

CASE STUDY

Green Cargo

Crew Shifts and Rosters, Locomotive Planning and Freight Car Distribution

Challenge

- Reduce operational costs for 1,000 crew
- Increase productivity of locomotive fleet
- Increase customer satisfaction while decreasing freight car capital costs
- Shorten planning process cycle for crew, locomotives, and freight cars.

Approach

- Benchmark and simulation work to demonstrate validity of business case
- Implementation of Resource Management Solution - Rail Shifts and Rosters
- Implementation of Resource Management Solution - Rail (Fleet)
- Joint development and enhancements to real-time freight car positioning system VADIS.

Results

- 2-5% reduction in crew costs
- Reduction of freight cars numbers from 12,000 to 9,000, while maintaining the same productivity
- Shorter planning process, transparency in decision making, higher plan operability
- More proactive attitude towards business change.

Green Cargo is Scandinavia's leading rail freight operator, based in Sweden. Their 1,000 crew operated equipment consisting of 420 locomotives and 12,000 freight wagons initially.

Green Cargo purchased scheduling systems that would allow more efficient use of their locomotives and crew, as well as develop a system for just-in-time positioning of freight cars prior to customer use.

Jeppesen made the initial Resource Management Solution - Rail (RMS - R) Crew delivery in 1995, with the first Fleet delivery being made one year later. These systems have undergone continuous evolution, via enhancements successively delivered by Jeppesen, through to present day.

The Fleet delivery allows the creation of locomotive rotations using timetables as input. This in turn permits simulation work

to be done, giving possible alternatives to the creation of the timetables themselves.

The Crew delivery comprised the modelling of company and union rules and regulations for train crew, which guarantee fully-legal rosters. These also allow a high quality of life for crew. Roll-out work included the training of planners and technical staff.

During 1999-2003, Jeppesen delivered expert consultancy for the development of VADIS, a real-time freight car positioning system that enabled Green Cargo to maintain production levels, though using 25% fewer freight cars.

Öyvind Söby, Manager of locomotives and wagons for Green Cargo said "We have been able to increase delivery performance and quality for empty cars to customers, as well as reducing the number of wagons in use."

About Green Cargo

Green Cargo is the leading rail freight operator in Scandinavia, moving approximately 13,000 million tonne-kilometers annually. They have around 3,500 employees, of which 1,000 are train crew. Their equipment currently consists of 420 locomotives and 8,500 freight cars.

About Our Company

Jeppesen is a wholly-owned subsidiary of The Boeing Company, comprising over three thousand staff, including transportation business specialists, researchers, and software engineers. Our business has for more than 70 years grown from the supply of navigational tools for the aviation industry, to now include world-leading expertise in improving transport operators' bottom-line performance, efficient use of their capital assets, and quality-of-life for their staff.

The Rail, Logistics and Terminals business unit of Jeppesen supplies optimization, simulation, modelling, and decision support software and services to a wide range of leading transportation companies, giving them the competitive edge required to succeed both locally and globally.

"Over the past years we have changed our way of planning completely, and Jeppesen's products are key contributors to this change."

Dr. Jonatan Gjerdrum
Manager Network Design, Green Cargo

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