

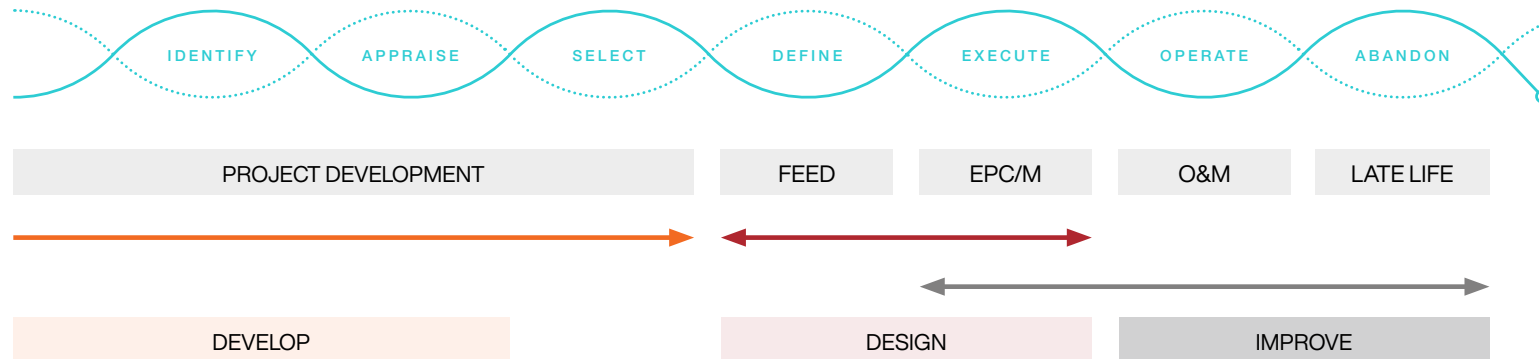
ENGINEERING AND CONSULTANCY SERVICES



Managing complexity, unlocking value

Petrofac's Engineering & Consultancy team combines creative thinking with practical experience and real asset data to help clients unlock value from their energy assets.

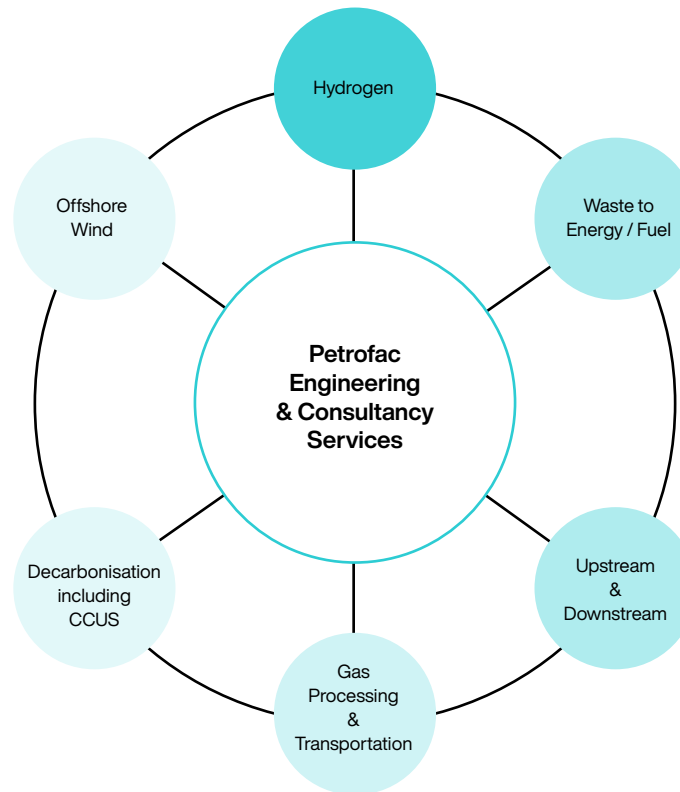
Our services span the energy asset life cycle; from project development into project execution, pre-operations through to operational improvement, late life asset support and into decommissioning.



Support across the energy landscape

We are committed to supporting our clients, partners and suppliers in their lower carbon ambitions. Our support spans the energy landscape and includes decarbonisation, including carbon capture and storage (CCUS), offshore wind, waste to energy and hydrogen developments as well as upstream and downstream projects.

Our consultancy and engineering services are fully independent. We have experience working with a range of technology providers, licensors, and original equipment manufacturers (OEMs), allowing us to define the best integrated solution for every project.

