Accelerated Product Development
Accelerate innovation and unleash the next generation of vehicles

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The traditional automotive landscape as we know it is coming to an end. The appearance of powerful mobility technologies like advanced driver assistance systems, autonomation, and vehicle electrification is transforming the industry.

This evolution has attracted start-ups and tech companies worldwide who are quickly making their way into the market.

At the same time, consumers are demanding innovation to increase sustainability, connectivity, and customization. The next generation of vehicles must also meet escalating regulatory and homologation requirements driven by the climate emergency.

Automotive manufacturing companies are under tremendous pressure to evolve and accelerate their product development processes in a dynamic and complex environment where rapid innovation is the key to survival. Only a new engineering approach integrating mechanical, electrical, and software domains into a data information platform can accelerate product development enough to compete within the new automotive landscape.

Are you ready to kick off the digital transformation that will enable faster and more efficient innovation, design, and development?

### Key drivers

- **Autonomous driving** incorporates advanced sensor engineering and connectivity technologies.
- **Electrification** demands innovative battery packaging, thermal management, and range optimization solutions.
- **Climate change** drives increased customer, regulatory, and sustainability requirements.
- **Globalization** requires global resource integration and collaboration.
To thrive in the automotive industry, you need to design and develop new products quickly, efficiently and bring them to market ahead of the competition. Failure to compete due to lack of innovation, slow development, or launch delays will result in a loss of business.

At the same time, you must not neglect your traditional products currently in production. Failure to maintain and service today’s products will also lead to the loss of loyal customers, revenue, and reputation.

How can you meet the needs of both markets without losing profitability, quality, or market share?

What’s more, a scarcity of the skill sets needed to develop these emerging technologies is driving up the cost of resources and, in turn, the total financial investment required. Additionally, increased development complexity due to demand for new technologies has generated many requirements and interacting targets that are difficult to track to ensure compliance. Consequently, many carmakers are forced to put speed over thoroughness and skip important verification and validation steps, which leads to an increase in recall and warranty cost.

A lack of adaptability ultimately results in performance degradation, making investments in innovation and advanced technologies even more challenging.

It’s time to escape from this vicious circle. Develop the next generation of vehicles with Siemens Accelerated Product Development.

Siemens Accelerated Product Development empowers businesses with the tools needed to deliver today’s complex cars successfully.

Innovate and develop better products faster to edge out the competition.
What can automakers do to stay ahead of the competition?

Adopt a highly efficient, integrated, and flexible product development process, using technology that drives innovation, optimizes resources, reduces waste, and accelerates speed to market.

Immediately implement a product data management (PDM) system that represents a data information backbone digital thread of your product development process and provides the entire ecosystem on-demand access to all product data (requirements, test results, simulations, changes, etc.) instantly.

Adopt a requirement tracking system to map out all interacting targets, objectives, and tasks, ensuring compliance during product development.

Introduce a status update system to consistently communicate and monitor requirements compliance progress toward established targets, preventing last minute surprises.

Accelerate your development cycle to reduce cost, free up funds and resources, and cope with increasing customer and government requirements.

With Siemens Accelerated Product Development solution, you can harness the power to develop products with highly complex technologies faster and more efficiently.

Accelerated Product Development — a comprehensive model-based, cross-domain solution that will help you drive the change in the automotive industry.

Improve quality and reliability with a model-based approach and early design validation to reduce risk, lower warranty costs, and prevent recalls.

Use a digital twin to get designs right the first time, reduce the number of physical prototypes, shorten development cycles, and maximize speed to market.

Collaborate on designs across multiple domains (Electronic, Mechanical, Electrical, Software, System) to optimize performance, protect quality, and incorporate increased complexity as needed.

Use collaboration and standardization to drive efficiency, improve change control, and prevent previous mistakes.

The next generation of vehicles requires a next generation product development solution that allows you to do more with less - faster.

Learn more at Siemens.com/APD
About Siemens Accelerated Product Development:

Siemens APD digital solution helps automotive manufacturers optimize their returns by driving innovation and accelerating productivity across the enterprise. This integrated solution incorporates next generation design capabilities to navigate the dynamic automotive landscape and meet the complex market requirements.

Siemens’ digital thread creates a seamless, synchronized, and collaborative environment throughout the many disciplines involved in today’s vehicle development.

With an emphasis on advanced simulation capabilities and early virtual validation, digital twin technology is especially valuable in fast-moving high-tech markets using emerging technologies like 5G, the internet of things (IoT), and artificial intelligence (AI).

Partnered with Siemens, OEMs and their suppliers will create the next generation of cars faster.

For more information on Siemens Autonomous Vehicle Development, visit siemens.com/apd or follow us on LinkedIn and Twitter.

Siemens Accelerated Product Development, where today meets tomorrow.

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