

News

Laying asphalt in efficient and well-defined steps helps save time and costs



Porsche Consulting Reduces Highway Traffic Congestion

Traffic jams caused by highway construction cost time and money, and harm the environment. Road work thus needs to be completed as quickly as possible. The Porsche AG subsidiary, Porsche Consulting GmbH, took a look at this issue as a practice project. The result? Applying lean production methods used in the automobile industry could help reduce highway congestion caused by road construction. This would not only save time, but would also lead to significant cost savings as well as noticeable quality improvements.

For the German road construction company F. Kirchhoff AG, the experts at Porsche Consulting developed the first-ever chronologically and organizationally precise work sequences for paving highways. "The entire process had to be brought into a steady rhythm that everyone involved strictly adhered to," reports Eberhard Weiblen, CEO of Porsche Consulting, "because only perfect planning—before the construction site is set up—can prevent delays."

The first step in the project was to analyze a highway construction site. The initial results already demonstrated that the paving machine was performing below its capacity. The

main reason for this was quickly found: the machine was frequently idle due to unnecessary waiting and superfluous time buffers. Porsche Consulting responded by establishing a timing cycle that utilized the machine's full capacity.

This type of optimization can cut construction times nearly in half and reduce the costs of labor and machinery by around 40 percent. Quality also improves: vehicles roll more smoothly on road surfaces paved at a steady rhythm, since there are fewer seams in the pavement.

The most important outcome of the analysis, however, relates to the reduction of overall economic losses. "Construction-related congestion on German highways costs motorists €37 billion every year," Weiblen explains. "These losses could be decreased by five to ten billion euros if construction times could be reduced by only 20 to 25 percent."

In this, as in all of its projects, Porsche Consulting bases its methodological approach on the successful and constantly refined lean production processes of the Stuttgart parent company.

christophorus

Christophorus Porsche Magazine
Magazine for Porsche enthusiasts

58th year, no. 340, October/November 2009
ISSN 0412-3417
Yearly subscription rate: €24.00/US\$ 30.00
The magazine is published bimonthly in ten languages (German, English, French, Italian, Spanish, Portuguese, Russian, Chinese, Japanese, and Korean).

Published by

Dr. Ing. h. c. F. Porsche AG
Public Relations Director: Christian Dau
Editor-in-Chief/Managing Director: Karen Schulze
Assistant Editor: Simone Kühner
Copy Editing and Consultation: Head-Line, Stuttgart
Graphic Design: Büro Linientreu, Stuttgart
International Editions: RWS Group GmbH, Berlin
Cover Photo: Stefan Warter

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Production

Sachsendruck Plauen GmbH
Printed in Germany

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Subscriptions

Christophorus can be obtained directly from Porsche or through your local Porsche dealer.

Other subscriptions:

ABO Porsche
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67346 Speyer, Germany
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Fax: +49-6232-310-215
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The subscription runs for at least a year and is also billed for this period. Please make payment only upon receipt of the bill.

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