



# HxGN Mould & Die

A suite of dedicated CAD/CAE/CAM, engineering, and automation tools empowering mold and die and tool manufacturers to increase efficiency, reduce costs, and produce high quality parts for their customers across industries ranging from automotive to aerospace and beyond.





# HxGN Mould & Die

The HxGN Mould & Die Suite provides end-to-end solutions for all stages of progressive dies and plastic injection moulding processes by offering an integrated workflow from design/engineering to manufacturing and automation, complemented with advanced analysis and predictive tools.



**CAD/CAE for plastic  
injection mould design**

**CAD/CAE for progressive die  
design**

**CAD for manufacturing  
preparation**

**CAM for CNC machine tool  
programming**

**Process simulation,  
verification & optimisation**

**Automation & collaboration  
Powered by Nexus**



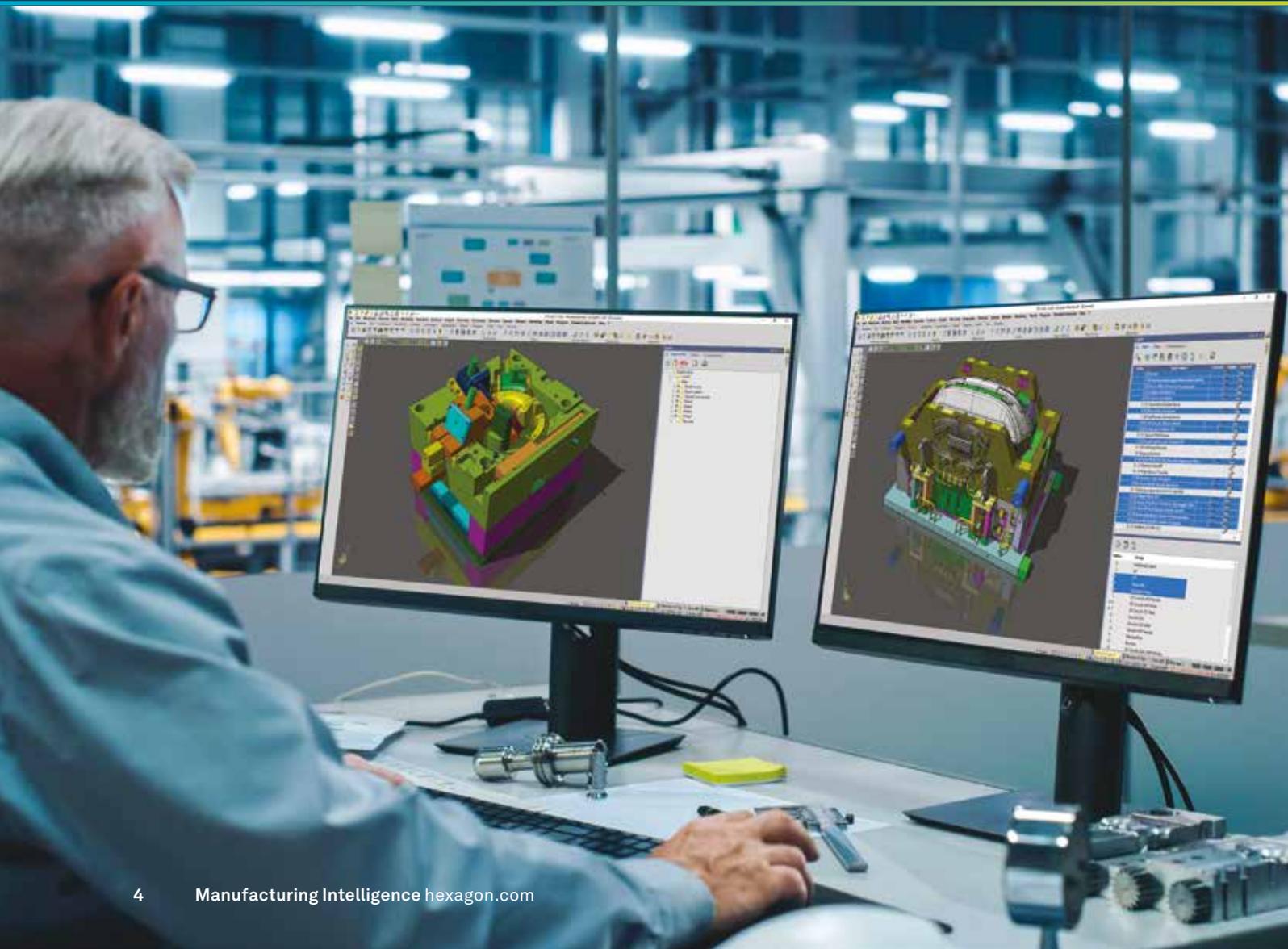
# CAD/CAE for plastic injection mould design

Comprehensive solutions for plastic injection mold tool design, utilising industry-specific automation to assist you throughout the mold development process and aids in major analysis to detect potential issues in the early project, ultimately resulting in substantial time savings as the design process advances.

