ICAM

Delivering industry-leading manufacturing software **for over 45 years.**

Manufacturing
Software Solutions

Post-processing, machine simulation and tool-path optimization solutions to get the most out of today's cutting-edge CNC machines.

ICAM

About
ICAM

CAM-POST
Post-Processing

Machine
Simulation

Supported
Technologies

Professional
Services

Advanced
Optimization

About **ICAM**

Our mission is to maintain our successful leadership in the automated manufacturing software market by enabling professionals like you to achieve your manufacturing goals through innovative software and services which ensure that your parts are cut perfectly and efficiently on today's most advanced CNC machinery.

Why? Because your success is our success.

Decades of NC machining know-how **at the core of all our solutions.**

Built-In NC Intelligence

At the heart of our software lies the deep machining knowledge and rigorous NC programming methodology needed to harness the power and efficiency of the latest machine technology.

Unparalleled Experience

Our participation in some of the world's biggest manufacturing challenges has allowed us to develop the unique skills & expertise we roll into every one of our solutions.

Worldwide Network

You can rely on our worldwide network of trusted dealers and representatives to deliver the same quality consulting and support services that you would get from working with us directly.

Cost Savings Through Innovation

Gain a competitive edge by improving your NC machining operations' profitability thanks to our innovative products and services.

About **ICAM**

AIRBUS
ALSTOM
BOEING
BOMBARDIER
CAT
Cummins
EMBRAER
FCA
FIAT CHRYSLER AUTOMOBILES
GE
HONDA
PHILIPS

Powerful CNC manufacturing software for **demanding industries.**

Aerospace Manufacturers

Gain the agility you need to quickly adapt to a volatile market with shifting demands for small runs of very complex parts.

Automotive Manufacturers

Improve the profitability of large-batch, mass production parts by shaving valuable time off your machining cycles.

Heavy Industry Manufacturers

Limit cost overages associated to extensive shop-floor proofing on large machine tools with high operating costs through reliable machine simulation.

Industry Leaders

Manufacturers in over 45 countries trust ICAM to deliver exceptional NC post-processing, simulation and optimization solutions.

Generalized Machine Shops

Make the most of your shop's existing machining capabilities by maximizing work envelopes and shortening your NC programming and machine cycle time.

CAM-POST
Post-Processing

Quickly create post-processors for all your **multi-axis NC machine tools.**

Less Coding
More Cutting

Address many complex NC programming situations through our extensive GUI, rather than developing logic through macros.

Modular
Design

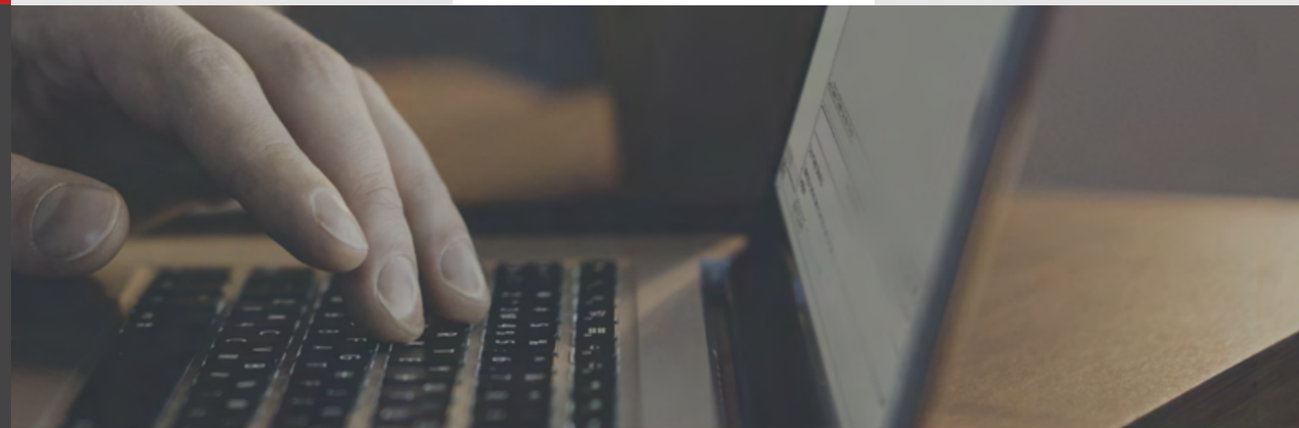
Get support for additional features like tool and part probing, high-speed machining and more with our add-on modules.

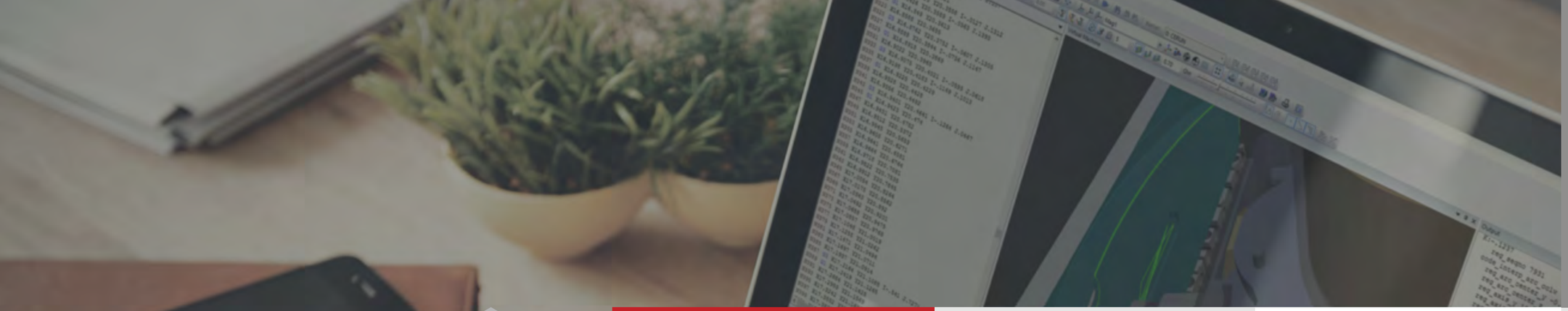
Efficient
Visual Debugger

Easily trace NC code errors back to their origins by synchronizing CL input, macro code and post-processor diagnostic messages.

