EXAPT

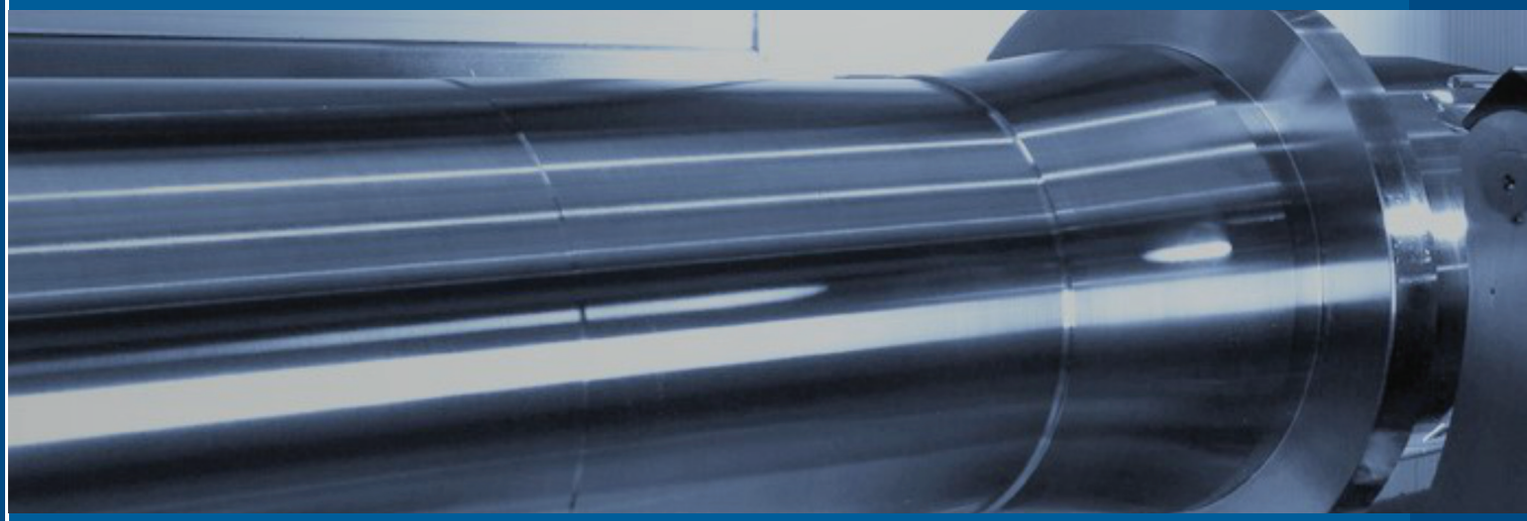
!

CAM

EXAPTplus

NUMERICAL - PRACTICAL - GOOD!

The all-round system for all CAM applications. EXAPTplus lays the foundation for a flexible and efficient CAM programming. Additional to the basic elements for turning, drilling and milling use also technologies as the EXAPT machine simulation or the EXAPT collision control. 2D data as IGES, DXF, etc. are the base of programming in EXAPTplus. The generation of own 2D geometries is also possible. EXAPTplus is simply ingenious and perfect for all who want to get quickly their NC record. No matter if new order or repair order. **More details on page 4**



EXAPTsolid

Doping for every machine tool

The high performer for NC programming. Programming like the experts - Reduce programming time and process steps by using fully automatic feature recognition. EXAPTsolid provides you with all production-relevant information for your 3D model at the touch of a button. Combined with exclusive machining objects as HPD and HSC milling strategy or a 3-5-axis freeform machining you get the NC records of superlatives. With EXAPTsolid you master complex multi-channel machines with two turrets, also in combination with simultaneous turning-milling spindle. The intelligent and fully integrated EXAPT tool-sequence-optimization organizes for you a minimum number of tool changes. This increases the productivity of your machine tools enormously. **More details on page 6**

EXAPT-MultiX

It's everywhere

5-axis simultaneous machining down to the most minute detail. EXAPT-MultiX is fully integrated into the 3D CAM high performer EXAPTsolid PROFESSIONAL and ensures the best 5-axis simultaneous machining available on the market. No matter if you only deburr or produce complex moulded parts, EXAPT-MultiX is perfect for any job. Latest machining strategies and a variety of optimization proposals get also the last seconds from your component – naturally with continued and optimum quality. Also EXAPTsolid BASIC and ADVANCED can be expanded at any time by adding the MultiX-Set. **More details on page 6**