- Suppliers Components Library
- Extensive Material characteristics DB
- Topology Investigation
- Automated Core and Cavity Extraction
- Physics and Mechanical Analysis
- Intelligent Cooling Channel Definition
- Advanced Flow Analysis
- Thermal Prediction/Simulation
- Warpage Estimation/Compensation
- Full Assembly Management
- Kinematics and Simulation
- Automatic Drafting & Dimensioning



VISI

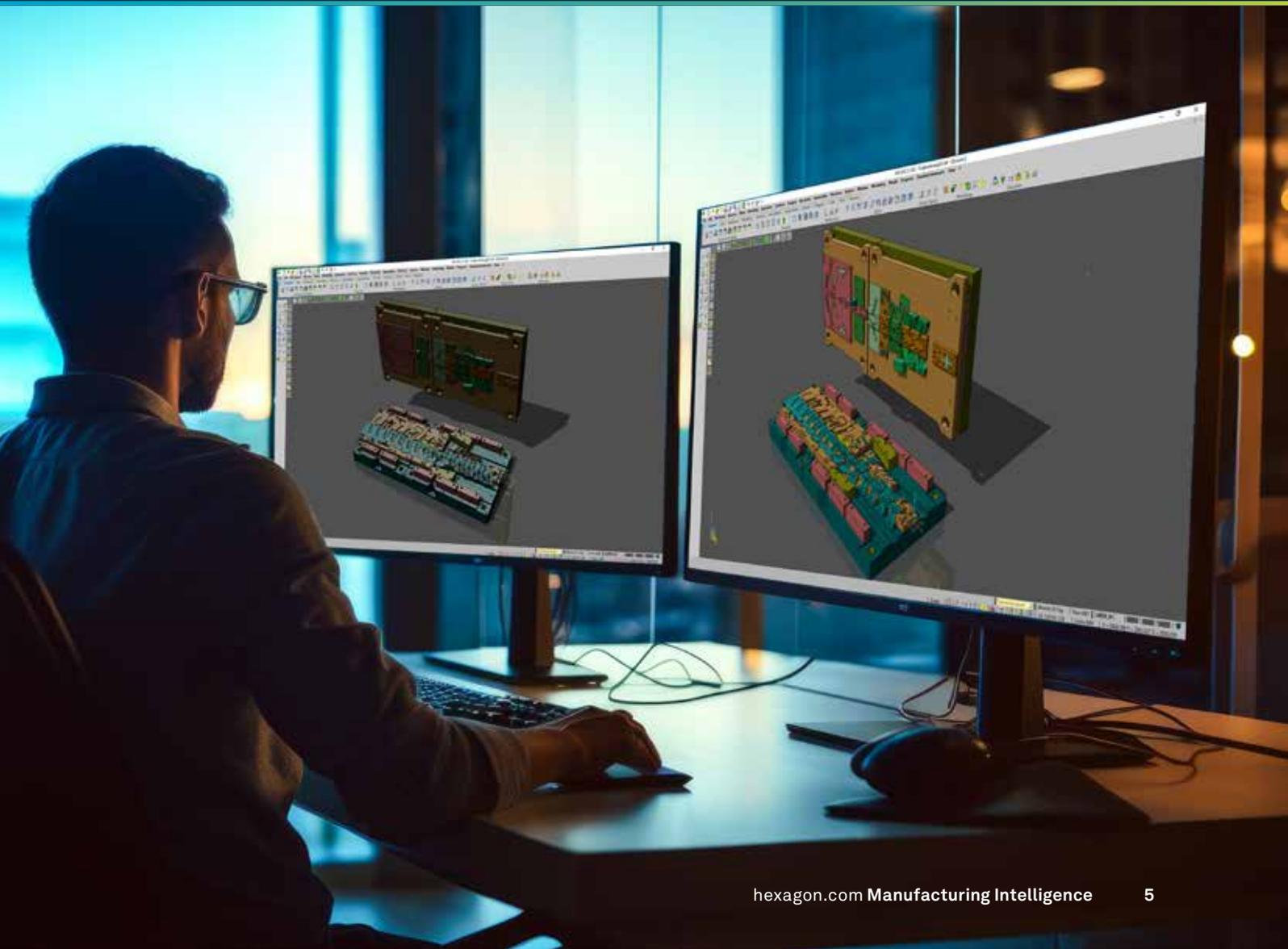




# CAD/CAE for progressive die design

The step by step unfolding of progressive die design reduces errors and aids in making informed decisions, while industry-specific features enhance the design process, providing unparalleled levels of productivity and efficiency.

- Suppliers Components Library
- Extensive Material characteristics DB
- Topology Investigation
- Automatic Blanking/Unfolding
- Intelligent Strip layout
- Springback Prediction/Compensation
- Material Bending Simulation
- Incremental Deformation Simulation
- Advanced Morphing Capabilities
- Full Assembly Management
- Kinematics and Simulation
- Automatic Drafting & Dimensioning