Intuitive
Graphical Interface

Quickly generate advanced NC post-processors thanks to a comprehensive point-and-click implementation wizard.





CAM-POST
Post-Processing

Smart tool-paths with **advanced planning, look-ahead & powerful macros.**

Dwell Mark
Elimination

Take advantage of several CAM-POST features that are designed to eliminate dwell marks caused by momentary pauses in tool motions.

Prewinding
Rotary Axes

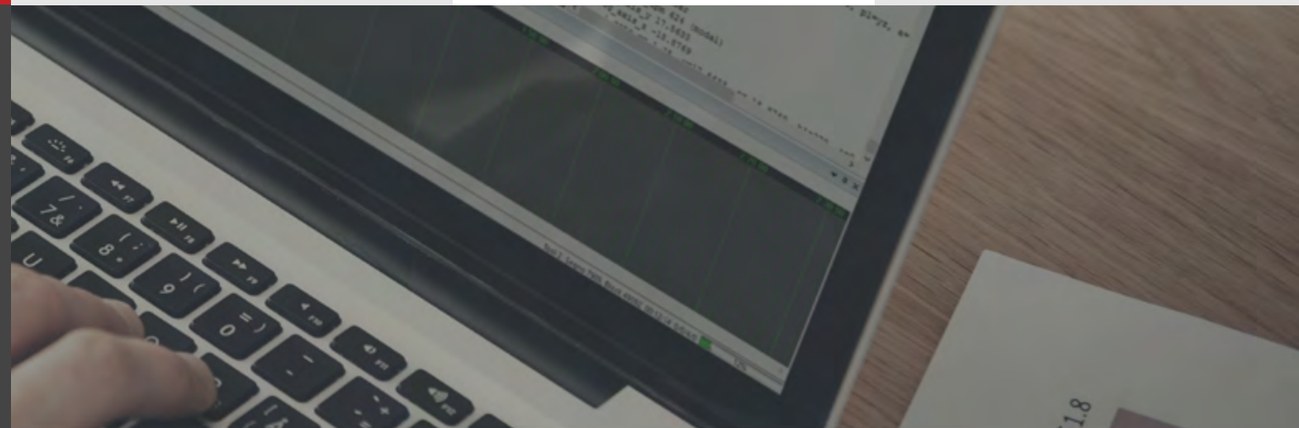
Extend the travel of your rotary axis by automatically winding the axis backwards before the cut, avoiding unnecessary retracts, turn-arounds and approaches.

Head Dancing
Avoidance

Automatically eliminate head and table wobbling when moving along low-angle, near-singular compound curves.

Macro Language
Complete Control

Address your unique machining environment & NC code requirements by developing & testing your own custom post-processor macros with our powerful visual debugger.



Identify & resolve collisions with an intuitive **machine simulation workbench.**

Real-Time Error Reporting

Identify and address errors as they're detected in your simulation with on-the-fly real-time error reporting.

