At Parker, our aim is to be the most innovative, reliable and efficient company in our industry and that is something we bring to every project we work on. We tailor all of our O&M packages to meet your needs, as we know that an effective O&M operation requires the right people who understand your values and your goals, with the right resources and systems to meet them. We treat your operations and assets as if they were our own, with a passionate and experienced team, we can provide you with the right people to deliver:

**A COMPLETE PERSONALIZED PACKAGE OF MANAGEMENT SERVICES FOCUSED ON:**
- Superior, safe and environmentally conscious performance
- Assuring reliability and cost control to deliver on time and target
- Project specific KPI tracking and improvement

**A FOCUSED APPROACH TO OPERATIONAL EXCELLENCE BASED ON PARKER'S INTEGRATED MANAGEMENT SYSTEM TO:**
- Efficiently manage your asset to optimize your performance
- Keep strong operational discipline to deliver safe and consistent operations every time
- Application of proven processes and procedures customized to your needs

**A DEFINED STRATEGY TO HAVE THE RIGHT PEOPLE THAT YOUR OPERATION NEEDS:**
- Providing tailored training and competency assurance
- Succession planning for managing your people now and in the future
- Nationalization strategies if required

*Your success is our success.*
Since 1972 Parker has been conducting Operations and Management (O&M) for both land and offshore projects, from arctic conditions in Sakhalin, to the jungle and mountains of Papua New Guinea, to the desert islands of Abu Dhabi.

We have the experience, knowledge and resources to help you enhance your operations through a fit-for-purpose solution, backed by our strong reputation for delivering O&M services from exploration to field development.

All of our O&M projects are structured specifically to meet your needs, improve your drilling performance and reduce your total operating cost, through one or more of our services:
Technical Services
Custom solutions for complex projects

Rig Design & Project Management

Our technical services team leverages their expertise and experience to manage projects and support world-class drilling facility design and construction from start to spud.

Features
- Front-End Engineering & Design
- Drilling System Design
- EPCI Services
- Project Management Consulting Services

Benefits
- Every Day Efficiency Improvements Through Design
- Effective Project Management From Start to Completion
- Project Integrated with Operations & Maintenance Expertise
- Ready to Operate at Handover

Engineering & Consulting

Parker’s dedicated engineering team works with customers to design, construct and install rig upgrades and modifications, using the latest technological advances.

Features
- Multi-disciplinary Engineering Experience: Mechanical, Structural & Electrical
- Standardized Risk Management Processes & Procedures
- Equipment Optimization, Including Failure Analysis

Benefits
- Rig Capability Improvements
- Single Solution for all Rig Related Studies
- Extended Asset Life
- Performance Improvement
With over 80 years of experience working in routine and specialized environments, Parker will provide you with strong leadership and key personnel committed to operational excellence and safety. We’re here to ensure that your operation meets and exceeds your targets — within budget and without incident — from start to finish.

**Features**
- Rig Management Expertise
- Customized Processes & Procedures
- Qualified & Experienced Personnel
- Tiered Approach: Advisory, Supervisory & Full O&M
- Rig Planning
- Site Management
- Competency Driven Recruitment

**Benefits**
- Improved Safety
- Reduced Cost Of Drilling
- Reduced Overhead Costs
- Overall Operational Improvement

We use our experience and know-how to design and implement specific competency-based training and recruiting programs, enabling you to hire and maintain a skilled, efficient workforce with confidence.

**Features**
- Customized Training Material
- Tailored Training Matrices (by Project & Role)
- Training Curriculum Development
- Competency Assessment
- Career Planning
- Management Trainee Development

**Benefits**
- Improved Full Crew Competence
- Succession Planning
- Overall Rig Efficiency
- Localization Strategy
Our team is in place to assess your full operation, seeking opportunities for improvement and identifying potential risks. With this analysis, we create and deliver a customized service delivery plan to maximize your overall operational capabilities. We recognize (and incentivize) innovation, reliability and efficiency, meaning you benefit from operational improvement, and cost savings are passed along to you.

**Features**
- Data Collection & Analysis
  - Benchmarking & KPI Creation
- Equipment Tracking & Review
- Service Delivery Plan & Execution
- Continual Improvement

**Benefits**
- More Efficient Operations
- Life-of-Contract Customer Savings
- Reduced Total Cost Of Ownership
- Expertise & Knowledge Transfer
- Reliable & Efficient Performance
We know that critical equipment and assets must be ready when you are and at Parker we have the experience and knowledge that you can be sure your equipment will be ready when you need it; through our focused inventory sourcing, storage and management; maintenance programs with API Q1 certified in-house machine shops; certification capabilities; and global infrastructure and transportation.