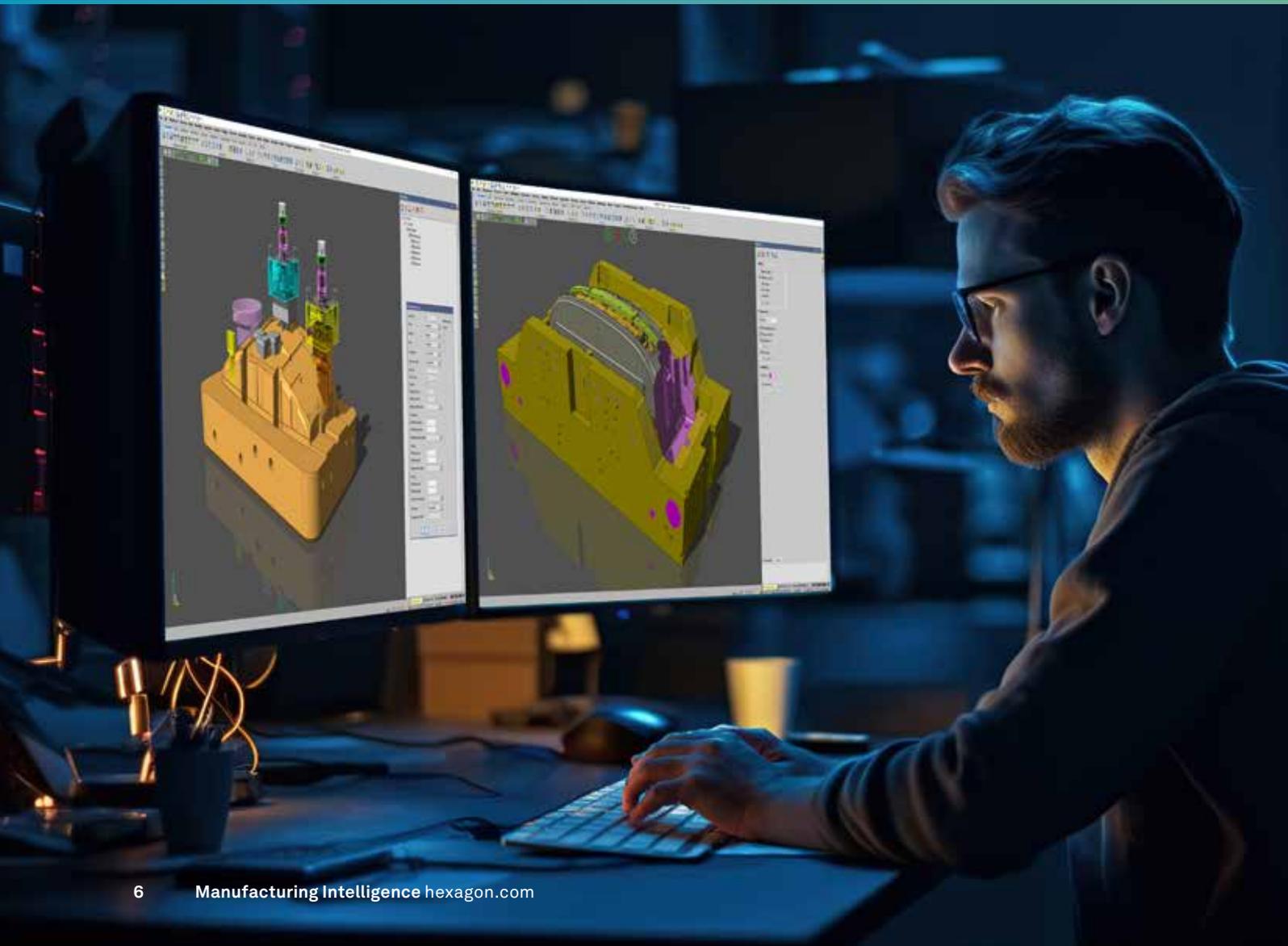




# CAD for manufacturing preparation

Prepare your part files for manufacturing faster than ever regardless of whether you design in house or receive models from your customers. Our robust CAD tools are developed for the manufacturing environment and designed to work with your CAM system.

- Design Review
- PMI Management
- Geometry Validations
- Automated Electrode Design
- Reverse Engineering
- Manufacturing Preparation