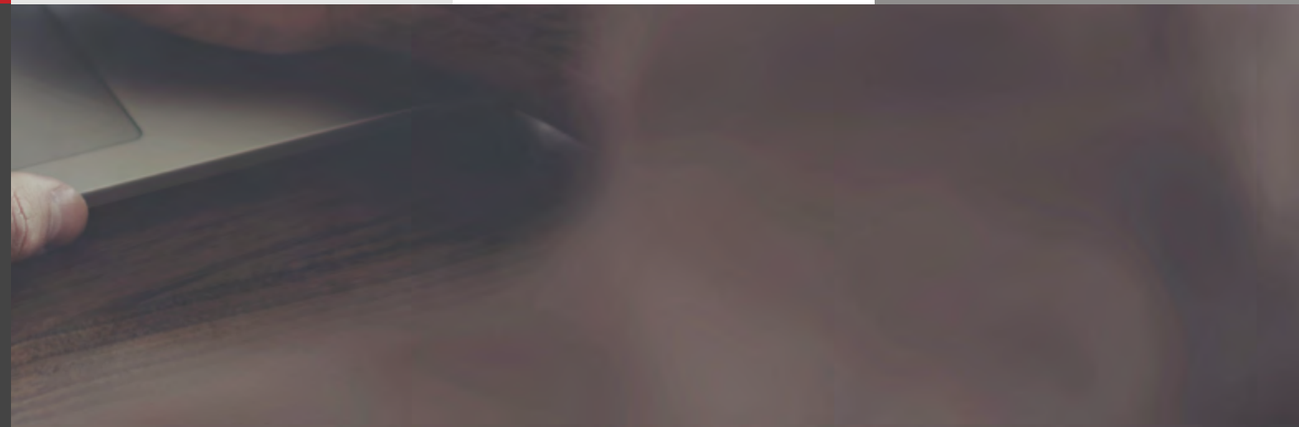
Fast Simulation Quicker Results

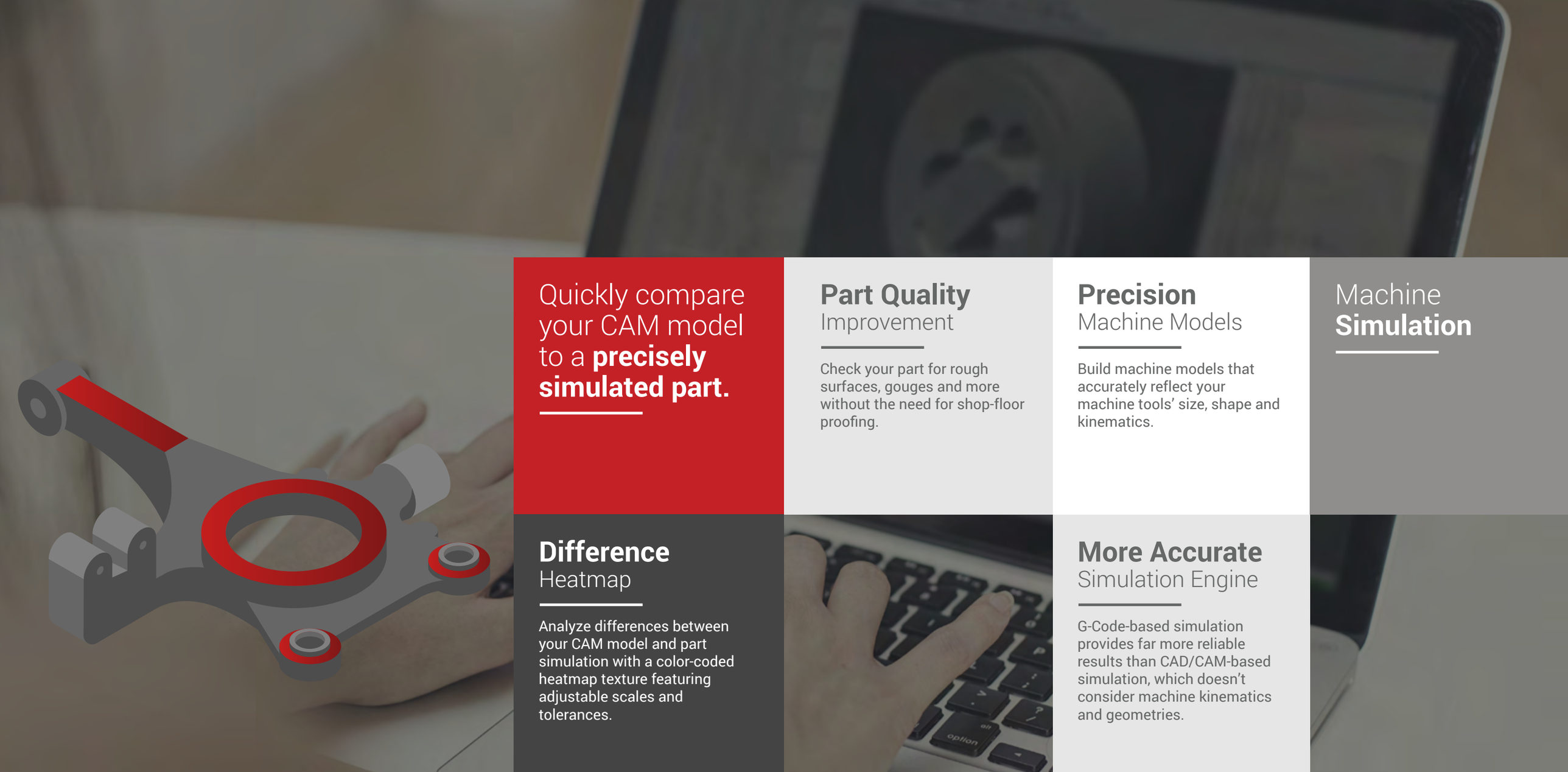
Thanks to our software's multi-thread capabilities, you can test more code in less time with G-Code simulation faster than any other on the market.

Machine **Simulation**

Unique Timeline Navigation

Pause, replay, move forward and backward in time through the simulation process to quickly target collisions and other errors.





Machine **Simulation**

Quickly compare your CAM model to a **precisely simulated part.**

Part Quality Improvement

Check your part for rough surfaces, gouges and more without the need for shop-floor proofing.

Precision Machine Models

Build machine models that accurately reflect your machine tools' size, shape and kinematics.

Difference Heatmap

Analyze differences between your CAM model and part simulation with a color-coded heatmap texture featuring adjustable scales and tolerances.

More Accurate Simulation Engine

G-Code-based simulation provides far more reliable results than CAD/CAM-based simulation, which doesn't consider machine kinematics and geometries.

Easily extract workpiece and tool assembly geometries **from your CAM system.**

Cutting Tool Definitions

Easy-to-use length & diameter compensation for turning and milling operations including indexable and solid body tools.

Multi-Setup Parts & Fixtures

Define complex machining fixtures and part positions, with support for multi-setup processes within a single program or spanning multiple programs.

Machine **Simulation**

Seamless Importing

Automatically recreate your specific CAM manufacturing process in the simulation at the push of a button with our library of extractors.

Simulate during post-processing for **optimized machine code output.**

Machine Context
Post-Processing

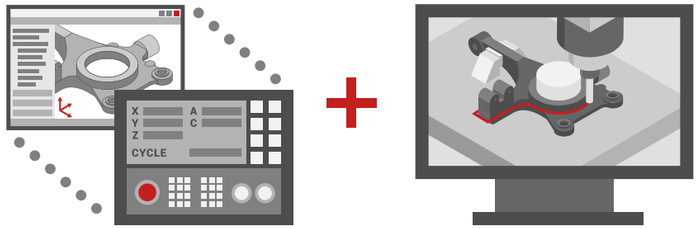
The only solution where machine and workpiece conditions are used during simulation to dynamically modify your post, greatly improving the NC Code output.

