

# JuraDOM

## Drilling Business Intelligent Application Platform

Built on OiO 5D business ontology, unifying drilling data, graphics, knowledge and intelligence



JuraDOM is a drilling-domain intelligent application platform built on the OiO Integrated Intelligent Platform. It empowers scenarios including collaborative design, data acquisition, operation monitoring, risk early warning, NPT management, ROP optimization, resource scheduling, standardized operations and knowledge management, helping oil & gas companies and drilling service contractors improve operational visibility, data quality, collaboration efficiency and continuous improvement.

### Three Core Positions



#### Ontology-Driven

Organize drilling business, data, graphics and knowledge with the OiO 5D business coordinates and MBU/IPOMSQ, connecting wells, wellbores, sections, conditions, tools, events, NPT, measures, cases and reports into a unified business chain.



#### Proven & Deliverable Capabilities

Cover collaborative design, data acquisition, operation monitoring, risk warning, NPT management, ROP optimization, resource scheduling, standardized operations and knowledge push—enabling practical and successful delivery.



#### Intelligence 3.0 Ready

Introduce drilling RAG, knowledge graph, intelligent agents, auto reports and well history generation and more—driving drilling applications from digital management to intelligent assistance and execution.



### Product Architecture

Five-Layer Integrated Architecture · Three Wings Enablement

#### L5 Business Applications

Collaborative Design   Data Acquisition   Operation Monitoring   Risk Early Warning   NPT Management   ROP Optimization   Resource Scheduling   Knowledge Application

#### L4 Intelligent Execution

Condition Recognition   Risk Warning   Intelligent Q&A   RAG Evidence Chain   Auto Reports   Agent Orchestration

#### L3 Resource Hub

Drilling Data   Graphic Templates   Algorithm Models   Rule Engine   Knowledge Base   SOP / Cases   Report Templates

#### L2 Business Ontology

**Organized by Object, Business, Work, Discipline and Process Domains to define the minimum business nodes for drilling and form a unified business semantic framework.**

#### L1 Data & System Connectivity

Real-time Field Data   Mud Logging   MWD/LWD   Video Streaming   Daily Reports   3rd-party Software   ERP/Supply Chain   Data Lake

## Core Business Scenarios

### Collaborative Drilling Design & Software Integration

- Project creation, task assignment, design review and progress tracking
- Bi-directional integration with Landmark, Compass, Pipesim and other professional software
- Auto calculation, professional graphics and Word report generation



### Multi-Discipline Data Acquisition at the Source

- Support manual, daily report parsing, real-time and offline data acquisition
- Edge acquisition boxes connect drilling instruments, MWD/LWD, videos and more
- Support data type validation, required fields, regular expressions, cross-field validation, and cross-row validation.



### Drilling Operations One-Screen Monitoring

- Real-time key parameters and alerts
- GIS well location, single & multi-well views, operation timeline
- Integrated view of wellbore, trajectory, formation, daily reports, design comparison and exceptions



### Risk Early Warning & Closed-Loop Management

- Parameter anomaly alerts and risk rule configuration
- Covering well kick, loss circulation, stuck pipe, swab/surge, wellbore instability, bit balling and more
- Closed-loop: alert → expert confirmation → action → feedback → knowledge capture



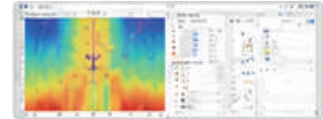
### NPT Fine Management

- Record waiting events and analyze Top 5 NPT categories
- Multi-dimensional analysis by well, section, run, operation, rig, time
- From after-the-fact statistics to process identification, root cause analysis and improvement tracking



### ROP Optimization & Parameter Recommendation

- ROP analysis, MSE heatmap, bit selection and offset well parameter benchmarking
- Match similar sections/conditions and provide parameter recommendations
- Closed-loop: identify → recommend → execute → validate



## Why JuraDOM is Different?



### Not A Stand-alone Software

Built on OiO, JuraData, graphic components, knowledge graph, rule engine, models and RAG to form a professional drilling application system.



### Not A Traditional Drilling Management System

Organized by OiO 5D business ontology to unify objects, processes, roles, data, graphics, rules and knowledge.



### Not A Generic Real-time Monitoring Dashboard

Transform continuous operations into drilling operation portraits for condition understanding, exception identification and closed-loop management.



### Not A Single-point AI Warning Tool

Combine rules, models, RAG and evidence chain with expert confirmation for explainable, traceable and reviewable risk assistance.



### Not Replace Low-code/BI Platform

Come with drilling domain objects, graphics, rules, knowledge and intelligent agent templates tailored for drilling.

## Product Value



### Trusted Data

Build data during the process instead of after-the-fact assembly, improving completeness, consistency and traceability.



### Transparent Management

From phone calls and manual reports to real-time visibility of operations, exceptions and key milestones.



### Efficient Engineering Analysis

Identify optimizable sections, benchmark historical conditions and reduce trial-and-error reliance on experience.



### Experience Accumulation

Capture risks, NPT root causes, parameter optimization and resolution processes as organizational knowledge for reuse.



### Scalable Scenarios

As a vertical application on OiO, continuously extend intelligent agents and scenario applications to create more value.