

Press Release

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Hexagon announces market-aligned strategy for Computer-Aided Engineering innovation and smarter manufacturing

Market leader in metrology, CAE and CAM reveals “entrepreneur-driven” growth plans for simulation to support its customers’ ambitions for smart manufacturing and sustainability

Hexagon’s Manufacturing Intelligence division has announced the new structure and growth plans for Computer-Aided Engineering (CAE) at its first simulation-focused conference, [HxGN Live Design & Engineering 2021](#).

As the trusted partner to manufacturers all over the world, Hexagon has been steadily building its CAE portfolio since it acquired MSC Software in 2017, supporting its customers to push the boundaries of design and engineering and address production challenges earlier in product development through industry-leading simulation capabilities and smart manufacturing solutions that utilise the breadth of Hexagon and partner ecosystem technologies.

Roger Assaker, President of Hexagon’s Design and Engineering business unit, said: “This week has showcased the enormous breadth and depth of our simulation capabilities. We have heard presentations from more than 200 customers spanning every sector and at every level – from analysts to data scientists, design engineers to management and the C-Suite – about how our solutions have enabled them to design better, smarter and faster.

“Hexagon invests 12% of its revenue directly into R&D, and we have applied that drive for innovation to our CAE business as well. In just four years, we have amassed a portfolio that goes beyond offerings from simulation-only companies, serving diverse needs that any customer may have throughout the product lifecycle, regardless of their development mindset or industry. Moreover, we have built that portfolio in the spirit of Hexagon’s core value of openness – there are no ‘vendor silos’ in our offering. Our mission is for our customers to achieve smarter manufacturing of sustainable products by design, and we want to empower them to be able to achieve that in the most effective way for their workflows and toolchains.”

Hexagon’s CAE offering is now defined as eight ‘Centres of Excellence’ (CoE), which group its portfolio of leading CAE tools by customer-defined goals, each focusing on one type of physics while enabling greater interoperability of workflows within common collaboration platform technology to enable multi-physics, generative design with data management and unique end-to-end solutions combining virtual and real data. Each CoE is led by an entrepreneurially-minded specialist, to ensure their customers’ needs are met at every stage and includes the discipline of product development, product marketing and process planning.



Assaker also revealed that one of Hexagon's key focusses for cross-discipline development is Artificial Intelligence (AI), providing solutions in each CoE that are both physics- and data-based. Hexagon is applying AI to improve accuracy, leverage data and enable problem solving in seconds rather than hours or days, by building on its capabilities in Finite Element and Finite Volume Analysis and other numerical simulation without compromising fidelity.

Helping its customers engineer parts that perform as intended when manufactured is in Hexagon's DNA. Hexagon will continue to help customers move beyond how a part will perform in theory, and to exploit its connection to market-leading metrology and production software to introduce high-value solutions in smart manufacturing. Democratising the use of CAE is implicit to this – making predictive insights available not just to designers, but to take simulation from engineering to the shop floor and the boardroom with new user experiences.

Nearly all of the Hexagon D&E tools will also be available through one licensing system to further lower barriers to entry; MSCOne, which includes partner software, and a new Innovate portal, which forms one simple destination for new and experienced engineers and designers alike to learn about Hexagon's software, CAE topics and training.

The new Centres of Excellence include:

- **Autonomous solutions**, to simulate more scenarios and make next generation advanced driver-assistance systems (ADAS) and autonomous driving a reality as soon as possible, centred around the open Virtual Test Drive (VTD) platform.
- **Computational Fluid Dynamics (CFD)**, for complex multi-physics fluid dynamics for everything from construction to aero-elasticity and MedTech, using Cradle CFD.
- **Acoustics**, the staple of automotive manufacturers and suppliers, aerospace and defence companies, and consumer product manufacturers, using Actran.
- **Structures**, combining modernised high-productivity user experiences with greater accuracy and performance, from MSC Nastran to Marc and MSC Apex.
- **Virtual Manufacturing and Costing**, leading cost engineering and virtual manufacturing of metal forming processes, virtual assembly and metal additive manufacturing solutions, from generative design to manufacturing, building on FTI FormingSuite to Simufact products and MSC Apex Generative Design.
- **System dynamics**, applying unparalleled insight to movement, from supporting electric vehicle powertrain and rotating machinery design to predicting durability and noise, vibration, and harshness (NVH), with the Adams and Romax portfolios.
- **Integrated Computational Materials Engineering (ICME)**, using the best available technology to design and make efficient use of materials, predicting the manufactured product's performance, from polymer composites to metals, using Digimat and MaterialCenter.
- **Applied solutions**, using Hexagon and its partners' technologies to solve real design manufacturing problems, for everything from wind turbines to electric vehicle powertrains.

To explore the breadth of Hexagon CAE please visit the HxGN Live Design & Engineering 2021 virtual event at: <https://hexagonMI.com/DESummitPR>



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About Hexagon

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Manufacturing Intelligence division provides solutions that utilise data from design and engineering, production and metrology to make manufacturing smarter. For more information, visit hexagonmi.com.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at hexagon.com and follow us [@HexagonAB](https://twitter.com/HexagonAB).