

User report

Continental AG

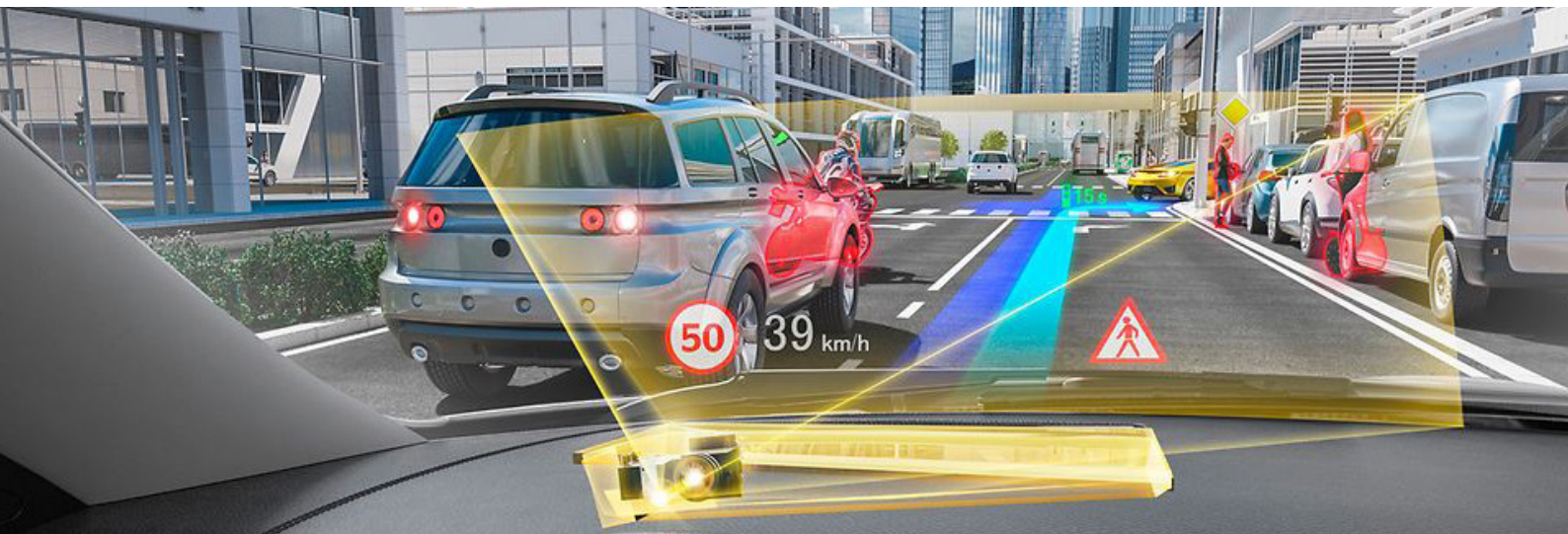


# Merlin CPQ

One configurator – endless possibilities



# Avoid over-engineering



A new CPQ solution helps Continental Automotive to efficiently and transparently compose and develop technically complex head-up displays according to customer requirements. This report illustrates the capabilities of the new solution.

The composition of technically complex customer solutions can often take weeks or even months and cost too much. The automotive supplier branch of Continental chose process optimization, which allows time-saving of up to 200 hours per project.

## Continental Automotive

Continental Automotive is one of the largest automotive suppliers worldwide. Since 1871, the company offers products and solutions to vehicle manufacturers and other industries. For example, diverse vehicle solutions, such as head-up displays, are developed and internationally distributed in the „Human Machine Interface“ business unit.

What's special: Continental constructs custom head-up displays for each automotive manufacturer which fit the individual vehicle frames and specific technical parameters. For this purpose, the knowledge of all possible product specifications needs to be available worldwide at all locations so that all employees can access a common knowledge base. Therefore, The various dependencies and complex connections that occur when ge-

nerating technical product descriptions for head-up displays need to be modeled transparently and error-free. Especially the interplay between the different technical disciplines optics, electronics, software, mechanics, and production becomes a challenge.

But how can individual customer requirements be best realized at optimal cost? Continental has faced this challenge not only to optimize its own sales processes, but also to create an even more positive customer experience.