Shortened
Development Cycle

Because post and simulation are now integrated you no longer need to wait for the results of G-Code simulation to identify collisions, meaning you can correct errors in your CAM tool-paths earlier and more efficiently.

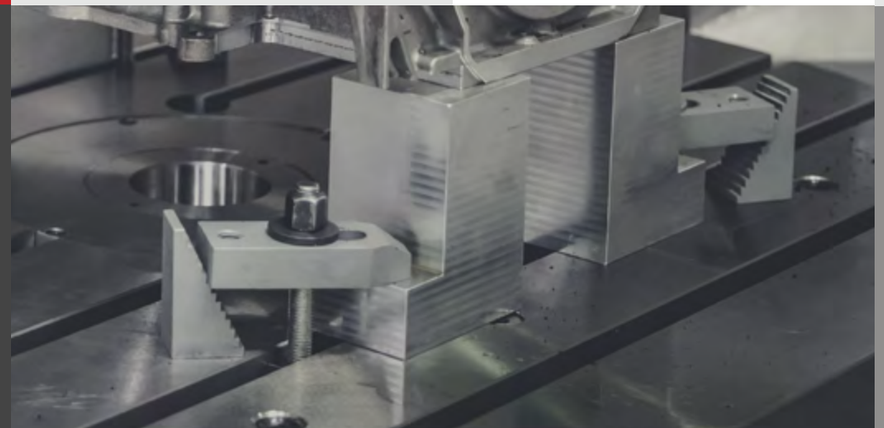
Upgradeable
With SmartPACK

Complete integration of post and simulation opens the door to a number of powerful add-ons for air-cut elimination, enhanced tool-path optimization and much more.



Integrated
Post & Simulation

With the simulation reporting errors to the post-processor, the post makes on-the-fly changes to the tool-path, minimizing collisions and other errors.



Advanced
Optimization

SmartCUT
eliminates air cutting and micro-collisions.

Fewer Air-Cuts
Faster Machining

Spend less time cutting air by automatically switching to more efficient RAPID motions wherever possible.

Tool Wear
Reduction

Reduce tool-wear caused by RAPID motions colliding with in-process stock by automatically detecting these collisions and switching to cutting motions.

Enhance
With SmartPATH

By combining SmartCUT with our SmartPATH tool-path optimization software, you can not only move faster but also automatically recalculate the fastest path to the start of the next cut.

Advanced
Optimization

SmartFEED automatically **optimizes feed-rates.**

Faster Cutting
Dynamic Feed-Rate

SmartFEED optimizes cutting by detecting an upcoming change in depth of cut and adjusting your feed-rate, allowing you to cut faster without increasing tool-wear.

Reduce
Programming Time

Automatically cut at the ideal material removal rate for your machining environment, eliminating the need to manually define new feed-rates at every change in depth of cut.

Fine Tune
Parameters

SmartFEED's configuration options allow you to reach the optimal balance between processing time, program size and smoothly changing feed-rates.

Advanced **Optimization**

SmartPATH safely and automatically **optimizes tool-paths.**

Overtravel Elimination

Automatically detect and eliminate troublesome machine overtravels, allowing you to maximize your machine's work envelope.

