

Managing a megaproject: Drees & Sommer assures cost, schedule and highest quality for the new Stuttgart Trade Fair Centre

The new Stuttgart Trade Fair Centre in Stuttgart is designed as a communication marketplace and high-tech experience for visitors from all over the world. A lot will happen on Germany's biggest building site before it is finished in autumn 2007. Drees & Sommer Stuttgart's role in the € 806 million project is to ensure orderly and timely completion and to ensure that the highest possible quality and level of service is provided by all involved within the fixed budget. The team is also responsible for ensuring that the fair centre taking shape next to Stuttgart's international airport is market-focused and functional. The eight-year development and construction period has required innovative solutions, which have been adapted to changing conditions.

Two-dimensional structure

How do you organize a megaproject with 100,000 m² of exhibition space in seven standard halls, one high-ceiling hall and a congress center? At the beginning of the project, the first task for the managers was to "create order". This meant structuring the project itself as well as developing participants' organizational structures and distributing tasks in a manner sustainable for the entire project. As the direct representative of the Projektgesellschaft Neue Messe GmbH (fair centre project company), Drees & Sommer divided the project into 19 subprojects in order to achieve orders of magnitude manageable for assigned project managers and their teams. To ensure coordination and cooperation between the many teams, Drees & Sommer defined exact interfaces between the various areas of responsibility. All teams with common interfaces – such as architects, external infrastructure planners, and engineers – exchange information about their individual projects in regular meetings, discuss delays and problems, and define solutions strategies under Drees & Sommer leadership.

The Internet-based Project Communication System PCS gives all teams access to information such as CAD plans, minutes, schedules and reports at any time. Currently, the system has some 40,000 documents stored, including approx. 30,000 drawings.

Please send a specimen copy in the event of publication. Thank you.

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The new fair centre – fit for use

The yardstick for the quality of the new fair centre will be how well the buildings support the intended use. To achieve the best possible outcome, the project managers worked with the later users – the Stuttgarter Messe- und Kongressgesellschaft mbH (fair and congress company) – to develop robust specifications which are being implemented in design and construction. All building services equipment for the fair centre has been designed in collaboration with subsidiary DS-Plan as part of the system design. The work specifications have also included unusual activities for managers. For example, no reliable dimensions were available for the clearance between halls to allow unproblematic delivery by truck. Specifications ranged between 32 and 40 meters. Drees & Sommer organized a truck trial which established the optimal clearance to be 36 meters.

In order to respond flexibly to changing market demands, regular coordination with the users is taking place during the planning and construction phases. Drees & Sommer is undertaking qualified random inspections throughout the project to ensure that the specified levels of quality are implemented in design and construction.

Estimating, controlling and monitoring – during and after construction

When the project started with an architectural competition in 1999, costing had to be undertaken for individual designs up to € 900 million. During later development, Drees & Sommer was responsible for identifying possible cost-saving potential, coordinating this with the client, and ensuring integration of the results into planning. One example of a major cost-saving was the suggestion of building the whole fair 1.5 meters higher than planned. This resulted in 20% less excavated material and a cost saving of € 10 million.

A technical innovation by subsidiary DS-Plan led both to lower construction costs and to substantially more economical operating costs: Experiments showed that halls only required constant ventilation with fresh air in the lower areas occupied by people. This resulted in a reduction of the cubage that had to be ventilated by some 30 percent. This so-called layered ventilation concept and other technical measures led to a saving of € 15 million in construction costs and an annual reduction in operation costs for the Stuttgarter Messe- und Kongressgesellschaft of € 450,000. Drees & Sommer is responsible for ensuring that the cost of completing the complex remains below the ceiling of € 806 million approved in 2001. Currently, costs are completely within budget.

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Scheduling – the backbone of project execution

Tight schedule management is required to ensure timely completion of the new Stuttgart Fair Centre in 2007. Schedules were calculated backwards from the completion deadline. During the tendering and award process, for example, managers have to factor in four or five months from shipment of bills of quantities to start of construction. Detailed schedules are drawn up for each trade, regulating down to the day what has to happen where and when. A total of some 100 such schedules were drawn up, which the contractors then had to integrate into their scheduling. Schedules are complemented by a site logistics concept which defines when construction and access roads can be used and when the 40-plus cranes and further mobile cranes have to be erected and dismantled during the various construction phases to ensure that they do not hinder each other.

Current status

The first standard halls have already been erected, the shell of the congress center with an underground car park is under construction, and the steel structure of the multilevel car park is being erected piece for piece over the A8 autobahn. With regard to infrastructure, tunnels, bridges and roads are being built in the core area – some of which are already completed.

The megaproject is both within budget and on schedule to allow partial opening of the new Stuttgart Fair Centre in April 2007.

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Press release

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**DREES &
SOMMER**



Germany's biggest building site close to the Stuttgart airport: the New Trade Fair Centre

For more information and images please call us.

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