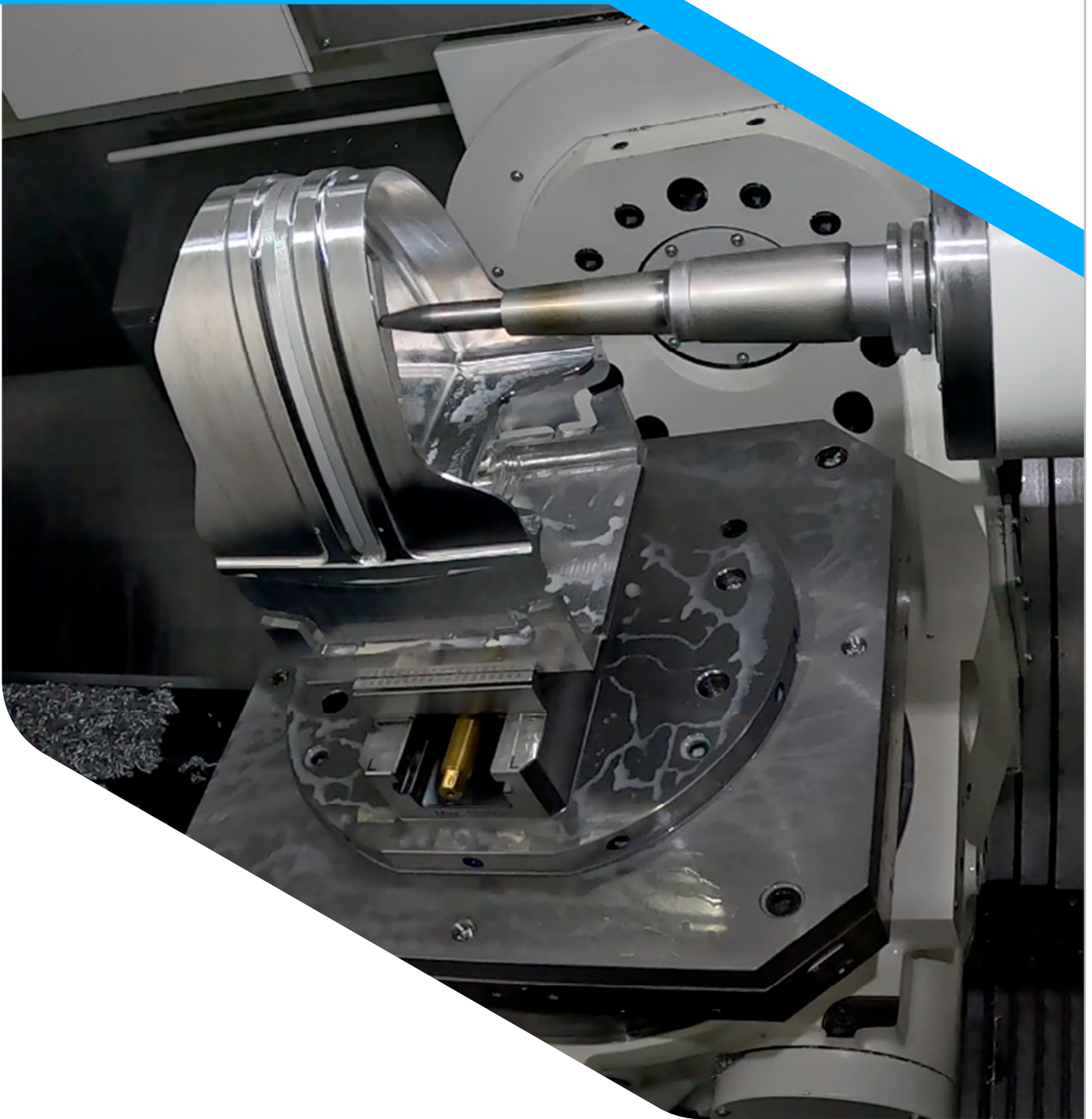
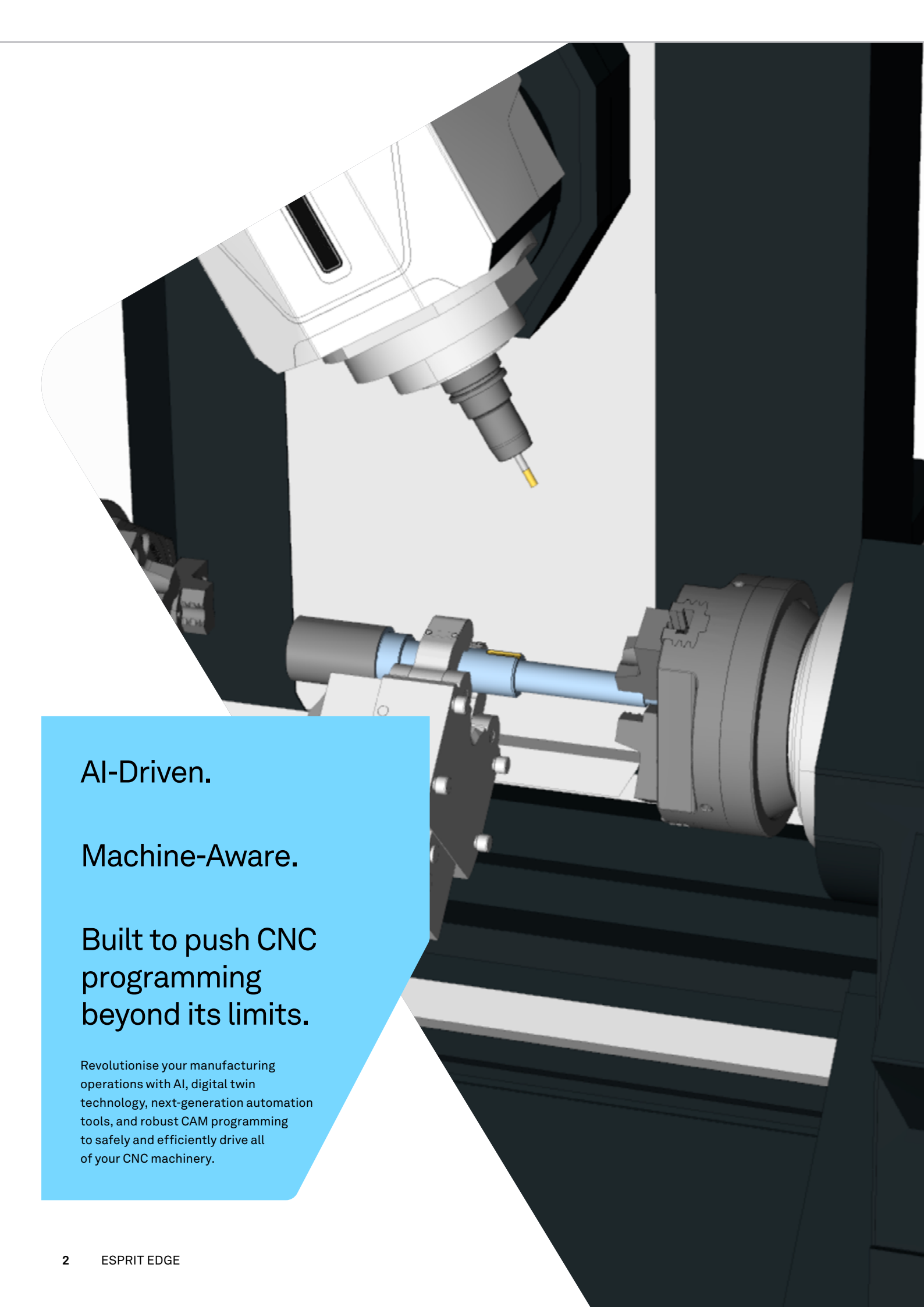