# CAM for CNC machine tool programming

Efficiently generate complex component programs with fast and secure toolpath creation, utilising top-notch features to meet the demanding standards of the market.

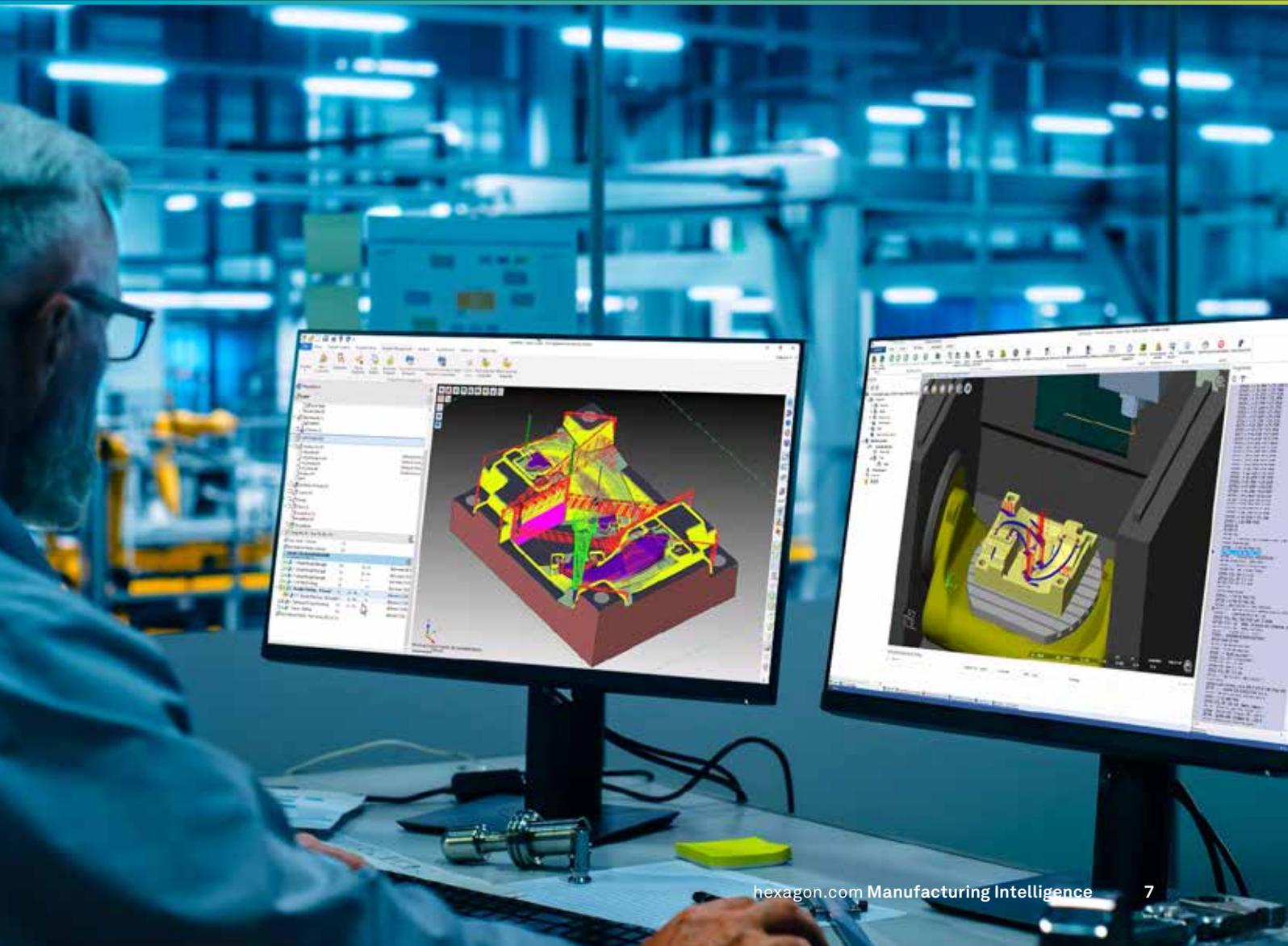
- Design Review
- Geometry Validations
- Automated Electrode Manufacturing
- Manufacturing Preparation
- Milling 3- to 5-Axis
- Extremely Safe Toolpath
- High-Speed Machining
- Ultra-Quality Surface Finishing
- Automated Electrode Programming
- Wire EDM
- Programming Automation
- Dedicated Post Processing
- Tool Management



