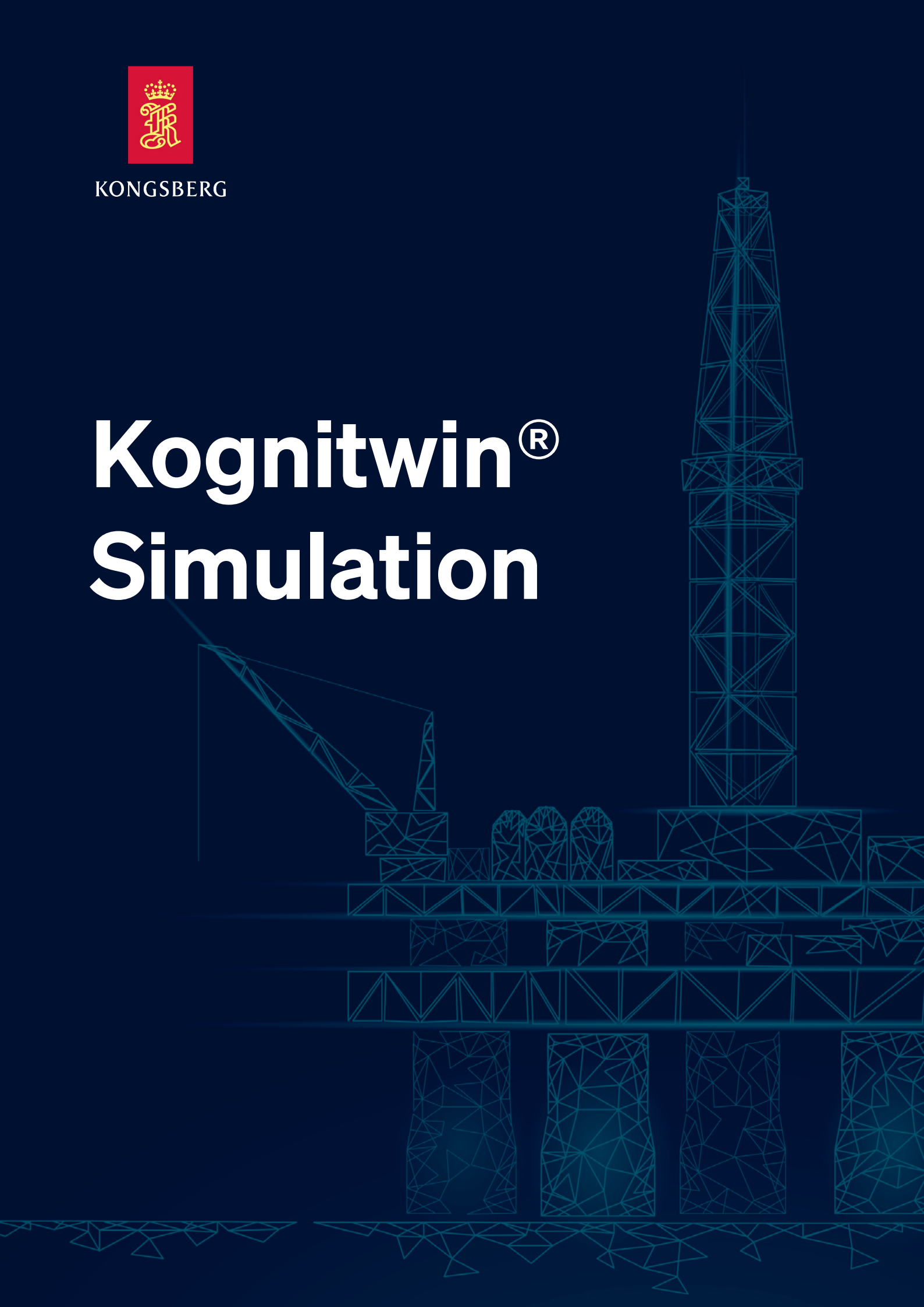




KONGSBERG

Kognitwin[®] Simulation



Power your industrial operations

Unexpected failures or downtime in the energy sector can severely impact production and profitability. On-the-job training for complex operations is expensive, time-consuming, and often impractical. Meanwhile, reducing energy consumption and emissions are key priorities in transitioning to sustainable operations.

Kognitwin Simulation provides access to a wide range of simulation models, enabling digital visualisation and contextualisation of operations from any location.



Navigate complex scenarios with high-fidelity simulations

Kognitwin Simulation enables energy organisations to build and access high-fidelity digital twin models of important facility assets. Mapping these models with relevant data allows users to visualise real-time field production operations digitally and in context, providing 24/7 access from any location. Energy operators can also leverage the power of AI to model future “what if” scenarios quickly and comprehensively for a distinct competitive advantage. This better positions them to identify issues and opportunities that will improve day-to-day operations.

Future-proof energy operations with sophisticated simulation technology

Through Kognitwin Simulation, users can access cloud-native versions of K-Spice, LedaFlow, and other simulation models to visualise and contextualise operations digitally from any location.



Generate real-time insights

Through our cloud platform and the Industrial Work Surface, you can access high-fidelity, real-time simulations that reflect the current state of your process facilities. This better positions you to identify issues and opportunities that can help you improve day-to-day operations.



Access powerful simulation capability from anywhere

K-Spice enables detailed dynamic simulation of oil and gas processes and control systems throughout the whole process lifecycle. LedaFlow is a dynamic multiphase flow simulator that ensures the safe, continuous flow of oil and gas from the reservoir to processing facilities. Further, Kognitwin offers unparalleled interoperability, seamlessly integrating with a wide range of industrial simulators.



Test designs and enhance training through “what-if” scenarios

Our cloud platform offers near-infinite scalability, so you can grab a snapshot of the current state of the simulation to run your own “what-if” cases. You can also set the system to automatically trigger optimisation, sensitivity, or look-ahead simulations that report back to you with useful findings.



Maximise cost-efficiency for ongoing operations

Kognitwin Simulation gives you access to top-tier simulations that help your organisation reduce costs overall. Moreover, you only pay for the capability you use, which helps eliminate high upfront costs and ongoing maintenance expenses.



The solution in action

Maximise safety and production by knowing how to handle a range of different scenarios

As the leading Norwegian continental shelf (NCS) operator, Equinor oversees the third-largest oil field, Johan Sverdrup. Key stakeholders like Operations Process Technicians must be prepared for any scenario. However, on-the-job training can be expensive, time-consuming, and often not feasible. Simulators help improve operators' flexibility and response time. They can also better prepare for activities like shutting down and starting up.

Knut Bolme, Process Engineer and Simulator Instructor for Equinor offered an example: "We had an incident with a tripped low-pressure compressor on Kristin. The trip sequence failed, and we had a 4-hour lockout period for a gas turbine before we could start up again."

Typically, operators are forced to prevent flaring by closing wells in such situations. This often results in significant delays as operations halt until the equipment is repaired or replaced. However, based on their immersive simulator training, the team [could continue producing](#) without risk to their people or the environment.

Gain a competitive edge in a rapidly evolving energy industry

Kognitwin Simulation empowers energy organisations to overcome costly downtime, impractical training, and emissions challenges by providing high-fidelity, real-time simulations of facility assets. This cloud-based solution allows users to test scenarios, optimise operations, and improve collaboration, driving safer, more efficient, and sustainable performance across their value chain.

"Some of the crew members had never done this operation live before. But I have been training for it on the simulator. Based on our training, we decided that we could start up in high-pressure mode. Production could continue at a reduced rate while waiting for the low-pressure compressor to be put back in operation."

Knut Bolme,
Process Engineer and Simulator
Instructor, Equinor