

Stellantis Deploys AI-enabled Innovations to Boost Manufacturing Efficiency, Sustainability and Improve Workplace



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- On annual Factory Booster Day, Stellantis invites suppliers and startups to propose solutions to support global manufacturing ambitions
- Stellantis plants around the world are implementing cloud-based digital twins, AI and 3D vision-enabled solutions from previous Factory Booster Day events
- 2024 Factory Booster Day (September 18) at the Mirafiori Complex in Turin, Italy, features more than 60 partners and 93 innovations

AMSTERDAM – Stellantis manufacturing leaders embrace the challenge to discover and implement production processes that leverage workers' talents, ensure product quality, improve efficiencies and produce vehicles and components efficiently with minimal environmental impact.

Now in its ninth year, Stellantis' annual Factory Booster Day is a key part of driving manufacturing improvements to meet the demands of today's industry and leverage new technologies for the shop floor. Employing the Open Challenge process where plant leaders solicit suppliers and startup companies for ideas, Factory Booster Day is a global showcase of solutions for the factory floor, pitched by suppliers and startups via physical and virtual demonstrations.

The 2024 Factory Booster Day held September 18 at the Stellantis Mirafiori Complex in Turin, Italy, includes 93 innovations on display. Over the past three years, more than 300 proposals have been considered by the Stellantis manufacturing team.

We have proof that collaboration with our manufacturing partners works. Implementing innovations and continuous improvement have reduced our transformation costs 11%, energy consumption 23% and quality issues 40% since 2021,” said Arnaud Deboeuf, Stellantis Chief Manufacturing Officer. “Stellantis workers are proud to build vehicles that deliver the emotional and world-class qualities of our iconic brands. Leveraging the latest technologies, especially AI, is a significant lever to achieve the level of excellence we are aiming for.

Innovations from prior Factory Booster Day events are bringing speed and error-proofing advancements in cloud-based digital twins, artificial intelligence (AI) and 3D vision-enabled solutions to Stellantis manufacturing environments. Some of these innovations include:

- Stellantis uses Autodesk Construction Cloud, a cloud-based platform that supports workflows for all phases of construction – from design, to planning, to building, to operations. Presented at 2022 Factory Booster Day, it enables suppliers and Stellantis to share and simulate construction layouts simultaneously and interact in a “digital twin” of a manufacturing facility. Accelerating the aggregation of construction data and improving the collaboration process between Stellantis and its suppliers reduce “digital waste” by eliminating manual aggregation of data, allowing direct visualization for all teams. It also accelerates validation of the design. Autodesk Construction Cloud was first implemented at the Windsor Assembly Plant in Canada for the STLA Large installation and, following notable cost savings, was expanded to be used for the STLA Frame installation at Sterling Heights Assembly Plant, Michigan, U.S.

- AI-enabled robot guidance, installed in several Stellantis powertrain plants, incorporates a three-dimensional (3D) vision system. This GuideNow innovation with Inbolt, a France-based startup, leverages AI and vision systems to allow robots to adjust their trajectory and operations in real-time to avoid potential conflicts or impacts. The system is delivering improved quality and reducing lead time between powertrain assembly and installation in a vehicle. This innovation was presented at the 2021 Factory Booster Day.

- Autonomous wheels from [wheel.me](https://www.wheel.me), a Norwegian robotics startup, convert existing carts and dollies into autonomous mobile robots

(AMRs). The wheels replace standard casters, automating the movement of parts or commodities within factories. This technology helps boost efficiency, safety and cost savings – with minimal disruption to existing processes and material flows. [wheel.me](https://www.wheel.me) eliminates the need for expensive track systems, offering Stellantis flexibility and annual savings. Stellantis and [wheel.me](https://www.wheel.me) are currently planning on expanding the technology across other plants. The innovation debuted at the 2022 Factory Booster Day.

Manufacturing innovations that help deliver better products, generate less waste or reduce energy usage are key to helping meet the ambitions of the Dare Forward 2030 strategic plan:

- Becoming a carbon net zero company by 2038, all scopes included, with single-digit percentage compensation of remaining emissions. Stellantis achieved an over 20% reduction of the manufacturing carbon footprint on scopes 1 and 2 since 2021.
- Reducing production costs by 40% by 2030, including deploying automation, digital solutions and artificial intelligence.
- Achieving #1 product quality with optimized defect detection, delivering an industry-leading customer experience.

Stellantis N.V. (NYSE: STLA / Euronext Milan: STLAM / Euronext Paris: STLAP) is one of the world's leading automakers aiming to provide clean, safe and affordable freedom of mobility to all. It's best known for its unique portfolio of iconic and innovative brands including Abarth, Alfa Romeo, Chrysler, Citroën, Dodge, DS Automobiles, FIAT, Jeep®, Lancia, Maserati, Opel, Peugeot, Ram, Vauxhall, Free2move and Leasys. Stellantis is executing its Dare Forward 2030, a bold strategic plan that paves the way to achieve the ambitious target of becoming a carbon net zero mobility tech company by 2038, with single-digit percentage compensation of the remaining emissions, while creating added value for all stakeholders. For more information, visit www.stellantis.com.

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