Femern
Sund ≋ Bælt

▼ Predict!

How Femern A/S drove mega-project success with proactive risk management

1 Framework
for transparency and compliance

€7 billion
($8.2 billion) construction budget

18 km
underwater tunnel infrastructure project

Products:

Predict!

Programs:

Infrastructure, mega-projects

Introduction:

Femern A/S is breaking new ground in global transport systems with the Fehmarnbelt link. After a decade of planning, the world's longest immersed tunnel will link Germany and Denmark and slash journey times once completed in 2029.

Forty meters beneath the Baltic Sea and stretching 18 kilometers, it's Northern Europe's largest construction project with a construction budget of over €7 billion ($8.2 billion). Critically, this mega-project is designed to drive new levels of sustainability, efficiency, and economic opportunity for the region.

Problem:

The Fehmarnbelt Tunnel is a colossal undertaking—79 individual tunnel elements, each 217 meters long and weighing 73,000 tons. Once complete, the tunnel will enable travel between Denmark and Germany in just 10 minutes by car or 7 minutes by train. As part of the EU's ScanMed Corridor, the project directly contributes to the EU 2050 climate goals and will employ 3,000 people during construction, with many more in the supply chain.

Such scale demanded a new approach to managing risk. The Femern A/S executive management team, led by Risk Manager Bo Nygaard Sørensen, established core goals for risk management strategy and culture:

- An easy to use, integrated, and dynamic risk register together with a full risk picture across the mega-project.

- Develop a risk index to identify, categorize, manage, and mitigate all risk in a structured, transparent and timely way. Underpinning this was an adherence to Danish government regulations and compliance.

- Establish an agreed level of risk management competency and knowledge across all Femern A/S employees.

- Capture all internal and external risks via Predict! to provide a real-time and accurate view of exposure, together with treatment plans.

- Drive thinking, strategies and culture with robust, regular reporting.

> "Risk management demands a behavior shift. We ensured buy-in by delivering specific training with Predict! for risk owners and department heads, embedding learning with doing. Next steps were to support and fine-tune any gaps to motivate and empower the team."
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> **Bo Nygaard Sørensen, Risk Manager, Femern A/S**

LUMIVERO

Solution:

Femern A/S engaged with Predict! right from the beginning; using the integrated risk database and Monte Carlo analysis platform to inform the decision-making on whether to build an immersed tunnel rather than a bridge. The Femern A/S team were committed to leading a risk positive culture as risk maturity in construction evolved. Using a software program like Predict! for the first time meant shifting from spreadsheets to a flexible, integrated tool. He adds, "Risk management demands a behavior shift. We ensured buy-in by delivering specific training with Predict! for risk owners and department heads, embedding learning with doing. Next steps were to support and fine-tune any gaps to motivate and empower the team."

Results:

Femern treated risk as a strategic driver from the very start. Predict! was integrated into the core infrastructure, evolving alongside the project to keep pace with constantly changing risks. By embedding risk management into the project's DNA, the team could preempt issues threatening timelines. "Anything that could postpone the project and disrupt the critical path and schedule is a risk. Putting a cost on risk makes people listen and time is often the most expensive part of projects at this scale. Yes, there are other risks, but the single most important factor is anything that interferes with time," Bo emphasized. Importantly, risk became a shared responsibility—not an administrative burden. Bo cultivated a culture where every stakeholder saw risk as a success factor, not a blocker:

"Everyone's invested in this project being a success, so we don't see risk as a negative. Instead, it's important to identify, mitigate and work with risks. Of course, historically, it has been seen as an admin burden, but now we show risk owners how it can be seen as the line of success running through the project," said Bo.

As construction ramps up after a decade of planning, Predict! remains Femern's framework for accountability, transparency, and compliance. It ties risk management directly to the company's values and operational effectiveness. For Bo, embedding risk management across the organization "ensures we do the work we're supposed to do." Tying risk effectiveness back to core organizational values was a key implementation strategy and a significant win for Femern and Predict!'s collaborative approach. Compliance is also essential, especially for projects of this profile and scale. "Predict! fulfils all the requirements of how we work with risk and how we document it, in line with ISO 31000 – as long as we're using Predict!, we're compliant," said Bo.

> "Continuous improvement is a core value for us. With Predict!, we can demonstrate governance, oversight, and management across all risk touchpoints to the board. And how this leads to continuous improvement. It gives complete confidence to the executive management team and reassures everybody that the framework works as it should. Ultimately, it delivers the results they want to see."
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> **Bo Nygaard Sørensen,**
> **Femern Risk Manager**