

we keep you ahead




consulting

Product Lifecycle Management.

Precisely and efficiently manage the lifecycle of your products along the entire value chain.

MBtech

Mercedes-Benz technology 



Precisely and efficiently manage the lifecycle of your products along the entire value chain.

Your driver for profitable growth.

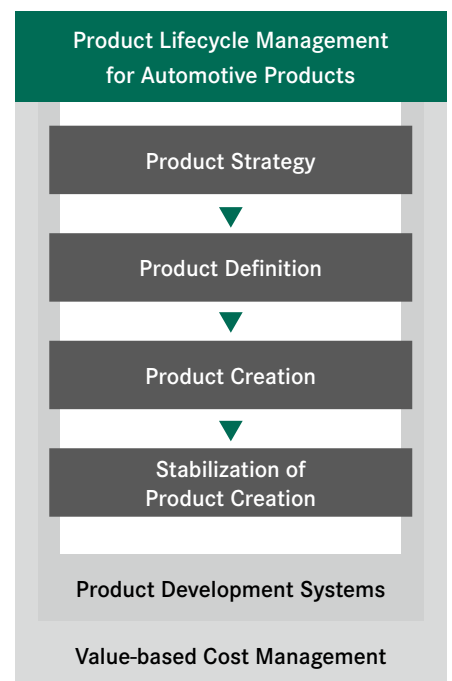
For a product range to be successful, it is essential that the product management, development, transfer to production, and stabilization in the markets be dovetailed precisely. Customers and suppliers are thus vital partners that need to be systematically integrated into the processes.

Comprehensive product lifecycle management ensures that you can accurately meet your customers' specific requirements and that your product range clearly stands out from the competition. Maximize your vehicle-related and overall development efficiency with systematic generation management for product families based on platform and module strategies.

Lifecycle management is already implemented during the basic design phase for all products, letting you realize a consistently attractive range of products and equipment for all regions and markets. Potential for optimization can be identified and economies of scale can be leveraged – including for premium products – over the entire product lifecycle.

Put our experience to work for you.

When it comes to optimizing product lifecycles, MBtech Consulting is your full-service partner. At MBtech, engineering and consulting are our forte, and we are right at home in what is probably the world's most complex sector: the automotive industry. We know it inside and out. With locations in Sindelfingen (Germany), Detroit (USA), and Shanghai (China) we are present in the industry's most important centers – Europe, North America, and Asia.





Are you challenged with the task of successfully establishing a product program on the market?

Do you want the product development to be straightend due to quality, cost and time in an optimal way?

Are you interested in proven approaches to product lifecycle management?



Product strategy:

- Is your product portfolio geared toward sustainable future market trends?
- Do you pursue differentiated strategies based on the individual requirements of your product families?
- Are your product strategies synchronized with the segment strategies?

Product definition:

- Do you have clearly defined performance profiles for your future products?
- Does your product definition include platform, module, and re-use strategies as well as potential issues over the lifecycle?
- Are development jobs prioritized according to evaluations of customer-required functions?

Product creation:

- Does production-oriented product design start early on in the strategy phase and incorporate technology and system suppliers?
- Do you use state-of-the-art processes to shorten time to market?
- Is your product creation plan optimal with regard to time, cost, and quality factors?

Stabilization of product creation:

- Do you thoroughly analyze the degree to which the planned processes of your value chain are fulfilled?
- What maturity levels do the components to be developed have to meet along the timeline?
- Is the allocation of resources in the development phases optimally recorded for management purposes?

Product development systems:

- Is your development organization able to map and implement functional job/order chains?
- Do your committees and decision-making bodies use up-to-date processes?
- Can your development system be adapted to the innovation level of your products?

Value-based cost management:

- Along with product-oriented cost effectiveness studies, do you also analyze entire product families?
- How is the customer perspective accounted for in your cost analysis?
- Does your project controlling system also proactively consider the effects of changes in costs?





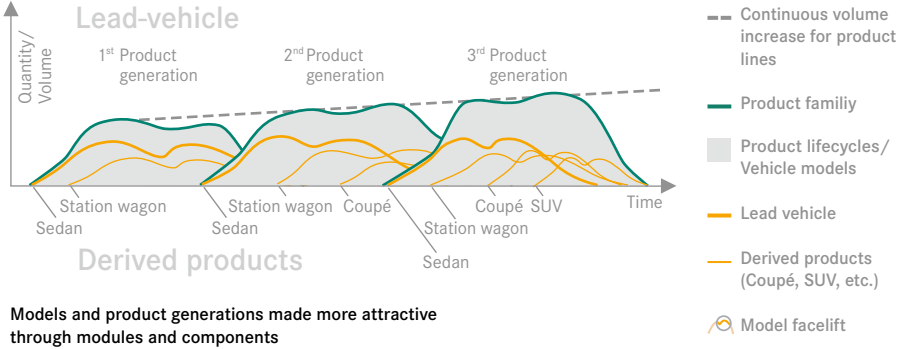
Rev up your product development – the pull principle, from customer benefit to lean product.

