OptiField

MaestroOS™

Decommissioning of energy and industrial assets – onshore and offshore

Knowing what to address first — and what can safely wait

Two-day workshop · up to 20 participants · one late-life asset case throughout

Classroom or virtual · no software and no network access required

Decommissioning is not construction in reverse. A late-life asset carries decades of modifications, maintenance history, ageing equipment, incomplete documentation and assumptions nobody has revisited. Whether the asset is an offshore installation, onshore process plant or other complex industrial facility, the central decision problem is similar: what should be inspected, repaired, isolated, made safe, deferred or removed first — and what evidence is needed before committing people, equipment and capital to that order?

About this workshop

Systems designed to operate together must be progressively isolated, cleaned, disconnected and removed — while parts of the asset may still have to function safely. The hard question is rarely what eventually has to go. It is what should be inspected, repaired, isolated, made safe, deferred or removed first, and what evidence is needed before committing people, specialist resources, equipment and capital to that order.

One question runs through both days: what should we address first, and why? Participants work from an asset as it actually exists — condition, history, dependencies and missing information — rather than an idealised baseline. They learn to separate condition from consequence, because the most degraded equipment is not automatically the first thing to address.

The course also treats the two decisions people most often merge: when to stop producing, and when to remove. They have different drivers, different deadlines and different reversibility, and conflating them is expensive.

What makes it different

- **It starts with the asset as it is.** Incomplete records, undocumented modifications, conflicting evidence and uncertain condition are the material, not an inconvenience.
- **The method works across asset types.** The same decision framework applies to offshore installations and onshore industrial facilities; the execution constraints, logistics and regulatory context are adapted to the asset being decommissioned.
- **It separates condition from consequence.** Participants trace what a failure or an intervention can affect elsewhere in the system, and prioritise on that rather than on the worst-looking equipment.
- **The asset changes while the work proceeds.** Every isolation and removal moves system boundaries, dependencies and the risk attached to whatever comes next.
- **Estimates are treated as evidence, not as facts.** Decommissioning cost and schedule estimates are wrong in a known direction. The course shows why, and what to do about it before committing.
- **It ends in a defence.** A sequence that cannot be explained to a regulator, a partner or a board is not yet a decision.

Learning outcomes

1. Frame a decommissioning problem at asset, system and equipment level.
2. Distinguish the cessation decision from the removal decision, and recognise what each one actually turns on.
3. Establish what information is required to understand the current condition and configuration of a late-life asset.
4. Distinguish asset condition from the consequence of failure or intervention.
5. Identify dependencies and propagation pathways across interconnected systems.
6. Compare inspection, monitoring, repair, isolation, make-safe, defer and removal alternatives.
7. Prioritise competing work using technical risk, HSE, dependencies, cost, schedule and uncertainty.
8. Judge whether additional inspection or testing could change the decision — and stop paying for it when it cannot.
9. Read a decommissioning cost and schedule estimate critically, including the direction in which such estimates are typically wrong.
10. Develop defensible sequences for progressive isolation, preparation and removal.
11. Present and defend a priority or sequence to a technical, management or regulatory audience, including what evidence would change it.

The two days

Day	Content
One · Understand, assess and prioritise	The decommissioning lifecycle from late-life operation through cessation, make-safe, preparation, removal and material disposition. Cessation as its own decision: late-life operating cost against the liability, the value of deferral, and the dates that are genuinely fixed. Asset configuration, registers, inspection and maintenance history, documentation quality and undocumented modification. Teams build an asset picture and mark what is known, what is assumed and what is missing. Late-life integrity: corrosion, structures, pressure systems, piping, valves, rotating and supporting equipment. From condition to consequence — effects on people, containment, access, schedule and the work that follows. Alternatives: inspect, monitor, repair, isolate, make safe, defer, remove, or retain where permitted. What information is worth buying before committing. Teams prioritise competing issues and defend the order.
Two · Sequence, cost and defence	Make-safe, cleaning and preparation, hazardous inventories and temporary systems. Asset-specific execution considerations: process and utility systems, structures, access, dismantling and lifting; pipelines and associated infrastructure; and, where relevant, subsea systems and marine operations. SIMOPS and changing system boundaries. Cost and schedule under uncertainty: specialist equipment and contractors, lifting resources, logistics, access, weather or operating constraints, waste handling and disposal, and why estimates drift in one direction. The capstone requires an integrated sequence, defended to a panel, while new information changes the case.

THE CAPSTONE

Teams hold a late-life asset, competing integrity and preparation work, finite specialist-resource, equipment and crew availability, and a budget that does not cover the list.

The course case can be configured around an onshore or offshore asset depending on the client and participant group.

New information arrives once they have committed. They revise, then present the sequence, the evidence behind it, what they chose not to do, and what would change their mind — to a panel that asks the questions a regulator or a partner would.

The reasoning is the deliverable. Nobody is scored.

Who should attend

- Decommissioning, facilities, mechanical, process, structural, integrity, subsea and pipeline pipeline and, where relevant, subsea engineers.
- Project, operations, maintenance and HSE personnel working on late-life energy and industrial assets.
- Those who review, approve or regulate decommissioning scopes as well as those who develop them — the method is the same from either side of the table.

Relevant assets include offshore installations, onshore oil and gas facilities, terminals, processing plants, power and energy facilities and other complex industrial assets.

A working familiarity with energy or industrial facilities is useful. No background in formal decision analysis is required.

What participants take away

- **A prioritised, defended sequence.** Built by their own team on the course asset.
- **A way to separate condition from consequence.** Portable to any asset they go back to.
- **A sharper eye for estimates.** Including what to ask of a decommissioning cost estimate before relying on it.

Delivery and what the venue needs

- **Format.** Two consecutive intensive days, up to twenty participants in teams of four. One case runs through both days. The case can be configured for an onshore or offshore asset depending on the client and participant group.
- **The method, and the software.** The method stands on its own and is worked on paper throughout. Software appears once, briefly, demonstrated from the front on the course case — long enough to show what the same reasoning looks like when the arithmetic is automated. Nothing is installed, no network access is required, and no participant needs a laptop.
- **Confidentiality.** All shared and assessed work runs on a course case, not on participants' own assets. No participant is asked to disclose their organisation's information to the room or to the instructor; own-asset work stays on their own paper. The course is suitable for a room drawn from several organisations, including operators, contractors and authorities together.
- **The room.** Tables that can be arranged as islands for teams of four, a screen, and printing. Classroom or virtual instructor-led; in-house or open enrolment.

The instructor

Oddvar Spjeld is a mechanical engineer with more than 25 years across energy and industrial engineering, offshore facilities, modifications, maintenance, reliability and integrated operations — disciplines central to understanding late-life assets when documentation no longer fully reflects what is actually installed.

At Aker Solutions he held EPCI responsibility for the modification and maintenance portfolios on Troll B and Gullfaks C, roughly NOK 100 million and NOK 200 million a year respectively, and was Shut-down Manager for turnarounds on Åsgard, Snorre, Visund and Gullfaks — campaigns in which systems are progressively isolated, made safe and handed back under time pressure. Earlier he was package-responsible mechanical engineer for flare systems, scrubbers and gas-turbine packages.

At Statoil/Equinor he led predictive and condition-based maintenance and reliability improvement across offshore and onshore assets, work built on exactly the asset condition and maintenance-history evidence that late-life decisions rest on. He holds a BSc in Mechanical Engineering from Louisiana State University and a Master of Management in business strategy and project management from BI Norwegian Business School, and completed NTNU's programme in Reliability and Maintenance Management. He is co-founder and CEO of OptiField.