**Asset Management**
Ensuring your equipment is available when you need it

Parker’s preventive maintenance program is built to ensure that assets we operate are properly maintained, while reducing maintenance costs through both time-based and predictive-based preventive maintenance.

**Preventive/Predictive Maintenance**

**Features**
- Computerized Maintenance Management System
- Non-Productive Time Tracking
- Failure Prevention Plans
- Standard Procedures
- Maintenance Planning
- Root Cause Analysis

**Benefits**
- Extended Asset Life
- Reduced Maintenance Costs
- Reduced Equipment Downtime
- Asset Optimization

We proactively manage the supply chain process by selecting relevant suppliers, focusing on alignment and sustainability, while ensuring that each vendor is thoroughly vetted and approved using our internal procurement process.

**Procurement Management**

**Features**
- Technical Knowledge & Experience
- Large Selection of Well Vetted, Premium Suppliers
- Preferred Pricing & Supplier Agreements
- Supplier Audit & Assessment

**Benefits**
- Reduced Operating Costs
- Regulatory Compliance on Purchases
- Experience Global Support
- Reliable Supply Chain Performance
- Reduced Downtime
Asset Management
Ensuring your equipment is available when you need it

**Tubular Management**

**Features |**
- On-site Inspection
- Hard Banding
- Monitoring Drillpipe Condition
- On-site Maintenance Shop
- Global Tracking & Availability

**Benefits |**
- Need-driven Asset Availability
- Access to Global Inventory
- Cost Savings Through Proper Maintenance
- Fully Certified Operations

**Pressure Control Equipment Management**

**Features |**
- Large OEM Fleet
- Global Network Of Experienced & OEM Certified Technicians
- BOP Exchange Program
- Recertification Programs

**Benefits |**
- Eliminate Downtime
- Reduced Headcount, Equipment & Facilities
- Maintenance Responsiveness & Reliability
- Ensured Compliance with International QHSE Standards

**Fishing Management**

**Features |**
- Skilled, Certified Personnel; with Quick Worldwide Mobilization
- Variety of Tools Available for Wellbore Item Retrieval

**Benefits |**
- Ability to Restore Operations Quickly
- Reduced NPT from Lost Equipment
- Cost Savings
Our O&M team applies considerable experience and expertise to managing the challenges of operating in remote, harsh and ecologically sensitive areas. We can assist you with logistical scheduling, global shipping and mobilization/demobilization services for your drilling rig and ancillary equipment.

**Features** | 24/7 Operation Support  
KPI-Driven Performance  
Real-Time Updates  

**Benefits** | Minimized Transportation Costs, Fees & Taxes  
Reliable & Efficient Logistics  
Efficient Rig Moves  
On-Time Delivery  
Regulatory Compliance

We work to provide our customers with true inventory level optimization by combining manufacturer recommendations, historical equipment data and delivery scheduling.

**Features** | Certified Warehouse Personnel  
Procurement Expertise  
Proper Inventory Controls  
Min / Max Management  

**Benefits** | Inventory Optimization  
Reduced Equipment Loss  
Improved Uptime  
Cost-Effective Inventory Levels
Seamless Transition of Rig Operations in under 50 Days

Parker was selected by our customer to manage their first operations and management (O&M) provider transition. Parker successfully completed the transition ahead of time, alleviating concerns about the “cost of change”.

Challenge
Displace existing O&M provider with experienced and competent rig personnel, while minimizing cost of change, adhering to platform collective bargaining agreement and other local regulatory requirements, within 60 days.

Solution
Parker created a management of change plan to efficiently transition the platform’s O&M services, with minimal impact, so drilling operations could resume safely and quickly.

Results
- Parker transitioned first rotation of rig-based personnel onto the platform in under 50 days from project award.
- Parker achieved 94% Local Content personnel at the commencement of the project.
- Parker was recognized by customer as their 2016 Q4 Service Partner for Change Management.

Aligned Parker transition strategy with customer needs and goals
Understanding customer’s needs and the local laws and regulations, Parker utilized strict recruitment and hiring processes to ensure rapid and effective selection including: generating project specific job descriptions, thorough interviewing, selection, and training and competency evaluations. This process ensured that all candidates chosen, were experienced and capable of meeting the demands of the job.

All processes and solutions were based on Parker’s API compliant Integrated Management System (IMS) and operations discipline practices.

Effectively transition O&M providers and demonstrate performance improvements
In addition to the initial transition of the workforce, Parker was tasked with improving personnel competency, operational efficiency and HSE performance. This was achieved by creating a custom management plan for the customer, focussing on stringent HSE policies and practices; continuous competency assessments; and revised procedures.