Product strategy and product program management.

Based on a market-driven product portfolio strategy, a good product management system ensures that your products stay profitable throughout all phases of their lifecycle, and allows you to manage the initiation of technology, platform, module, and series development projects. The greatest driving force behind the key success factors of time to market, readiness for production, and profitability is the interplay between a product strategy geared toward customer benefit and a development system aligned with the pull principle. Planning the products using a fully integrated approach and over the entire lifecycle enables balanced and effective resource utilization and market supply.

MBtech project expertise:

- Development of a market-oriented, lifecycle-based product strategy
- Development controlling based on product families



Our Success Story

Lifecycle measures for a high-volume model line

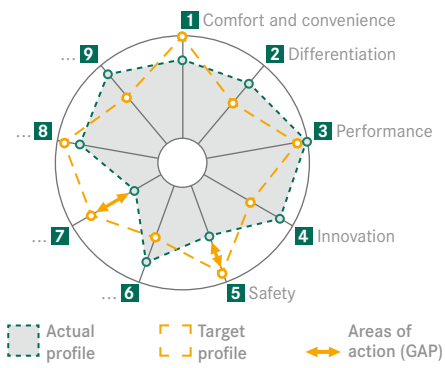
The product under analysis made a poor impression with regard to quality, and one that quick-fix enhancement measures could not dispel. MBtech performed a “major model improvement” for the first time: In addition to the much-needed lifecycle momentum generated by a revamped design, basic weaknesses had to be eliminated and strengths further developed. The resource allocation for the model improvement was redefined in the specified budget, and at the same time, customer-specific product communication approaches, content, and prices for the product lines were optimized. The product objectives were transferred to the pertinent component goals and the necessary performance profile for the model improvement was re-established.

Product definition and concept.

The more precisely you know the customer-required functions and customer preferences of your target group, the more specifically you can define your products and development phases. Using clear requirements such as a need for production-oriented product development as the basis, target and measurement systems can be developed at the product range, module, and component level. The integration of future series suppliers early on in the process represents another success factor.

MBtech project expertise:

- ▮ Definition of the project planning and enhancement strategy for the model improvement within the scope of a product project
- ▮ Prioritization of the development focus based on customer-required functions
- ▮ Variant management for complex modules of a premium vehicle



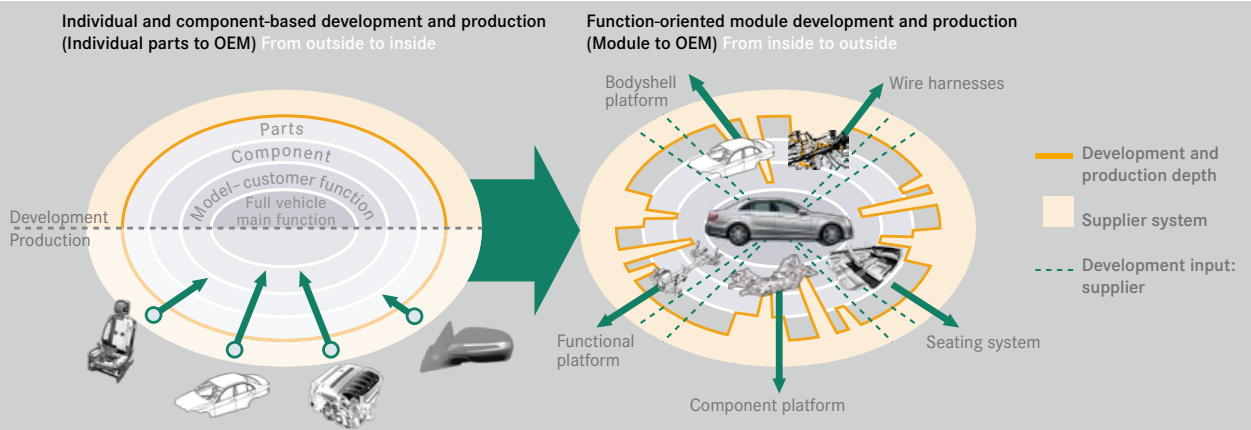
Visualization of the factors involved in optimally fulfilling customer-required functions

Product creation.

