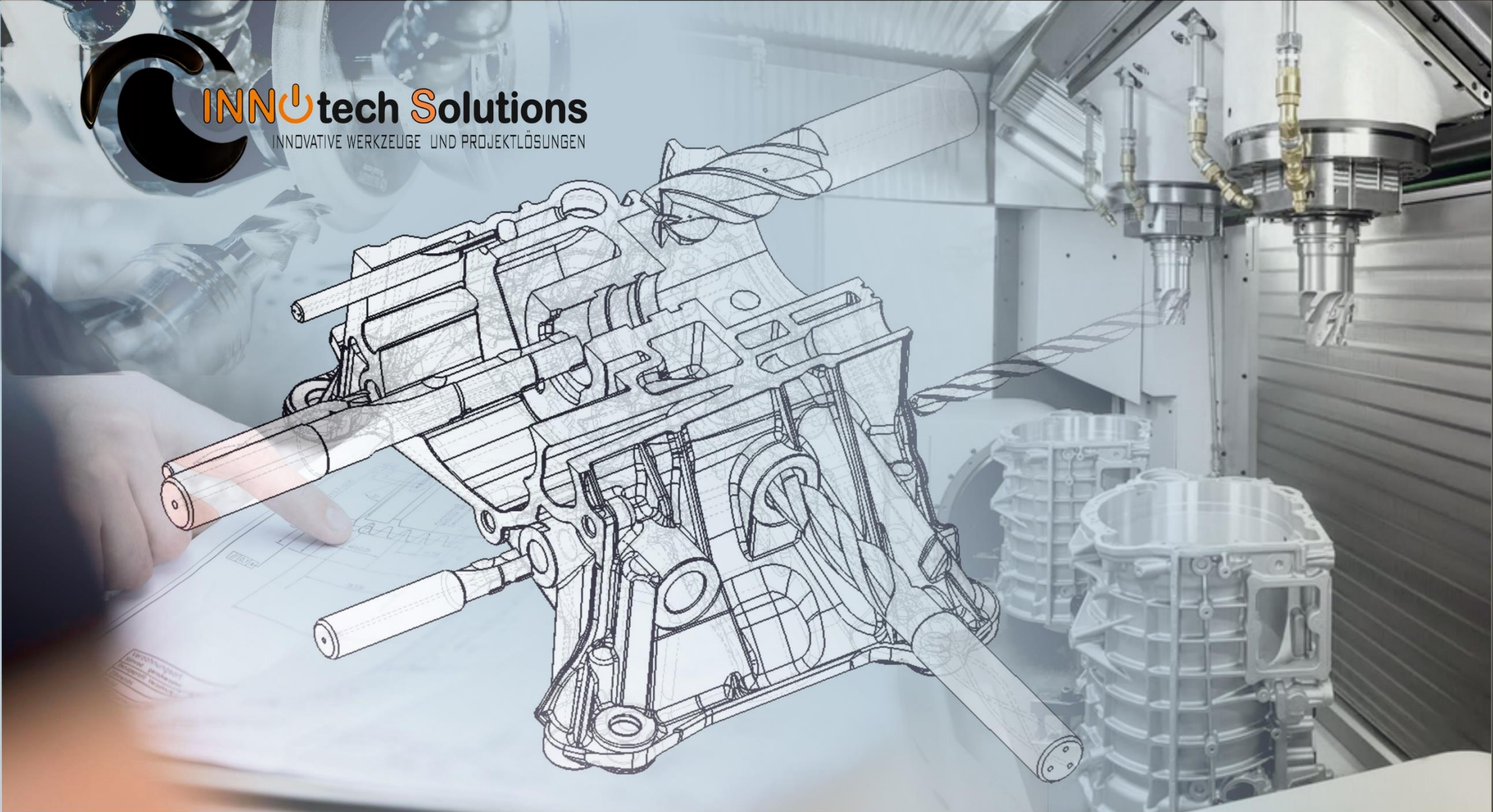




INNtech Solutions
INNOVATIVE WERKZEUGE UND PROJEKTLÖSUNGEN



Technologically oriented Tool and Project Development

DEVELOPMENT OF THE PRODUCTION PROCESS THROUGH THE CONCEPT OF CUTTING TOOLS AND MANUFACTURING TECHNOLOGY



INNtech Solutions
INNOVATIVE WERKZEUGE UND PROJEKTLÖSUNGEN

OUR DEVELOPMENT CONCEPT

Thanks to many years of experience in the engineering of cutting tools and project engineering according to the "ALL FROM ONE SOURCE" system, we provide a complete project from the conceptual solution to the final production concept.

