



Wipro's downstream  
oil and gas solution



## Introduction

Wipro's downstream oil and gas business solutions enable companies to rapidly deploy new models and create market-driven refining, blending and trading decisions. We also help them leverage dynamic pricing to optimize schedules, utilize fleets and deliver inventory to

the right place at the right time and at the lowest cost. We assist B2B and B2C businesses in redefining the customer experience and ensuring customer loyalty. Our domain offerings include a blend of consulting, implementation and managed services.

## The solution

Our solution includes helping companies transform their downstream business, optimize production plan and schedule, integrate and re-engineer their operations,

optimize their investments and achieve best-in-class productivity, profitability, quality and customer loyalty.

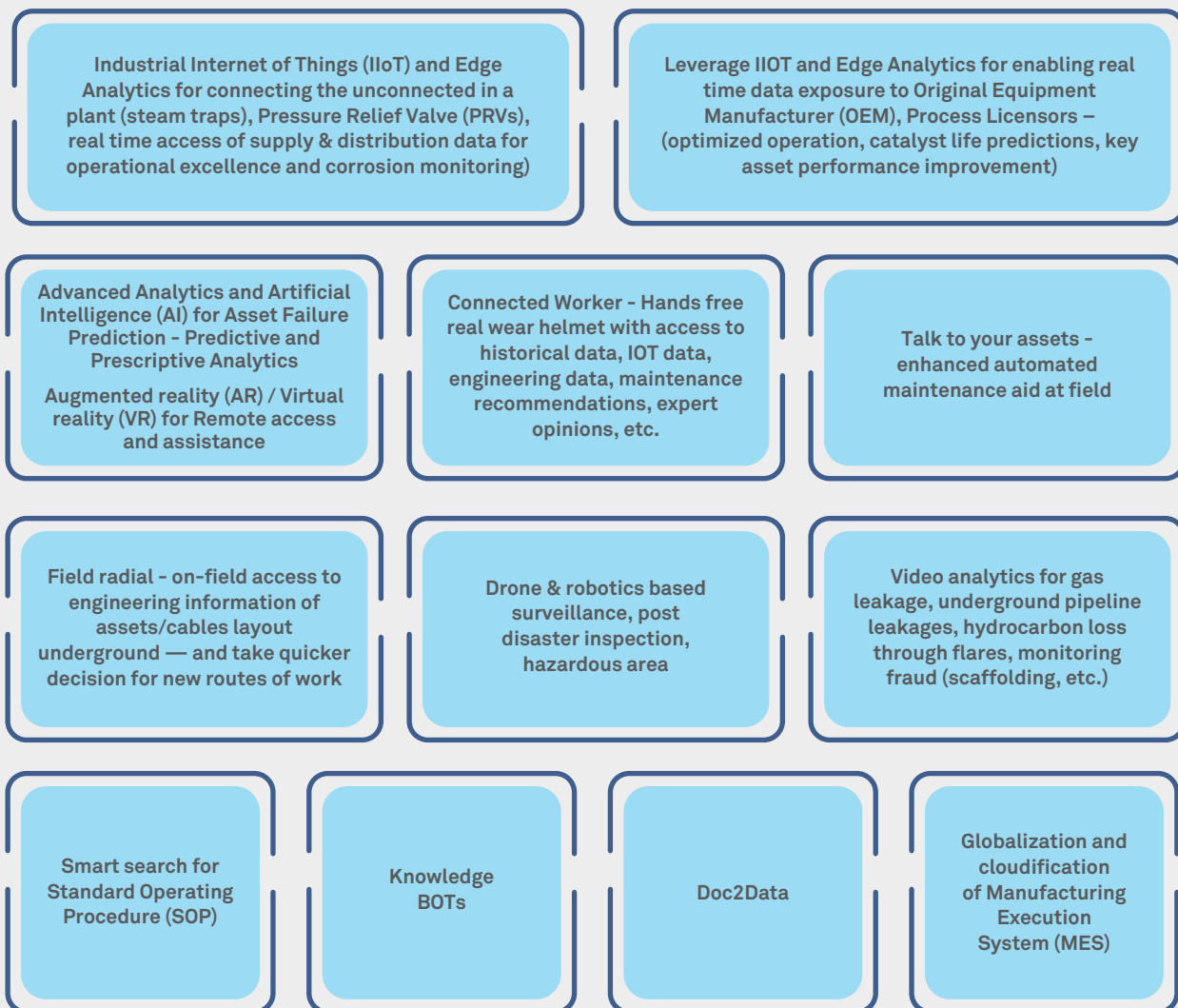
## Manufacturing (refinery, petrochemicals, lubricant plants, LNG, GTL, fertilizers, etc.)