ESPRIT EDGE

Powered by artificial intelligence
and digital twin technology





AI-Driven.

Machine-Aware.

Built to push CNC
programming
beyond its limits.

Revolutionise your manufacturing operations with AI, digital twin technology, next-generation automation tools, and robust CAM programming to safely and efficiently drive all of your CNC machinery.



The next generation of CAM

ESPRIT EDGE is redefining what CAM can achieve. Combining true digital twin technology with artificial intelligence, it delivers smarter toolpaths, faster setups, and more adaptive automation than ever before.

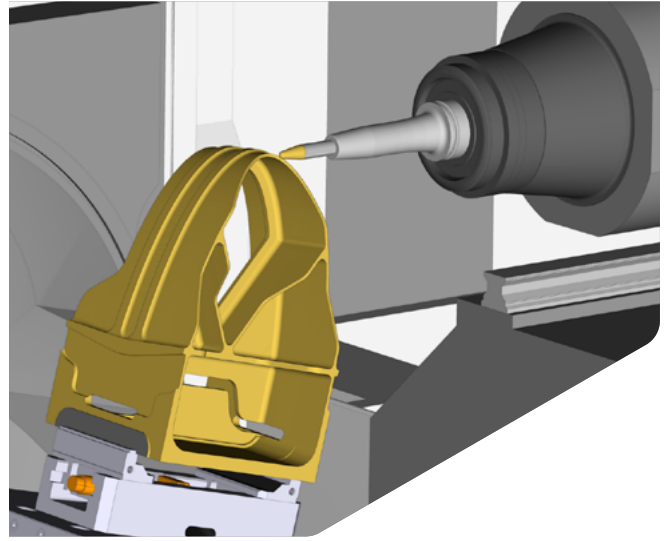
Built for every machine.

- Milling 3- to 5-axis
- Turning and millturn
- Wire EDM
- Swiss machining
- High-speed machining
- On-machine Inspection
- Metal additive manufacturing
- Virtual machine setup
- Turn-key post processing

One CAM for every CNC machine.