About us

As an ENGINEERING Partner in the field of development and optimization of the concept of cutting tools, production technology, as well as complete project solutions according to the «ALL FROM ONE SOURCE system» ; we support customers from project planning to complete OPTIMIZATION of production and supply of CUTTING TOOLS.

VERSATILITY through continuous monitoring of the latest trends in cutting processing technology allows us to successfully solve both individual and complete project solutions through a partner-oriented approach.

“Inno-Tech Solutions” innovative development concept for cutting tools, production technology and project engineering, combined with an innovative online web platform for the integration of KNOW HOW, enables the progress of reference ideas that would be on the edge of new opportunities and customer needs for the future of processing and new advanced technologies.

As an Engineering Partner focused on the development and optimization the concept of cutting tools and production technology , our business we base on:

- **Partners relationship** as DEVELOPMENT AND OPTIMIZATION support for manufacturers of parts in serial production according to the "ALL SOLUTIONS AND TOOLS FROM ONE SOURCE" system
- **Partners relationship** as PROJECT support to manufacturers of CNC machines and equipment in the domain of development and optimization of the concept of cutting tools and production technology
- **Partners relationship** as a support to manufacturers of parts in serial production on the optimization of projects through new solutions and optimization the geometry of cutting tools (optimization of costs).
- **Partner relationship** as a development support and a source of supply of cutting tools according to the "ALL TOOLS FROM ONE SOURCE" system for other Engineering and trading companies.

The targeted direction of the concept of our activities is based on support to partners in the domain of achieving optimum production costs, with a focus on:

- **Development and optimization of production technology** through the development of innovative solutions for cutting tools and the application of modern cutting methods.
- **Optimization of production technology** based on the integration of production operations using INNOVATIVE SOLUTIONS of cutting tools.
- **The development of individual and project solutions** of cutting tools aimed at the integration and superimposition of production operations
- **Increasing the efficiency of cutting tools** through an EXPERIMENTAL-STATISTICAL approach to the optimization of cutting geometry
- **Project Engineering** according to the ALL FROM ONE SOURCE system (Production Concept + Cutting Tool + Clamping Tool + CAM Production Technology)



OUR DEVELOPMENT AND PRODUCTION CAPABILITIES

A DIFFERENT APPROACH FOCUSED ON DEVELOPMENT, ENGINEERING AND PROVIDING A COMPLETE CONCEPT OF CUTTING TOOLS AND PRODUCTION TECHNOLOGY WITH A TARGETED FOCUS ON PRODUCTIVITY ; MAKING US A COMPETITIVE PARTNER

FOCUS ON OPTIMIZATION OF PRODUCTION COSTS

DEVELOPMENT ORIENTATION on the customer's specific project, allows us to strive to the optimal PRODUCTION SOLUTION through joint interaction with the customer, which in synergy with the invention optimal CONCEPTUAL SOLUTION OF CUTTING TOOLS affects the achievement of the production optimum

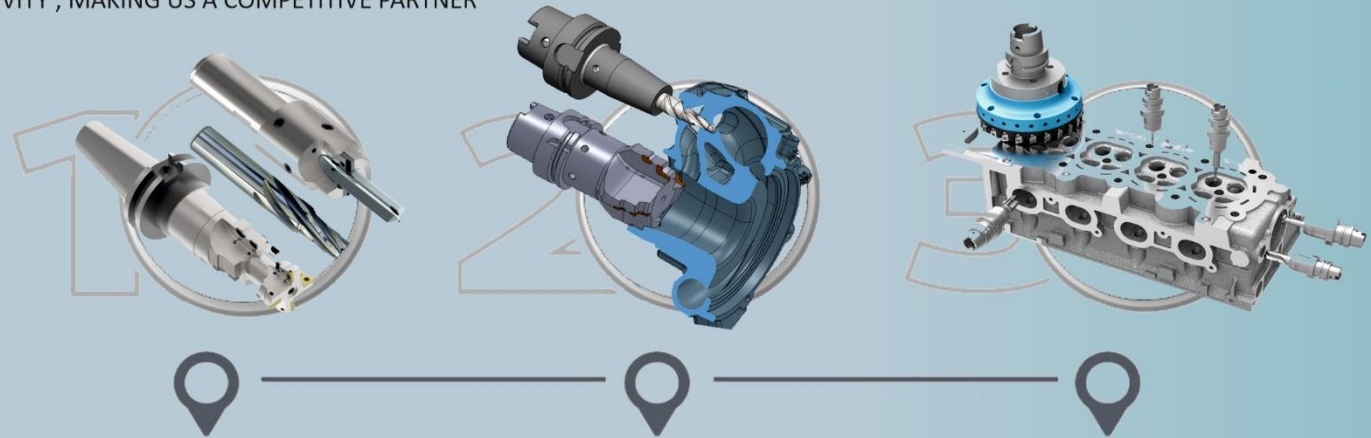
As an Engineering Partner, we are focused on setting up optimal production technology with the application of complex cutting tools aimed at integrating and superimposing production operations.

