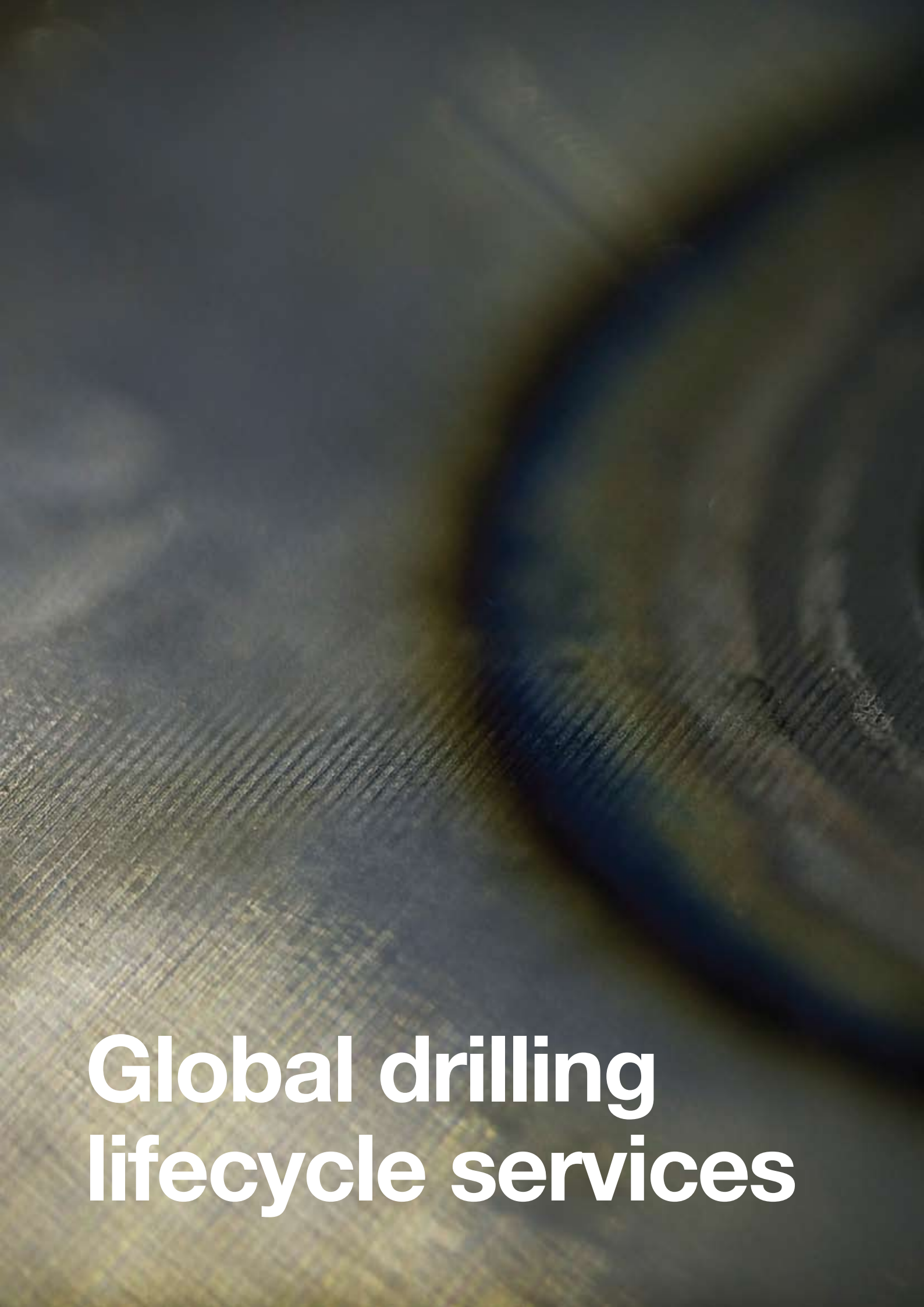


Global drilling lifecycle services

Global drilling lifecycle services

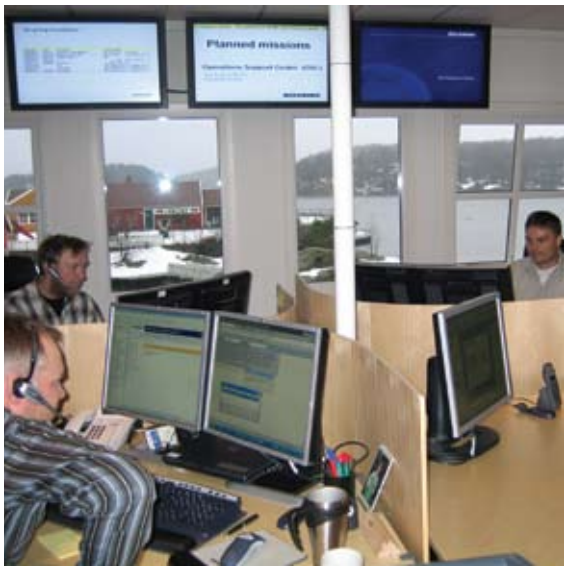
Aker Solutions offers global drilling lifecycle services (global DLS™) to all drilling equipment and systems customers around the world. The global DLS™ organisation serves customers through four strategic hubs in Brazil, Europe, Singapore and the US.

Aker Solutions has been delivering drilling equipment and solutions to the global oil and gas industry for 40 years. We provide the full range of services required to ensure excellent performance and safe operation of drilling equipment, throughout the lifetime of the equipment.

Aker Solutions offers lifecycle services for all drilling equipment and systems, from top drives and drawworks to drilling risers and mud mixing systems. We serve our customers from our locations around the world, including the four strategic hubs.

Each hub is staffed with experienced industry professionals who are ready to support our customers where they are, when they need assistance. The hubs are also equipped with Aker Solutions' industry-leading drilling simulators, which offer customers onshore training opportunities. Our technology also provides clients with new opportunities for rig optimisation.

Global services
- Technical support
- Spare parts
- Overhaul and modification
- Training centres
- Drilling equipment simulators
- IPort™ – integrated operations centre
- Lifecycle engineering
- e-services
- Worldwide support



Technical support

To secure professional technical support and customer satisfaction we operate with 24/7 services. Technical and operational support can be provided through a team of technical customer expeditors and a large number of highly skilled service engineers.

A team of senior engineers support complex troubleshooting and engineering capacity and cover all applicable disciplines, i.e. mechanical, hydraulic, electro, instrumentation, control system, software, structural and calculation. All customer services are provided on a global basis.