Milling 3- to 5-axis

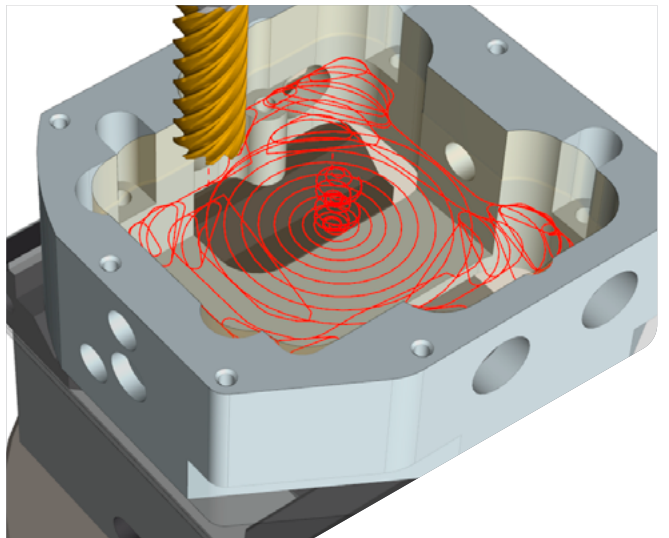
ESPRIT EDGE delivers advanced milling toolpath capabilities designed to maximize both productivity and part quality. Its comprehensive roughing strategies are optimized for high material removal rates, maintaining consistent cutter engagement to reduce cycle times while protecting tools and spindles. For finishing, it offers a full suite of strategies, from fine step-over surface finishing to multi-axis contouring, ensuring exceptional surface quality and dimensional accuracy on even the most complex geometries.



High-speed machining

Dynamically optimised toolpaths to increase productivity and lower operating costs.

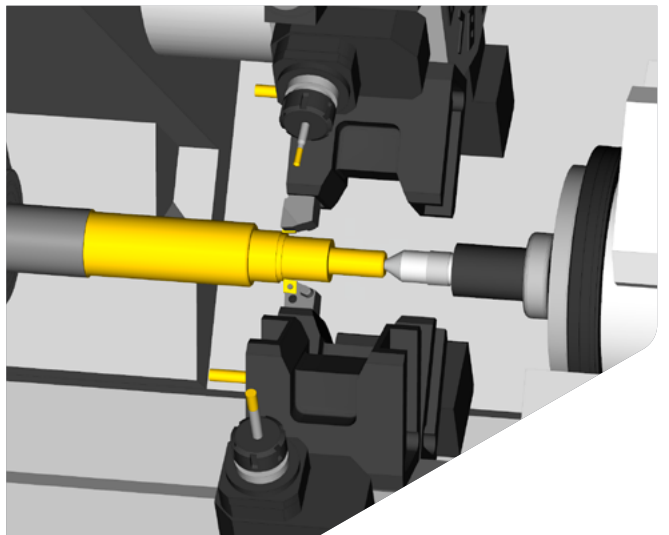
ESPRIT EDGE offers high-speed machining cycles for 2.5-, 3-, 4-, and 5-axis roughing that yield remarkable benefits. These cycles effectively reduce cycle times and substantially extend tool life. The approach involves a blend of optimised high-speed toolpath designs, chip thinning with shallow radial engagements and full depths of cut, along with dynamically adjusted feed rates to ensure a constant chip load and minimise cutting forces during machining.



Turning and multi-tasking

Advanced turning and part-handling cycles for lathes, mills, and mill-turns—supporting multi-spindle, multi-turret, and multi-channel machines.

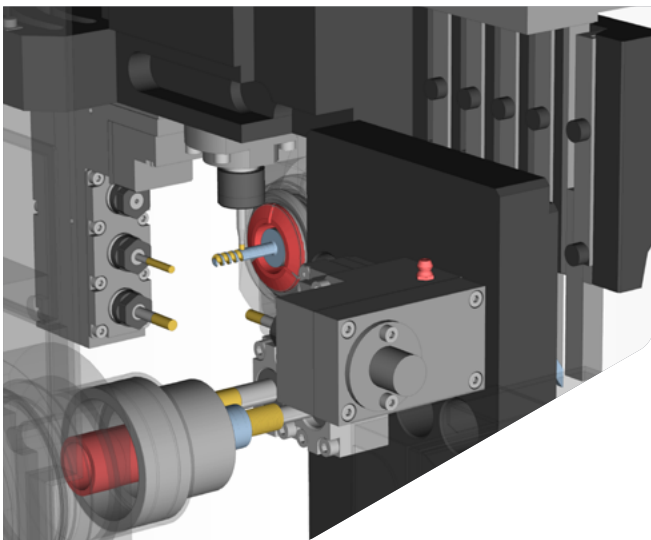
ESPRIT EDGE offers versatile turning and part handling cycles suitable for all types of CNC lathes, mills, or mill turn machines. It integrates milling, turning, and probing operations into a single program, enabling the rapid generation of optimal toolpaths for diverse workpieces and machining scenarios. Its comprehensive toolpath control accommodates specific needs for special parts and materials.



Swiss machining

Powerful and intuitive solution for programming Swiss-type CNC lathes, enabling manufacturers to efficiently machine complex, high-precision components with confidence. Designed for sliding-head machines, it simplifies even the most intricate multi-axis operations while maintaining full control over every detail.