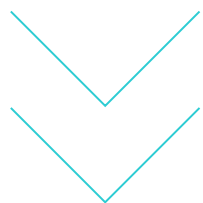


GLOBAL EXPERIENCE

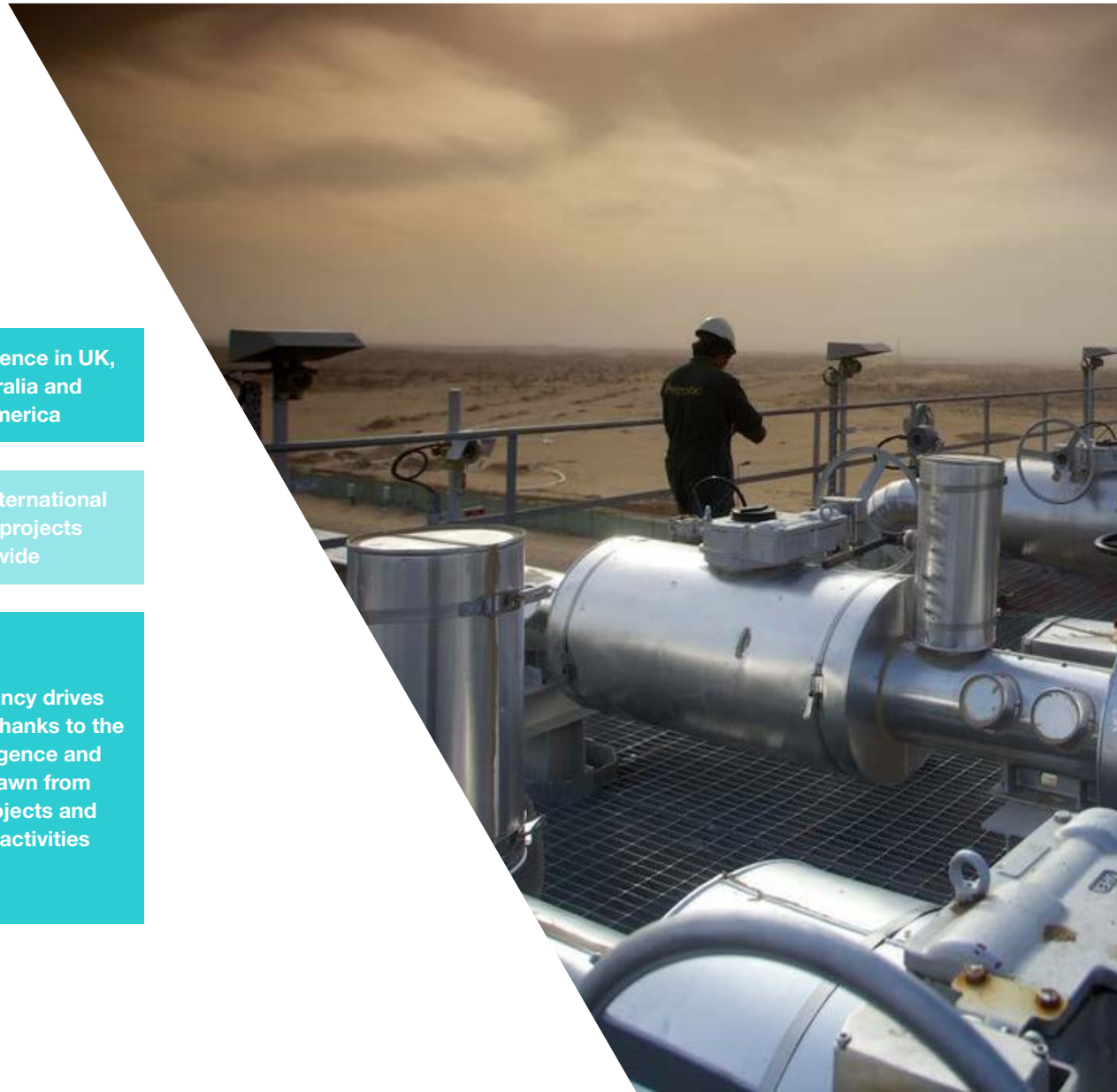
We have supported projects across the World, from the deserts of North Africa to the UKCS, the Russian Arctic to the Gulf of Mexico. Our experienced, multi-disciplined team has a rich skill set enabling us to solve the most complex project challenges.

FLEXIBLE DELIVERY

We are flexible in our delivery, providing these services through framework and similar agreements, as discrete projects or as part of large-scale integrated projects.



