



DanPilot



Case Study

Location and Sizing of DanPilot's Crew and Fleet



Business Case

DanPilot engaged Opsiana to create a strategic analysis of their pilotage network, with the aim of reducing costs by rationalizing the existing number of pilot boats and pilot bases.

Opsiana met with a variety of relevant stakeholders at DanPilot to get a clear understanding of their business requirements, their network structure, and operating practices. Discussions with DanPilot's management provided a good understanding of strategic drivers for how DanPilot see their position going forward and how they need to adapt to succeed in the future business landscape.

Opsiana formulated and implemented a mathematical optimization model to explore the best possible configuration of DanPilot's operations. The model considers DanPilot's operation in detail, including capital costs of boats and pilot bases; pilot wages and overtime compensation; union agreements; multiple travel modes for the pilots; and many other factors. The model generated detailed suggestions of how DanPilot could reconfigure their geographical setup to reduce costs while maintaining a highly responsive pilotage service.

The analysis was delivered to DanPilot clearly highlighting the ideal setup of their operations and also indicating where different choices could be made.

Results

Detailed recommendations for reconfiguration of the pilotage network, including:

- Optimal number and location of crew bases.
- Ideal number and location of pilot boats.
- Quantification of reductions in transport costs, overtime wages, and capital expenditures.
- Maintaining the pilotage certifications of all pilots in the system.
- Investigation of a wide range of business scenarios potentially impacting the reconfigured network.

“Opsiana delivered this engagement on a tight deadline. They engaged competently with all stakeholders at DanPilot and understood our position and the aim and boundaries of the project.

Their communication was clear and relevant and assisted in achieving the goals for the project.

DanPilot has been satisfied with the work carried out by Opsiana and will in the coming years implement a new network structure based on Opsiana’s recommendations.”

Steen Larsen

Head of Planning, IT and Digitalization at DanPilot

About



DanPilot

DanPilot is an independent public enterprise under the Ministry of Business and Growth, with the Danish Maritime Authority as the supervising authority.

The narrow Danish waters are amongst the most densely trafficked waters in the world and at the same time also the passage to and from the Baltic Sea. Each year thousands of large vessels with dangerous cargo, for example from the major Russian oil terminals and others, make use of this passage.

DanPilot was established to safeguard this traffic against accidents, which could have devastating consequences for the transportation by sea and the Danish marine environment.

DanPilot handles the public pilotage through Danish territorial waters from any destination in Denmark to all ports in the Baltic Sea. As the unique full-service provider in Denmark DanPilot offers pilotage to all Danish ports as well. DanPilot is obliged to deliver pilotage in Denmark and handles the majority of transit pilotage through Danish waters.



Opsiana is a dynamic, Scandinavian-based consultancy, providing customer-centric, innovative solutions for the most complex business problems.

Opsiana's consultants are recognized optimization, simulation, and analytics experts with deep knowledge of the transportation, and energy industries. This combination of industry knowledge and analytics expertise allows us to understand our clients' business environment in depth and to propose unique solutions that give them a competitive advantage.

Together, Opsiana's consultants have 36 years of experience implementing optimization systems for leading international companies such as Boeing, Maersk, DNV-GL, ILOG, Level (3), Technologix, SAS, and Jeppesen.