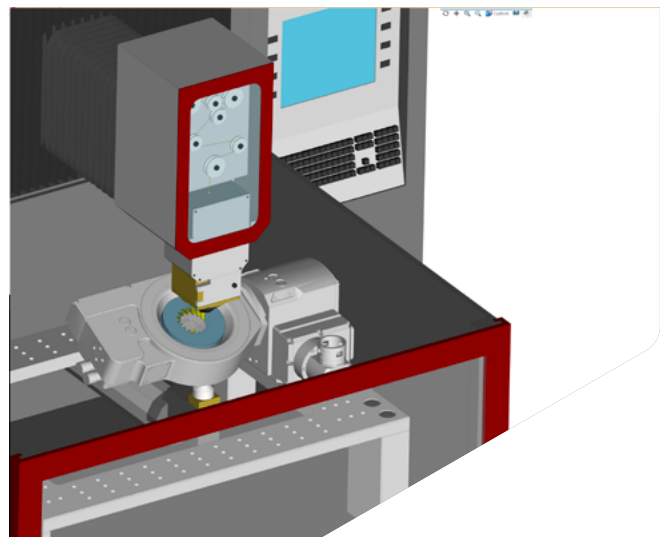
- Complete Multi-Axis Control – Programme simultaneous turning and milling operations across main and sub-spindles with ease.
- Automatic Channel Synchronisation – Optimise cycle times with intelligent synchronisation of turrets, spindles, and tools.
- Machine-Aware – Simulate the exact behavior of your Swiss machine, including guide bush, tool overlap, and axis limits for collision-free machining.
- Edit-Free G-Code Output – Generate reliable, machine-optimised NC code tailored to your specific Swiss machine.



Wire EDM

Machine-specific strategies with precise control over cutting conditions and unattended operation.

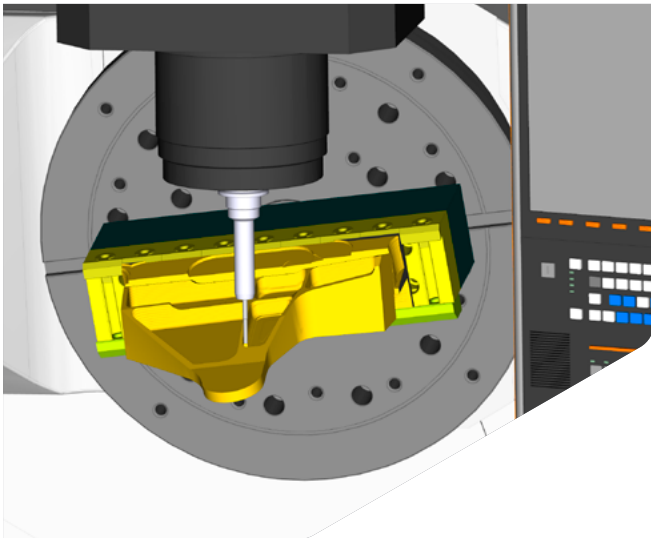
Tailored solutions are available for different wire EDM brands and machines, optimising performance. These expert systems leverage established, machine-specific knowledge to set ideal cutting conditions. Additionally, factory-developed post processors ensure the delivery of g-code that requires minimal editing.



Turn-key post processing.

Built-in collaboration with machine tool builders ensures edit-free, machine-optimised g-code.

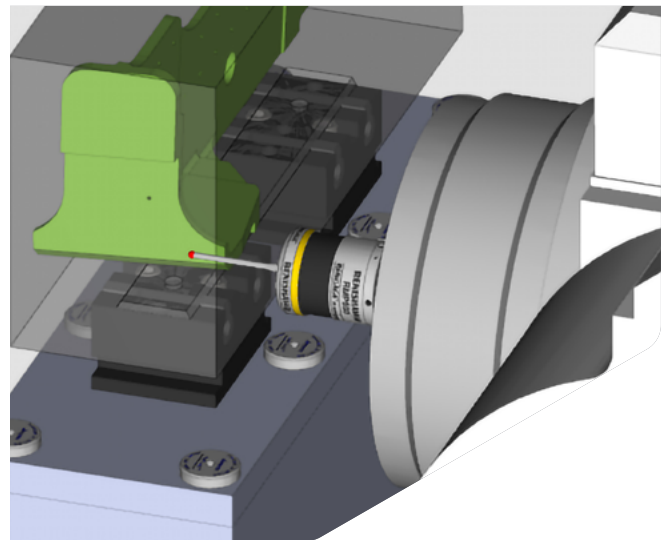
With turnkey post processors, you can visualise the entire machining process and machine environment in dynamic, solid-shaded graphics. This includes stock materials, fixtures, and clamps. The real-time display of your machine's kinematic action provides highly accurate verification before any actual cutting, ensuring precision for all machines.



