

RED LINE THROUGH EUROPE

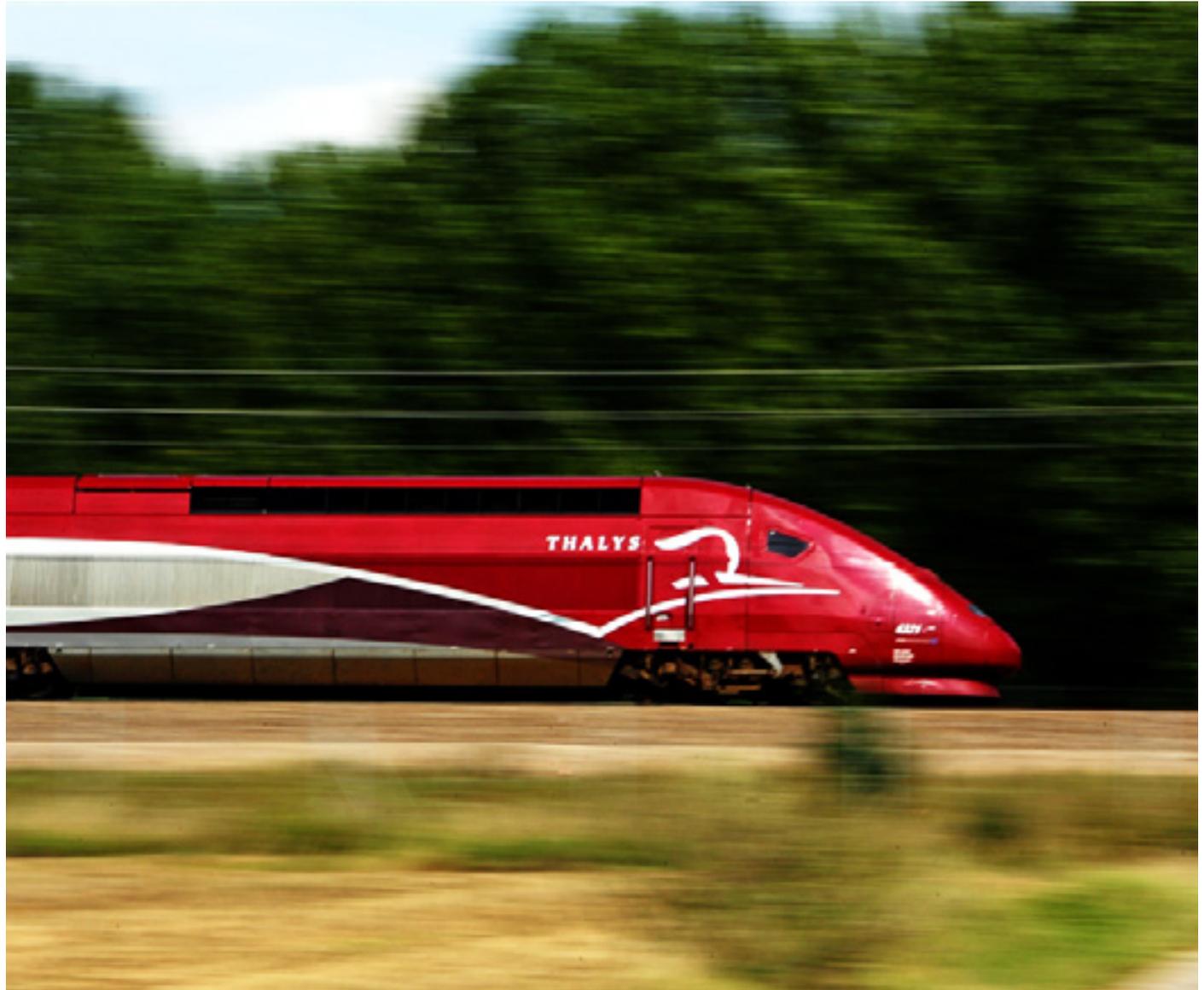
How Thalys optimized crew planning for high-speed, cross-country rail with DELMIA Quintiq





Rapid growth at a high-speed rail company meant mounting challenges as it continued to expand. Manual planning and a legacy system were no longer enough to keep an eye on resources and make the best planning decisions.