Through the process of development and construction of the cutting tool, we are finding a production optimum aimed at maximum process productivity and minimum process costs per processed product.

OUR DEVELOPMENT CRITERIA

POLYVALENTITY through continuous monitoring of innovative trends in CUTTING PROCESSING TECHNOLOGY allows us to support business partners in the field through a development-oriented approach:

- Individual development and construction of all types of cutting tools and supply through its own production structure.
- Project Engineering of cutting tools focused on the integration of production operations, maximum process productivity and minimization of production costs per processed product (CPP).
- Project Engineering according to the «ALL FROM ONE SOURCE» system (Production Concept + Cutting Tool + Clamping Tool + CAM Production Technology).



INDIVIDUAL DEVELOPMENT AND CONSTRUCTION OF CUTTING TOOLS

- Detailed analysis conditions of exploitation of the cutting tool and technical requirements of the cutting tool.
- Analysis of technical feasibility and production usability of cutting tools.
- Development and construction of all types of cutting tools (solid carbide cutting tools, cutting tools with Inserts , PKD cutting tools, all types of combined cutting tools. Used software (Solid Works, Siemens NX,).
- A wide base of highly effective geometries of optimized cutting tool geometries is available, which guarantees TOP TOOL performance.
- High development experience in almost all branches of industry and processing materials.
- Supplying of tools from our own production network

PROJECT ENGINEERING OF CUTTING TOOLS AND RE-TOOLING

- Project Engineering and development of all types of cutting tools with detailed elaboration of the concept of cutting tools, exploitation parameters and production times.
- RE-TOOLING of existing production projects with a targeted focus on productivity and the development of cutting tools that synchronize multiple production procedures or operations.
- Optimization of production technology based on the integration of production operations using modern production techniques.
- Detailed analysis of production costs and realized production savings
- Close partnership at the project level with customers in the serial production and manufacturers of CNC machine tools

PROJECT ENGINEERING ACCORDING TO THE "ALL FROM ONE SOURCE" SYSTEM

- Complete Project of Engineering of production projects from planning to the release into serial production (Development of production technology , Development of cutting tools , Development of clamping tools , Development of CAM production programs , Optimization of the production process by agreement and in our own DEMO center).
- Completely covered supply from our own production network / one source of supply (production under a single database of cutting geometry).
- Provided resharpener service and restoration of the cutting geometry of all types of cutting tool (100% repeatability of cutting geometry)
- Permanent optimization and improvement of manufacturing technology with a focus on maximum productivity.



48 ST.
SHORT RESPONSIBLE TIME



XXX+ 1 MANN
FLEKSIBLE TEAM OF EXPERTS



XXX+ MAŠINA
LARGE PRODUCTIONS EXPERIENCE



6+ ZEMLJA
LARGE MARKET COVERAGE



5+
WORK AND PROFESSIONAL EXPERIENCE



XXX + 1 PARTNER
WIDE NETWORK OF BUSINESS PARTNERS

THE SYSTEM OF PROJECT ENGINEERING

WE ARE LOOKING IN DETAIL ALL PROJECTS REQUIREMENTS, WITH THE PURPOSE OF FINDING OPTIMAL CONCEPT OF CUTTING TOOLS AND PRODUCTION TECHNOLOGIES; WHICH WILL ENSURE SUSTAINABILITY AND STABILITY OF THE PRODUCTION PROCESS.