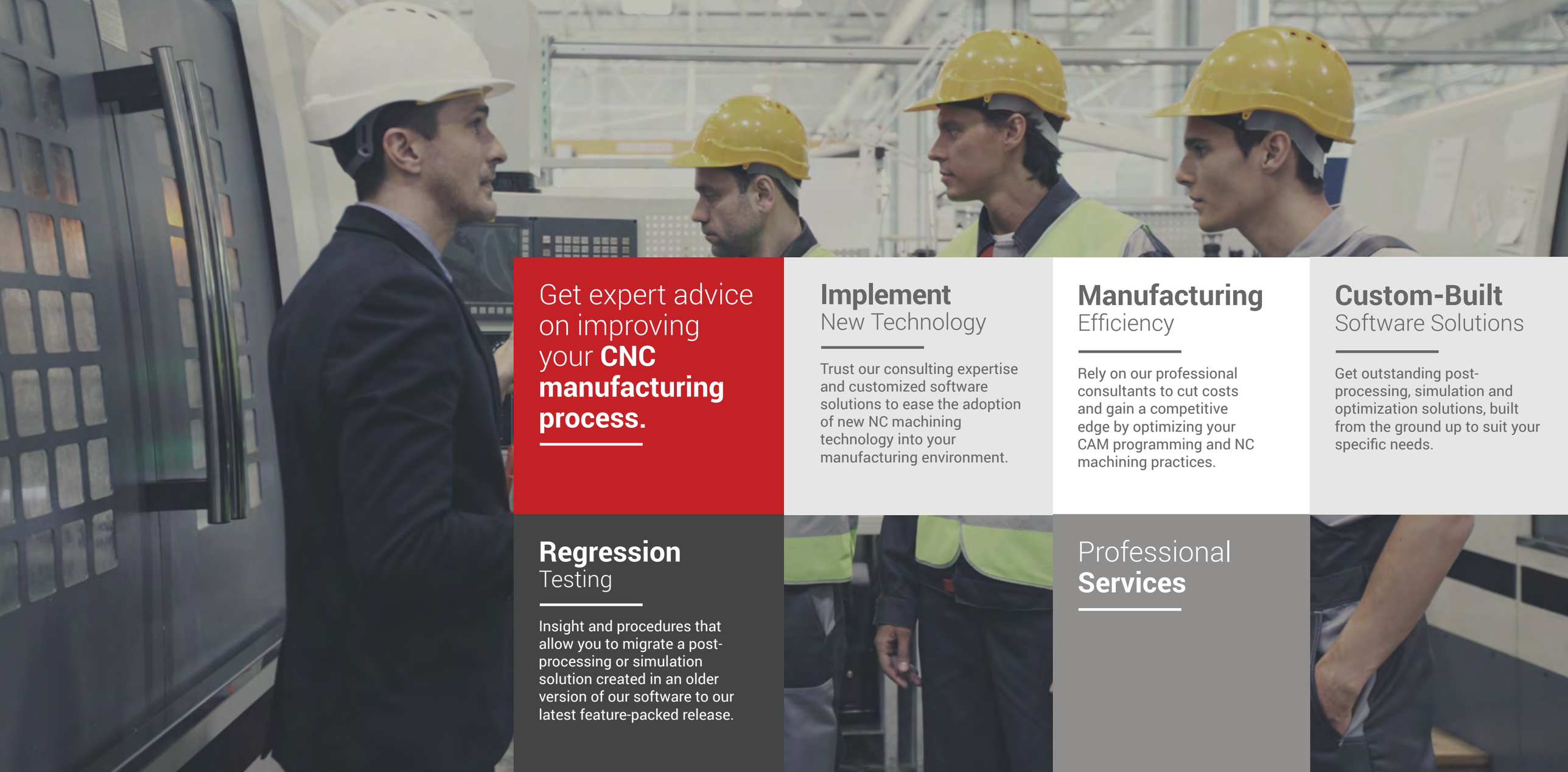
Easy Migration Between Machines

Quickly and easily move production from one machine to another with different kinematics without returning to your CAM system.

Cycle Time Reduction

Smarter path planning leads to shorter machine cycle time, allowing you to cut more parts in less time.

Advanced **Optimization**



Get expert advice on improving your **CNC manufacturing process.**

Implement New Technology

Trust our consulting expertise and customized software solutions to ease the adoption of new NC machining technology into your manufacturing environment.

Manufacturing Efficiency

Rely on our professional consultants to cut costs and gain a competitive edge by optimizing your CAM programming and NC machining practices.

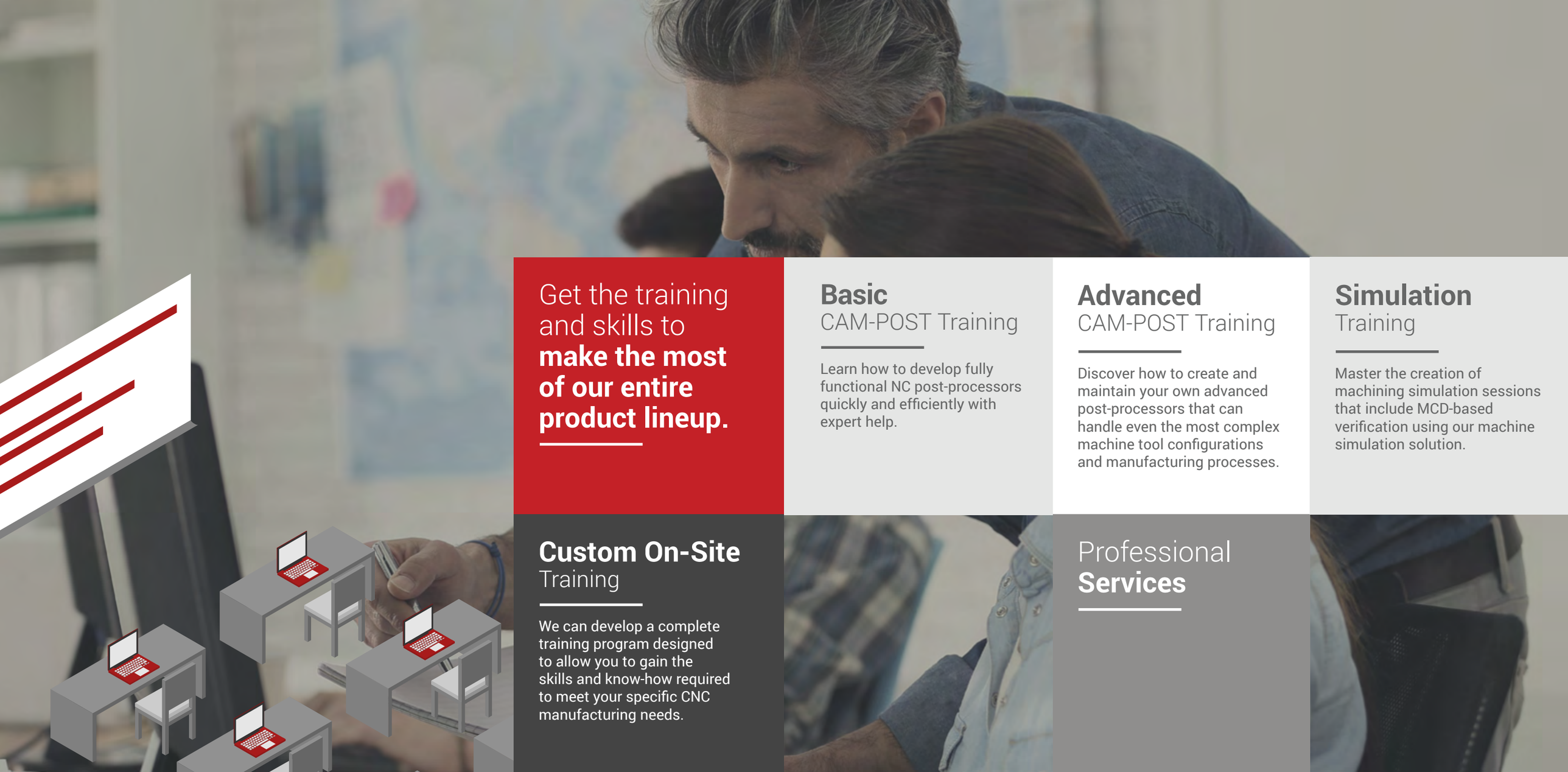
Custom-Built Software Solutions

Get outstanding post-processing, simulation and optimization solutions, built from the ground up to suit your specific needs.

