added Ferioli. "We are always looking for new ways to be faster, smarter, and more sustainable. PTC gives us the tools and support to keep pushing forward."

## Results

- **End-to-End Continuity & Traceability** - Full traceability from requirements to production with unified data flow connecting mechanical, electrical, and software systems, reducing errors and enabling validation.
- **Agility & Speed** - Shorter development cycles with fewer late-stage changes allow fast iteration across physical and digital domains, and real-time visibility into performance metrics and test results supports agile decision-making.
- **Collaboration & Efficiency** - Cross-functional alignment and shared platforms improve collaboration and enhanced data quality and reuse improves consistency, reduces costs, and drives efficiency
- **Customer-Centric Innovation** - Personalized digital platforms deliver bespoke ownership experiences, and deep insight from connected services drive product refinement and customer engagement
- **Scalability & Transformation** - Modular digital ecosystem to support hybridization, electrification, and future product expansion; change management tools and internal apps embed innovation into daily workflows across teams
- **Strategic Readiness** - Positioned for advanced analytics and AI adoption through robust data convergence. Future-proofed for evolving market demands, regulatory environments, and digital-first mobility trends

## Customer Quick Facts | Lamborghini

**Headquarters**

Sant'Agata Bolognese, Italy

**Industry**

Luxury automotive manufacturing

**PTC Products**

Windchill, Windchill Navigate (PLM), Codebeamer (ALM)

**Website**

[lamborghini.com](https://www.lamborghini.com)