Focus area	Offerings
Integrated operations management	Integrated Operations Management System (IOMS) — IT Front End Engineering Design (FEED) to support operations collaboration center — within and across plants and supply chain (Key Performance Indicators (KPI) dashboards, decision support system, automate workflows, scenario planning & what-if analysis)
	Digital process twins
Integrated asset management	Engineering Information Management - (Intergraph, Dassault)
	Asset reliability and integrity - (Meridium, Bentley)
	Maintenance execution (Maximo, SAP PM)
	Integrated turnaround management (Meridium, Primavera, e-Vision, digital content management)
	Digital asset management solutions (Drone based surveillance, Mobile, IOT, predictive analytics)
Foundational manufacturing execution system	Crude assay management - Haverly, Spiral, AspenTech
	Crude scheduling and optimization - Aspen Petroleum Scheduler (APS)
	Economic planning and optimization for margin maximization - Aspen PIMS, Quintiq, Schneider Spiral, Honeywell RPMS, Haverly GRTMPS, iLog
	Scheduling - Multi-blend optimizer (MBO) or single blend optimizer and blend monitoring - Aspen APS, MBO
	Data validation and reconciliation - Integrated Mass Balance & Energy Accounting - Belsim Vali, Aspen Advisor, Sigmagine, Honeywell Production Accounting and Reconciliation (PAR), Schneider MAB, ROMeo, Data-Rec
	Retro-analysis and performance management
	Operations management - Operations monitoring, operator logbook, operations instructions - Honeywell OM Pro, DynAMo, St James, Universal Tag Locator (UTL)
	Integrity Operating Window (IOW) - Maximizing yield by operating at the constraints - Schneider
	Product Specifications Management (PSM)
	Emission management and reporting

	Movement monitoring - Honeywell, Schneider Refinery Offsite Management Software Suite (ROMSS)
	Simulation - static & dynamic - (KBC, Honeywell Unisim, Aspen Hysys , Schneider Pro II)
	Real time data monitoring system - Data historian, alarm management systems, process control loop performance management - OSIsoft PI, Aspen IP21, Honeywell PHD, Yokogawa Exaquantum, GE Proficy, Honeywell DynAMo, Expertune
	Advanced process control - Honeywell, AspenTech, Schneider
	Smart plants - Globalization, standardization & Cloud enablement of Manufacturing Execution System (MES), mobile enablement
	Tank farm monitoring system, blend movement & automation – Honeywell
	Electronic work permit – eVision
Lab automation	Laboratory information management system (LIMS) - SampleManager, LabWare, STARLIMS, Baytek
	Lab instruments, chromatograph – OpenLab

## Digital Innovation MVPs

(Minimum Viable Products)

