

SUCCESS STORY

Assembly and Logistics Planning for new BMW Group Automobile Factory Shenyang

Automotive





BMW GROUP: NEW PASSENGER CAR ASSEMBLY PLANT IN ONLY SEVEN MONTHS

Reaching one's destination faster with unconventional solutions

More and more Chinese are discovering their passion for German cars. Those wishing to benefit from the boom will have to step on the gas and focus all their efforts on safety – meaning on-site production must be set up and commissioned extremely quickly. At the same time, an eye must also be kept on investments. Thanks to the competent support provided by Ingenics AG, BMW Group demonstrated how this can be done successfully at Shenyang/Dadong in the northeast Chinese province of Liaoning.

About the BMW Group

Globally, the BMW Group is one of the most successful manufacturers of automobiles and motorcycles, and among the largest industrial companies in Germany. Today, with BMW, MINI and Rolls-Royce, the company has three of the strongest premium brands in the automobile branch. The vehicles of the BMW Group set the highest standards as regards aesthetics, dynamics, technology and quality and as such confirm the technological and innovative leadership of the company. Apart from a strong market position in the motorcycle business with the BMW brand, the company is also successful in the business with financial services.

The BMW Group task was clearly defined: relocate 3-series assembly from the main Chinese plant to an interim plant. This was necessary to create capacity until production of the successor product began in the new plant. Also, a timetable of seven months was firmly established.

With such a large task in front of them, the BMW Group decided to rely on Ingenics, a partner with many years' experience in China and specifically, at BMW's site in Shenyang. The planning process associated with all production logistics, from arrival of pre-finished components to final assembly, was contracted with Ingenics, along with the strict seven month timetable. The decision was solid because Ingenics had already undertaken a major share of the planning work for the first automobile plant in the region, which started operation in 2003.

The contracted scope included;

1. Planning for all processes
2. Equipment planning: types, quantities, placement
3. Staffing requirements and educational needs



The most important project results and Ingenics performances:

- › Production program exceeded
- › General planning of assembly and logistics system
- › Just in time capacity extension
- › Implementation of the lean philosophy
- › Comprehensive realization support
- › Close-knit launch support

4. Building structure requirements according to defined processes
5. Comprehensive realization supervision and launch support

Although all of these elements constitute a part of the everyday workloads of the BMW and Ingenics experts, special attention had to be paid to the alignment of plant production processes and building architecture, also considering that four assembly halls had already been rented in an existing industrial park. Compounding complexity, investment costs had to remain minimal and dismantling of all alterations had to be a consideration from the start.

In seven months – from start to finish – Ingenics was active on site with up to 25 consultants. During these months, the exchange and cooperation between BMW headquarters, BMW Brilliance Automotive Ltd. joint venture, BMW SAP professionals from South Africa, as well as a number of different external partners had to be flawless, right down to the very last detail. These were months which demanded impeccable execution. There were also months where misunderstandings or miscommunication would have jeopardized the success, timing and budget of the entire project.

Fundamentally, tried-and-tested methods and concepts are to be adjusted individually to specific requirements. Infrequently, all typically utilized standards had to be questioned.

As the general planner, Ingenics was responsible for the assembly and logistics systems in Shenyang. This included, all line side planning, concepts for material delivery, establishment of kitting and sequencing areas, synchronization and equipping of tigger trains, optimal warehouse structuring, including the goods receiving area; planning of special load carriers for kitting as well as solutions for bridging open spaces between halls. Despite the stipulation of “quick and cheap”, process stability and product quality had to be guaranteed.

“Surely one of the most exceptional tasks Ingenics has been commissioned with to date. But the BMW team had prepared the mission so perfectly that everyone could get down to work straight away.”

Dr. Jens Nitsche,
responsible Ingenics Partner

Although project progression was extremely unconventional, the result that was attained, was outstanding: a division of the area into two logistics and two assembly halls naturally included the option of a rapid expansion. The linchpin: tigger trains with flow racks that were synchronized in accordance with Kanban procedures resulted in the most efficient provision for assembly – as well as excep-

tionally flexible and low-cost concepts that were implemented by consistent utilization of lean philosophy.

However, the BMW Group and the great number of Chinese who are passionate about cars and now see their dream of a German quality product being fulfilled are not the only winners of this project. Ingenics’ expertise in the Chinese subsidiaries of Shenyang and Shanghai has increased further as a result of this project.

Efficiency improvement³ – Building sustainable business success



In a nutshell, the core services of Ingenics can be summarized in three words: Planning. Optimization. Qualification. Or, to put it simply, efficiency improvement³. Our main focus is on three central areas of business – factories, logistics, and organization. Ingenics' history in these areas has been sustained for more than 35 years.

Benefit from unique experiences gained over the course of more than 5.100 successful projects. Discover how, considering your goals and objectives, we create space for your sustainable corporate success.