Timeline

- **Begin Phase out of Legacy Contractor**
  - Day 19

- **Second half of Parker Personnel Mobilized**
  - Day 129

- **Awarded Service Partner of the Quarter (Q4 16)**
  - Day 201

- **Contract signed**
  - Day 1

- **First half of Parker Personnel Mobilized**
  - Day 41

- **Drilling Operation Commenced**
  - Day 194
Parker ensures Nationalization of over 90%

Parker was tasked with increasing local content for National Oil Company with a strong focus on nationalization of the workforce.

Challenge
Meet role specific nationalization targets while maintaining reliable operational performance, increasing personnel competency and overcoming language barriers.

Solution
Parker utilized many years of nationalization experience and proprietary development methodology to establish a plan for increasing the local workforce’s competencies for them to develop and replace expatriate roles.

Results

- Creation of strong training and competency programs
- Increased local workforce to 93% nationals
- Parker has consistently delivered local content above the required targets

Aligned Parker development strategy with customer requirements and goals
Based on varying job role nationalization targets, Parker created a specialized development plan for the operation to ensure personnel were provided sufficient opportunity to progress, whilst ensuring that all specific goals were met. This process included a current local workforce assessment, targeted candidate selection and job specificsuccession planning.

Developed well documented, reliable and complete competency and training plans
Parker developed well documented, comprehensive training and competency plans for all positions on site. Training was provided by the team on site, including job mentoring, training programs and courses, all designed to ensure local employees could replace expatriates positions.

The competency plan included customized job specific competencies for all roles along with employee KPI development, to ensure that employees progress and abilities were targeted and tracked.

Percentage of Local Workforce

![Percentage of Local Workforce Graph]

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
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</tr>
<tr>
<td>2010</td>
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<td></td>
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<tr>
<td>2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
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</tbody>
</table>
Leading Indonesia’s drilling market for 30 years

Parker Drilling has provided O&M advisory services to PT. Daya Alam Tehnik Inti (DATI) for over three decades; implementing management systems, reducing downtime and enhancing personnel competencies.

Challenge
DATI required a reliable drilling partner to provide international experience, resources, and proven management systems for long-term sustainable value.

Solution
Utilized Parker’s O&M advisory services to continuously reassess DATI’s needs and provide continual improvement in all areas of operations, maintenance, HSE and general management.

Results
- PT DATI is recognized by clients as the number 1 drilling contractor within Indonesian market
- Less than 1% NPT on rigs due to committed preventive maintenance and crew competency
- IADC Awards for outstanding Safety Performance

Supported DATI through operational discipline
For over 30 years we have provided operations and management services for DATI in Indonesia through a customized Technical Services Agreement; enabling them to benefit from Parker’s extensive drilling experience, methods and API compliant Integrated Management System (IMS).

Integrated Parker people, processes and safe working culture
Throughout this collaboration DATI and Parker have completed over 150 wells together, with a focus on providing safe, reliable and efficient operations.

To achieve this Parker provides advanced technical services to DATI, helping carry out enhancements and customized rig solutions to meet the tough conditions of their drilling activities.

Parker also shares our best practices - based on decades of experience - to support DATI with robust procedures and programs, for training, HSE and preventive maintenance.

Together, we deliver results that exceed expectation everyday.

“Thanks to Parker’s guidance and technical expertise we have consistently achieved our goals, and provided safe, efficient drilling services that meet International Standards to our customers.”
Robby Koyu, President Director PT. DATI

NPT Performance

<table>
<thead>
<tr>
<th>Year</th>
<th>KPI</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>2014</td>
<td>0.50%</td>
<td>0.50%</td>
</tr>
<tr>
<td>2015</td>
<td>1.00%</td>
<td>1.00%</td>
</tr>
<tr>
<td>2016</td>
<td>1.50%</td>
<td>1.50%</td>
</tr>
<tr>
<td>2017</td>
<td>2.00%</td>
<td>2.00%</td>
</tr>
</tbody>
</table>

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Continual Improvement Saves $24m in 2 Years

Parker Drilling tailored an O&M model that transferred knowledge to a National Oil Company for long-term sustainable value while immediately benefiting a drilling project by reducing flat-times and mitigating NPT. The Result: fewer days per well, forward production and contractor efficiencies.

**Challenge**
A long term ERD development project required O&M intervention to immediately improve performance, ensure safety, and transfer knowledge and best practice to local drilling crews and management.