Ambitious development targets can be implemented in parallel by dividing the task into two areas: initial platform or module development, and series production development aligned to market requirements. In this regard, it is crucial to permanently network digital and physical processes.

MBtech project expertise:

- ▮ Design of project and timeframe for a premium sports car project in line with the specific innovation type
- ▮ Opportunity and risk management to optimize weight and costs at the module and vehicle level



Market-driven development systems – the efficient path to modularization.

Stabilization of product creation.

Adaptive development processes are characterized by a consistent focus on product and process maturity levels at each stage. To secure total development and process quality, you need to be able to manage complex interdependencies.

MBtech project expertise:

- ▮ Comprehensive maturity level assurance for a complete vehicle project, in order to guarantee the market launch
- ▮ Cooperative product and product cost optimization during the volume production phase, with the aim of increasing product profitability (OEM to tier n)

Product development system.

A market-driven product development system lets you coordinate the interaction of the partners involved during the product creation and improvement phases. The organizational alignment is based on system responsibility for customer functions, which is the key element for the implementation and optimization of modularization projects. In this regard, it is crucial to continuously monitor potential leverage for boosting effectiveness and efficiency, in order to be able to evaluate the optimization concepts.

MBtech project expertise:

- ▮ Program for boosting effectiveness and efficiency based on synchronization points
- ▮ Module strategy and module organization development

Our Success Story

Economies of scale through product modularization

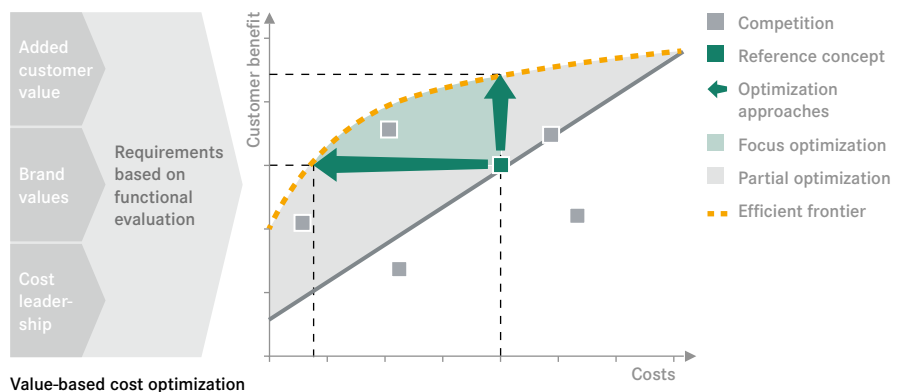
We analyzed a complex volume project with individual production/development in order to realize economies of scale. At the start of the project, ideal models were created for production, purchasing, sales, development, quality, controlling, and product sustainability, and then evaluated using key performance indicators. Based on these models, we then developed standardized product and process concepts and shaped them into modules tailored to identified

customer requirements. A business case was prepared for each of the modules. The modules comprised several technical components, which were aligned to customer requirements across the entire lifecycle and designed based on interlinking of system boundaries, all with the established requirements in mind. Economies of scale were realized via the degree of interlocking, lifecycle, and standard module concepts.

Value-based cost management for products with substance – your profitability driver.

Value-based cost management.

The implementation and monitoring of economic feasibility measures should always be taken into account. A multidimensional approach to cost management at the product and product range level anticipates customer requirements, systematically utilizes supplier know-how, and applies an interdisciplinary approach to integrate the partners relevant to cost issues. In addition, strategic cooperation models can be used to realize economies of scale.



MBtech project expertise:

- ▮ Development controlling based on product families
- ▮ Value-based product cost optimization during the development phase in order to increase product profitability
- ▮ Product controlling based on proactive opportunity and risk management

Our Success Story

Product-based cost optimization

In a tough initial situation with respect to target costs and scheduling, MBtech Consulting supported the client in optimizing product costs during the product creation process. Using various approaches based on the best-of-bench method, we were able to identify and apply significant leverage as regards both the product and processes.

Along with stringent application of these methods, it is crucial to select the vehicle modules in accordance with an extended list of criteria and in line with customer benefit and utility. The allocation of resources resulted in cost savings of up to 25% in production material alone, while customer benefit increased at the same time.



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