VISI



WORKNC





# Process verification & Shop floor production intelligence

Boost your confidence in machinery operation. Our tools for simulation, verification, and optimization ensure safe, efficient production, while real-time data enhances performance and fosters continuous improvement on the shop floor.

- Projects & Processes Management
- Digital Twin Simulation
- Cycle Time Optimization
- Collaboration powered by Nexus



NCSIMUL

datanomix®



# Automation & collaboration Powered by Nexus

Extend the capabilities of your technology with the power of Nexus, including tool catalogs and machine libraries, collaboration tools, workflow automations, and next gen computational technologies.



Catalogs and libraries



Job collaboration



Workflow automation



Productivity tools





VISI

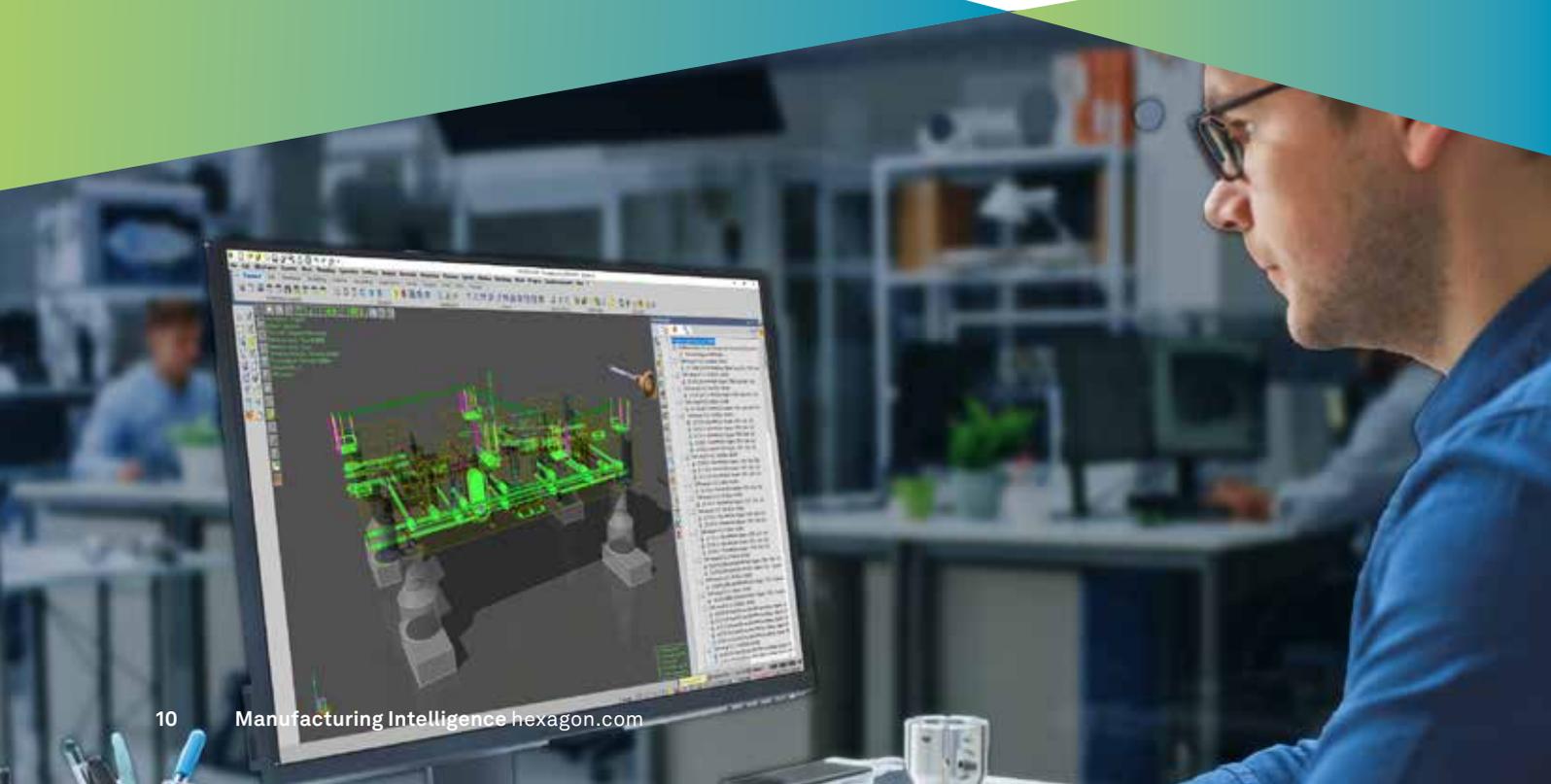
# Integrated CAD software solutions for the mould & die industry