## Motivation

The automotive supplier had been searching for a CPQ solution that decreases technical product complexity, in which you can easily model product variety, and which makes knowledge on product specifications available in an international solution database. Furthermore, they wanted to be able to configure custom-fit solutions for different customer requirements so they could perfectly meet those requirements and not exceed them unnecessarily.

With the implementation of Merlin CPQ, Continental has found the solution that meets these requirements, additionally accelerates the generation process for technically complex product descriptions, and still configures all customer requirements at optimal cost.



## The Lego brick principle

To achieve an efficient implementation and optimal functionality of the CPQ solution, it soon became obvious that the ideal approach to project success would be functional disassembly of the product. To easily model the complex product structures in the configurator, a modular concept needed to be developed. Thus, the first step was to disassemble the product structures of the head-up displays into functional components. These components range from the dimensions of the windshield projections to the projection brightness, energy consumption, to the communication interface to the vehicle network. Stable temperature, shielding against electro-magnetic influences, as well as weight are all important factors that can influence each other and need to be considered.

What was and is complex about the configuration of technical descriptions is that each parameter setting is mutually dependent on almost all other parameters. Therefore, there are multiple solution options for each functional component with multiple combinations of predetermined functionalities. Thereby, for example, a holographic projection is only possible in combination with a corresponding laser.

With the chosen configuration solution, those implications and dependencies can be transparently modeled, viewed at a glance, and the overall complexity can still be reduced. The solution becomes the digital cross-location wizard for developers, which supports them in selecting the most useful and cost-efficient solution. „Our recipe for success is our component structure: the components can be assembled like a Lego brick set with the push of a button,“ Dr. Kai Habermehl, Lead Architect for Head-Up Displays at Continental, describes Merlin CPQ functionality. „Meanwhile, every request is processed via the CPQ solution. This saves time and simultaneously ensures quality and thereby sustainable company success.“

## Transparency prevents over-engineering

Highly complex customer requirements are part of daily business for Continental. Often customers send requirement catalogues containing up to 20,000 parameters. The developers subsequently filter for the significant parameters and transfer them to the request form of the configurator. The architecture decisions for the product solution are then made based on the identified requirements.



◀ Continental, a giant among the automotive suppliers, develops and manufactures i.a. complex systems, such as the most modern, especially customized head-up displays.

In parallel with the product configuration, the developers check which technical requirements have already been met and which parameters have not yet achieved the ideal fulfilment level using the integrated Performance Chart. If, for example, the LED type is switched, the technical parameters and the fulfilment level change as well. This fulfilment level is displayed live in the configurator. In the Performance Chart, a red line serves as visualization and indicates the desired goal fulfilment level for the parameters. The developers can view at a glance whether the customer requirements are met or exceeded so that they can immediately react to changes and thus configure the ideal product solution. Thereby, there's no chance of over-engineering.