EXAPT-Security

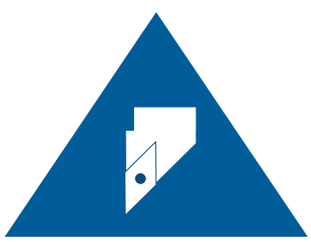
more security is not possible

No matter if EXAPTplus or EXAPTsolid - The security of your machines and components ranks first for us! This ensures EXAPT-Security, checks each collision for you and displays them including single machining steps. This technology combined with EXAPT machine kinematics and EXAPTpostprocessors leads to absolutely error-free NC records. This not only inspires your employees but also shortens your positioning processes enormously.
More details on page 8

EXAPT plus

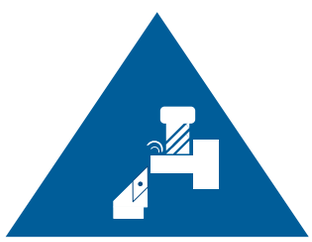
With EXAPTplus you have a real all-rounder for your CAM programming. Thanks to the intuitive and interactive handling you easily program all common components from mechanical engineering. No matter if you want to program milling, turning, grinding or eroding machines. Even complex multi-channel machines where several tools execute at two spindles milling or turning operations at the same time are no problem with EXAPTplus.

In addition to the geometry transfer from the most different sizes EXAPTplus provides also an own geometry generation tool, that you can use to create your own machining geometries in shortest time. This way also components without digital sizes as e.g. repair parts are easy to process for you. An absolute highlight is the language-based part program editor, running parallel to the interactive programming. This enables you to get standardized sequences for the NC program in shortest time. So many of our clients reduced their programming effort by more than 200 %.



Turning machining

Milling machining



Turning/milling machining

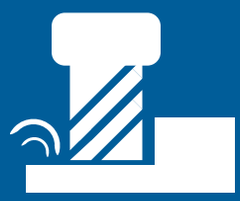
Optimum programming time

- Processing of IGES, DXF, NDI, BSPLINE, ME10 and SAT file formats
- EXAPT tool and NC database ensures optimal organization
- Interactive, language-based programming ensures maximum possible individualization
- Highest flexibility thanks to the unique subprogram technology
- Without limits for the creation of special solutions
- Future-proof due to high-end cutting strategies
- Absolute accuracy due to automatic adaptation from nominal sizes to tolerance sizes
- The system for complex multi-channel machines
- Machine-related CAM programming system with high-end simulation

EXAPT

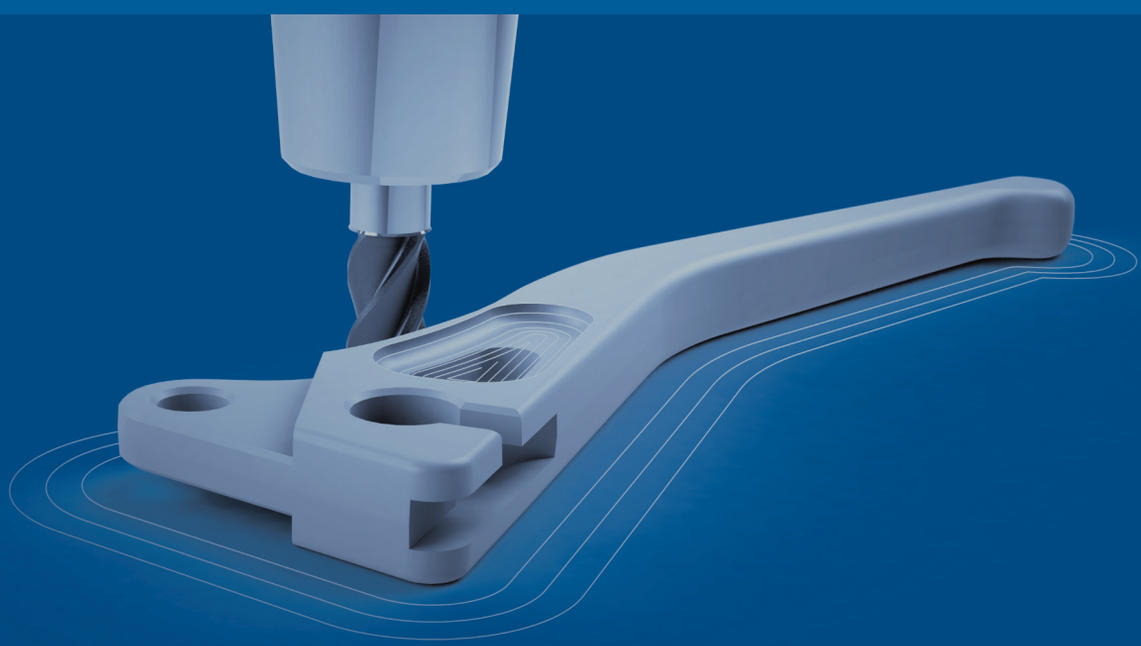
- The expert for simple & complex turning operations
- Masters all high-end turning technology
- Supports all types of turning machines
- Automates your multi-spindle machines