Our differentiators



Specialist life-of-asset consultancy and front-end engineering



Regional presence in UK, UAE, Australia and North America



Complements wider operations and EPC activities



Supported international clients for projects worldwide



20-year track record delivering more than 800 studies



Our consultancy drives better results thanks to the use of intelligence and live data drawn from Petrofac projects and operations activities



More than three million hours of consultancy and front-end engineering delivered



Develop

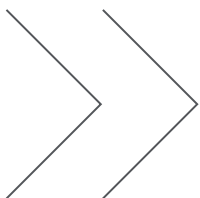
We are focused on providing the right guidance at the earliest project stages. Our project development consultancy spans field development planning, concept design, screening and selection studies, complemented by a strong technical team who help advance even the most challenging projects.

We draw on our EPC experience and operational know-how to shape our project development activities, enabling the trouble-free transition of projects through project sanction. By combining clever thinking with practical experience, we deliver designs, costs and schedules that can be trusted not to result in cost and schedule creep in later project stages.

FAST-TRACK PROJECTS

We integrate our services where there are clear opportunities to improve schedules and benefits to be gained from cost saving strategies. This might involve fast-tracking projects, integrating concept, pre-FEED and FEED phases, delivering early procurement of long lead items, or taking a modular fabrication approach to reduce total installed costs.

Integrating development and execution activities ensures technical continuity can be maintained. It also protects against the risks associated with executing FEED separately to execution by offering a higher degree of commercial certainty as projects progress.

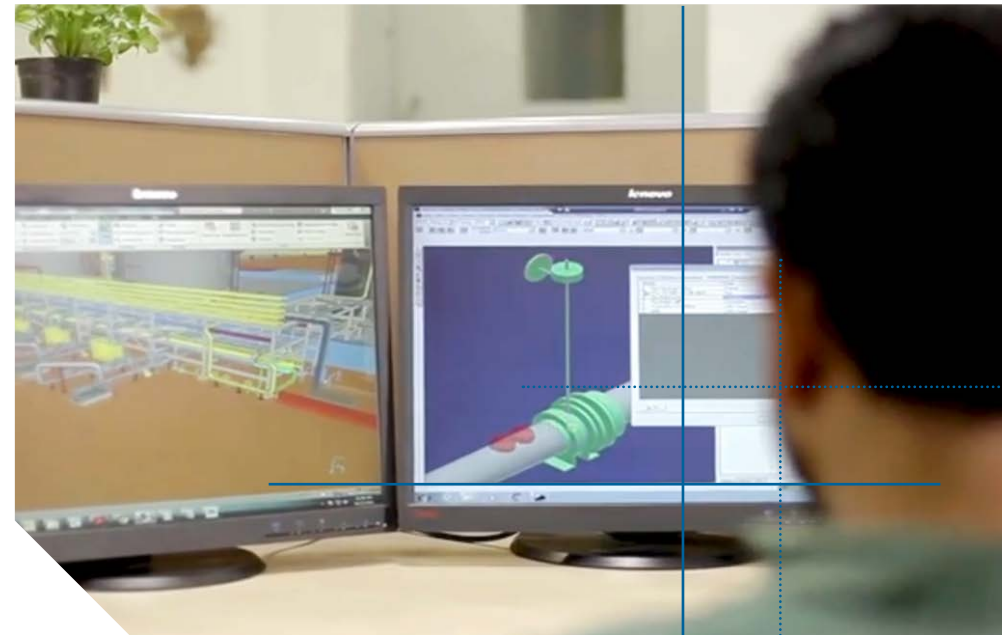


Design



Our engineering services span FEED into detailed design, through to procurement, commissioning, and site support. Our team is multi-disciplined, with experience in delivering both early engineering and detailed design for projects. Whether onshore, offshore, or subsea, our team has the knowledge and experience to support both new build and brownfield modification projects across the traditional and new energy landscapes:

Energy transition	Offshore and subsea	Onshore
Wind farms – jackets and topsides	Fixed structures	Well sites and flowlines
Electrical systems and distribution	Floating facilities	Export pipelines
Pipelines – onshore, offshore and subsea	Reception facilities	Central processing facilities
	Metering	Gas processing
Waste to energy / fuels	Risers and flowlines	Oil processing
Infrastructure and utility support systems	Umbilical and controls	Refineries
Decarbonisation and emissions reduction	Subsea production systems	Degassing stations
Hydrogen plant (blue, green and grey)	Manifolds and structures	Offsite facilities



We network with our other global engineering centres to provide value for our clients without compromising quality or local client interfaces.



