

INTELLIGENT DIGITAL OILFIELD IN THE OIL & GAS INDUSTRY FOR MANAGERS

“Transform oilfield performance using smart sensors, real-time analytics, and integrated digital systems.”

Schedule

Venue	Fees
In-House	ASK FOR THE QUOTATION

► Available delivery methods: In-House Training

Introduction

The “Intelligent Digital Oilfield” represents a fusion of operational technology (OT), information technology (IT), and advanced analytics to optimize hydrocarbon production, reduce costs, and improve HSE outcomes. This 5-day training equips managers and senior professionals with the strategic, technical, and leadership knowledge needed to plan, implement, and manage intelligent digital oilfield initiatives across upstream assets.

Objectives

Participants will:

- Understand the architecture and components of the digital oilfield
- Learn how to apply IoT, AI, cloud, and edge computing to field operations
- Identify and mitigate risks associated with digital oilfield implementations
- Integrate real-time data with predictive analytics for decision-making
- Build a roadmap for digital oilfield transformation aligned with business goals

Why Attend

With mounting pressure to improve recovery rates, minimize downtime, and ensure safety, the intelligent digital oilfield is becoming a critical enabler of operational excellence. Managers who lead this transformation will position their organizations for long-term competitiveness.

Target Audience

- Field Development Managers
- Operations & Production Managers
- Digital Transformation Leads
- Asset Integrity & Reliability Engineers
- IT/OT Integration Managers
- Senior HSE, Maintenance, and Petroleum Engineers

Individual Benefits

- Gain clarity on smart oilfield tools and strategies
- Learn how to manage real-time data and automation systems
- Improve cross-functional decision-making through integrated dashboards

Organizational Benefits

- Increased production efficiency and asset utilization
- Enhanced predictive maintenance and downtime reduction
- Improved collaboration across field, control room, and corporate offices
- Scalable, data-driven infrastructure for future growth

Instructional Methodology

- Expert presentations and global case studies
- Interactive sessions with IoT and AI demos
- Group activities and problem-solving workshops
- Strategy design labs for real-time integration

Course Outline

DETAILED 5-DAY COURSE OUTLINE (CUSTOMIZABLE)

Training Hours: 7:30 AM – 3:30 PM

Daily Format: 3–4 Learning Modules | Coffee Breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Foundations of the Intelligent Digital Oilfield

Module 1: Evolution from Conventional to Smart Oilfields (07:30 – 09:30)

Module 2: Core Technologies – IoT, AI, Edge & Cloud (09:45 – 11:15)

Module 3: Key Challenges in Legacy Oilfields (11:30 – 01:00)

Module 4: Digital Oilfield Architecture & Value Chain Mapping (02:00 – 03:30)

Day 2: Real-Time Data Acquisition & Integration

Module 1: Sensor Networks and Wireless Infrastructure (07:30 – 09:30)

Module 2: Data Transmission, Collection & Centralization (09:45 – 11:15)

Module 3: SCADA, DCS, and Historian System Integration (11:30 – 01:00)

Module 4: Case Study: Real-Time Well Monitoring System (02:00 – 03:30)

Day 3: Analytics, Optimization & AI in Field Operations

Module 1: Data Lakes, Machine Learning & Predictive Modelling (07:30 – 09:30)

Module 2: AI-Driven Production Optimization (09:45 – 11:15)

Module 3: Smart Maintenance – Predictive vs Preventive (11:30 – 01:00)

Module 4: Workshop: Build a Predictive Maintenance Framework (02:00 – 03:30)

Day 4: Cybersecurity, Safety & Change Management

Module 1: OT Cybersecurity Risks & Protection Protocols (07:30 – 09:30)

Module 2: Digital Safety Monitoring & Emergency Integration (09:45 – 11:15)

Module 3: Workforce Enablement & Digital Upskilling (11:30 – 01:00)

Module 4: Stakeholder Management for Digital Adoption (02:00 – 03:30)

Day 5: Strategy & Roadmap Development

Module 1: Cost-Benefit Analysis & KPIs for Digital Oilfields (07:30 – 09:30)

Module 2: Aligning Smart Field Plans with Corporate Strategy (09:45 – 11:15)

Module 3: Creating a Digital Oilfield Implementation Roadmap (11:30 – 01:00)

Module 4: Capstone Presentations: Your Field of the Future (02:00 – 03:30)

Certification

Upon successful completion, participants will be awarded a **Certificate of Completion: Intelligent Digital Oilfield for Managers**, verifying advanced knowledge in applying digital technologies to optimize oilfield performance.

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