Spare parts

Our global network of strategic regional spare parts inventories ensure that critical, recommended and consumable spare parts combined with experienced expeditors are available at all times. Our main inventory is located at the head office in Norway and a team of logistics specialists complements the spare parts supply service 24/7 to secure timely delivery.

Overhaul and modification

We offer professional overhaul and installation services, modifications and upgrades. Experienced and competent project managers and senior engineers plan and supervise the work.

Our services are based on international industry standards, internal procedures, original manufacturing drawings and documentation. We ensure that all parts are original, and that our sub suppliers are certified according to our quality standards. DnV and ABS carry out these certifications on our behalf as part of our services.

Added value for the customers are warranty on all overhauls, updated original documentation, original parts, implementation of bulletins (HSE issues), overhauled equipment prepared for condition based maintenance, and a wide range of exchange components to reduce non-productive time during overhauls.

Training centres

Professional training and competence are key success factors in maximising uptime and ensuring a safe operation of drilling equipment and drilling rigs. Aker Solutions' drilling equipment simulators have changed the concept of training dramatically. This tool offers a unique opportunity to train personnel in rig specific and critical operations. Skilled instructors use the latest technology to ensure professional training according to our customers' demands and official regulations.

Our facilities include fully equipped classrooms, simulator facilities, single equipment simulators and a technical training lab.