- Optimizes 2,5D cutting paths automatically
- Implements standardized milling cycles
- Generates automatically optimal cutting paths
- Simplifies the programming of pocket machining



- Masters skillfully multitasking machines
- Controls up to 3 tools at the same time
- Synchronizes & optimizes production sequences

- Generates standardized subprograms
- Minimizes the programming effort
- Unlimited & individual program generation

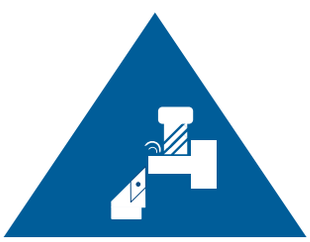


EXAPT solid

EXAPTsolid is one of the most powerful CAM systems on the market. The extensive range of technologies, algorithms and machining strategies makes each kind of programming a daily highlight. Also the selection of the machines to be programmed is unlimited. Turning machines with two spindles, two turrets and a milling spindle are as well part of the daily business as complex boring machines or portal milling machines with several parallel axes and innumerable additional aggregates.

Your programmers are always supported with the most modern machining strategies, developed by us together with diverse universities, machine manufacturers, tool suppliers and naturally our clients. An absolute unique selling point of EXAPTsolid is its technology database. Therewith you are able to file simple and also complicated machining strategies. They are automatically linked with your geometries. Only with this feature you reduce your programming time many times over. EXAPTsolid is a real profit tool which lifts your "Way 2 Profit" to a new level.

Milling machining



Turning/Milling machining

MultiX

integrated knowledge base

- Versatile processing of file formats in top quality e. g. STEP, Parasolid, CATIA, ProE/Creo, Inventor, SolidEdge, NX and many more
- Automatic tool path generation
- High-end volume cutting up to 5 axes simultaneous
- 3-5-axis simultaneous machining
- Programming of multi-channel turning machines
- Up-to-date machining strategies
- (HPC, HSC, „BarrelMill", „Wiper plates", „Rollover-Turning" etc.)
- Integrated modification programming
- Continuous material removal and blank part actualization
- Intelligent technology database for standardized programming
- Machine-related CAM programming system with high-end simulation

