JuraVerse

Collaborative exploration and development research

Around a shared research object, bring the right materials to each task, invoke tools as needed, and connect specialist outputs in an orderly way to create traceable, reusable research results.

Operating context

New-well data drives an update to reservoir understanding

After new-well data becomes available, well-logging, geology, and reservoir teams collaborate on interpretation, model updates, and specialist review, creating a consistent evidence base for subsequent research.

Current workflow gaps

01 Dispersed materials require repeated preparation

Sources, versions, and specialist conditions are difficult to verify, and materials still need repeated organization after they are found.

02 Tools are disconnected from specialist work

Inputs and outputs depend on manual handoffs; after understanding changes, related outputs are difficult to update in sync.

Expected deliverable

Usable materials / Connected process Consistent outputs / Traceable evidence

Capabilities and value

01 Reduce material-search time and start research sooner

Match materials to research objects and tasks; organize structured data, documents, and volume data; and deliver them to work nodes with their sources and versions. Corresponds to 1. Automatic organization / Proactive delivery / Visual preview

02 Reduce manual transfer and reuse tool outputs

Use JuraDataHub to connect specialist software, deliver task-specific materials, receive research outputs, and retain processing and exchange records for reuse. Corresponds to 2. Tool registration / Software invocation / Bidirectional exchange

03 Reduce collaboration rework and support understanding with evidence

Link task dependencies, research evidence, and output versions; support option comparison and joint justification; and prompt relevant disciplines to review updates as understanding changes. Corresponds to 3. Work linkage / Joint justification / Change linkage

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Workflow and application

Organize the entire research process around a common object

Well-logging, geology, and reservoir teams | Same work area, wells, and intervals | Update reservoir understanding

Existing materials and environment JuraVerse collaborative research Research deliverables

New-well data Existing models and reports | 1. Data acquisition Match materials and prepare deliveries | Interpretation outputs and maps

Updated models

Data platform Specialist software and engineering | 2. Tool integration Invoke tools and exchange outputs | Justification and review records Traceable output versions

3. Specialist collaboration Link tasks, evidence, and versions

Specialists review and confirm adoption → outputs are stored for citation by downstream tasks Upstream materials or understanding changes → identify impacts and notify relevant disciplines to review and update

OiO shared support: business ontology (DWM), resource services, process linkage, and intelligent engine AI-assisted research: intelligent data Q&A, mapping, report generation and checking, and specialist-software operation

Typical application and practical basis

CNOOC integrated collaborative research platform for exploration and development

Connect exploration and development research through an enterprise data lake and research cloud and organize multidisciplinary research scenarios.
Other project examples include the Sinopec natural-gas development research platform and the PetroChina Tarim Oilfield engineering-technology collaborative research platform, covering data integration, software integration, and specialist collaboration.

Adoption and integration

JuraVerse provides the research work environment, and OiO provides shared support.
JuraDataHub connects external specialist software, while specialist processing remains with the corresponding software. The integration scope must confirm data permissions, software versions, interfaces, and licenses, and specialist adoption of outputs remains subject to human confirmation.

Start with one research task

We recommend selecting one work area, one validated model, and 3-5 representative wells for scenario demonstration and validation.
Key checks: material usability, output recoverability, and traceability of specialist handoffs and adoption.