**Solution**
Utilized Parker’s on-site rig management, maintenance crews, systems and support functions that drove efficiencies, improved work habits and culture, ensured adherence to SOPs, developed crew competencies and preserved assets for longterm sustainable value.

**Results**
- Savings of **$24M+ in two years** by reducing the days per well
- Average **NPT reduced by over 10%**
- Lasting impact on local Drilling Contractor

**Supported Customer with people, processes and commitment**

Parker understood the customer’s project goals and created a customized O&M package with a focus on performance enhancement and knowledge transfer. Implementing performance tracking, service delivery planning, and accountability and continual improvement programs, Parker were able to quickly improve performance and transfer knowledge to the customer to help them operate with best international practices and ensure wells were delivered to the client on-time and on-budget.

**Long-term sustainable value**

Based on Parker’s proprietary HSE programs, the customer brought renewed focus to HSE performance reducing their total recordable incident rate by tracking goals, measuring performance and ensuring crew competency. All teams were aligned with daily objectives creating a culture of operational excellence that spread throughout the organization.

Based on the quick improvement of performance and the foundations of an operational excellence culture, the customer were able to reduce the number of days per well, saving their client $24m in just two years.

**Planned vs. Actual days Per Well**

<table>
<thead>
<tr>
<th>Well 1</th>
<th>Well 2</th>
<th>Well 3</th>
<th>Well 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFE</td>
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</tr>
<tr>
<td>112</td>
<td>76</td>
<td>129</td>
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</tr>
</tbody>
</table>

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Providing the Support Needed to Break Records

Parker has provided operations and management (O&M) services for this project for over 15 years; implementing management systems, improving equipment uptime, enhancing personnel competencies, and achieving multiple extended reach drilling (ERD) world records.

Challenge
Required a reliable and efficient O&M provider, who could improve performance and personal competencies while working in a remote and harsh environment.

Solution
Parker created a personalized package to meet the extensive demands of the project including: personnel, management systems, training and competency planning, ancillary equipment, logistics, and procurement management.

Results
- Less than 1% NPT on rigs due to committed preventive maintenance and crew competency
- Recipient of the “Drilling Contractor of the Year” award in 2013 and 2014
- Achieved multiple ERD world records

Supporting project goals and ensuring reliability through implementation of proven systems and processes

Working in a remote location, reliability was key to the customer as they needed to know that equipment was well maintained and could be trusted to do the job every time. Parker successfully kept NPT under 1%, through customization of Parker computer based maintenance and inventory programs, specifically designed for this operation.

O&M efficiencies were also required for ancillary services, like warehousing, cranes, mobile fleet, mud plan, tubular inspection, camps, and procurement and logistics, all of which were realized by maximizing on Parker’s global systems, network of suppliers and best practices learned from 80+ years of experience.

Integrated Parker people, processes and safe working culture

Parker treat every operation as if it were their own and always focus on ensuring the safety of personnel. As part of the O&M package, Parker assisted and developed the customer’s safety culture through HSE management, procedures and programs focused on consistently providing safe, reliable and efficient operations.

Over the course of the O&M project, Parker also developed specific training programs for rig based personnel in order to increase personnel competencies, improve local content development, and strengthen experienced succession plans.

Together, we increase uptime and deliver results that exceed expectations every day.
Improving Record Breaking Design

Parker managed the design, procurement, fabrication, commissioning, load-out, and start-up of an enhanced mobility land rig for cold weather environments.

Challenge

Required a new drilling rig to be designed based on their record breaking, custom-built extended reach drilling (ERD) rig; optimized for remote, cold environments, and with enhanced mobility for faster rig moves.

Solution

Parker leveraged experience from designing the customer’s original ERD rig, ensuring certainty of outcome in meeting the customer’s project objectives.

Results

- Designed and managed the fabrication of the rig in **30 months**
- Delivered the completed drilling rig to remote location with **minimal** open punchlist items
- Parker operations personnel were integrated with the Parker technical team to expedite the handover and transition into drilling operations

Complete Project Management

Parker provided full support and management during the project to deliver a safe and reliable rig. Parker placed team members on site at the Brownsville fabricator, who consulted on and assisted with both the fabrication and load out and delivery from the Brownsville, Texas site to customer’s remote location. This process was essential to manage effectively as at over 40 truckloads when broken down, it is one of the largest land rigs in the world.

Once the rig arrived at the drill site, Parker operations and management team provided efficient support and structure to facilitate an early rig-up. The integration of the Parker teams ensured a seamless transition from Technical Services into drilling operations, saving both costs and time.