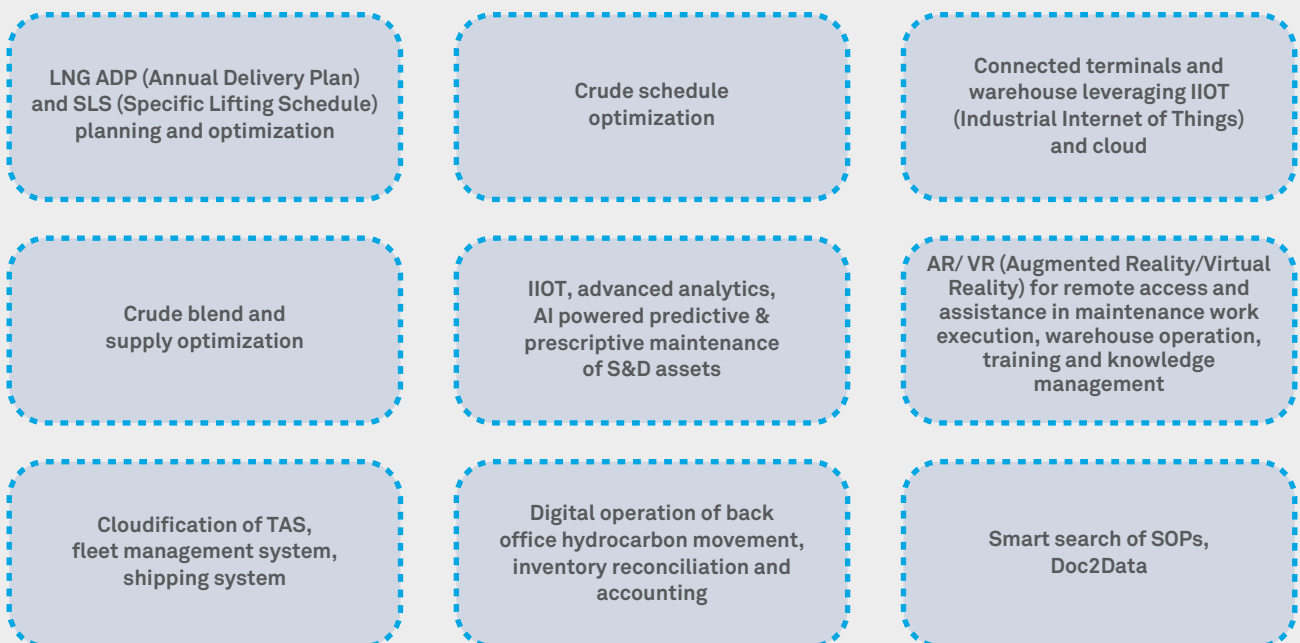


## Supply and distribution

Focus area	Offerings
Integrated supply chain	Demand forecasting and planning
	Integrated supply chain planning & optimization
	Supply network planning (terminals, warehouse, logistics)
Distribution planning and scheduling	Distribution planning and scheduling
	Transport & route planning
	Fleet monitoring and management
	Vessel and pipeline scheduling, voyage management
	Production & delivery planning and optimization
Smart terminal operation	Cloudified terminal automation system - As a service
	TAS lab set up & Operation as a Service

## Digital Innovation MVPs

(Minimum Viable Products)



## Marketing & customer value

Focus area	Offerings
B2x 360 - Customer value augmentation - fuels & lubricants	Digital e-Commerce order management platform (omnichannel)
	O2C and customer analytics
	Mobile commerce - aviation, marine and lubes O2C
	Central dealer and distributor platform
	Transport & route planning
	O2C Business Process Services (BPS) transformation
Retail site transformation	Smart gas stations (multi-purpose customer app, web and mobile commerce, mobile loyalty, Cloud and multi-channel site system)
	Retail site system implementation and integration with payment, loyalty
	Adaptive forecourts (connected/virtual stores, energy Amazoniation, digital payments, new energy, destination hub)
	Retail test lab consolidation and life cycle management as a service
Fleet & payment cards	Card issuing and acceptance - Business Process as a Service /Platform as a Service
	Business Process Services - fulfillment, invoicing, reconciliation and settlement
	Fleet card multi-channel user portal, MI and Analytics solution Touchless fleet card implementation (QR codes, Telematics, RFID)
Pricing	B2B Pricing as a Service (fuels & lubricants)
	Retail pricing (fuels & non-fuels) as a service

## Digital Innovation MVPs

(Minimum Viable Products)



## Key benefits:

### Refining & manufacturing:

- Plan, operate, monitor effectively and optimally with reliability and safety to ensure insight driven decision culture
- Increased ability and flexibility to respond to market dynamics
- Reduced operating expenses and CAPEX due to higher availability, increased production and eliminated risk
- Increased asset life, optimized maintenance cost with next generation asset management systems and practices

### Supply & distribution

- Improved process efficiency and responsiveness with trace and track enablement in hydrocarbon value chain

- Reduced cost to serve across distribution and storage with improved visibility, collaboration, agile decision making
- Enhanced S&D asset lifetime, reduced maintenance cost with next generation asset management system and practices

### Marketing

- Enhanced fuel retail site performance with connected customer experience, hyper personalization, ability to respond to market dynamics
- Integrated customer journey and engagement across B2B commercial product segments with next generation IT and digital technologies to drive market share and profitability



## Success stories

### Supply and distribution

#### Client problem

Client's IT systems and processes did not support the Demand Forecast Accuracy (DFA) up to the desired levels. Top down forecasting led to huge demand-supply gaps, high stock levels at plant and warehouses, frequent stock-outs at demand end and over production at plants due to very little visibility into real-time demand.