Regression Testing

Insight and procedures that allow you to migrate a post-processing or simulation solution created in an older version of our software to our latest feature-packed release.

Professional **Services**



Get the training and skills to **make the most of our entire product lineup.**

Basic
CAM-POST Training

Learn how to develop fully functional NC post-processors quickly and efficiently with expert help.

Advanced
CAM-POST Training

Discover how to create and maintain your own advanced post-processors that can handle even the most complex machine tool configurations and manufacturing processes.

Simulation
Training

Master the creation of machining simulation sessions that include MCD-based verification using our machine simulation solution.

Custom On-Site
Training

We can develop a complete training program designed to allow you to gain the skills and know-how required to meet your specific CNC manufacturing needs.

Professional
Services

Technical support and product maintenance to **keep things running smoothly.**

Regular Updates For Our Solutions

Be the first to receive updates to latest feature-packed versions of our software by joining our Maintenance & Support program.

Technical Support

Experiencing some difficulties using any of our products? Contact our Maintenance & Support group for timely advice and professional help.

Professional **Services**

Mastercam

SIEMENS NX

CATIA

creo

POWERMILL

hyperMILL

Gain complete CAM system freedom with our **Multi-CAM solution.**

Maximize Your Machine ROI

Get more shop-floor productivity out of your machines by enabling them to run part programs from all your major CAM systems.

Minimize Training Costs

Cut down on the time it takes NC programmers to adopt a new CAM system by using a single flexible post-processing solution.

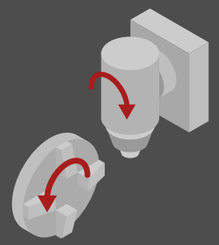
Consistent MCD Output

Make your machine operator's day by providing familiar MCD output no matter which CAM system you use.

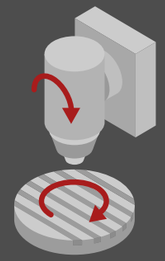
One Post Many CAM Systems

Streamline your NC manufacturing process by standardizing on one post for all of your CAM systems, saving both time and money.

Supported **Technologies**



Mill-Turn



Head-Table

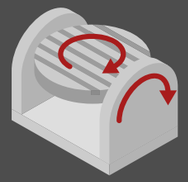
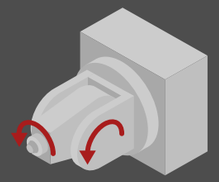
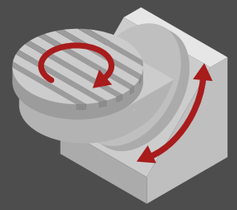


Table-Table



Head-Head



Nutating Axes

Angular Heads

Get more out of your multi-axis machine tools with support for **up to 15 axes.**

Multi-Channel
Support

Built-in support for synchronized and merged operations for complex dual-spindle/dual-turret merging lathes.

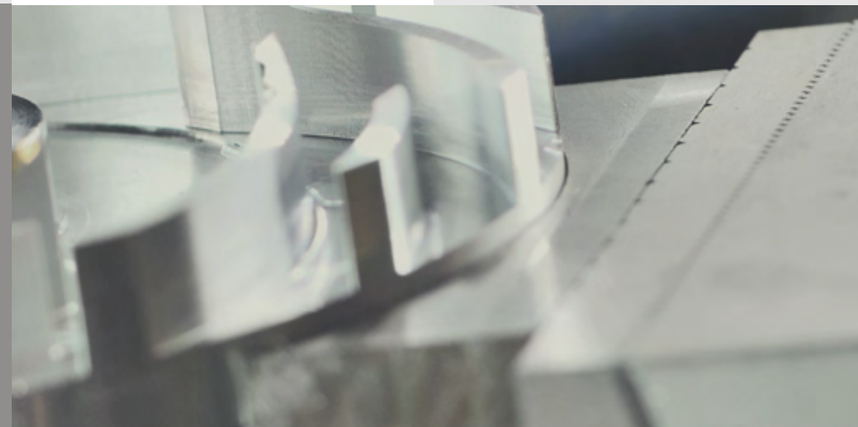
6-Axis
Optimized Milling

Designed to support 6-axis milling machines with either quad-linear/dual-rotary or triple-linear/triple-rotary setups.

Unparalleled
Machine Support

Mills, Lathes, Horizontal/ Vertical Machining Centers, Mill-Turns, Wire EDMs, Water Jets, Lasers, Plasma & Flame Cutters as well as machines utilizing any combination of the above.

Supported
Technologies



FANUC

SIEMENS

HEIDENHAIN

BOSCH

Fadal

FAGOR

Mazak

Haas

OKUMA

FIDIA

Solutions that can adapt to **advanced controller settings.**

SIEMENS
840D

Easily adapt our post & simulation solutions to match your customized SIEMENS function subprograms.

FANUC
Macro B

Supports all the latest FANUC smoothing functions as well advanced B Macros & more.