We perform a **MULTI-VARIANT ANALYSIS OF PRODUCTION TECHNOLOGY AND CONCEPT OF CUTTING TOOLS** with the aim of finding the technological and production optimum, in terms of maximum productivity and minimum production costs (production time, cutting tools, clamping tools, energy resources). So, taking into account the production equipment at the disposal of the customer, we arrive at the most favorable manufacturing variant.

ANALYSIS OF TECHNICAL REQUIREMENTS for the product is carried out immediately before the development process, with the aim of fully assessing the technical requirements for the product, as well as the production requirements that are placed before it.

The established analysis takes into account:

- o factor of product complexity and technology
- o serial production factor
- o factor of tolerance shape and position
- o requirements criteria over the processed surface
- o criteria for the application of special cutting and clamping tools.

THROUGH EFFECTIVE ACTION in the field of construction and development of special cutting tools, we greatly influence the creation and optimization of production technology, within which we achieve significant savings, which are manifested through:

- o Creation of **complex cutting tools** that combine two or more production operations, thereby reducing the number of tools that directly participate in the production process
- o Reducing the number of **tool changes**
- o Reducing the **duration** of the processing process through the unification of production operations and procedures
- o Reducing the number and duration of processing passes-cycles

01 ANALYSIS OF PROJECTS REQUEST

WE ARE PROVIDING RESHARPENING OF THE CUTTING TOOLS on all developed cutting tools, as well as on tools on which we have carried out the process of optimizing the cutting geometry.

We develop the resharpening technology in such we integrate the original or optimized cutting geometry into it, and in this way we ensure complete repeatability of the cutting geometry and cutting edge stability of the tool throughout its lifetime.

02

ANALYSIS OF IDEAL CONCEPT OF CUTTING TOOLS AND PRODUCTION TECHNOLOGY

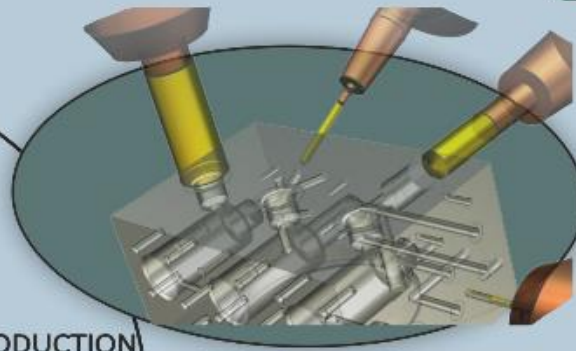
03

RESHARPENING OF CUTTING TOOL (OWN NETWORK)

ANAL



DEVELOPMENT AND CONSTRUCTION OF CUTTING TOOLS



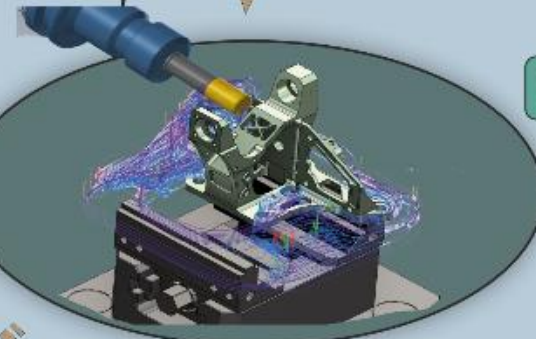
FEASIBILITY PRODUCTION ANALYSIS

04

We conduct the **PRODUCTION FEASIBILITY ANALYSIS** after the construction of the cutting tools during the Project Engineering process; and for the needs of business partners who own **PROJECTS IN HIGH VOLUME PRODUCTION**.

The analysis aims to check the usability of the cutting tool in the real system **TOOL-MACHINE-CLAMPING TOOL- WORKING PIECE**; and the cutting tool is checked for collision.

On the basis of the conducted analysis, we are getting clear indicators, whether the adopted lengths and tool holders correspond to the needs of the production project; and whether we can completely carry out the technological process without collision of the tool with working part, or clamping tool.



05

DEVELOPMENT OF NC PROGRAMS at Project Engineering is carried out using modern CAM software: SolidCam and Siemens NX (Unigraphics).

