CYIENT | Nothing Less

Engineering Intelligence across the Oil & Gas Lifecycle

Delivering plant engineering, asset intelligence, and brownfield support



The pressure on oil & gas has never been greater

Volatility is squeezing margins

Operators must increase output, reduce risk, and control costs, all at once.

Legacy operations are slowing decisions

Manual, centralized models cannot keep pace with real-time, autonomous field conditions.

Downtime is no longer tolerable

With offshore losses reaching up to $1 million per day, uptime is mission-critical.

Capital is cautious

Investment is flowing, but only to projects with clear execution confidence and measurable returns.

Aging assets are under strain

Decades-old infrastructure must meet new reliability, ESG, and digital demands.

Data inconsistency

Disparities in data between the control room and the field make it difficult to trust insights and act with certainty.

Higher margins need smarter production

Technology must unlock greater production efficiency and maximize output from higher-value products.

Capital is available. But operational and technical challenges are reshaping how operators allocate it and what they demand from engineering partners.

The shift toward intelligent engineering

Making brownfield assets smarter

Compliance-ready design from day one

Predictive planning for supply chain resilience

Intelligent reinvention over intelligent intervention

From drilling to refining - we're there

Stage	What we do	What you get
Exploration	GIS & well-log data management, LiDAR imagery processing	Drilling accuracy, faster decisions
Development	Plant engineering (Pre-FEED to detailed), SCM & procurement	CAPEX optimization, regulatory compliance
Production	Digital twin, AI solutions, private networks, MoC projects	Higher throughput, cyber resilience
Maintenance	Asset management, predictive maintenance, technical documentation	Longer asset life, operator safety
Closure	ESG consulting, decommissioning, technical documentation	Clean exit, full compliance

Precision engineering. Every stream. Every complexity.

Upstream	Midstream	Downstream
FPSO, FSOs, drill ships, semis, jack-ups	Subsea pipeline engineering	EPC, plant layout & commissioning
FEED, feasibility, detailed engineering	HAZOP, surge protection, hydraulic analysis	Tank farms, distillation, hydrogenation
Asset integrity, topsides & interface design	Design verification	Asset integrity & optimization
Mooring, hydrodynamic & riser analysis	Advanced engineering studies	Procurement & HSE compliance
Drilling facilities — derricks, process & mechanical systems		Technical equipment evaluation
New-build ships: basic to detailed design		

Tailored engineering for operators, EPCS, offshore players, and investors

Cyient brings tailored engineering support aligned to the realities of aging assets, project delivery, and pre-FID decisions.

Operators

- Management of Change projects keeping production online
- Predictive maintenance extending equipment life
- Digital twins providing operational visibility
- ESG reporting infrastructure
- Technical documentation management for assets with 30+ years of modifications

Drilling companies & offshore services

- FPSO and FSRU engineering for harsh offshore conditions
- Rig upgrades and brownfield modifications
- Subsea systems: design, installation engineering, structural integrity
- HAZOP studies and safety-critical system design
- Real-time data management and drilling automation

EPCs

- Piping, structural, civil, instrumentation, and electrical expertise, deployed as an extended engineering arm that scales with project demand.
- Rapid mobilization for major offshore and onshore projects
- Integration into client project management systems
- Capacity relief for European and North American markets
- Quality standards satisfying lenders, insurers, classification societies

Energy investors, PMC and developers

- Pre-FID engineering satisfying lender due diligence
- Concept studies proving technical feasibility before capital commitment
- FEED packages based on construction realities
- Cost estimation accounting for regional labor markets, supply chain constraints
- HSE assessments identifying permitting risks early



Where engineering complexity meets execution proof

1. De-risking brownfield FPSO delivery through multidisciplinary engineering

Business challenge

Deliver detailed engineering for a brownfield FPSO program across 20 topside modules while validating FEED-stage assumptions, including PSV scenarios and line sizing, before execution.

Our approach

Mobilized a multidisciplinary engineering team across process, piping, civil, electrical, instrumentation, and automation. Delivered design validation, layouts, calculations, 3D modeling, safety reviews, and detailed engineering packages to support coordinated brownfield execution.

Outcome

Corrected a PSV scenario carried forward from FEED and enabled 70% of project delivery from Cyient's India center, improving execution efficiency while reducing delivery risk.