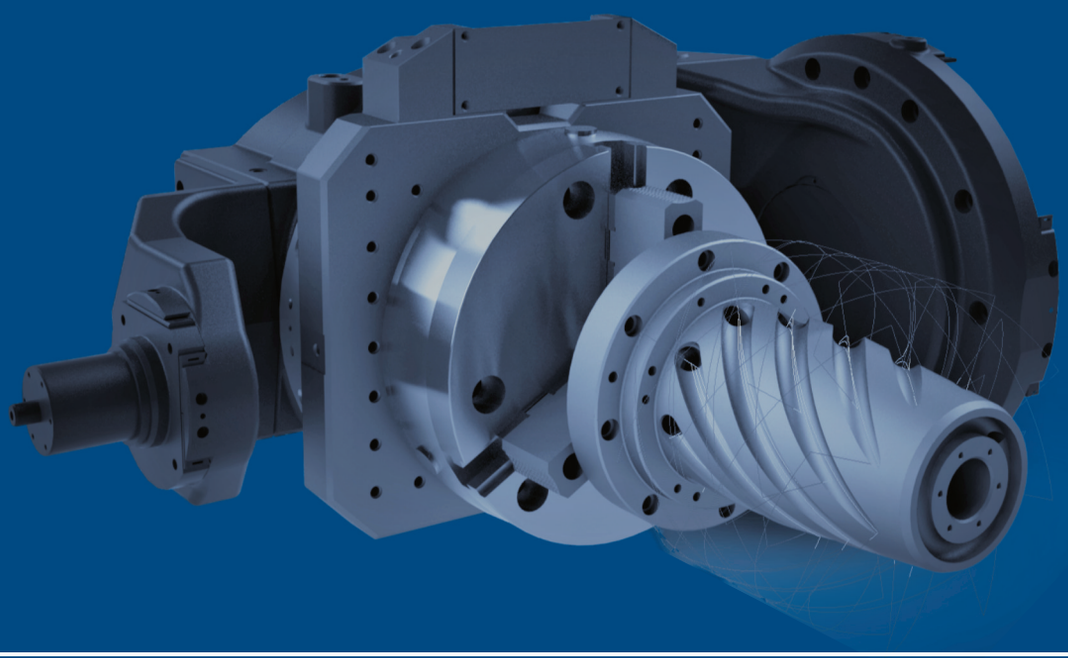
EXAPT

- Generates automatic milling features
- Cuts at the 3D solid body
- Controls the blank and finished part status
- Works with latest machining strategies

- Masters skilfully multitasking machines
- Automatically generates turning contours
- Controls up to 3 tools at the same time
- Synchronizes & optimizes production sequences

- Expert for 5-axis simultaneous machining
- Supported modern „Barrel-Mill“ tools
- Manages 3+2-axis machining specifically
- Realizes any kind of free form surfaces

- Enriched by integrated knowledge database
- Controls technology-based machining strategies
- Benefits from intelligent tool sequence optimization