Design - specialist consultancy



We have been helping clients develop their projects for almost two decades, taking projects through concept and FEED into execution. We take a practical and pragmatic approach to the early project definition phases to understand key drivers and objectives. Once these are understood, we challenge the rules and integrate our approach to focus on the technologies that will unlock the most value for our clients.

PROCESS TECHNOLOGY

We help define, improve or de-risk our clients' projects through process engineering-led studies that draw on our asset knowledge and experience to provide practicable solutions.

As the Energy Transition gains pace, new technologies are being developed to improve efficiency and reduce costs. Our team has the experience, technical and legislative understanding to properly evaluate the pros and cons of each opportunity and select the technology that will be key to project success. As a technology neutral provider, we are free to select the best solutions for each client and each project, and have established relationships with a wide range of technology providers.

SUBSEA AND PIPELINES

Our subsea, offshore, and onshore pipeline capabilities address design, integrity, and operational challenges across the asset life cycle.

Our expertise spans conventional seabed facilities associated with subsea tie-backs, through deepwater SURF and long-distance, large diameter pipelines.

FLOW ASSURANCE

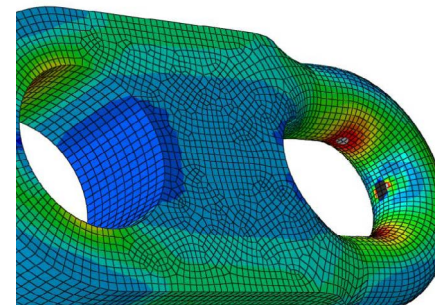
Our flow assurance consultants work closely with our pipelines and process teams, tackling offshore or onshore dynamic and steady state challenges. They blend experience, technical understanding, and software to develop practical solutions across the asset life cycle. Whether it's a start-up issue, dynamic slugging problem or analysis of wax or hydrates, the team supports across both the initial design and operating project phases.

STRUCTURAL ANALYSIS

We specialise in solving complex structural problems across the oil, gas, and offshore wind sectors, throughout the concept, design, operational and late life asset phases. Our in-house capabilities cover onshore, offshore and subsea infrastructure, for both fixed and floating assets.

SAFETY AND ENVIRONMENTAL

Our team delivers safety, risk, reliability, and environmental consultancy for assets onshore and offshore, from new builds to brownfield modification and decommissioning projects. We can support planning and permitting applications for new builds and have extensive experience of environmental and land-use planning.



Improve



We deliver improved asset performance strategies to drive more value from our clients' energy assets.

Using insights from our own operating data and learnings from historical maintenance and integrity strategy and optimisation projects, we quickly and efficiently collate, standardise and improve large, complex data sets drawn from our clients' operating assets and machinery.

Central to this activity is our proprietary software platform, BuildME; a Cloud-based asset management data and content development environment that supports the efficient control, management, and consolidation of complex data sets associated with operating assets and machinery.

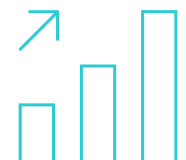
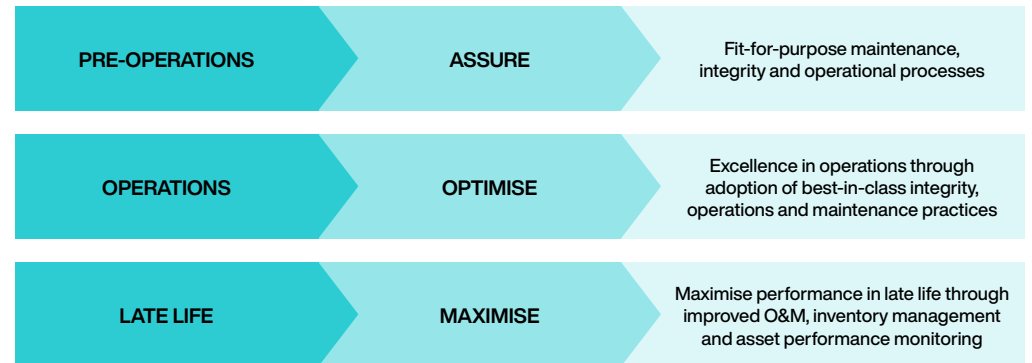
YOUR DATA, BUT BETTER

By making asset data work better for our clients, we can help them implement asset maintenance strategies that:

- > Ensure operational readiness
- > Improve safety and integrity
- > Increase reliability and availability
- > Reduce cost
- > Assure compliance
- > Improve the management of risk

SUPPORTING NEW FACILITIES

We support the pre-operational phase too, ensuring the effective start-up of new facilities by delivering fit-for-purpose maintenance, integrity and operational processes. This includes complete Computerised Maintenance Management System (CMMS) builds and training manuals, to assure ultra-efficient future operations.