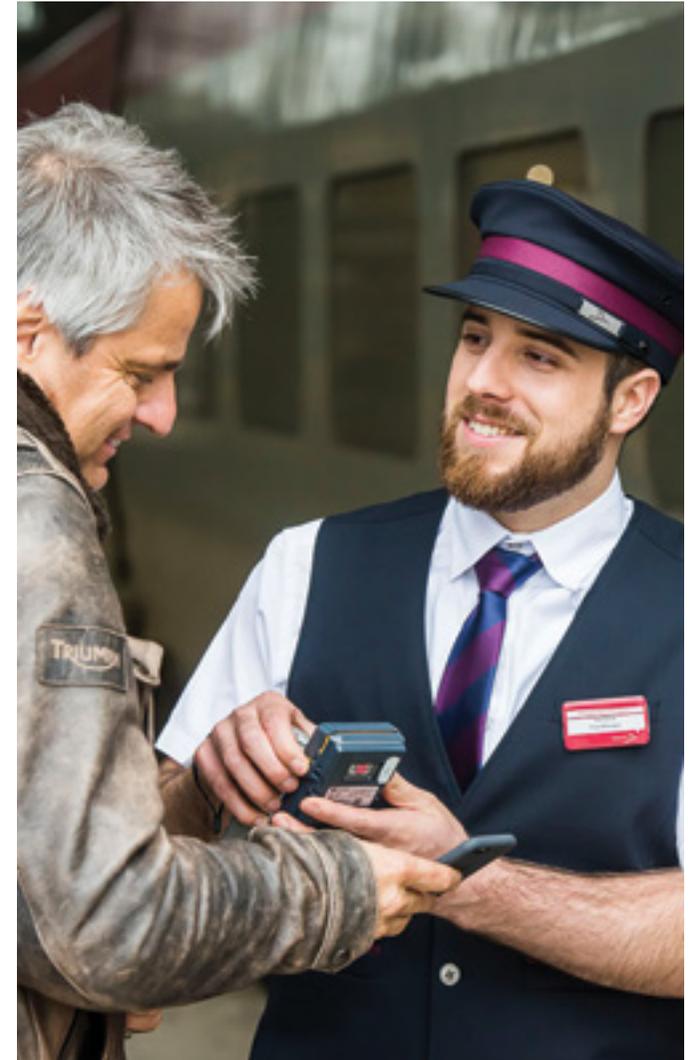
With rail services connecting four countries and more than six million passengers a year at stake, the company needed a solution fast. It needed a solution that could adapt to different sets of labor laws and user preferences while maintaining the integrity of its data. It needed a solution that could raise its already excellent reputation for efficiency, sustainability and customer service to an even higher level. How did it solve its issues?



Business	High-speed passenger rail
Date established	1996
Headquarters	Ixelles, Belgium
Operating revenue	€457.4 million*
Total employees to be planned	640

* as of 2016

Thalys' iconic red trains are immediately recognizable in Paris, Brussels, Amsterdam and Cologne. It is the only international rail service to have achieved a high-speed regional link between four European countries, having served up to 120 million passengers to date. Thalys' pioneering actions — from introducing onboard WiFi for passengers to a custom train management solution for increased operational efficiency — has also secured its position as a visionary in the rail industry.



The challenge

Speed, safety and service are core aspects that can make or break a passenger rail company's reputation. Thalys excelled at all three. However, as it grew, it faced many new challenges: How could it expand and increase the frequency of its services while minimizing investments in new resources? How could it maximize its potential without increasing spending? Finally, how could it efficiently handle planning processes that were becoming more and more time-consuming?

What Thalys needed to reach its goals was an effective planning solution that would increase operational efficiency and agility. In the meantime, its planning processes buckled under its existing custom-built planning system and crew planning system.