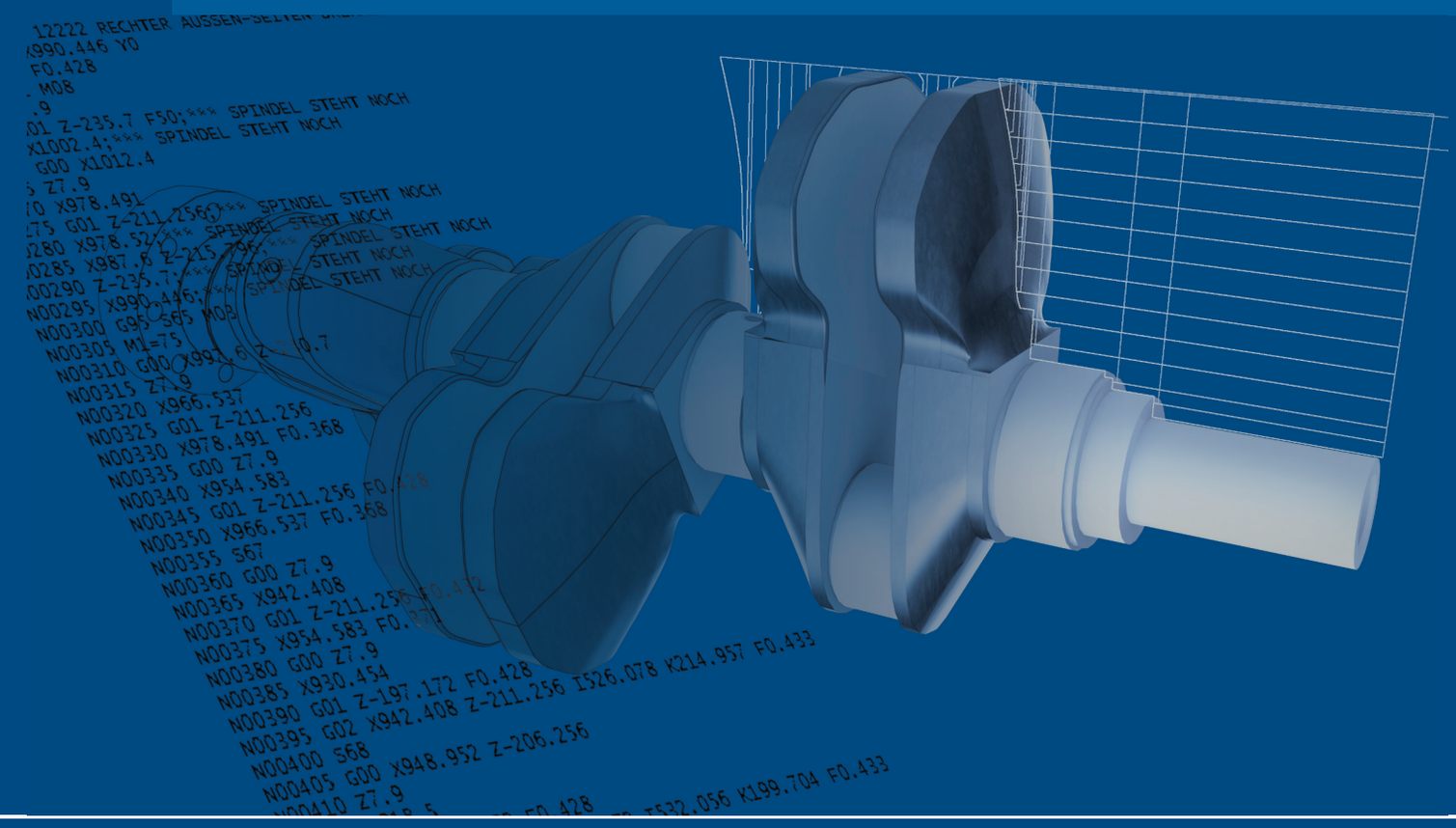


EXAPT Postprocessor

EXAPT postprocessors always belong to the most powerful on the market. EXAPT assumes the generation individually for your respective machine control - e. g. Sinumerik, Heidenhain, Fanuc, Okuma, Philips etc. Personal consulting always comes first for us.

Because only this way your individual requirements can be realized optimally. At the same time we ensure that your production standards are mapped and observed from the EXAPT postprocessor.

- Use of all functionalities of the processing machines
- Loss-free transfer of the CAM strategies in the NC program
- Implementation of standardized NC program structures
- Assurance of the necessary flexibility in the positioning process
- Optimized for all usual control types
- Independent from machine or production strategy
- Individual adaptations according to your wishes
- Own generation or editing of the postprocessor possible