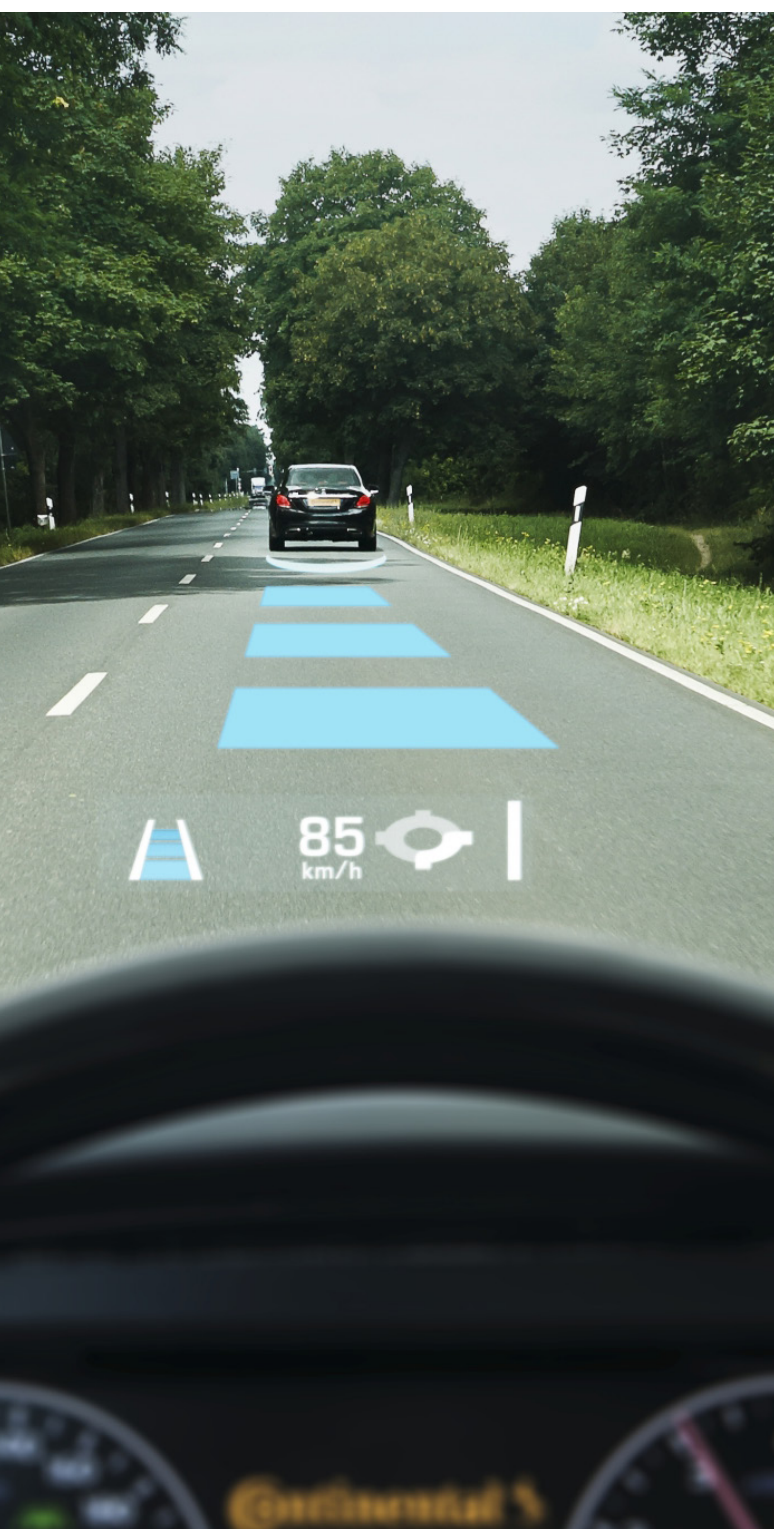
The interfaces to internal simulation software enable you to quickly review vehicle integration and provide price estimates. „In the past, this process took two to three months. Today, the rough idea is visible after about two days or even less,“ Habermehl comments.

## Product descriptions as a sales tool

„To us, the best feature of the configurator is that abnormalities stand out immediately. You can see at a glance which requirements are critical and which ones have not yet been met. Thus, the technical product descriptions are always issued in high quality,“ Dr. Kai Habermehl explains. These high-quality product descriptions are in turn pivotal for sales as they are utilized as valuable documents during customer talks.

## Focus on artificial intelligence in the future

Due to its positive experiences with Merlin CPQ, Continental plans to extend their CPQ solution with further product rules in the near future. Furthermore, Continental searches to become even more efficient and solution-oriented in the long run by using a combination of configurator and artificial intelligence. The goal is for the configurator to actively review all product possibilities at the push of a button and then create the ideal customer solution automatically. A first „Proof of Concept“ has shown: this vision can be realized thanks to intelligent algorithms.



## More information:

[www.continental.com/en/](http://www.continental.com/en/)





[www.cas-merlin.de/en/](http://www.cas-merlin.de/en/)

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## Merlin CPQ

at a glance:

-  Product and quote configurator for the easy management of quote and sales processes
-  Central pooling of all employee know-how which is then made available in the configurator software
-  Simple and intuitive quote creation – for error free quotes
-  Enables a quick turn around for individual enquiries

[Find out more](#)

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