The planning system had worked well in Thalys' early years, but rapid growth soon caused the company to outgrow it. The system's information collection tool relied on manual entry, which carried a high risk of error. Information in the system could not be exported to other support solutions either. This made planning across platforms difficult and time-consuming — a disadvantage in an industry where speed is crucial. Meanwhile, Thalys' existing crew planning system

was limited in terms of labor law compliance. Being a leased solution from French Railways, it only supported crew planning based on French laws. Thalys needed to plan and manage crews in all its countries of operations. Compliance with multiple sets of local labor laws is a must. To add to the difficulty of crew planning, the system could not alert planners to rule violations and, just like the custom-built planning system, could not export information to other solutions. Thalys employees were also not able to access the system directly, making it difficult for them to log administrative tasks such as applying for leave.

As the company continued to outgrow its legacy systems, it began searching for a new planning solution. This new solution had to be able to plan different types of crew such as train drivers, train managers and non-operating agents (e.g. station crew and operations center staff). Because Thalys operates in four different countries, the solution also needed to provide visibility across the entire operations, support multiple languages and take into account different sets of labor laws.

Thalys found this solution in DELMIA Quintiq.

“We need a solution that can keep up as we grow and evolve. DELMIA Quintiq's excellent track record in the passenger rail industry proved that it was the best option.”

Fabrice Gidon, IT Manager,
Thalys

Choosing DELMIA Quintiq

DELMIA Quintiq's proven track record in solving passenger rail planning puzzles was evident in the standard crew planning solution it provided to Thalys, which offered full integration and a capability scope much broader than the company's existing system. Other benefits include:

Best-fit solution

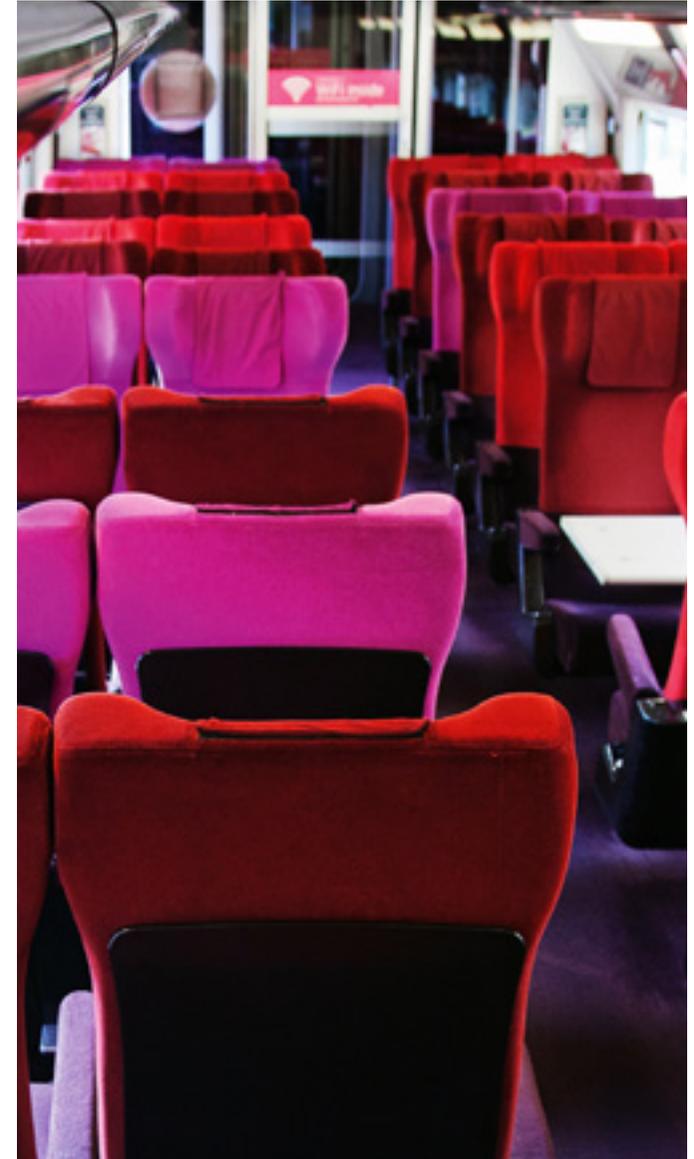
DELMIA Quintiq's standard crew planning solution fulfilled many of Thalys' needs straight out of the box, but DELMIA Quintiq did not stop there. The solution was further configured to Thalys' specific requirements (e.g. multiple labor law compliance and multilingual support) and fully integrate with its existing IT landscape.