Improve - bring best practice into operations



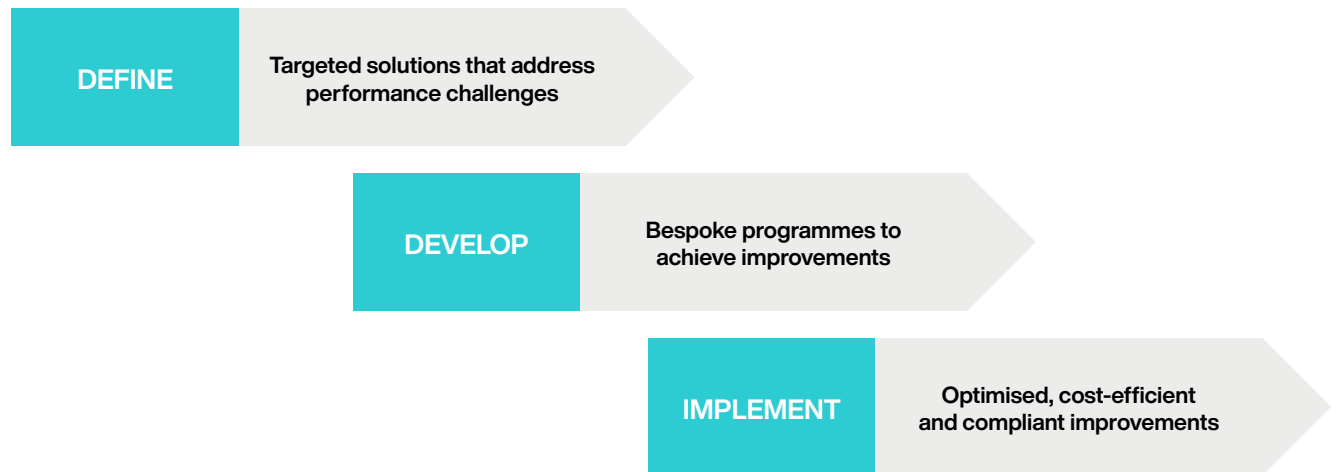
IMPLEMENTING IMPROVEMENTS

With decades of experience in the field, and a bank of highly experienced technical experts, we offer manpower, functional support, and supervision to help our clients implement improvement measures and support the effective management of change. Our support is flexible and can be used to implement recommendations made by Petrofac’s asset solutions team, or to implement changes identified by our clients independently.

TARGETED PROGRAMMES

We create targeted programmes to meet specific objectives, tailored to the needs of the asset’s operational phase. Solutions are fit-for-purpose and designed to integrate with our clients’ existing systems. We carefully consider any asset performance improvement initiatives in line with our clients’ existing asset management processes, assessing the maturity of their approach and identifying any shortfalls. Where applicable, we will also align with the requirements of ISO 55000, best practice in Asset Management.

We use insights from our own operating data and historical maintenance and integrity projects to efficiently collate, standardise and improve complex asset data sets.



