

OIL, GAS AND CHEMICALS INDUSTRY

ABB in oil, gas and chemicals.

A proven approach for minimizing cost, schedule and risk across the full hydrocarbon chain.

abb.com/oilandgas
abb.com/chemical

Notes:

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein.

Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB.



Turning chaos...

Recalibrating to the post-boom environment will challenge every sector of the oil, gas and chemicals industry.

Adjusting to flattening economic growth across many markets and significant margin pressures caused by uncharacteristically low prices – expected to continue for the foreseeable future – has created a perfect storm of problems to derail performance.

Against this backdrop of macroeconomic uncertainty, business operations are trickier than ever before:

- Deposits are increasingly hard to reach both technologically and geographically
- The explosive rise in unconventional deposits is forcing industry players to chart new territory
- Growing complexity caused from data streaming in from multiple sources and disparate systems is overwhelming employees' ability to make optimal decisions
- Experienced workers are retiring and new employees are well-educated but lack practical experience
- Environmental and safety legislation is more and more stringent

...into clarity

With great challenges, come extraordinary opportunities

Increasingly affordable sensors, exponential growth in computing power and ubiquitous connectivity are driving a fourth industrial revolution which promises a transformational increase in productivity of 30 percent or more.

However, without the infrastructure and support to harness the ever-increasing reams of statistics now available to operators and to turn data points into actionable insights, the potential benefits of digitalization will remain theoretical for many.

ABB empowers you to turn opportunity into reality

We help reduce complexity by simplifying processes and improving the flow of information by ensuring that the right people have the right information at the right time.

We turn dumb data into analytic intelligence. Our technology sifts through the extraneous detail, leaving operators free to focus on what matters – taking the decisions which will optimize operations, improve reliability and generate competitive advantage.

Partnering with ABB not only gives operators a fully integrated automation and electrical solution but also one which, uniquely incorporates all telecoms integration requirements from the same provider.

Our approach is proven to result in up to 30 percent lower costs, reduced risk and more predictable project execution. And, we do this while simultaneously ensuring that your most important assets – your people and your information – are protected through coordinated safety and cybersecurity systems that improve work environments and protect against external threats.



Collaborative operations.

Delivering actionable insights to optimize performance in a digital world.

Ensuring companies take the correct actions at the right times is critical for success. That is why ABB has partnered with Microsoft to develop one of the world's largest industrial cloud platforms giving customers new insights to empower faster, more astute decision making. Only when things, services and people are in sync will real change occur - all three matter and ABB has a proven track record of bringing these elements together seamlessly.

With an installed base of more than 70 million connected devices and more than 70,000 digital control systems across a range of industries and its deep understanding of the oil, gas and chemicals (OGC) industry in particular, ABB makes it possible to "see, hear and feel" industrial processes like never before.

Collaborative operations:

A proven four-angled approach to cut costs, reduce schedules and minimize risk through properly integrated digitalization

ABB's collaborative operations approach addresses the need to use big data and data analytics to realize the potential of the industrial internet of things. We consolidate data to manageable levels whereby people can take decisions, helping to improve coordination between functional silos

by providing greater visibility and real-time system integration.

Our approach is scalable such that companies can join in where it makes sense – though full benefits will only accrue to those opting for the totally integrated solution.

The first two phases provide the foundation on which performance improvement and cost containment rely while the other elements ensure that initial engineering and infrastructure investments continue delivering the desired results over the long term.

1 Intelligent engineering

Typically, power and automation projects in the OGC industry involve many packages such as drives, control systems and telecoms being put to bid. The more vendors are involved the greater the complexity, the larger the footprint required, the bigger the risk of human error and the increased likelihood of cost and time overruns.

ABB's intelligent engineering approach covers the processes, tools and standards that take project execution from a traditional multi-vendor method

to one which streamlines the equipment mix to reduce human error, risks and labor costs. This also provides single-source accountability for extra peace of mind and shortens completion. Beyond initial project design, ABB can optimize customer objectives throughout the rest of the life cycle right up to decommissioning and end of life.



Up to 50% fewer man hours and four months quicker start-up



50% reduction in alarms and significant productivity improvements

3 Intelligent applications

Intelligent applications are software solutions and system components that help improve efficiencies and optimize performance across the enterprise. They ensure the intelligent infrastructure reaches its full potential to deliver sustainable profitability.

