

Tecnomatix

Moscow Domodedovo Airport

Renovating Russia's largest airport – virtually

Industry

Aerospace

Business challenges

Plan for airport upgrade and passenger traffic increase

Keys to success

Use Tecnomatix Plant Simulation for modeling air cargo handling, passenger flows in the international terminal, as well as various terminal performance scenarios

Start with single application; with success, implement simulation across projects

Results

Bottlenecks identified at the design stage and timely corrections made

Investment risks reduced for reconstruction of the international terminal

Airport attained a leadership position in the Russian civil aviation market

Tecnomatix provides the tools to simulate optimum passenger and cargo handling workflows, helping airport become a leader in the Russian civil aviation market

Moscow Domodedovo Airport is Russia's largest airport. Handling 46 percent of air passengers in Moscow, the airport is used by 74 airlines and serves 228 destinations across the globe, with 91 destinations exclusive to the Moscow region. The airport works with 46 foreign and 28

domestic airlines. This includes 11 countries from the Commonwealth of Independent States (CIS). In 2009 Moscow Domodedovo Airport handled 18.7 million passengers.

The cooperation between Domodedovo and Siemens PLM Software began in 1999, when Moscow Domodedovo Airport implemented a major redevelopment program – among the largest European civil aviation investment projects of the decade – with a proposed series of airport infrastructure upgrades that required the development and evaluation of various designs.





Moscow Domodedovo Airport selected Siemens PLM Software as an instrumental technology provider for its reconstruction program.

To effectively plan for the airport renovation, qualitative and quantitative efficiency indicators needed to be set. In addition, the equipment, floor space and transport requirements needed to be determined. Moscow Domodedovo Airport's experts used advanced computer-aided design (CAD) tools and some of the best practices of airports globally to address these requirements. Among Moscow Domodedovo Airport's strategic tools for design and analysis is the Plant Simulation solution, part of Tecnomatix® software from Siemens PLM Software.

The first assignment for Tecnomatix was a cargo handling simulation project. The objective was to model the handling of incoming air cargo in order to identify bottlenecks and to improve overall efficiency. Within three weeks the model had been developed. Key information included the aircraft landing schedule, the number and specifications of cargo handling transports,

the storage capacity and timeline. The model provided an evaluation of both the cargo handling system "as is" and with several proposed upgrades, which led to the optimal solution for the air cargo terminal.

Next, using Tecnomatix, a series of joint projects were simultaneously implemented, including a simulation and evaluation of the international terminal's reconstruction plan. Since the airport anticipated a sharp increase of international flights, it was important to make sure that the design solutions were correct. It was also essential that the investment risks related to the terminal's reconstruction be minimized and controlled.

Using Plant Simulation, Moscow Domodedovo Airport produced a detailed model of passenger flows within the terminal. Airport experts were able to experiment with a variety of scenarios to evaluate and determine the optimal approach. For example, extensive parameters were entered to arrive at various

Solutions/Services

Tecnomatix

www.siemens.com/tecnomatix

Customer's primary business

Moscow Domodedovo Airport is the largest Russian airport and holds the leading position among Moscow area airports in terms of passenger traffic. Located 22 kilometers south-east of Moscow, it is the first passenger airport terminal in Russia to be certified under ISO 9001:2000.

www.domodedovo.ru/en/

Customer location

Moscow

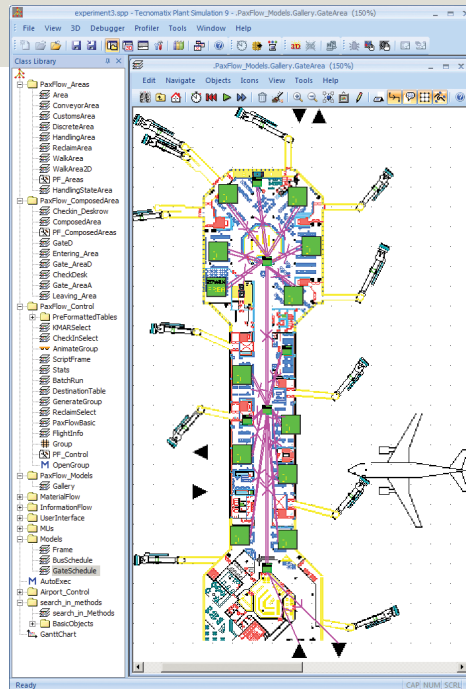
Russia

"Thanks to Tecnomatix, we have made considerable improvements to everyday airport workflows, including check-in planning, buses, gates and boarding management."

Helen Galanova

Spokesperson

Moscow Domodedovo Airport



"With such outstanding virtual planning, Tecnomatix Plant Simulation has significantly reduced the risks and uncertainty associated with our airport reconstruction planning," says Helen Galanova, spokesperson for Moscow Domodedovo Airport. **"Thanks to Tecnomatix, we have made considerable improvements to everyday airport workflows, including check-in planning, buses, gates and boarding management."**

Galanova notes, **"Using advanced technologies such as Tecnomatix, Moscow Domodedovo Airport has become a leader in the Russian civil aviation market."**

solutions that depended on a range of anticipated passenger situations. Parameters included flight schedules and data, incoming passenger traffic, service regulations, passenger routes across the terminal, equipment for check-in, customs, security, luggage claim areas, the locations of stores, food outlets and duty free zones.

Peak loads were a special concern, especially relative to the equipment needed to handle the high-traffic times. Plant Simulation accounted for different passenger flow patterns, considering both incoming and outbound flight schedules. Bottlenecks were readily revealed and corrective action taken.

Siemens Industry Software

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