

# DIGITAL ENGINEERING

## MAGAZINE

DEVELOPMENT ACCELERATION THROUGH PROCESS OPTIMIZATION

## Lean Processes, Rapid Development

Claus Lintz

**The acceleration of product development processes promises immediate cost savings and generates more flexibility for the company. The following article describes how development processes can be revised and tightened, without any loss in product quality.**

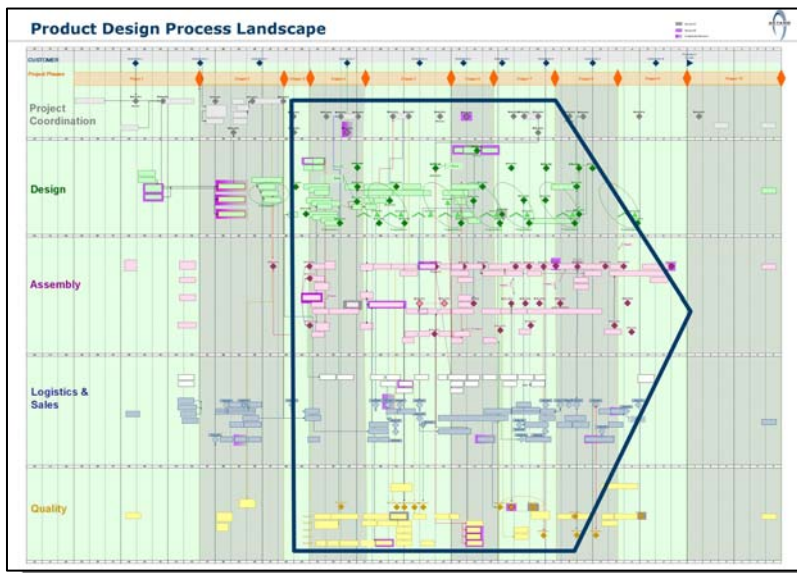
The Japanese automotive industry, and especially Toyota, is a prime example of the economic potential offered by the continuous analysis and optimization of product development and production processes. Car manufacturers in particular are faced with a very difficult development environment. Given that components with completely different, apparently contradictory development cycles – electronics, software and hardware – are used in their vehicles, it is necessary to merge these procedures into one uniform overall process. This complex interaction between the various sub-processes offers hidden potential, which can be used to accelerate development processes. Process management specialists like Actano help companies to identify this potential and restructure the respective processes accordingly.

Restructuring development processes also has an effect on the entire corporate organization. Therefore it is important for a start, that the highest management level in the company be won over for such a project – and that they also be convinced of the advantages of a restructuring, especially from an organizational-economical perspective. These kinds of arguments can achieve the required readiness to adjust interfaces, formalisms and authorization loops accordingly during the course of the project.

### Process Map

If influential supporters for the process optimization project are found, it makes sense to bring everyone involved in the respective processes to one table in line with the principle of “making those affected into participants”. The next step is to record and analyze the existing processes. The process consultants appraise the initial situation in interviews with the individual responsible people and project managers. Subsequently, they illustrate this in the “process map”, which is the center point and linchpin of process optimization. It enables a bird’s eye view of the entire playing field, including all sub-processes of the product development. Additionally, it makes the largely sequential product development processes, which also run parallel in different departments, transparent for all participants.

The experts then start with the analysis of the technical development processes using the process map. Paramount in their searches are weak points in processes, which cause time or financial losses, such as dual developments in different departments or asynchronous, inaccurately coordinated processes. At what point in the development process, for example, do delays recur? Where to



The process map visualizes the comprehensive processes regarding the development of a product

allocate more time? Where to remove time-consuming intermediate stages that obstruct rapid development, but are not quality-relevant? Is there a department with an especially good sub-process that can be used profitably at other locations in the company? Is it really necessary for all members of top management to approve specific sub-project stages, or is it sufficient for project managers or unit leaders to do this? The process consultants closely examine and ask questions, and consequently uncover the causes of deficits that are mostly perceived in the interdisciplinary project working day as "normal incidents", which, however, are avoidable and should be avoided.

### Continuous Success Checks

After the analysis, the process consultants support the participating employees in the departments in creating a new, optimized process map that forms the basis for the future project practice. Methods for

performance checks should also be implemented here in order to ensure that the new processes actually deliver the desired results. Actano, for example, has developed a special metrics system for the operative project teams and for the overall procedural context. Defined test points support up-to-the-minute project controlling and enable the pinpointing and rapid removal of weak points from the running operation, as well as the identification of trends in process quality.

### Conclusion

Process maps visualize what exists in many companies, but is hardly tangible: the weak points and, more importantly, the strengths of the existing processes. Once identified, the ideal processes of individual projects can be established company-wide and clearly defined standards can be created. Experience shows, for example, that it is possible to reduce process variants by up to 66 percent and throughput times of individual sub-processes by up to 60 percent.



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## Project Management Practice

The Actano User Conference, held April 19 at Munich airport, also dealt with the optimization and acceleration of development processes. In a numerous array of user fora and presentations, speakers from Actano and its customers presented the methods of controlling development processes with the aid of the so-called "Collaborative Project Management". The focus of the conference were the new modules of Actano's RPlan software. The new Project Controller, for example, allows the quality of running processes to be monitored, controlled and continuously improved.

The two customer presentations by General Motors Europe und Volkswagen proved to be particularly interesting highlights of the event, in which 90 project management experts from 39 companies took part. Thomas Wurtzbach of Program Management, GM Europe, described a current undertaking to establish a central, global project management structure for the development of twelve automobile brands using Actano's RPlan software. Karl-Heinz Hornbostel, head of the ITP Product Management and Procurement Planning department at Volkswagen, also had interesting information to report on development practices at Volkswagen. In a short presentation he outlined the future use of RPlan for brand-wide project management in the product development process at Volkswagen and Volkswagen Commercial Vehicles, with possible expansion to other brands of the Volkswagen Group.