To that end ABB offers a comprehensive suite of applications designed to enhance day-to-day equipment efficiency, promote safe, secure production and make it easy to access expert guidance whenever and wherever required.

2 Intelligent infrastucture

While intelligent engineering simplifies and accelerates project execution, having an intelligent infrastructure which seamlessly integrates process control, safety, power automation, telecoms and electrification systems into one collaborative environment is the backbone of daily operations.

By optimizing the manner in which machines, applications and people communicate through an expert single-source supplier, ABB has proven that companies can significantly reduce capital (CAPEX) and operating (OPEX) expenditures while simultaneously improving production.



20% to 30% less OPEX and CAPEX and up to 60% space savings



20% improved uptime and 20 years extended lifetime

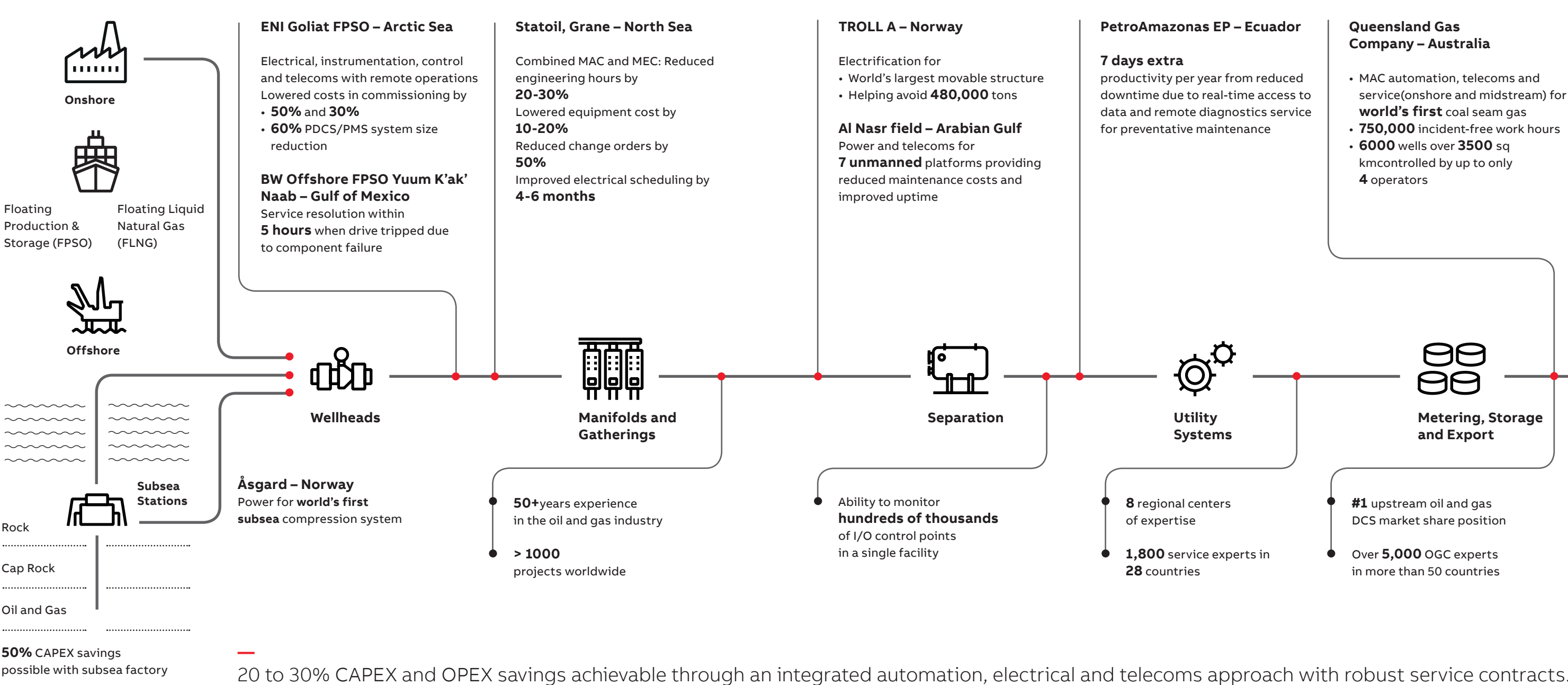
4 Intelligent services

Even the best systems need upkeep to minimize downtime and employees benefit from training to improve their effectiveness. Intelligent services enable companies to move from costly reactive or unnecessary time-based maintenance to planned and predictive interventions based on actual equipment needs to ensure a cost-efficient, extended life cycle for equipment.