Improve - data management

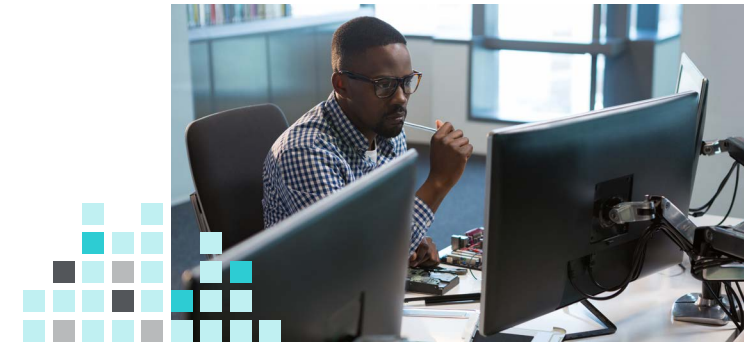
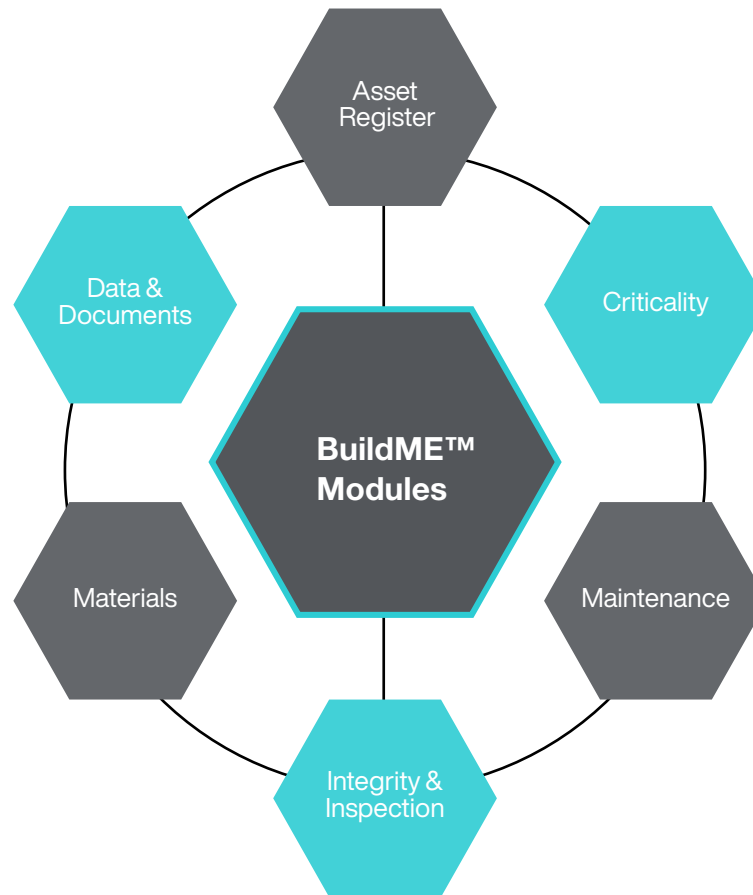


PERFORMANCE CHALLENGES

We take a systematic approach to solving asset performance challenges, using BuildMe™ to ensure efficient, consistent and effective delivery.

Whether applying small, continuous changes to meet medium-term improvement plans or overhauling an entire set of master data and equipment strategies, BuildME™ offers a pathway for success.

As a single source of truth, it allows clear line of sight of data standards compliance and the operational effectiveness of any planned maintenance and inspection routines. This ensures the right maintenance is happening at the right time – and that the right resources are in place to complete it quickly, efficiently, and cost-effectively.



OUR APPROACH TYPICALLY RETURNS:

30% savings achieved through reduced maintenance requirements

20% savings by streamlining work execution processes

30% savings through reduced inventory

70% improvement in availability of inventory through optimised repair and spare strategy



Develop, design, and improve

We deliver focused support from development to end of life, and every point in between.

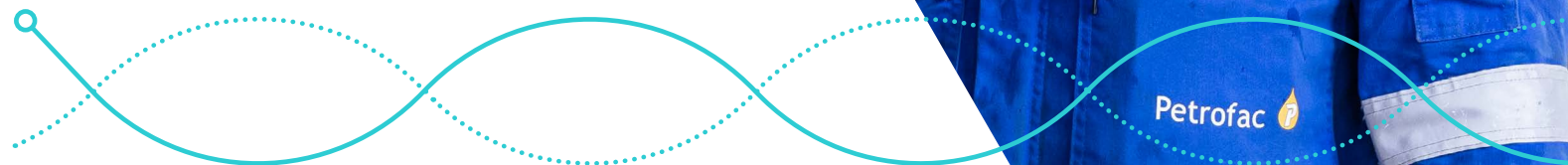
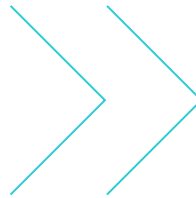
Our technology experts, engineers and asset solutions teams draw on specialist capabilities to solve complex project challenges.

We are committed to achieving Net Zero and have focused and aligned our services in support of this goal.

Our EPC data informs our front-end designs assuring project delivery.

We draw on insights from our 30 years' operational experience to develop best fit solutions.

Our services can be integrated to drive ultra-efficient performance and assured delivery across new, operating, and late life assets.



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To connect engineering know-how with the right technology to bring your project to life, **turn to Petrofac** 

With us, delivery is always assured.

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