Forecast error rates were high as well.

#### Solution

Wipro stepped in as the "thought-to-finish" partner for the O&G major in this marquee demand sensing transformation program, delivered Proof of Concept (POC) to scale up across geographies and locations.

We deployed a COTS-based demand sensing and multi-enterprise inventory optimization solution. We also managed the entire project life cycle from requirement analysis, design, build, test, deploy and rollout of the demand sensing solution.

#### Benefits

- 30% reduction in forecast errors in 9 months, resulting in more than 92% on Time In Full (OTIF)
- 30% reduction in safety stock over the same 9-month period
- 10% reduction in cycle stock, thereby reducing inventory costs and improving supply chain efficiency
- Inventory reduction led to annual savings of USD 16 million in supply chain costs

### Retail

**Client problem:** Client was looking to transform their engagement with their B2B customers and put these customers at the heart of everything they do. They needed a digital hub that would be compatible with all mobile devices, would have data analytics capability to throw up actionable insights and would not require multiple logins for users. The O&G major was trying to overcome the fragmented digital experience.

#### Solution

Wipro implemented a system to change the way the client engaged with its B2B customers and channel partners in global commercial and retail businesses through rapidly growing digital channels. Adobe Experience Manager (AEM) was used for the digital aspects of the solution, SAP Hybris for the e-commerce elements and a bespoke Java-based application to manage the authentication and profile of each user, elegantly interlaced with the client's Active Directory.

#### Benefits

- Reduction of USD 27.1 million per annum in operating expenditure
- USD 5.1 million decrease in sales time liberation per annum
- USD 6.4 million per year reduction in customer service centre and sales costs
- USD 7.4 million per annum reduction in marketing costs
- Annual savings of USD 8.2 million from decommissioning of legacy systems
- Superior customer experience: Their customers can now place orders, review their accounts, interact with service centres, all in one system—a true one-stop-shop for ordering large quantities of fuel and lubricants

## Manufacturing

### Client problem

Smart refinery — Implement and integrate the Refinery MES applications for Greenfield Refinery that meets customers' goal of "hitting the ground running" from the first day of the operation

### Solution

- Implementation of 4 different refinery MES applications:
  - Refinery Operations Dashboard (KPIs and KOIs)
  - Blend performance monitoring
  - Product specification management
  - Real time analysis
- Implementation of SAP IS-OIL to automate end-to-end supply chain processes

- Implementation of SAH ESH to support safety processes
- Integration of 13 MES applications using process and service based integration via BizTalk (80+ Interfaces – ESB/P2P/SSIS)
- Deployment of the complete IT infrastructure

### Benefits

- Up to 15% increase in revenue through better productivity at the refineries
- Significantly improved agility of refinery planning, operation, monitoring, control up to 30%
- Integrated data view and optimized operations through benchmarking
- Improved cost of refining and gross margins by up to 20%





## Key highlights of our major downstream engagements over a decade

32 refineries and 10+ chemical complex support

1 Greenfield Refinery IRIS implementation

2 Greenfield Refinery SAP IS OIL implementation

1 LNG annual delivery plan optimization—Think, Design & Implementation

3 LNG operations application implementation

Cloudification of refinery planning & global LIMS—part of a pioneering journey for global sites

Manufacturing execution system implementation for all process areas—Think, Design, Build, Run for all leading products in planning, scheduling, material balance, oil movement, lab systems, RTDM—data historians, alarm management systems, operations management, asset reliability & integrity, maintenance execution systems, etc.

10,000+ miles of linear assets support

300 terminals system integration & testing & deployment

Implementation & integration of LNG planning and optimization solution for largest LNG major in middle east

TAS test lab set up and operation for a global major

Marine assurance system deployment

Demand sensing to improve lube supply chain short term forecast accuracy for a global major

Transformed B2x digital customer experience for an Oil supermajor; reduces OPEX by more than \$27 million per annum

70000 retail outlets supported

1500 retail outlet system implementation & integration

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