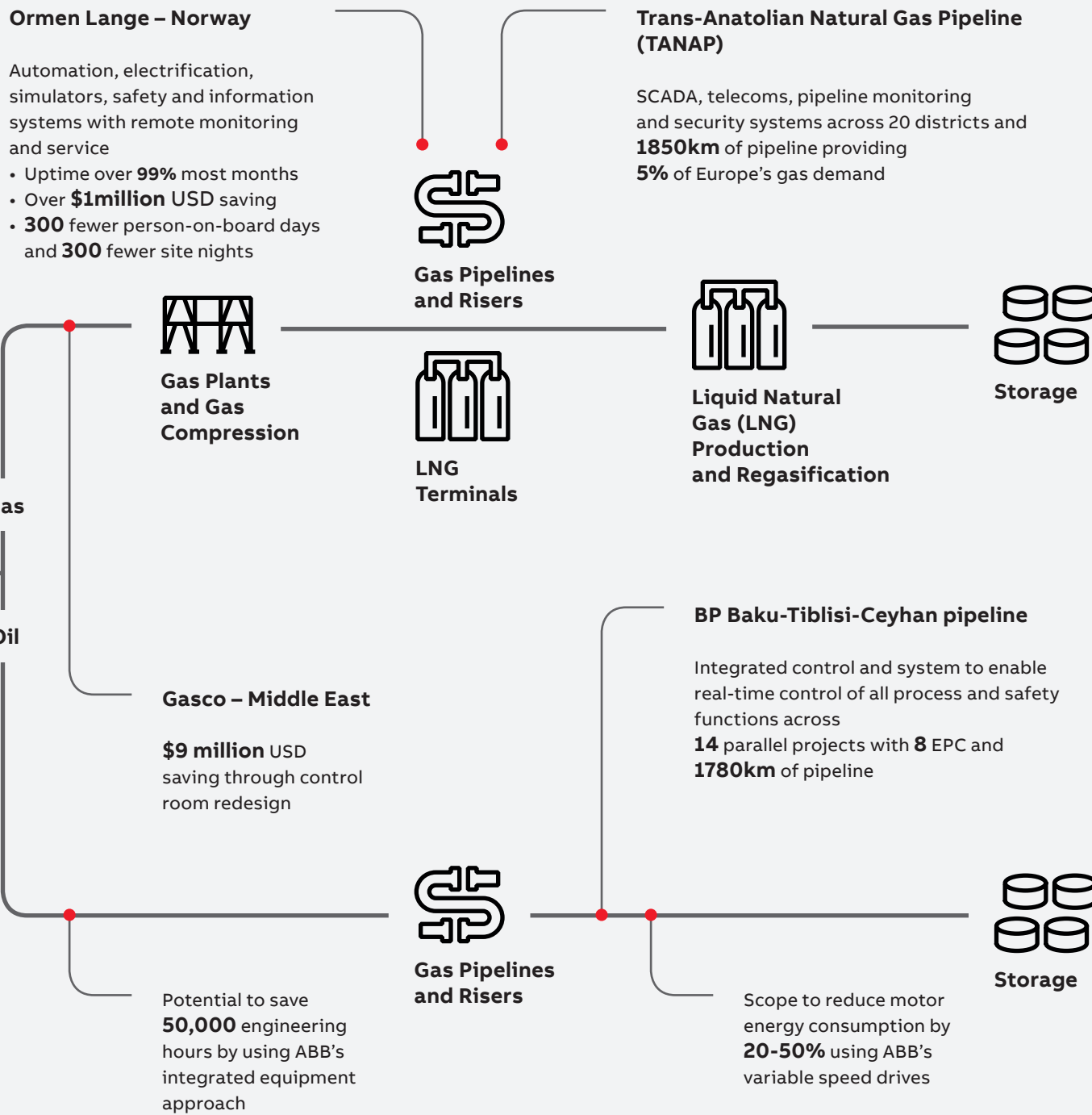
Through a range of OGC care contracts and service agreements, training programs and advanced capabilities, ABB helps operators ensure maximum performance of their equipment, people and processes by combining its considerable global experience with an extensive local presence.