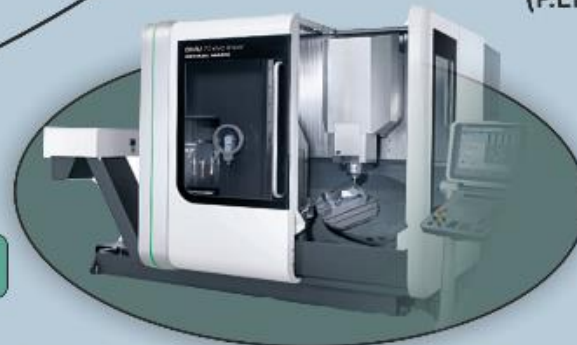
By applying the mentioned software, we ensure obtaining NC Codes for different control systems, with the possibility of displaying the processing process in a 100% real environment together with the machine and the clamping tool.

CAM DEVELOPMENT OF TECHNOLOGY (P.ENG)



ANALYSIS OF EXPLOITATION COSTS AND PRODUCTIVITY

07



OPTIMIZATION OF TECHNOLOGY (P.ENG)

06

LAUNCHED OF COMPLETE PRODUCTION TECHNOLOGY and optimization of the production cycle is carried out by agreement with the customer in our own **DEMO CENTER** where we can fully test the production technology and eliminate all defects related to the production process.



OUR BUSINESS AND SERVICE OPPORTUNITIES

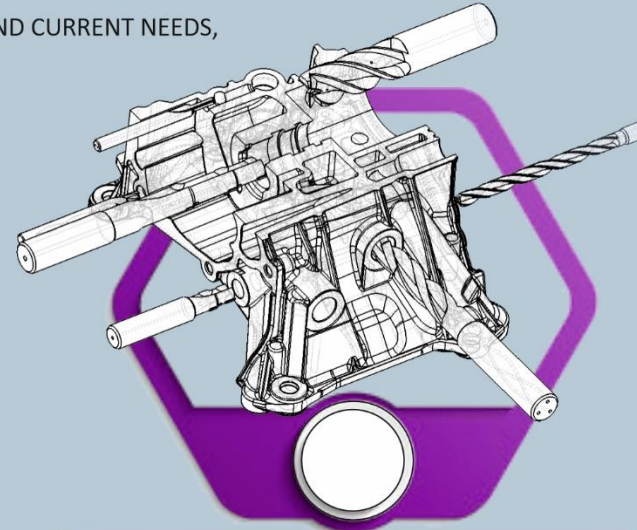
DEPENDING ON TECHNICAL AND PROJECT QUALIFICATIONS OF BUSINESS PARTNERS AND CURRENT NEEDS, WE RANGE OUR SERVICES IN SEVERAL DIFFERENT LEVELS..



- INDIVIDUAL development and construction of tools according to the needs of the user.
- DEVELOPMENT of the complete geometry of cutting tools with the application of a wide base of innovative geometries.
- **PROVIDING tools from our own production network (requirement)**
- SETTING the optimal geometry and providing own tool resharpening service (option)

Without contract obligation

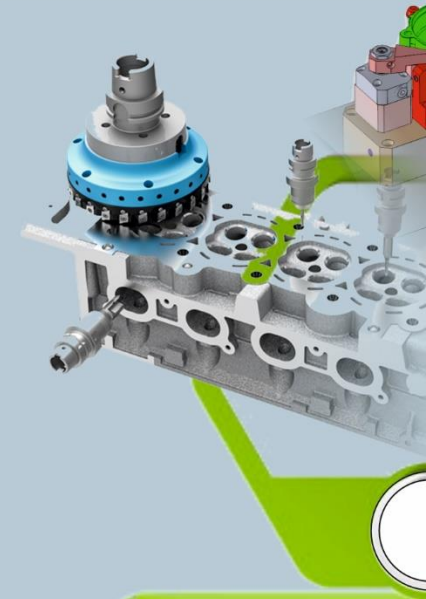
**INDIVIDUAL
 TOOL CONSTRUCTION
 AND TOOL ENGINEERING**



- DEVELOPMENT and construction complete project solutions of cutting tools.
- Creation construction documentation of cutting tools
- Creation of project and technological documentation (processing plans, technological sheets, plans of cutting tools).
- DEVELOPMENT of the complete geometry of cutting tools with the application of a wide base of innovative geometries of cutting tools