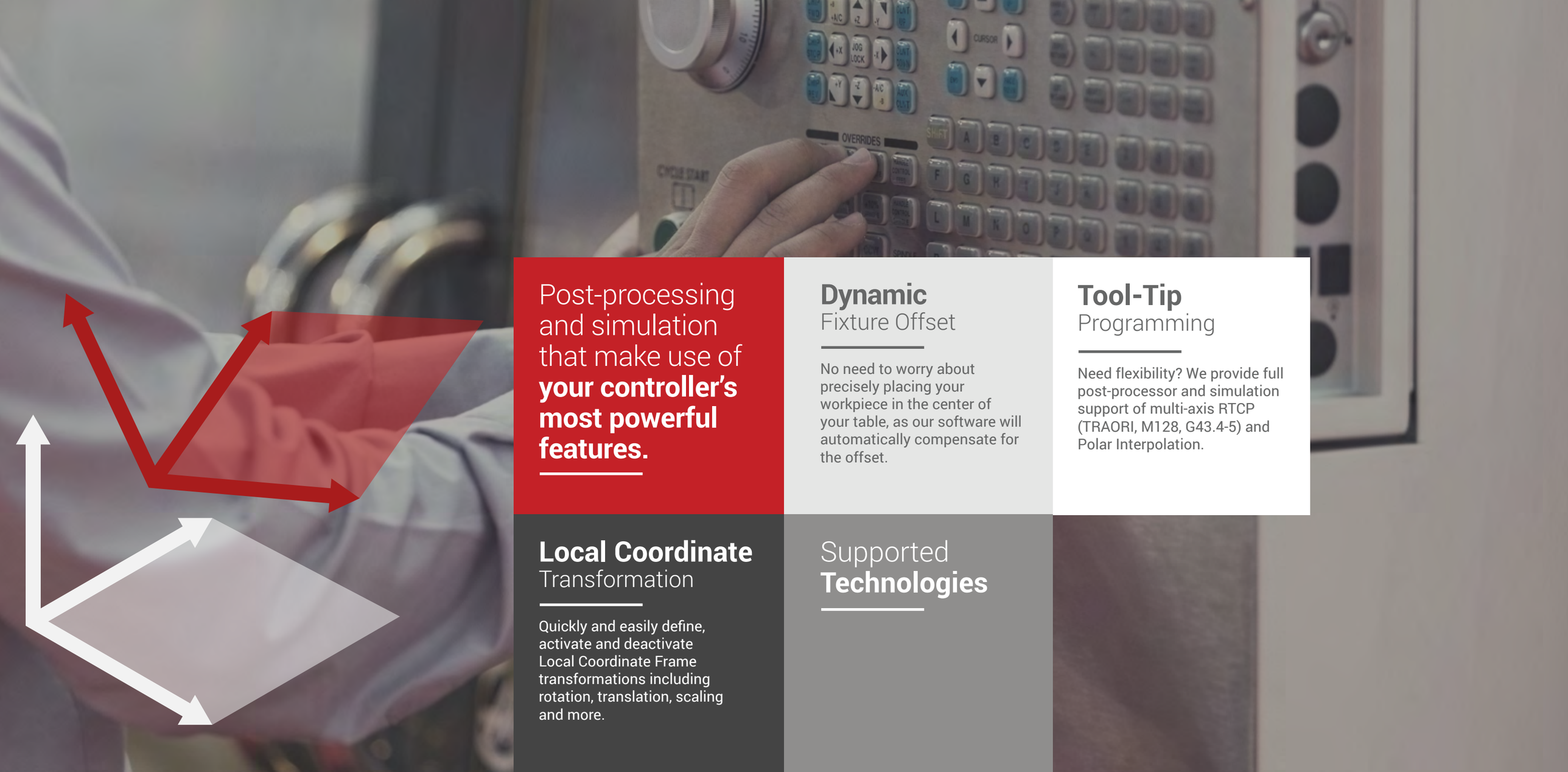
HEIDENHAIN
ISO & Conversational

Use both ISO & conversational machine control programs with our post & simulation solutions.

Controller Default
Library

Choose from our library of quick-start controllers to speed development of your post-processor or control emulator before fine-tuning to fit your specific machine and controller setup.

Supported **Technologies**



Post-processing and simulation that make use of **your controller's most powerful features.**

Dynamic Fixture Offset

No need to worry about precisely placing your workpiece in the center of your table, as our software will automatically compensate for the offset.

