**dSPACE Process Consulting**

Optimizing processes in all development phases and for the validation of ECU software

**Highlights**

- Optimization of workflows throughout the entire development process
- Planning of development and test processes for functions for automated driving
- Modification of processes for ISO-26262-relevant projects

**Challenges**

Manufacturers and suppliers have to increasingly optimize their processes to be able to continue developing and testing ever more complex system and software architectures as for highly automated vehicles, for example. More than ever before, they have to coordinate the various development phases with each other, from system design to validation, and implement them in a process-reliable manner. dSPACE Process Consulting offers consultancy projects to support you in defining processes and optimizing them throughout all phases of ECU development, independent of whether dSPACE tools are used.

**Key Benefits**

To optimize processes, to reach goals faster and more efficiently, or to develop more complex products using existing tool chains, current processes must be analyzed and understood. dSPACE captures and structures complex processes and develops concepts to master new challenges. Therefore, the spectrum of the consultancy ranges from analyzing established processes and identifying the resulting optimization needs to suggestions for structuring new development processes and their implementation. The specialists also evaluate the suitability of processes for defined projects and examine how beneficial new processes or tools are for you. They also assist you with necessary adjustments.

**Why dSPACE?**

Decades of experience, particularly in the automotive industry, but also in many other areas, such as aerospace or medical engineering, make dSPACE a competent partner if you want to develop and test electric/electronic systems. Experienced specialists at dSPACE who are successfully working on projects around the world can quickly analyze your processes and identify potential for optimization. Their knowledge with regard to development tools and tool chains helps you establish lean and efficient processes.

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<th>Typical Services (Examples)</th>
<th>Description</th>
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<td>Benchmarking, process analysis and optimization</td>
<td>dSPACE Process Consulting analyzes existing customer processes and compares them with best practices from various industries. The specialists identify optimization potential and make suggestions for implementing new processes. If required, dSPACE also supports the implementation.</td>
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<td>Creating and implementing standard-compliant processes</td>
<td>dSPACE Process Consulting advises on working with development and test environments to comply with standards such as ISO 26262, ISO/IEC 15504, and Automotive SPICE.</td>
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<td>Proof of suitability for verification environments when working on safety-critical projects</td>
<td>dSPACE Process Consulting evaluates processes and makes necessary adjustments for safety-critical projects.</td>
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<td>Introducing model-based development and virtual validation</td>
<td>dSPACE Process Consulting determines if and how you can profit from the benefits of model-based controller development and supports you in the implementation, if required.</td>
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<td>Supporting the transition to agile development methods</td>
<td>dSPACE Process Consulting supports you in the implementation of agile software development so you are able to address the new challenges of the development of complex E/E systems and their embedded software, such as the introduction of continuous integration and the utilization of suitable tool chains.</td>
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Typical procedure for Process Consulting Projects

Customers contact dSPACE with specific concerns, intentions, and objectives, which is why content and scope generally are very individual for each process consulting project. Therefore, the procedures differ according to the customer’s demands.

In most projects, the first step is an analysis of the current situation, which is initially conducted on-site and includes interviewing all persons involved. To assess the current state, dSPACE then correlates this status with the development goals.

For this purpose, several facts are taken into account, for example:
- existing tool chains
- assigned roles
- specified requirements
- best practices derived from comparable processes

Based on the information gathered, dSPACE identifies the potential for improvement and derives a concept for process extensions or reorganizations. After implementing the proposed measures, it is essential for customer acceptance to be able to evaluate success by means of key figures.

To apply a standardized structure to customer discussions, dSPACE Process Consulting has developed an assessment model, which consists of several steps:

a) Defining the position of the project in the development process
b) Creating a tool chain overview and documenting its application
c) Discussing and analyzing established workflows