With contract obligation

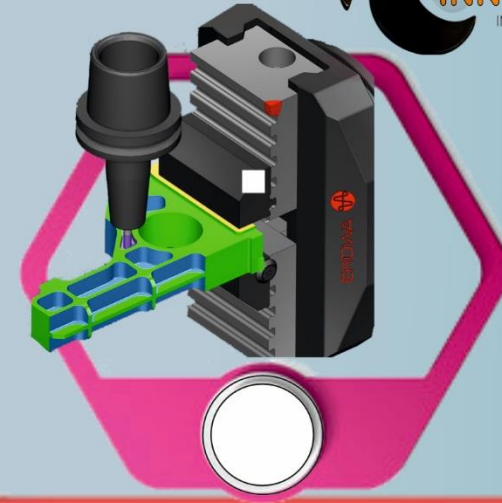
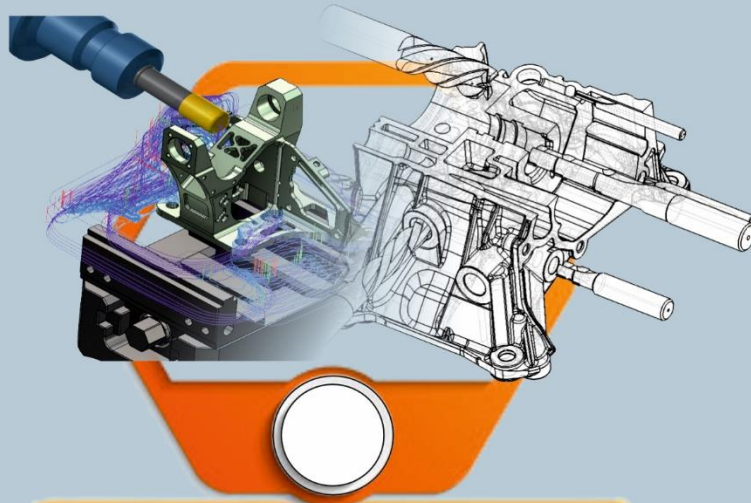
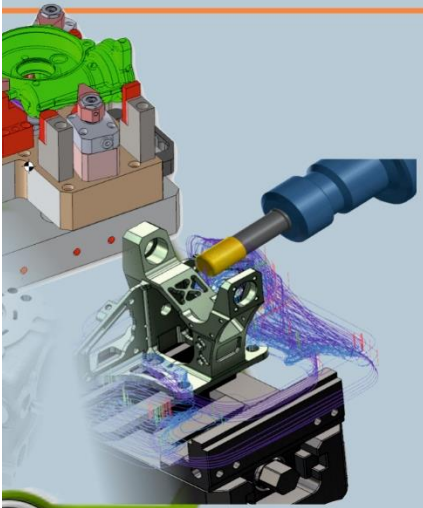
**DEVELOPMENT OF PROJECT
 CONCEPT OF CUTTING TOOLS**



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- Creation co documenta
- Konstruktio
- Developme technology technologic (processing sheets, plan
- CAD CAM p optimization concept (op

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**DEVELO
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option)

Without contract obligation

DEVELOPMENT OF PROJECT CONCEPT

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- START analysis of production costs and analysis of space for potential savings (Cost of tools per product, productivity)
- TECHNOLOGICAL-cost optimization of the existing project through the optimization of cutting tools and manufacturing technology
- OPTIMIZATION of production technology based on the integration of production operations using innovative solutions of cutting tools
- OPTIMIZATION of the cutting tool geometry
- **PROVIDING tools from our own production network (requirement)**
- **SETTING cutting geometry and providing own tool sharpening service (requirement)**

Without contract obligation

OPTIMISATION OF THE CONCEPT OF CUTTING TOOLS AND PRODUCTION TECHNOLOGY

5
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- PROJECT ENGINEERING based on the "ALL FROM ONE SOURCE" system.
- DEVELOPMENT of production technology and creation of technological documentation (processing plans, technological sheets, plans of cutting tools).
- DEVELOPMENT and provision of clamping tools and construction documentation
- DEVELOPMENT of cutting tools and creation of construction documentation
- CAD CAM programming and optimization of the production concept
- Optimization of the production concept in our own DEMO center (option)
- **PROVIDING tools from our own production network (requirement)**

Without contract obligation

PROJEKT ENGINEERING (ALL FROM ONE SOURCE)



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