**Implemented proven processes and procedures to provide a reliable result**

Parker developed specific operations and maintenance procedures, based on years of experience, to facilitate a seamless transition into drilling operations once the rig arrived on site. Parker also leveraged years of experience and lessons learned from previous harsh environment land and platform rig builds to make sure the final product was delivered on time and within budget.

To enable a safe and reliable delivery, QHSE personnel and procedures were present for all design, construction, and transportation operations. This included ensuring:

- Vendor drawings, documents, and specifications reviewed and approved by engineers, management, and client prior to equipment fabrication.
- OEM oversight included schedule delivery review, expediting, vendor site visits, and QA/QC audits.
- Equipment received in the shipyard was thoroughly inspected, documented, and preserved.

This effective process ensured that the team encountered no delays and were able to complete the project ahead of schedule.
From Concept to Full MPDR Design in 18 Months

Parker performed an extended Front End Engineering and Design (FEED) study for a Modular Platform Drilling Rig (MPDR) design for competing Engineering, Procurement, and Construction (EPC) contractors.

**Challenge**

Required an extended FEED study for a highly mobile modular drilling rig to be utilized on two separate Tension Leg Platforms (TLP) in a remote offshore location.

**Solutions**

Parker completed a FEED study focused on optimizing rig moves between TLPS, and facilitating safe and efficient operations.

**Results**

Parker successfully completed the extended FEED study on schedule and within budget, to deliver the following results:

- Designed Fixed Modular Derrick concept with integrated offline stand-building
- Hands free tubular handling from the Platform Supply Vessel (PSV) to the rotary table
- Eliminated working at heights risks with platforms, stairs, and basket access
- Packaged technical procurement packages for certainty of success with factory acceptance testing and delivery
- Integrated lessons learned from similar platform designs
- MPDR design optimized for constructability and plug-and-play
- Multiple robust and efficient cuttings and liquid handling methods
- 10,000 year storm design criteria and tie down systems
- Delivered 741 MPDR related documents as approved for design

**Parker utilized its rich history facing diverse challenges to deliver the customer’s complex requirements for a remote operating location**

This project was designed around a Modular Platform Drilling Rig (MPDR) shared between Tension Leg Platforms (TLP). Due to the remote drilling locations of the operation, the customer required an innovative rig design that could be reliably and efficiently moved between TLP’s in a cost effective manner. Parker had to design solutions for optimum fixed modular derrick and plug-and-play technology operations.

**Relentless optimization leads to innovative solutions meeting customer goals**

Parker addressed this extended FEED project with a diverse and experienced engineering and design team, integrated with key drilling operations personnel. A key focus of the design team was modularization of the MPDR (lifting, assembly, mobilization) in order to make the project economically viable for the remote Australian location.

Parker recognized the pipe handling philosophy was fundamental to project success and utilized extensive three-dimensional modeling to optimize the layout of equipment and handling operations.
Consistently Achieving Sidetracks with Easy-Trak

An effective sidetracking solution using the Hydraulic Easy-Trak (HET) Casing Exit System

Challenge
Required an easy to use, cost effective hydraulic whipstock system, which would be capable of a single trip casing exit in varying conditions.

Solution
Parker provided the Hydraulic Easy-Trak Casing Exit System (HET), along with a customized training plan for customer personnel.

Results
- Customer personnel were trained and operating the Easy-Trak system in just 2 runs
- Customer has independently and successfully exited over 40 wells
- Rat holes of up to 46ft have been achieved in a single trip
- Consistent successful operation of the hydraulic mechanism

Application Summary
The customer has utilized the HET Casing Exit System since 2016 for a variety of side-tracking applications. All casing exit jobs were completed successfully in one trip inside 9-5/8” x 40.0# to 47.00#, at varying depths. The most common casing grade encountered was corrosion resistant: 13CR-80, which is softer than standard casing,

Application Highlights
The customer has performed multiple sidetracking runs at varying casing exit depths ranging between 1,560 to 5,891 feet; with deviation/inclination job parameters varying between 10.8 to 73.2 degrees. The whipstock face angles used were between 2 and 3 degrees to ensure a successful rat hole each time.

Throughout the customer’s project, the HET system has achieved extended rat holes, helping improve their overall operational performance. Standard rat hole lengths are usually held between 10 to 20 feet, however, thanks to the aggressive cutting structure of the Easy-Trak multi-mill the customer was able to cut extended rat holes, which ranged from 13.4 to 46 feet. See the chart below for rat hole lengths based on samplings from 18 jobs.

![Chart showing rat hole lengths](chart.png)

Rat Hole Achieved after milling 9-5/8” x 47.0 lb. - 13CR-80 casing