2. Delivering LNG and floating gas engineering across nordic markets

Business challenge

An LNG infrastructure program required end-to-end engineering support for a 50,000 m3 LNG terminal, alongside concurrent engineering services for FLNG and FSRU assets. The engagement spanned feasibility studies, FEED, development, and detailed engineering phases, demanding seamless coordination across multiple asset types, disciplines, and project stages.

Our approach

Cyient delivered multidisciplinary engineering support for the LNG terminal, covering engineering management, electrification, plant layouts, interface management, 3D model coordination, piping, firefighting systems, and civil and structural design. For the FLNG and FSRU programs, Cyient provided expertise across process and mechanical engineering, module and area layouts, ventilation systems, equipment design, and document control.

Outcome

- Successfully executed multidisciplinary engineering activities across LNG terminal, FLNG, and FSRU assets simultaneously
- Ensured delivery aligned with client quality standards and project schedules across multiple concurrent workstreams
- Provided consistent engineering support across all project lifecycle stages, from feasibility through detailed engineering

3. Turning refinery archives into actionable asset intelligence



Business challenge

A refinery operator needed to transform a vast archive of physical engineering and asset records into a structured digital repository. The engagement involved digitizing hundreds of thousands of documents, requiring large-scale scanning, secure archive handling, and accurate metadata capture to convert paper-based records into searchable, usable digital assets.



Our approach

Cyient established and managed the end-to-end document digitization program, including archive logistics, secure transfer of physical records, high-volume document scanning, and metadata extraction. Leveraging an AI-augmented proprietary tool, Cyient streamlined data capture and improved the accuracy and efficiency of the digitization process.



Outcome

- Digitized over 1 million pages of engineering and asset documentation.
- Accelerated metadata extraction with Cyient's AI-augmented proprietary tool.
- Transformed physical archives into a searchable, structured digital repository.
- Improved document accessibility and retrieval efficiency across operations.

4. Engineering complex refinery projects across global programs



Business challenge

Refinery modernization programs required multidisciplinary engineering support across solvent de-asphalting and large-scale refinery facilities. The engagements demanded coordinated execution of piping stress analysis, equipment layout engineering, vendor integration, model reviews, and IFC-ready deliverables while maintaining compliance with industry standards.



Our approach

Cyient delivered unit plot plans, equipment layouts, underground piping concepts, piping stress analysis, specialized supports, MTOs, vendor drawing reviews, and staged 3D model reviews at 30%, 60%, and 90% design milestones. The team also supported handling studies, maintenance access planning, and platform penetration engineering to ensure design integrity and operability.



Outcome

- Delivered multidisciplinary engineering packages across multiple refinery programs.
- Ensured design quality and alignment through staged 30%, 60%, and 90% model reviews.
- Enabled IFC-ready deliverables through coordinated layouts, stress analysis, and vendor integration.
- Maintained consistent engineering standards across complex, concurrent workstreams.

Why Cyient

30+ years of integrated plant & digital engineering

Complete plant engineering lifecycle solutions

- Full plant lifecycle ownership from FEED to procurement support, driving efficiency through standardization and modularization
- Proven across complex safety-critical applications in nuclear, power, and oil and gas

Brownfield and asset life extension

- End-to-end MoC packages, brownfield tie-ins, and PSM-grade documentation for refinery turnaround and revamp scope
- Proven on ethylene crackers, sulfur recovery units, gas treatment plants, and modular skid packages

Opex reduction and digital asset management

- Utility integration, energy-efficiency retrofits, and emissions-compliance engineering
- Smart P&IDs, 3D laser scanning, as-built drawing and documentation integrating with existing plant data platforms

European and indian engineering delivering global standards

- European engineers playing a key role in quality and process compliance across projects
- Extended planning, SCM, QA/QC, as-built, asset and master data management support

Build reliability into every stage of your oil & gas asset lifecycle. Speak with our experts, today.

Cyient is a global lifecycle engineering services company powering mission-critical industries from design to aftermarket across products, plants, and networks. With 300+ customers and 15,000+ associates across 30+ countries, we combine human expertise, deep domain knowledge, and AI to deliver intelligent engineering for every lifecycle across Aerospace and Rail, Automotive and Mobility, Connectivity, Energy, Healthcare, Mining, Utilities, and beyond.

To learn how we deliver exemplary outcomes, nothing less, visit www.cyient.com.

North America Headquarters
USA
T: +1 860 528 5430

Europe, Middle East, and Africa Headquarters
UK
T: +44 118 3043720

Asia Pacific Headquarters
Australia
T: +61 2 8887 8600

Global Headquarters
Hyderabad
T: +91 40 6764 1000

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