On-Machine inspection

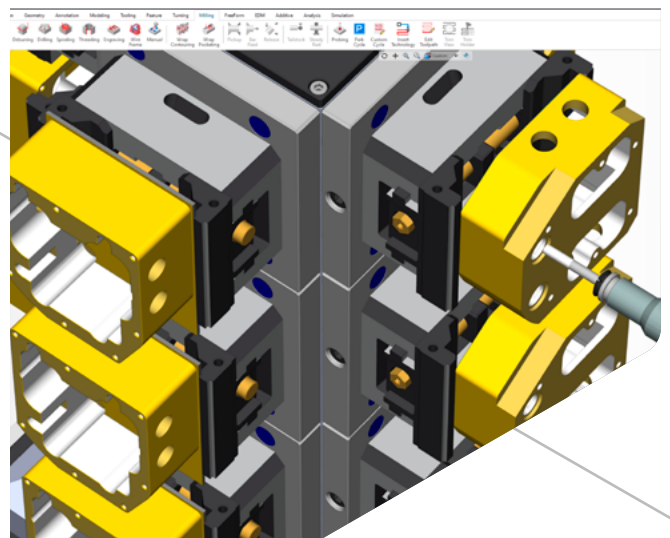
Integrated probing cycles for combined machining and inspection in one program.

This robust suite of probing cycles seamlessly integrates into the ESPRIT EDGE workflow. It is universally compatible with any CNC machine, control system, and touch probe. By combining machining and inspection capabilities into a single program, it streamlines the entire process.



Virtual machine setup

ESPRIT EDGE's digital twin incorporates machine models, controller emulators, machine parameters, and post processors, enabling precise simulation and the generation of machine-optimised g-code. Furthermore, it provides factory-developed post processors that yield g-code requiring minimal editing, making it easier to maximise the potential of your machine tools and optimise your investment.





Powered by three AI technologies

Three Layers of Intelligence for Smarter Manufacturing.

ProPlanAI – process intelligence

Turn your data into a competitive advantage.

ProPlanAI learns from your organisation's historical data to recommend the best tools, setups, and machining strategies. It leverages institutional knowledge to automate process planning, reduce setup time, and improve resource utilisation across the shop floor.

Key benefits:

- Learns from real production data to optimise operations.
- Automatically proposes optimal toolpath strategies and resources.
- Helps standardise best practices across teams.
- Ideal for manufacturers looking to increase machine utilisation and consistency.

“

We've seen somewhere between 15 to 20% increase in production yield in the departments that have implemented ProPlanAI.

Adrian Nistler,
President, Path Machining + Automation

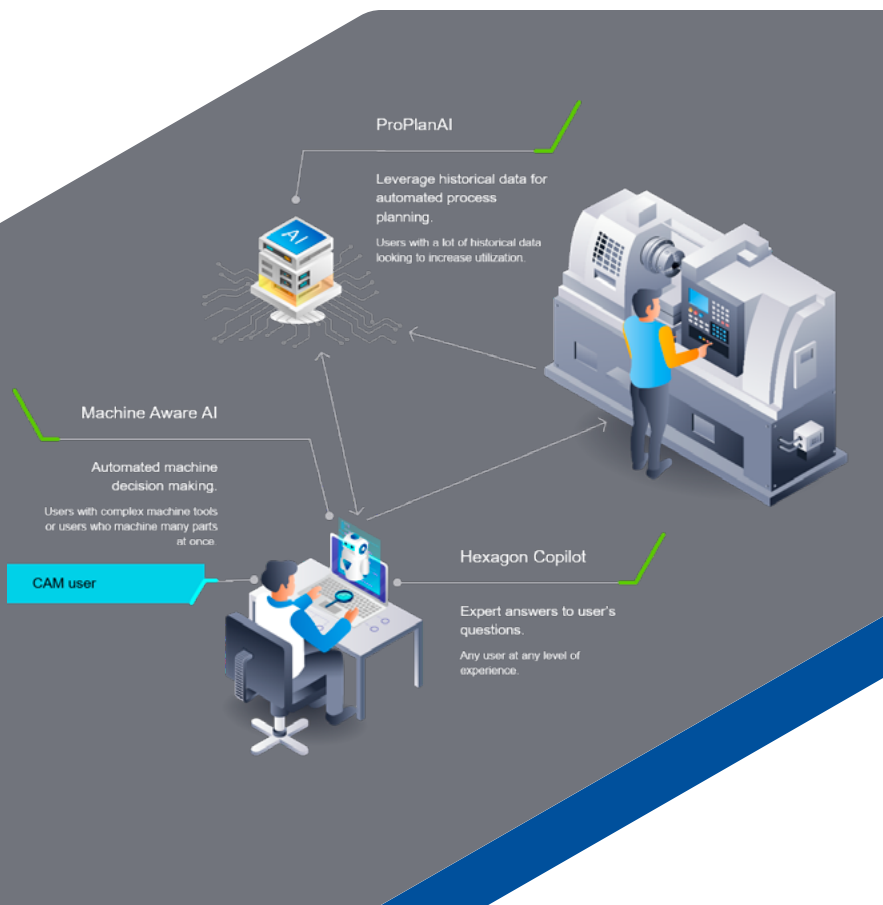
Hexagon Copilot – knowledge intelligence