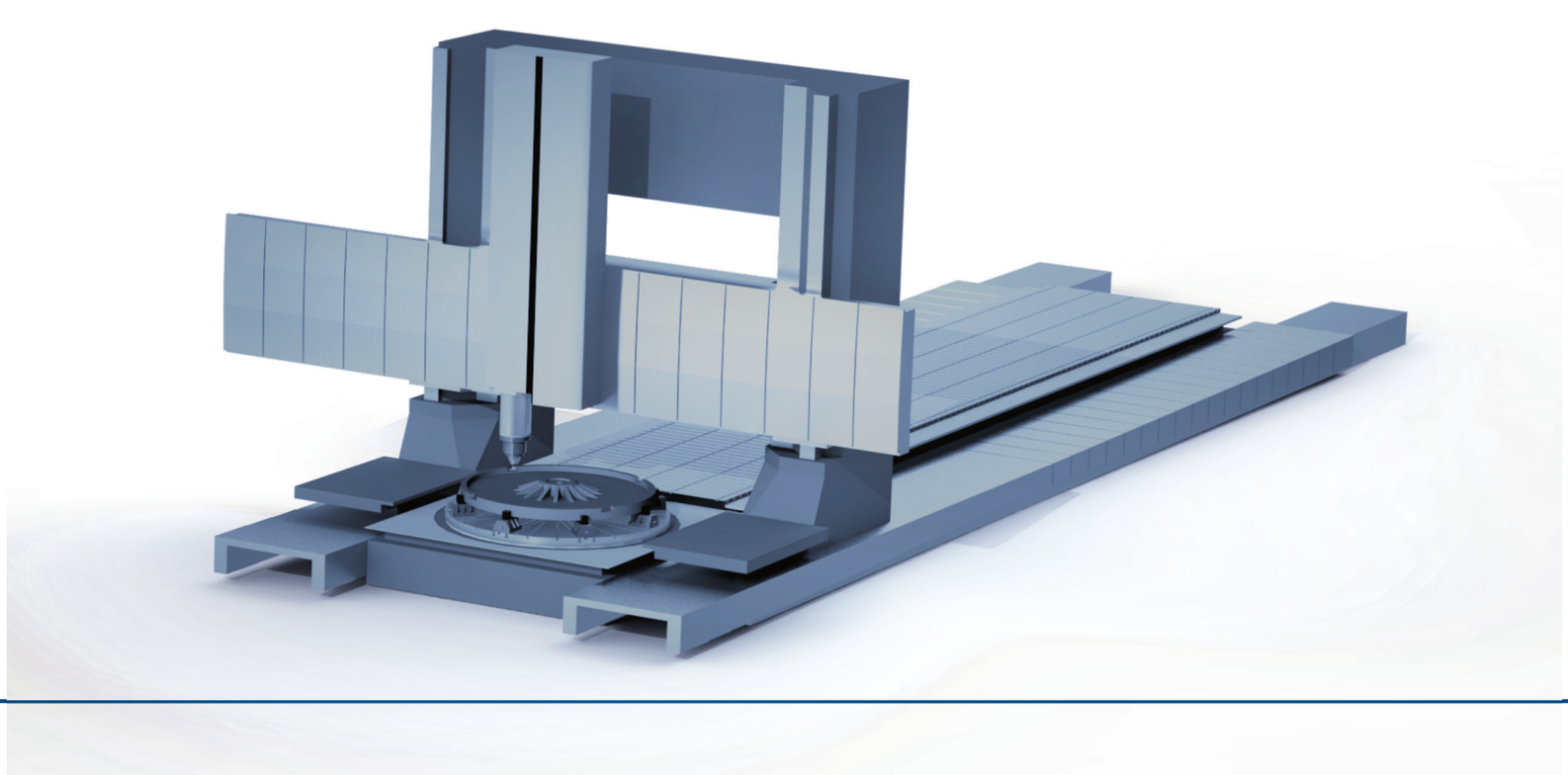


EXAPT machine model

Everyone is talking about the “Digital Twin”! To ensure an error-free process the simulation of the CAM program including machine model is indispensable. EXAPT creates you a kinematic model based on the respective CAD machine model.

So you can control and optimize your CAM programs realistically before starting the program run. The collision control of all machine components as clamping device and workpiece naturally are standard as well as the control of joint limits and end positions. Well, a real digital twin of your machine.

- CAM integrated machine simulation
- Clear use in the usual planning environment
- Use of intermediate results for further operations
- Consideration of the machine environment
- Collision control in the entire engine room
- Realization of complex kinematics
- Kinematic simulation
- Mapping of all machine aggregates



CAM-specification

EXAPTplus	BASIC	ADVANCED	PROFESSIONAL
Turning, drilling, milling for 1-slide machining	X	X	X
Administration of complete tools and NC information	X	X	X
Tool optimization, tool simulation	X	X	X
Single slide programming and production simulation	X	X	X
graphically interactive geometry creation	X	X	X
Security Set*		X	X
Automatic turning technology with active B-axis		X	X
Tolerance processing, end side/face slide machining		X	X
Turning, drilling, milling for 2-slide/2-spindle machining			X

EXAPTsolid	BASIC	ADVANCED	PROFESSIONAL
Turning, drilling, milling for 1-slide machining	X	X	X
Administration of complete tools and NC information	X	X	X
Tool optimization, tool simulation	X	X	X
Single slide programming and production simulation	X	X	X
graphically interactive geometry creation	X	X	X
Security Set*		X	X
Automatic turning technology with active B-axis		X	X
Tolerance processing, end side/face slide machining		X	X
Turning, drilling, milling for 2-slide/2-spindle machining			X
MULTI-X Set**			X

* Ablation simulation, collision control, limit switch monitoring, engine room monitoring, machine simulation
** 3-5-axis-simulation machining, freeform surface machining, 3-axis volume cutting, adaptive milling technology

EXAPTconsulting

The key to success

- Define targets
- Regard production strategy
- Identify cost positions
- Determine production standards
- Plan organizational requirements
- Plan transformation process
- Specify evaluation criteria

11 steps to the perfect project

- Workshop concerning state analysis and target definition
- Creation target proposal for process optimization
- Support for the creation of the specification sheet
- Requirement specification – creation & finalizing
- Project plan – creation, coordination & finalizing
- Determination of the respective project leaders
- KickOff Meeting with all participants
- Implementation according to the project plan
- Regular status check
- Acceptance of the project
- Celebrate successes together

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