Industry specific applications for plastic injection tool design including material flow analysis and progressive die design with step-by-step unfolding provide the toolmaker with unsurpassed levels of productivity.

- Powerful solid & surface modelling system
- Tools for validation and preparation of model geometry
- Reverse engineering with advanced morphing
- Complete mould- tool- and die-design solution
- Unique prediction tools, ideal analysis & concurrent engineering
- Automated tool for the creation and management of electrodes
- Complete and intuitive solution for flat blank development
- Automatic springback compensation
- Practical, intuitive and simple application for CNC programming
- Dedicated high speed milling techniques
- Wire EDM technology for precision engineering & tool making
- Programming automation
- Automated Electrode programming

## Benefits:

- An intuitive solution that's both easy to use and master.
- Comprehensive 2D, 3D and 5-axis machining strategies with dedicated high-speed routines.
- Wire EDM toolpaths and proven CNC code for all wire erosion machine tools.





WORKNC

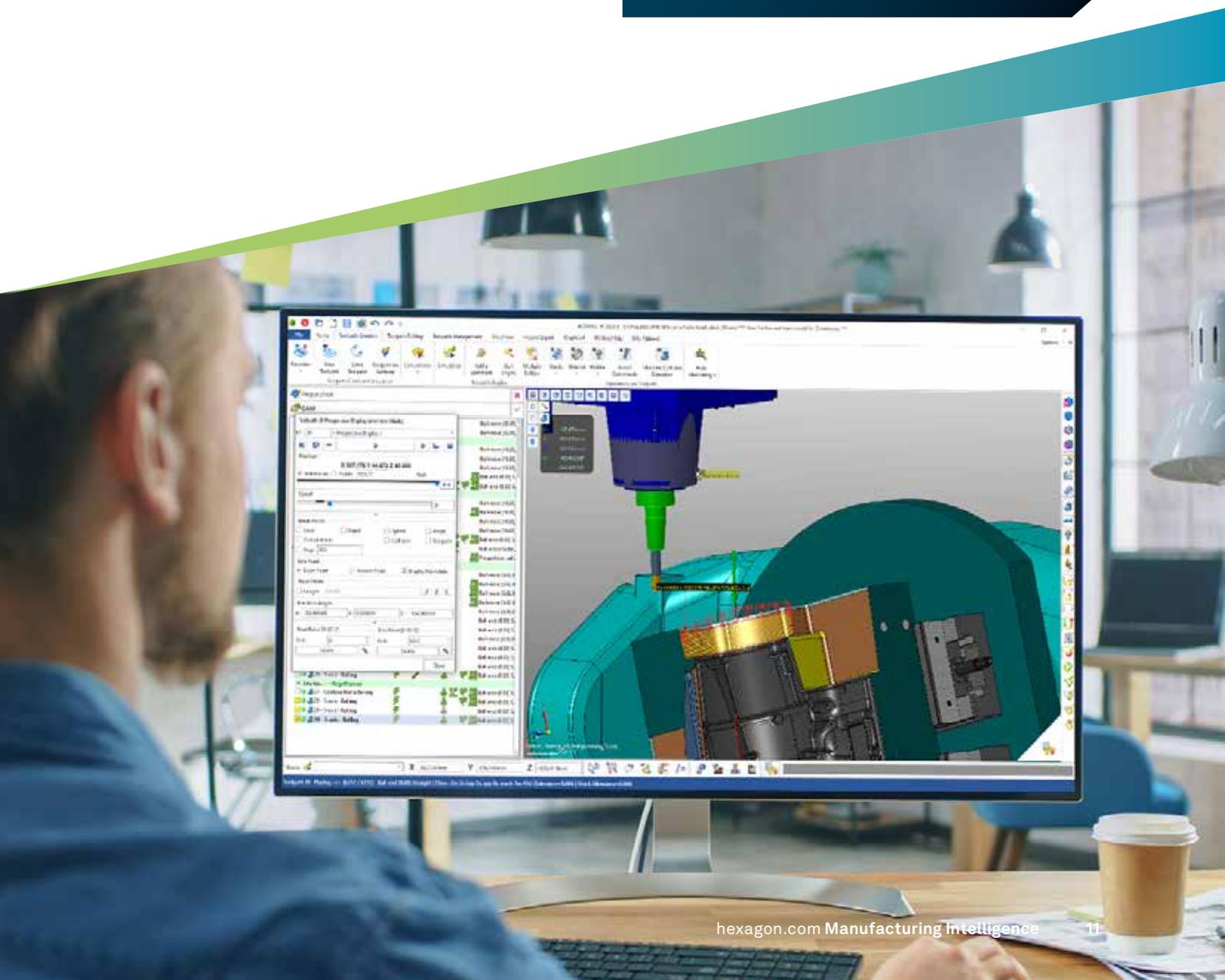
# CAD agnostic CAM dedicated to milling moulds, tools and dies

Quickly program complex parts with efficient and safe toolpaths by utilizing best in class capabilities to accommodate the demanding requirements of the market. Key strengths are fast roughing and high-level surface finishing.

- Fast programming for milling 3- to 5-Axis
- Automated Multi-Axis toolpath conversion
- Leveraging common tool types
- Process safety through validation
- High-Quality Surface Finishing
- Quick Toolpath Calculation

## Benefits:

- Reduced machining cycle time with the efficient implementation of easy-to-create and use toolpaths.
- Improved overall manufacturing productivity thanks to WORKNC's longer tool life and software support.
- Seamless importing of model data for your projects from all leading CAD manufacturers.





NCSIMUL

## Process simulation, verification and optimisation

Verify, certify, and optimise your code before running your programs to guarantee machining results, safeguard your equipment, and maximise machine output.

- G-code simulation
- Cycle time optimisation
- Setup revision
- Program certification

### Benefits:

- True G-code certification for all CNC machines from lathe to Swiss-turning, including full 5axis milling
- Ensure safe machining and prevent tool, head, or spindle breakage
- Reduce machining cycle-time, cutting-tool wear and improve part quality with optimisation





