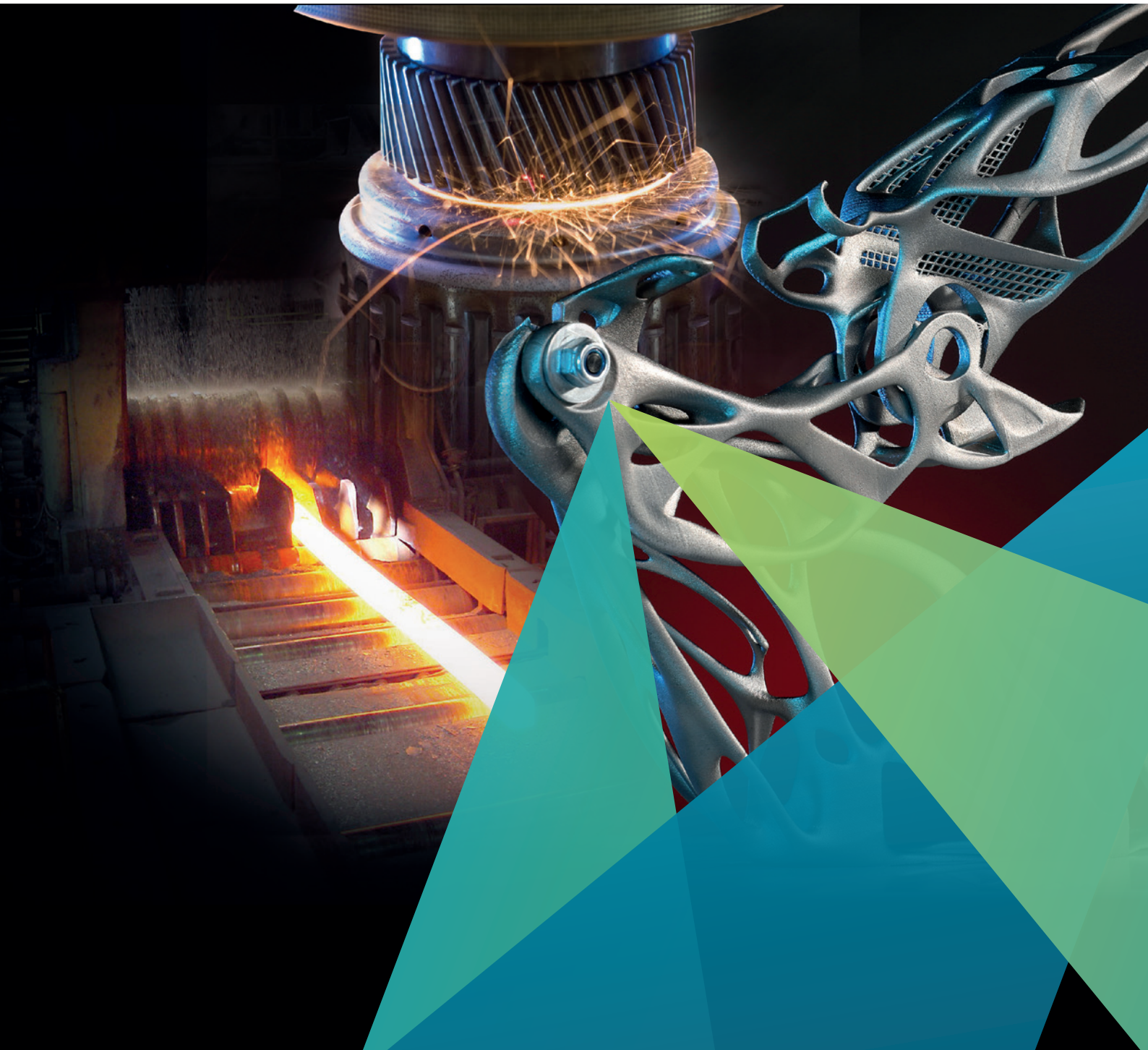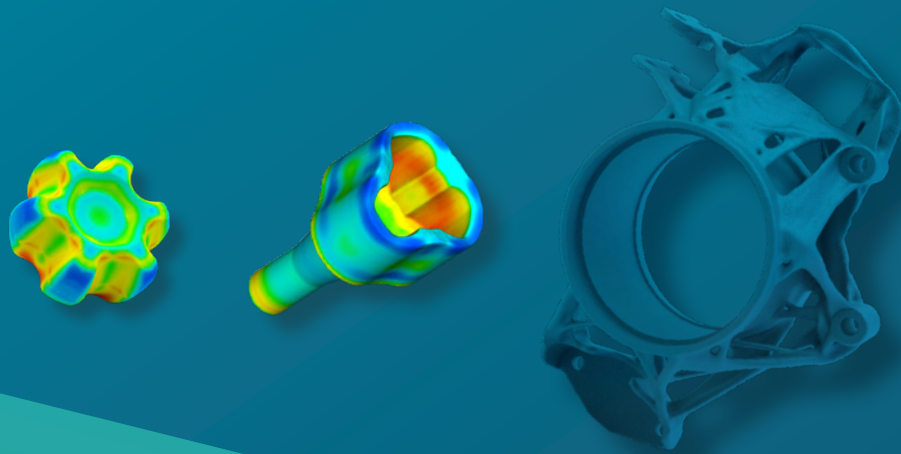HEXAGON | simufact