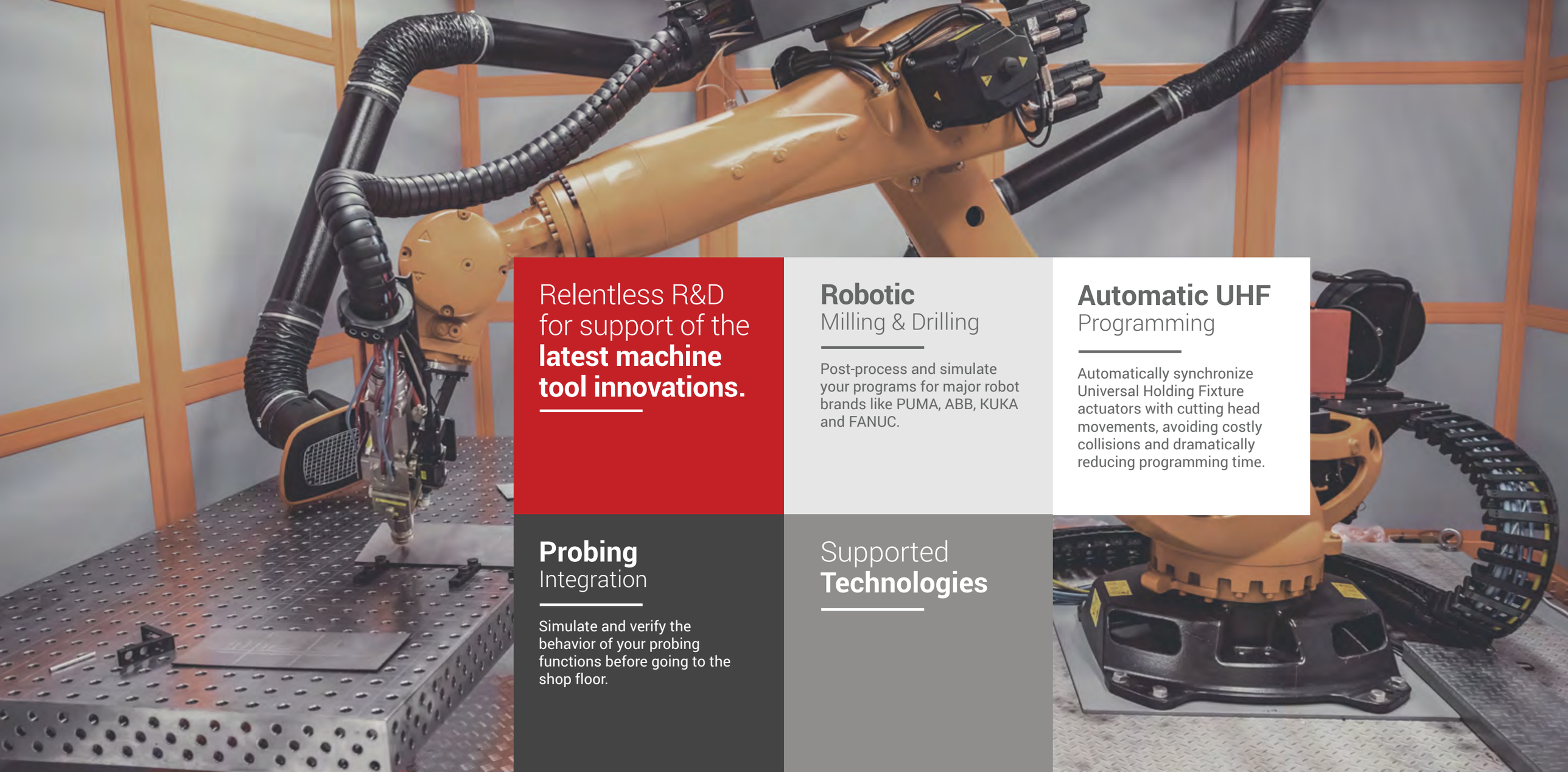
Tool-Tip Programming

Need flexibility? We provide full post-processor and simulation support of multi-axis RTCP (TRAORI, M128, G43.4-5) and Polar Interpolation.

Local Coordinate Transformation

Quickly and easily define, activate and deactivate Local Coordinate Frame transformations including rotation, translation, scaling and more.

Supported **Technologies**



Relentless R&D for support of the **latest machine tool innovations.**

Robotic Milling & Drilling

Post-process and simulate your programs for major robot brands like PUMA, ABB, KUKA and FANUC.

Automatic UHF Programming

Automatically synchronize Universal Holding Fixture actuators with cutting head movements, avoiding costly collisions and dramatically reducing programming time.

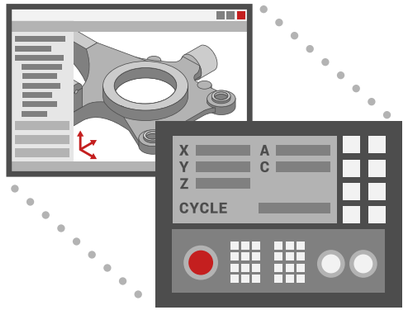
Probing Integration

Simulate and verify the behavior of your probing functions before going to the shop floor.

Supported **Technologies**

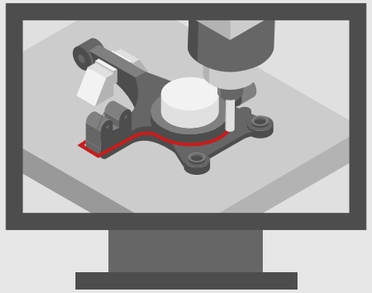
Save up to 35% in programming and machine cycle time.

We've turned the traditional CAM workflow on its head by combining post-processing, machine simulation and tool-path optimization solutions into **one** streamlined technology called **Adaptive Post-Processing.**



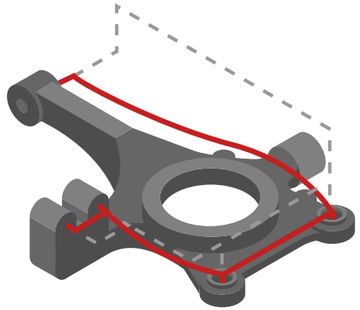
Post-Processing

Receives a block of instructions and generates MCD for a target controller, making use of its advanced features like interpolation and canned cycles.



Simulation

Receives the controller-specific MCD and simulates the machining process in a precise machine simulation environment, detecting collisions and other issues.



Optimization

Analyzes the simulation results, automatically corrects collisions and safely adjusts tool-paths to eliminate overtravels, air-cuts and other issues.

Automatically generate collision-free, optimized G-Code in less time with **Adaptive Post-Processing, exclusively from ICAM.**

Correcting collisions and other errors with traditional CAM programming practices is a time-consuming, repetitive process.

Break the cycle!

Get Adaptive Post-Processing and watch your post-processor, machine simulation and optimization solution to work together in a single, streamlined process.

ICAM
Technologies

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