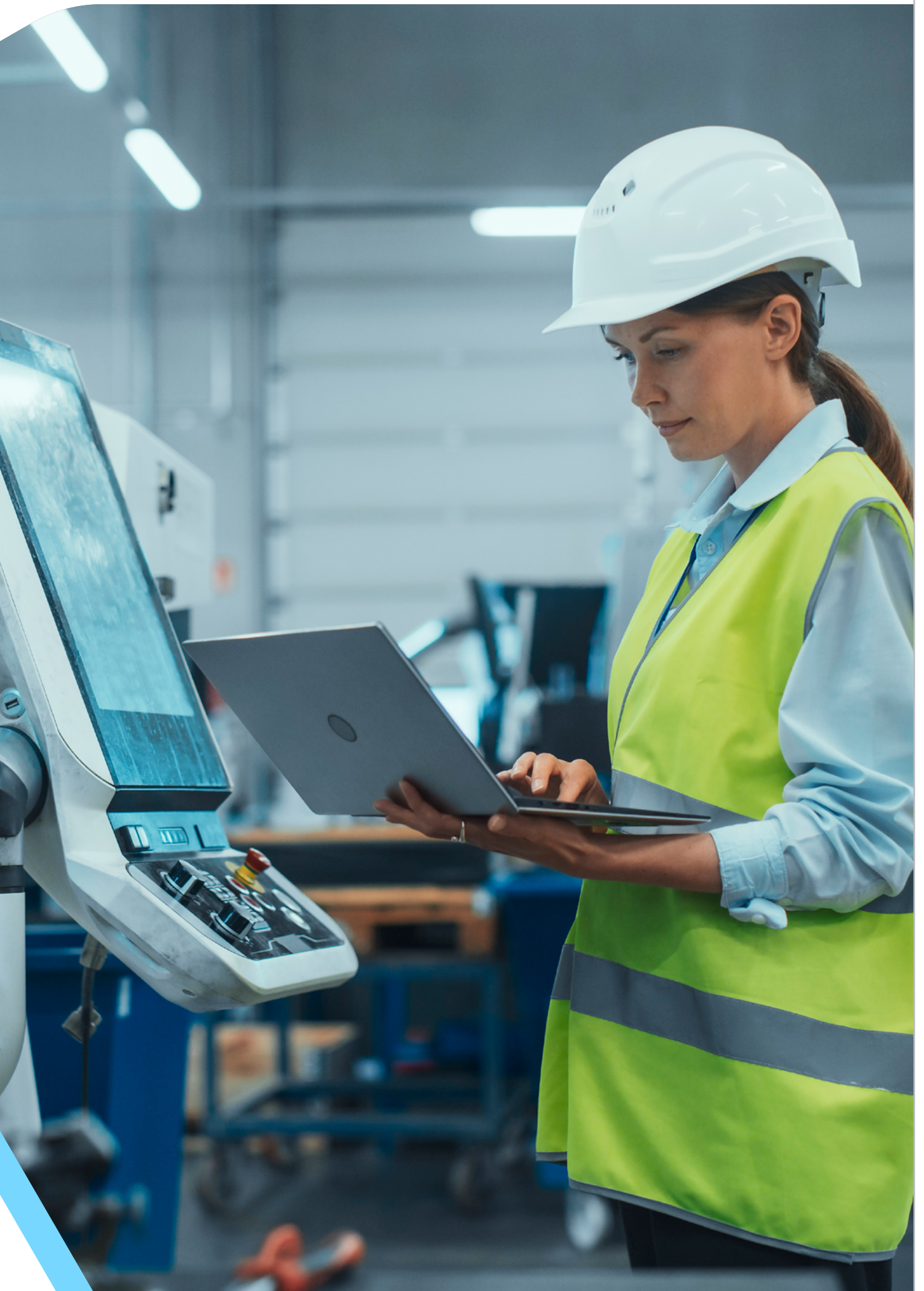
Your virtual assistant for CAM programming.

Hexagon Copilot is the in-software assistant that supports every user — from beginner to expert. Using direct commands or contextual prompts, it delivers instant answers, guidance, and workflow shortcuts to keep productivity high and downtime low.

Key Benefits:

- Instant expert answers and suggestions
- Simplifies learning curve for new users.
- Reduces dependency on technical documentation.
- Keeps programmers focused on value-added work.