We offer
- Courses
- e-Learning
- Equipment and systems
- Technical and operational training
- Tailor-made project training
- Practical training
- Computer-based training

Drilling equipment simulators

The drilling equipment simulator (XfactorDES) is a multifunction 3D simulator that provides mathematically correct models of rigs. Each rig is meticulously recreated as a virtual asset, including all rig equipment and control systems. This offers the possibility of onshore training and detailed operational planning in virtual environments that are identical to those offshore.

Providing a clearer view of the offshore installations and functioning as a testing ground for upgrades and installations, the simulator has proven its value in terms of everything from HSE benefits to increased speed and efficiency of well drilling.

Area of use
- Design of drill floor, processes and control systems
- Quality assurance of entire process by 3D visualisation and simulation of actual equipment and control system
- Training of personnel
- Commissioning, by building the rig and applying the control system in the simulator. A log can be prepared virtually and off critical line, shortening the actual commissioning process
- Monitoring and optimisation of operating rigs
- Benchmarking of performance can be done at any given time, and possible deviations detected and handled
- Fault diagnostics of equipment
- Remote support for rigs in operation

IPort™ - integrated operations centre

The IPort™ centre comprises simulators, technological facilities and services in one integrated operations centre, contributing to project success. Visioneering refers to virtual engineering. Testing and optimisation in an in-house simulated environment results in thoroughly tested and fine tuned systems prior to on-site installation.

The offshore industry presents the petroleum community with especially challenging engineering tasks, involving multi discipline design in harsh environments. Safety and environmental concerns are of high importance, and high capital and operational expenses make reliability, confidence and visibility prime concerns.

The visioneering approach to systems design and realisation aims at reducing risks, removing uncertainty and lowering cost. Through use of innovative equipment and facility simulations as an integral part of the engineering process, the visioneering team can deliver projects on time and with considerably reduced commissioning time. The installed systems are optimised and fine-tuned to a level that cannot be achieved using traditional engineering practices. This ensures drilling rigs that operate at peak performance throughout their lifecycle. We achieve this performance through the use of our patent-pending process and technology.

Our “try before you buy” principle ensures that your equipment package is composed and integrated in a way that provides the best possible performance for your rig requirements. Testing and optimisation in an in-house simulated environment prior to on-site installation, reduces the number of offshore personnel required for installation and commissioning.

Improved results through virtual engineering ensures

- Optimised rig performance
- Reduced non-productive time
- Tested and proven systems

Visioneering will help all involved parties better understand the reality on board, and prevent costly mistakes and misunderstandings.

Lifecycle engineering

Aker Solutions constantly strives to reduce operational expenditures by helping our customers add value to their installed base. With increasing product complexity and a continuous focus on high HSE standards, we believe our lifecycle engineering services are fundamental. We cover everything from single equipment to entire drilling systems.

e-services

Aker Solutions' installed base has grown sharply in recent years, and to meet our customers' expectations and provide excellent services for rigs in operation, we have initiated an e-services technology pilot project.

The development is based on our front end technology and will give a full real-time 3D monitoring of the drilling process from our onshore IPort support center. Condition based maintenance and remote diagnostics, as well as operational support will become integrated in our e-services.

Rig operators will be offered access to a state-of-the-art service with the following main objectives

- Offer pro-active rig support
- Minimise response time for pro-active technical and operational support
- Reach optimal rig performance and reduce non productive time

The goal is to achieve full real-time monitoring and to support the entire drilling process in joint efforts with the rig owners. Our e-services will lead to major reductions in response time for professional technical and operational support. Our customers will have extended access to senior competence via the Internet, where specialists can access, monitor and support the actual operation on the rig, without being physically present.

Worldwide support

> Rio das Ostras

Our main support centre is located at Aker Solutions' Drilling Technologies headquarters in Kristiansand, Norway. The three other strategic hubs are in Rio das Ostras in Brazil, Houston and Singapore. Other regional support centres are located in Aberdeen, Azerbaijan, Beijing, Dubai, Horten, Mumbai and Stavanger.

> Houston

> Singapore