Simufact Software Solutions

Virtual manufacturing for metalworking industry

Your challenges

- inefficient manufacturing processes

- Many physical try-outs are required to find the right manufacturing process chain depending on production type, batch sizes, existing equipment.

- too long process development (time-to-market issue)

- too high costs, cost competition from alternative manufacturing processes

- lack of knowledge about the processes at an early design phase

- poor knowledge management (related to personnel fluctuation and retirement)

- Meet the quality and performance requirements of your customer's specification.

Simufact Software Solutions

Virtual manufacturing for metalworking industry

Our solution approach

Shift time- and cost-consuming shop floor try-outs into more efficient virtual try-outs.

Manufacturing simulation helps you determine the best manufacturing concept (optimization with regards to costs and quality) by ...

- reducing process development costs / manufacturing costs

- reducing development times = shorter time-to-market, higher on-time delivery rate

- helping to achieve the profitability (cost estimation)

- providing early understanding and deeper knowledge about manufacturing processes

- retaining, sharing, structuring, and preserving process information

- helping to establish more robust manufacturing processes and as a result: reduced risk of scrap / rework, program timing delays, cost over runs and assembly downtime

- demonstrating competence to prospects and customers
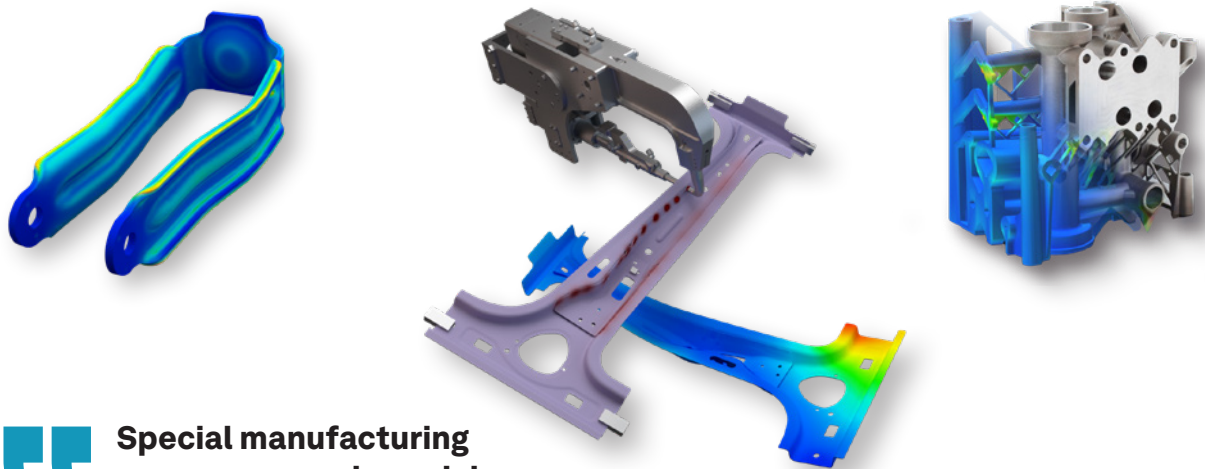
**Special manufacturing processes need special functions"**

Why Simufact?

You are exactly right with us.

Simufact provides ...

- the largest team of manufacturing experts dedicated to process simulation

- most accurate results with an easy-to-use GUI

- local support based on the largest worldwide network of offices

- easy-to-use, dedicated and integrated solutions for widest fields of application

- unique process chain capabilities including export of data into third-party systems
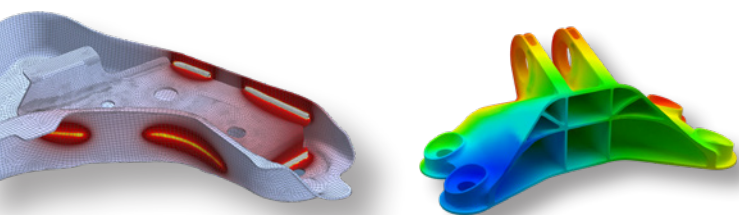
Broad portfolio with special solutions

Whether you are interested in bulk metal forming, sheet metal forming, mechanical joining, welding operations, or additive manufacturing: Simufact provides modular solutions.