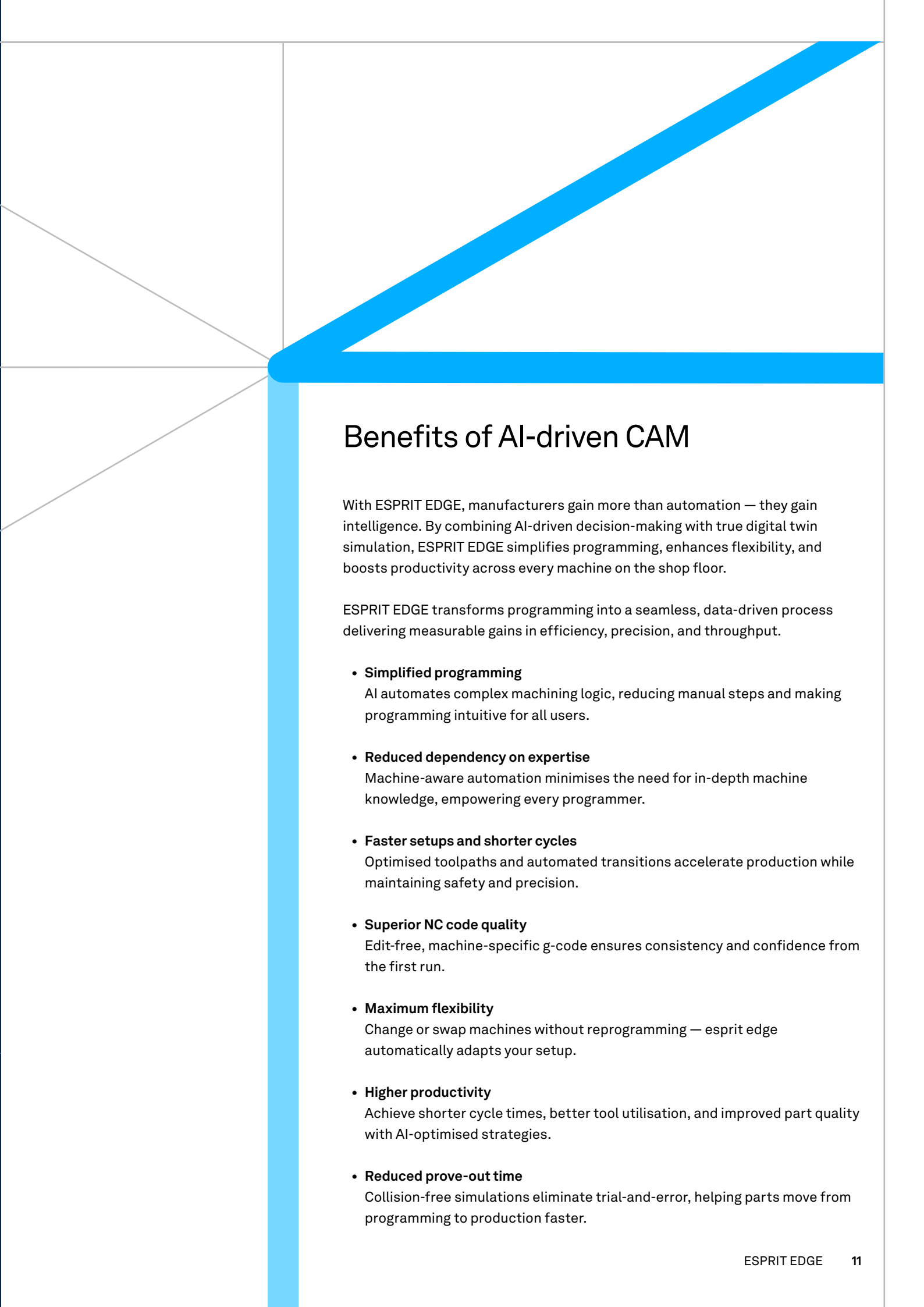
Machine-aware AI – machine intelligence

Smart decisions based on real machine behaviour.

Machine-aware AI uses your digital twin to understand the kinematics, tool limits, and behaviour of each CNC machine. It automatically optimises programs, synchronises spindles and turrets, and ensures collision-free operation — in real time.

Key Benefits:

- Automated decision-making for complex machines
- Real-time toolpath optimisation
- Intelligent synchronisation across multi-axis, multi-channel setups
- Perfect for shops with high-mix or high-complexity production



Benefits of AI-driven CAM

With ESPRIT EDGE, manufacturers gain more than automation — they gain intelligence. By combining AI-driven decision-making with true digital twin simulation, ESPRIT EDGE simplifies programming, enhances flexibility, and boosts productivity across every machine on the shop floor.

ESPRIT EDGE transforms programming into a seamless, data-driven process delivering measurable gains in efficiency, precision, and throughput.

- **Simplified programming**

AI automates complex machining logic, reducing manual steps and making programming intuitive for all users.

- **Reduced dependency on expertise**

Machine-aware automation minimises the need for in-depth machine knowledge, empowering every programmer.

- **Faster setups and shorter cycles**

Optimised toolpaths and automated transitions accelerate production while maintaining safety and precision.

- **Superior NC code quality**

Edit-free, machine-specific g-code ensures consistency and confidence from the first run.

- **Maximum flexibility**

Change or swap machines without reprogramming — esprit edge automatically adapts your setup.

- **Higher productivity**

Achieve shorter cycle times, better tool utilisation, and improved part quality with AI-optimised strategies.

- **Reduced prove-out time**

Collision-free simulations eliminate trial-and-error, helping parts move from programming to production faster.

How digital twin and AI transform CAM

From conventional CAM to intelligent CAM.

Traditional CAM programming often relies on manual input and deep machine expertise, making it time-consuming and prone to errors.

ESPRIT EDGE changes that. By leveraging true digital twin technology and artificial intelligence, it transforms the CAM process into an automated, machine-aware workflow—simpler, faster, and more flexible than ever.

