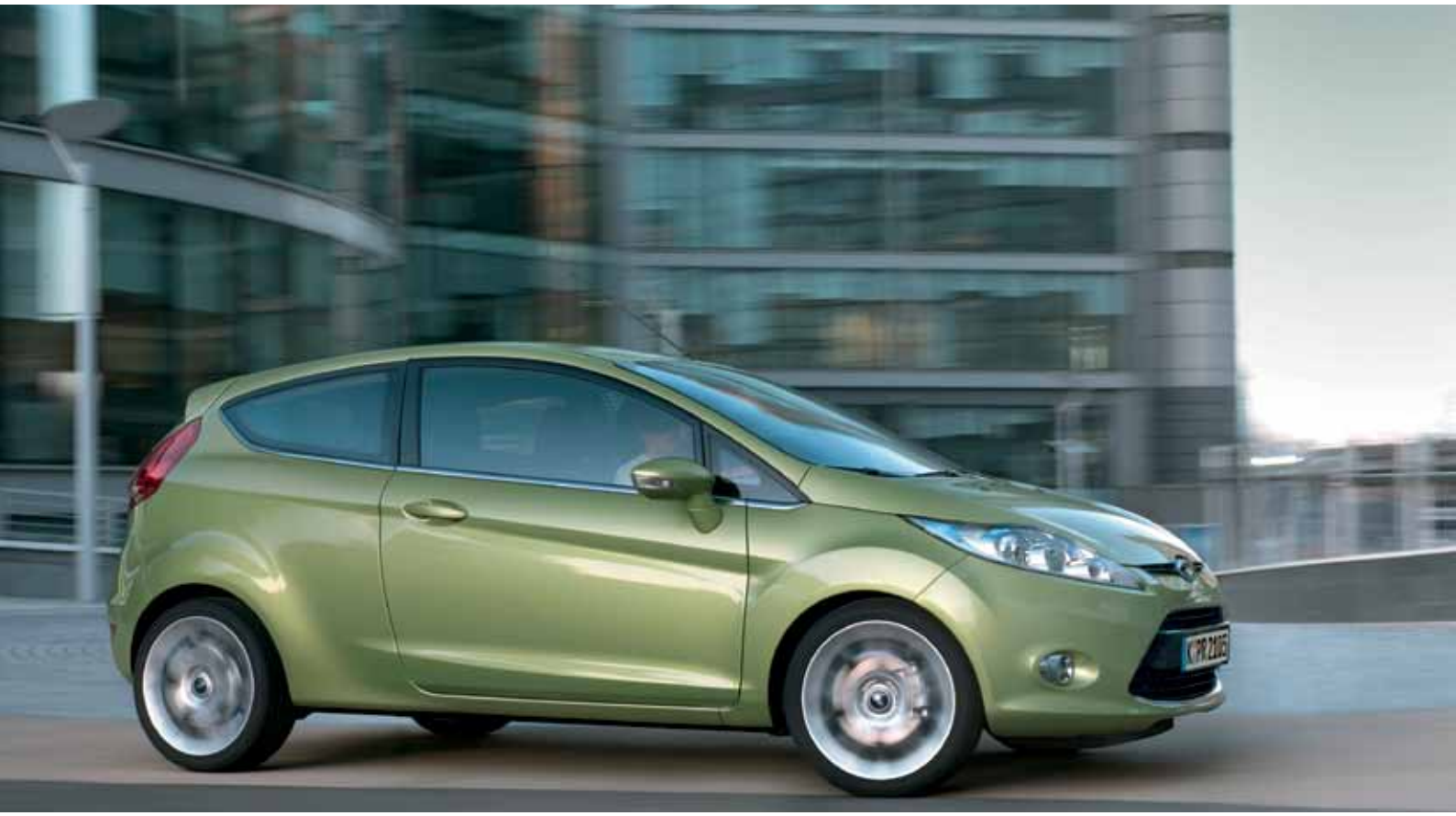
zenon – an innovative solution is the engine of success.

Ford has changed significantly since the introduction of the Tin Lizzy. The cars may have changed, but innovation and modern production technology are still the main focus of the company. For the modernization of its forging and die-casting factory in Cologne, Ford relied on COPA-DATA's software solution, zenon.



The name Henry Ford stands for inventive talent, ideas and innovations. He introduced the assembly line, he relied on the standardization of components and he led the company to success, thanks to rationalization and division of labor. Today, Ford plants still regularly modernize and optimize existing machinery, in order to stay competitive. The current considerations for Ford's forging and die-casting factory in Cologne focused on how to raise the quality and productivity of the equipment there. "Above all, we wanted to check the effectiveness of the machines that produce transmission components and engine parts", explains Frank Tils, project manager of process visualization, in hall R at Ford-Werke Köln GmbH.

HIGH EXPECTATIONS

Together with his team, Tils aimed at maximum system availability to ensure smooth production and quality control. For this, they tested and rated different process control systems for their suitability, among them zenon from COPA-DATA. zenon had already been introduced to some parts of the plant, but now the engineers wanted to review its performance in terms of downtime analysis. Basic requirements were:

- continuity,
- Scalability, and
- modular structure.

In addition, the solution had to allow for the use of other controller hardware.

Other important goals of the project team at Ford included:

- vertical integration so that information can be shared with the management level, and
- simple and safe maintenance.

Frank Tils was looking for a process control solution that is so simple to use that the service personnel could perform modifications quickly and easily. Even if they don't have programming knowledge, the users should be able to adjust visualization projects. Besides visualization, the process control system should also allow for machine data acquisition and failure statistics.

VISUALIZATION, MDE AND PERFORMANCE ANALYSIS – ALL IN ONE

After the evaluation of the several shortlisted systems, Ford chose the software solution of COPA-DATA. zenon: "zenon is powerful, easy to use and very flexible. For example, we can adjust projects even during runtime", explains Frank Tils. Another important reason for selecting zenon was its scalability: ranging from the machine-oriented operation at the Windows CE-Panel to the control system on the PC. Thanks to that, projects can be created platform-independently in a single development environment.

Over 300 drivers guarantee compatibility with all PLC and bus systems on the market. Furthermore, the user can link different zenon projects in a safe and powerful way and configure database connections simply by using parameters. The Industrial Performance Analyser of zenon 6.22 allows for a statistical analysis of error messages. Ford's Frank Tils says:

"This tool [the IPA] enables us to make a very detailed analysis of facility downtime and the reasons for each instance of downtime." The project manager expects an additional rise in the efficiency of production from their new ability to analyse downtime effectively. The IPA also offers a detailed report of past messages and failures for later analysis.

TOP PERFORMANCE REQUIRED

The new process control system easily meets the high demands of the production environment at Ford-Werke Köln GmbH. For example, zenon provides clear and simple visualization of the procedures during the production of a die cast component, thanks to the numerous display options of moving picture elements.

"In case of machine downtime we can get a fast and detailed understanding of the causes for that particular case of downtime. As a consequence, we can react quickly and apply counter-measures to reduce downtime", says Frank Tils. Thanks to zenon, Ford now uses a special system to identify the machine operator at the process control system. As a result, there are generally fewer input errors today. During machine operation, the zenon archive server also records production and machine data. The machine operator can view this data in a row, in trend curves or in a report. This allows a comprehensive overview of the current production process. Ford plans to develop the system in the future, and a zenon web server will be deployed to provide relevant production data for management via the company network.