Our three product lines **Simufact Forming, Simufact Welding**, and **Simufact Additive** cover a broad and ever growing range of forming, joining, and additive manufacturing processes: cold forming, forging, rolling processes, sheet metal forming, mechanical joining, heat treatment, all cammon welding processes, and additive manufacturing processes like powder bed fusion and metal binder jetting.

Our product lines' modular approach embodies our product philosophy: A special manufacturing process needs special functionality – that's why we provide process-specific modules.

Software for engineers – in industry and research

The Simufact software architecture ensures a well suited solution for shop-floor oriented users as well as for scientific experts. As modern simulation tools, our products are designed for manifold use in manufacturing departments and/or design departments: In the hands of a production expert or a development engineer, Simufact software helps you understand and optimize the manufacturing processes.

In automotive assembly Simufact software is employed to validate and optimize joining processes for car body construction. Other companies use Simufact for developing new manufacturing processes or for method planning.

SF   **Simufact** Forming

SW   **Simufact** Welding

S+   **Simufact** Additive

SJ   **Simufact** Joining Optimizer

Modular approach ensures flexibility and scalability.

Choose the modules and their functions relevant to your needs. This approach is cost effective and can easily be adapted to changing demands. While the application modules contain process-specific functions, the additional modules included in the product lines offer further functionality that is either needed for your daily use of the software, or increase the product performance.

Simufact can also be flexibly scaled to meet the scope of your work and can be supplemented by additional modules for special applications. Optimized processes with higher product quality within a very short time are the solution for our customers in a competitive, international market.

Application Modules

Basis Hub

Material Data

Advanced Material Models

Performance

Additional Modules
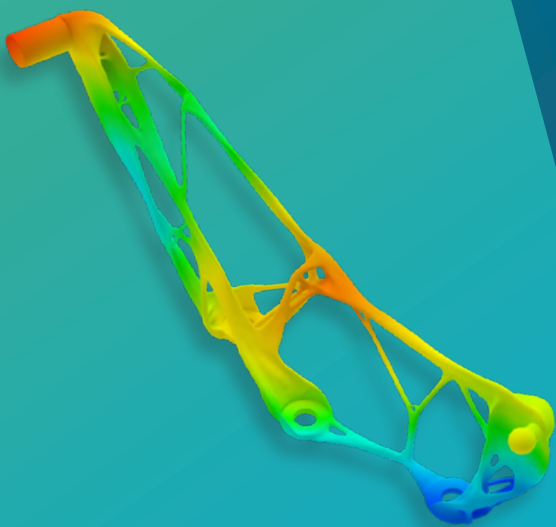
**Find the propriate solution for any manufacturing process"**

Precondition for process chain simulation

Simufact solutions enable for interoperability.

Results of single simulation steps can easily be transferred to the succeeding operation (from application module to application module and from product line to product line). So the software helps you take into account such aspects as the change of material properties between the process steps while simulation results benefit from a high level of accuracy and a very low error rate.

In additive manufacturing, simulation results flow back into the product design / or reduce to reduce distortion and residual stress. You can also link the software to third party products in order to use the simulation results e.g. for subsequent structure simulation. Considering e.g. the forming or joining history of your parts helps you bring your simulation closer to reality.

interoperability between product and modules

CAD   Simufact Solutions   Structure analysis
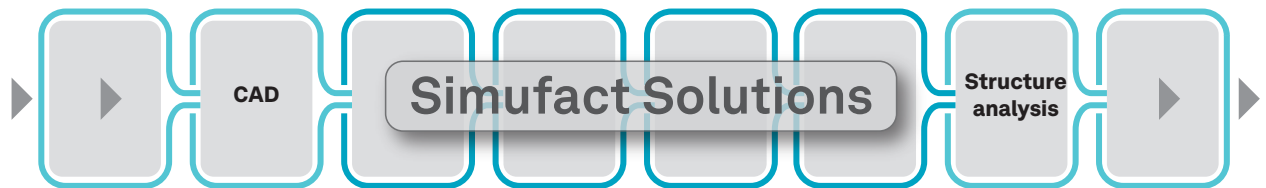
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HEXAGON | ◆simufact

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.

Simufact, part of Hexagon's Manufacturing Intelligence division, applies simulation and process knowledge to help manufacturers optimise metal forming, mechanical and thermal joining and additive process quality and cost. Learn more at simufact.com. Hexagon's Manufacturing Intelligence division provides solutions that utilise data from design and engineering, production and metrology to make manufacturing smarter.

Learn more about Hexagon (Nasdaq Stockholm: HEXA B) at hexagon.com and follow us @HexagonAB.

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