ABB provides a proven track reducing cost, minimizing risk and keeping customers on schedule across the entire hydrocarbon chain – worldwide.

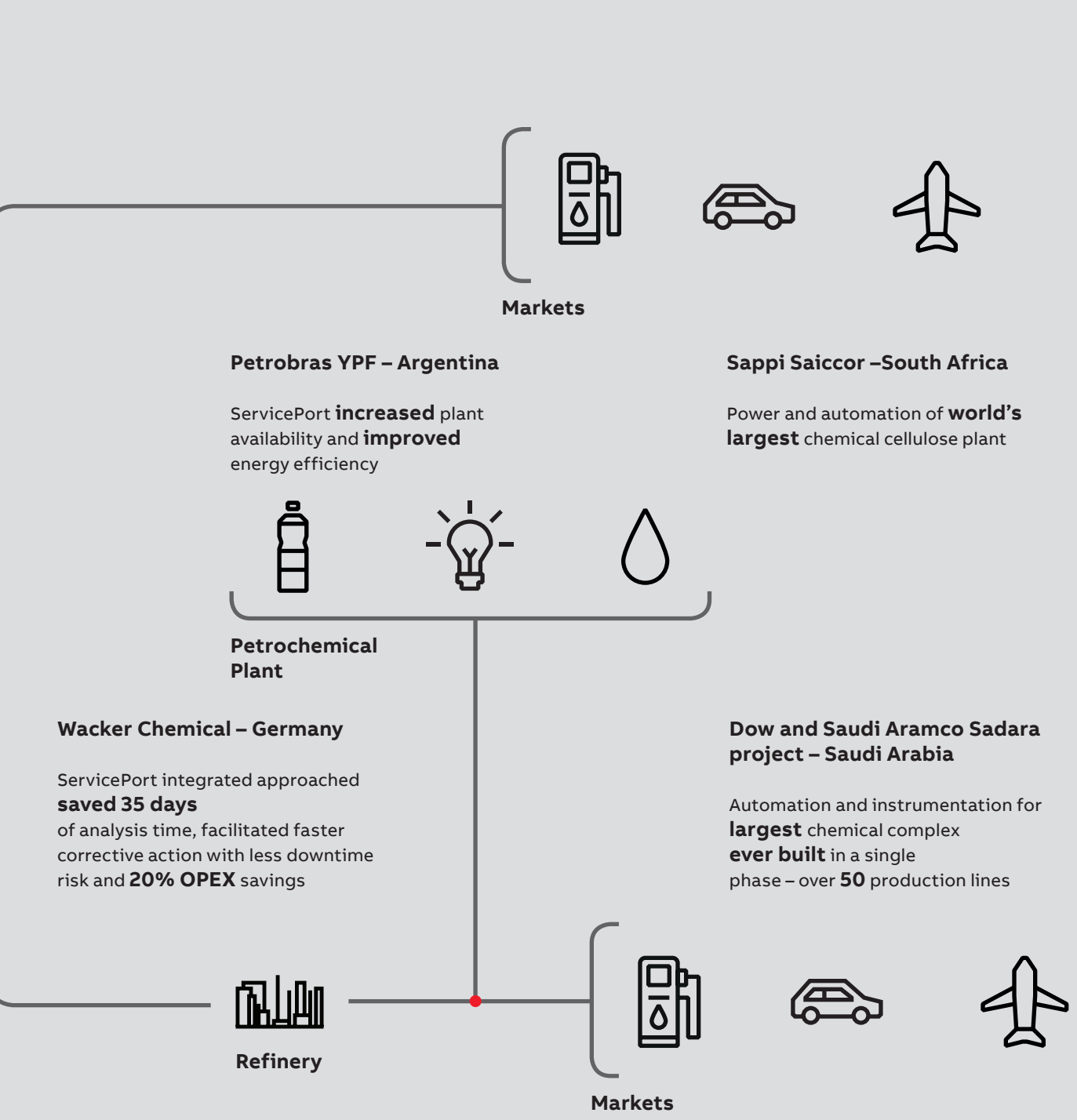
Upstream



Midstream



Downstream



Collaborative operations in practice.

Using digitalization to enhance integrated power, automation and telecom solutions to transform OGC projects and operations.