Conventional CAM	ESPRIT EDGE – AI-driven and machine-aware
Machine considered after toolpath creation – requires complex post customisation	System inherently understands each machine’s kinematics, axes, tooling, and limits
Heavy reliance on programmer’s machine knowledge	AI assists decision-making, reducing dependency on individual expertise
Manual setup and synchronisation between spindles, turrets, and channels	Automatic synchronisation and transition movements between all machining channels
Time-consuming prove-outs with risk of collisions	True digital twin simulation reflects exact machine behaviour – collision-free assurance
Fixed toolpaths not optimised for machine performance	Toolpaths dynamically optimised for each machine’s capabilities
Reprogramming required when changing machines	Program automatically adapts when switching machines
Inconsistent g-code quality across different machine types	Generates high-quality, machine-specific, edit-free g-code
Limited automation and scalability	Fully scalable AI automation with learning-based optimisation

Digital twin technology

Program with complete confidence

ESPRIT EDGE brings the digital twin to life. Every CNC machine, every axis, every tool, and every setup is mirrored in a virtual environment that behaves exactly like the real thing.

By simulating the true kinematics, constraints, and conditions of your machines, ESPRIT EDGE ensures every toolpath is collision-free, optimised, and production-ready before a single chip is cut.

What makes ESPRIT EDGE's Digital Twin different

Exact machine representation

Models every spindle, turret, axis, and tool for precise, real-world accuracy.

Real-time simulation

Visualise the machining process exactly as it will occur on the shop floor

Collision detection

Prevent crashes and tool breakage through virtual prove-outs

Kinematic awareness

Automatically respects machine travel limits and movement constraints

Tool and fixture validation

Detect interference and optimise setups for maximum efficiency

Adaptive optimisation

Adjusts toolpaths dynamically for best performance on each specific CNC machine

Integration and workflow efficiency

ESPRIT EDGE isn't just CAM — it's the centre of a connected digital manufacturing workflow. From CAD import to post-processing, every step is streamlined through smart integrations and data continuity. The result: less manual effort, fewer errors, and faster, smarter production decisions.

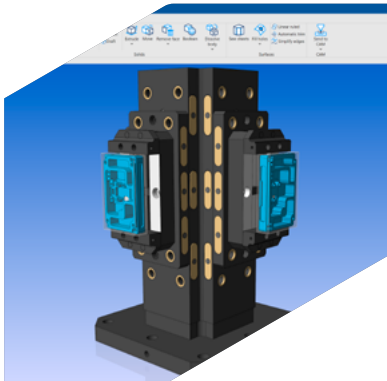
Integration area	How it works	Value delivered
CAD interoperability	Native import of all major cad formats with full associativity.	Maintain design intent and react instantly to design changes.
Tool management	Connect with tool databases and presetters for consistent data.	Avoid duplication and ensure right tool for every job.
Post processing	Advanced, customisable posts built and evaluated for your CNCs.	Get accurate g-code you can trust, ready for production.
Simulation and verification	Digital twin validation ensures safe and optimised programs.	Eliminate prove-outs and reduce downtime.
Cloud platform integration	Secure cloud connectivity for collaboration, sharing, and AI-enhanced features.	Enable team access to real-time data and AI-driven optimisation.

Our customers also use:

DESIGNER

CAD for manufacturing and design reviews

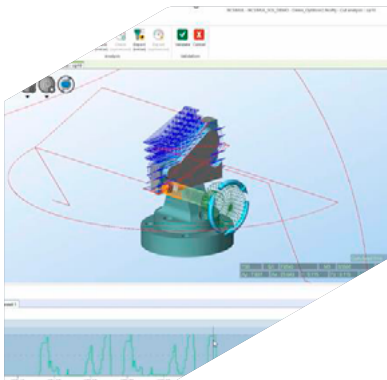
Streamline your production processes, enhance collaboration, ensure manufacturability and compliance, and embed quality into the design and preparation phase of manufacturing.



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.



Beyond software: Partnering for your success

With ESPRIT EDGE, you are never on your own. Our commitment extends far beyond installation — we ensure you are productive from day one and continually supported by experts who understand your goals, machines, and manufacturing challenges.

Global technical support and training

Comprehensive support services

- Access a network of full-time, dedicated ESPRIT EDGE application engineers.
- Get expert guidance in machine setup, automation, and advanced workflows.
- Continuous software updates ensure stability and access to new capabilities.

Training and consulting programs

- Global training centres offering on-site and virtual sessions.
- Personalised consulting to align ESPRIT EDGE with your production needs.
- Certified programs to upskill your team and boost productivity.

Automation platform and engineering services

Every manufacturer is unique — that's why ESPRIT EDGE offers a powerful API platform for advanced customisation and automation. Our engineering team partners with you to build bespoke applications and solutions that streamline your operations and drive data connectivity across your digital ecosystem.

- Eliminate repetitive, manual programming tasks with custom scripts and macros.
- Integrate ESPRIT EDGE seamlessly with ERP, MES, and PLM systems.
- Automate data flow to and from your CAM system for end-to-end digital consistency.
- Create specialised machining workflows that reflect your exact processes.

Hexagon, is the global leader in precision technologies at any scale. Our digital twins, robotics and AI solutions are transforming the industries that shape our reality.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 24,800 employees in 50 countries and net sales of approximately 5.4bn EUR. Learn more at hexagon.com and follow us [@HexagonAB](https://twitter.com/HexagonAB).