



This article was published in the *automotivemanager* 2/2008.
http://www.oliverwyman.com/ow/pdf_files/automotivemanager_2009_en.pdf

Get to know our Automotive Team.

Oliver Wyman's automotive experts have broad industry experience and a commanding track record of successful consulting projects for leading automotive OEMs and suppliers in Europe, America and Asia. We offer consulting services along the entire value chain of the auto industry: R&D, purchasing, manufacturing, sales and channel management, after sales and financial services. Oliver Wyman's global Automotive Practice supports clients with strategic topics like brand management, customer orientation, corporate and business strategies, market, competitive, and technology analyses, product development, innovation management, sales strategies and after sales programs. Operational optimization includes purchasing, production optimization, efficiency improvement programs, reengineering, turnaround management and restructuring. In addition, Oliver Wyman offers the whole range of mergers & acquisitions consulting services, from partner search to evaluation, transaction support, and post-merger integration.

© 2008 Oliver Wyman. All rights reserved.





> **Customer** > R&D > Procurement > Production > Sales > Services

Complexity: The Automotive Industry's Hydra

Vehicle and feature variants have proliferated in recent years, with a segment such as compact cars having huge numbers of possible combinations. Despite attempts to address this problem, new variant types re-appear like the many heads of the mythical hydra.

Peter Bosch,
Christian Heiss

For many years, complexity has been addressed and reduced through the use of module strategies, differentiating software, design guidelines, and production-line standards. Frequently, though, these traditional approaches have not been sufficient or sustainable.

Pragmatic approach necessary

What breeds complexity are a range of factors including additional vehicle models, engines, optional features, country types, differentiated

needs of customer groups, legal requirements, and competitive demands. Frequently, the manufacturer bears some responsibility, as a culture designed to exploit every market opportunity also fuels the proliferation of options. An overloaded catalogue of features creates both higher costs and increased error rates.

The pragmatic question about whether additional options or functions bring real benefits

tends not be asked, because of the lack of clear criteria. Yet a large number of customers do not notice the many options and high-quality technical features or, if they do, fail to appreciate them. This applies to series functions as well as to special functions with individual features. The time has come

tions, visualized in a complexity driver tree. With a maximum of 100 drivers, all options and combinations can be shown.

Optimize product substance

For every basic variant type, examine the product “substance” – that is, the character-

“Reducing complexity must be evaluated from the customer’s point of view. More does not necessarily mean better.”

to “slim down” for the customer’s sake, as long as a feature is not critical to long-term brand positioning.

But which variants are crucial factors in purchasing decisions? And for which part of the product is the customer willing to pay a premium? Drawing on customer surveys and historical purchasing data, Oliver Wyman’s approach creates a systematic variant-type management and coordination of product features.

Customer-based variant-type management

The first step is to determine the number of necessary variant types. This is done with the help of a selected model series, starting with a “zero based” model and making it necessary to justify each additional option. The range is then systematically developed on the basis of derivations, various drive trains, country models, and their combina-

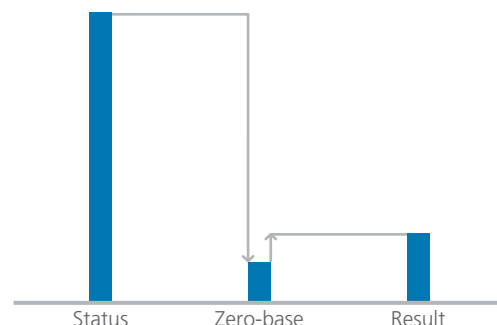
istics and functions of series and special options. Build a “gray list” that consists of all characteristics not relevant to brand positioning. For instance, this would include a complex sports chassis for a user-oriented high-volume brand. A “black list” contains characteristics that do not have any purchase-influencing impact on customers, including two very similar variants of seat upholstery.

Using “strategic-choice analysis,” one can then evaluate the relevance to customers of the range of special features. This methodology simulates a purchasing environment and determines the impact of various options or product characteristics on the customer’s behavior. With the help of a demand-elasticity curve, the price is set at a level that maximizes revenue. The model uses alternative variants to forecast customers’ switching habits within a brand as well as among competitors.

A comparison of zero-based and incremental approaches

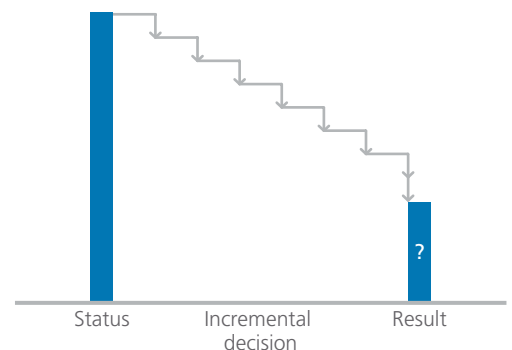
The zero-based approach facilitates significant project success at acceptable costs

Zero-based approach



- Radical reduction with minimum restrictions
- Clear and substantial changes
- Reversal of reasoning

Incremental approach



- Many small decisions
 - Little effect
 - Long line of argument
 - Difficult goal setting
- Weak arguments as a result of little information

Source: Oliver Wyman

Complexity: The Automotive Industry's Hydra

Optimal variant policies do not just enhance brand value; they also allow the customer to better see and understand the benefits of a particular package. And they improve the manufacturing margin per sold vehicle.

Anchored in processes and culture

To maintain control over variant growth, complexity management must become a fixed, cross-divisional component of business processes, just as processes include quality, customer satisfaction, or total cost of ownership components. Strong complexity management can add earnings of up to 300 euros per vehicle, as well as improving fundamental metrics such as sold vehicles, customer satisfaction, and reliability.

Slaying the hydra, the many-headed serpent in Greek mythology, was one of the 12 labors of Hercules, made more difficult because each time he cut off a head, another grew back. Yet Hercules and his nephew Iolaus figured out a solution and defeated the hydra.

Striving for process-related anchoring