Flexibility and agility

Rules and regulations in the rail industry are often subject to change as new safety standards and technological advances are adopted. DELMIA Quintiq gives Thalys planners full control of the configuration of rules within the system. It is also flexible and agile enough to cater to these rule changes as well as unplanned disruptions, with minimal impact to existing plans.

Fuss-free scalability

While Thalys' most pressing issue was crew planning, it also needed DELMIA Quintiq to support fleet planning in the future. DELMIA Quintiq's crew planning solution incorporates both of these capabilities on a single platform, so that further extensions to the solution may be implemented with ease when the time comes.



Enhanced visibility and decision-support capabilities

With operations split between Paris Nord, Bruxelles Midi, Antwerp and Liège, Thalys needed a solution that enabled visibility and clarity over its operations. DELMIA Quintiq's unique interface works with planners, not against them. Functionalities such as suggestions, smart filtering and graphic elements help planners make the best decisions in any given situation. KPI support also helps them evaluate the quality of their plans while real-time visibility lets them see the immediate impact of changes that they make.

Employee portal

The best-laid plans will fail if not communicated properly. An employee portal enables better communication for both planners and crew. The crew can use the portal to easily execute administrative tasks such as logging hours, applying for leave or swapping shifts with colleagues. This hands-on approach increases employees' job satisfaction as it gives them a sense of personal control. In turn, planners have visibility over the crews' availability, thus enabling them to make better plans.

“DELMIA Quintiq not only solved our planning problems, it made our planners more effective at their jobs.”

“DELMIA Quintiq's standard crew planning solution closed the gaps we had with our previous systems,” Gidon said. “However, it was when DELMIA Quintiq was configured for us that we benefited from its full value. It not only solved our planning problems, it also made our planners more effective at their jobs. DELMIA Quintiq has enhanced consistency of information, improved the productivity of our shifts and increased our day-of operations agility.”



Implementation

A highly experienced DELMIA Quintiq team was dedicated to ensuring a smooth implementation for Thalys. The team enforced full transparency on both sides to ensure good progress and mutual satisfaction. The configured DELMIA Quintiq solution integrates into Thalys' existing IT structure and covers crew planning from long-term until day-of-operations, including:

- Crew diagramming – long-term shift creation by assigning train services from the timetable to shifts
- Crew rostering – assignment of shifts to days in an anonymous week
- Employee scheduling – assignment of employees to rosters
- Roll out of long-term plans to actual weeks of operation and handling of exceptions such as train modification, employee leave or specific contracts
- Crew control – short-term and days-of-operation crew planning

While usage of the DELMIA Quintiq solution will start with 260 operating agents and 70 non-operating agents, a total of up to 600 agents in four locations are expected to use it in time to come. DELMIA Quintiq's planning application is available in French, Dutch and English.



The future

Thalys and DELMIA Quintiq are keen to expand on their partnership. With DELMIA Quintiq's crew planning solution successfully rolled out, Thalys has growing confidence in DELMIA Quintiq's ability to assist in other aspects of rail planning. The company recognizes the need for a single integrated solution for all its planning challenges. Not only will an integrated solution be more robust, easier to use and able to respond to disruptions more quickly, it is also lower in maintenance costs and total cost of ownership.

The Thalys-DELMIA Quintiq partnership will be extended in phases. Work is underway to extend the scope of DELMIA Quintiq's crew planning solution to incorporate fleet planning. A separate solution for timetabling may also be built in the near future.

"The DELMIA Quintiq team was well-prepared and responsive. The strong collaboration between our team and theirs made the transition from our previous solution to the new one much smoother than expected."



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