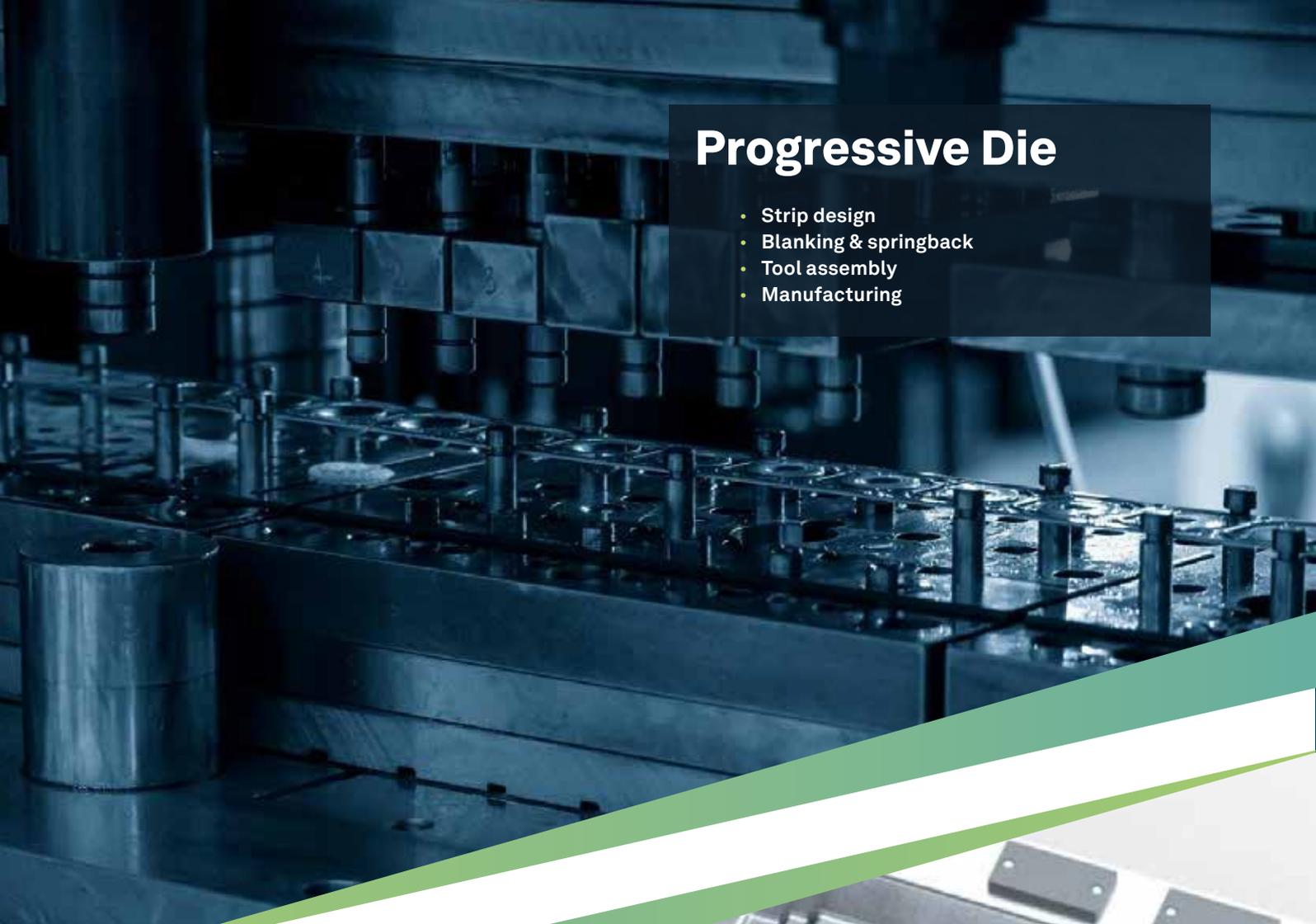
## Shop-floor production intelligence with automated machine monitoring

Put your data to work by gaining actionable intelligence from your shop floor with real-time and historical reports on production performance without the need for operator input.

- Production monitoring
- Real-time job insights
- Data-driven planning
- Automated job costing
- Condition monitoring

### Benefits:

- Knowing what and why on stopped machines and other insights on the machine downtime aids in faster response
- Real-time alerts sent to email or mobile devices that show operators & supervisors where their attention is needed helps in data driven planning
- Tracking & displaying the time it takes to get every machine into cycle across every shift supports in continuous improvement



## Progressive Die

- Strip design
- Blanking & springback
- Tool assembly
- Manufacturing



## Plastics Injection

- Core & cavity
- FEA simulation
- Tool assembly
- Manufacturing

# More from production software

## Empowering an autonomous, sustainable future

- » From quote to delivery, an integrated workflow
- » For design, production and quality assurance
- » Highly efficient utilisation of materials and equipment
- » Best practices are captured and consistently applied
- » With significant automation driving towards autonomy



HxGN  
Mould & Die



HxGN  
Production Machining



HxGN  
Wood, Stone & Composites



HxGN  
Sheet Metal Fabrication



HxGN  
Additive Manufacturing





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

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

Hexagon's Manufacturing Intelligence division provides solutions that use data from design and engineering, production and metrology to make manufacturing smarter.

Learn more about Hexagon (Nasdaq Stockholm: HEXA B) at [hexagon.com](https://www.hexagon.com) and follow us [@HexagonAB](https://twitter.com/HexagonAB).