

To keep their customer promises, they digitally reimagine business models through new business capabilities

- Extend beyond the barrel
- Digitize products and services
- Compete as an ecosystem
- Utilize technology as an enabler

In the experience economy, **Intelligent Oil and Gas** companies consistently deliver on their promise to deliver safe, reliable and sustainable energy products and services focused on the customer

- Moving away from traditional, vertically integrated business models to those that will replace access to reserves and capital with access to information as the competitive differentiator
- Breaking free from traditional energy demand and capturing value in three main areas: lower costs, greater portfolio diversity, and more outcome-focused business models

Project Orchestration	Hydrocarbon Production	Hydrocarbon Logistics	Operational Integrity	Human Resources	Finance	Procurement
<ul style="list-style-type: none"> <li>Run real-time predictive analysis on portfolio performance at any process stage</li> <li>Enable asset performance-based contracting with shared risk models</li> </ul>	<ul style="list-style-type: none"> <li>Minimize disruption of the production process</li> <li>Increase transparency into historical, current, and planned gross and net production, quality, and margins</li> <li>Promote production sharing of agreements</li> </ul>	<ul style="list-style-type: none"> <li>Simplify order commitment and fulfillment processes through live inventory management, real-time available to promise, and faster material replenishment planning</li> <li>Provide consistent customer experiences across all channels or devices</li> </ul>	<ul style="list-style-type: none"> <li>Analyze risk and reliability analysis</li> <li>Calculate risk-based asset lifecycle costing</li> <li>Optimize asset effectiveness</li> <li>Integrate mechanical, process, and people integrity processes and solutions, including operator and contractor experience</li> </ul>	<ul style="list-style-type: none"> <li>Work on flexible contracts with customers</li> <li>Support social collaboration among teams</li> </ul>	<ul style="list-style-type: none"> <li>Run strategic customer portfolio management</li> <li>Enable financial controlling of performance-based service contracts</li> </ul>	<ul style="list-style-type: none"> <li>Augment the workforce by integrating the contingent workforce efficiently</li> <li>Find and contract talent with specific noncore skills to drive new strategies outside the current business scope</li> </ul>
<ul style="list-style-type: none"> <li>Support a systems-engineering approach that includes mechanical software and electronic capabilities</li> <li>Embed a technologies foundation to enable equipment networks</li> <li>Hand over a digital twin to operations</li> </ul>	<ul style="list-style-type: none"> <li>Enhance simulation and analytical capabilities</li> <li>Provide a remote monitoring and collaboration platform</li> </ul>	<ul style="list-style-type: none"> <li>Track all molecules digitally</li> <li>Integrate trading and transportation data</li> <li>Resolve order issues faster with guided procedures</li> <li>Constantly monitor brand performance in the market</li> </ul>	<ul style="list-style-type: none"> <li>Establish a platform for collaborative management of digital twins</li> <li>Base contracting on operational effectiveness</li> <li>Aggregate field data from the edge to optimize equipment performance</li> </ul>	<ul style="list-style-type: none"> <li>Train and certify the workforce on the latest digital technology</li> <li>Collaborate with universities and external entities with greater flexibility</li> <li>Turn new hires into ambassadors</li> <li>Higher employee engagement through total rewards</li> </ul>	<ul style="list-style-type: none"> <li>Include payment models for digital services in product calculation and financial reporting</li> <li>Manage and comply with digital rights</li> </ul>	<ul style="list-style-type: none"> <li>Bundle third-party products</li> <li>Manage complex services</li> </ul>
<ul style="list-style-type: none"> <li>Manage projects collaboratively across the entire project life cycle and ecosystem</li> <li>Create flexible supply chains for both materials and labor</li> </ul>	<ul style="list-style-type: none"> <li>Enable cross-functional transparency, collaboration, and reporting of gross and net production of working interests and operated wells</li> <li>Allow all functions to use single production allocation results</li> </ul>	<ul style="list-style-type: none"> <li>Drive feedback to resolution in no time</li> <li>Drive visibility and delivery across the full hydrocarbon value chain</li> <li>Faster and efficient crowd service</li> <li>Foster predictive and optimized supply chain planning capabilities such as integrated business planning and secondary costs</li> <li>Incorporate product feedback channels</li> <li>Concept testing/ quality with end users</li> </ul>	<ul style="list-style-type: none"> <li>Provide a collaboration network for equipment data</li> <li>Manage assets holistically with a common view of information and operation technology data</li> <li>Improve visibility to inventory, spare parts, P&amp;IDs and catalogs</li> </ul>	<ul style="list-style-type: none"> <li>Manage external contractors in a flexible manner</li> <li>Enable flexible work teams</li> <li>Manage training, certification, and compliance across the entire workforce</li> <li>Monitor employee/ contractor engagement and satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>Optimize working capital</li> <li>Mitigate increasing financial risks associated with partner agreements</li> <li>Analyze profitability instantly across multiple dimensions of the ecosystem</li> <li>Support on-demand soft closes for operated and working interest wells</li> </ul>	<ul style="list-style-type: none"> <li>Enable global supply chains contractually with multitier management of suppliers</li> <li>Automate and simplify the integration of material suppliers</li> </ul>
<ul style="list-style-type: none"> <li>Manage a collaborative platform across the company's asset and project information, data, and processes</li> <li>Help ensure interconnectivity</li> </ul>	<ul style="list-style-type: none"> <li>Share a digital twin operating environment</li> </ul>	<ul style="list-style-type: none"> <li>Enable collaborative platform that provide real-time total inventory visibility of the hydrocarbon supply chain through a collaborative platform</li> <li>Innovate autonomous and shared storage and delivery models</li> </ul>	<ul style="list-style-type: none"> <li>Deliver a collaborative platform to manage the entire asset life cycle</li> <li>Foster community and ecosystem machine learning</li> </ul>	<ul style="list-style-type: none"> <li>Foster knowledge sharing and community building</li> <li>Manage the total workforce on a single platform</li> </ul>	<ul style="list-style-type: none"> <li>Generate finance reporting with industry-related attributes</li> </ul>	<ul style="list-style-type: none"> <li>Implement a fully integrated procurement suite</li> <li>Help ensure network interconnectivity</li> </ul>

Typical business benefits\*

- Capital project costs: -2%–3%
- Project cycle time: -5%–20%
- Cost of shutdowns, turnarounds, and outages: -5%–15%
- Incidents: -10%
- Production: +3%–5%
- Lease operating costs: -5%–10%
- Well downtime: -15%–25%
- Rate loss deferrals: -25%–50%
- Refining and sales margins: +2%
- Hydrocarbon inventory: -6%
- Capital expenditures: -4%
- Return on assets: +5%
- Unplanned asset downtime: -15%
- First-time fixed rate: +25%
- Operators extra expense: +15%
- Procurement function cost: -15%–20%
- Worker acquisition time: -30%–40%
- Days payables outstanding on targeted spend: -2–5 days
- Days to close annual books: -40–50 days
- Budgeting and forecasting cost: -25%–50%
- Audit cost: -20%–40%
- Lower cost of time and attendance functions
- HR full-time equivalents: -44%

Intelligent Suite	Intelligent Technologies
<p><b>Digital Core SAP S/4HANA</b></p> <ul style="list-style-type: none"> <li>Project control and product development</li> <li>Enterprise portfolio and project management with embedded commercial project management</li> <li>Multi resource scheduling</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance management</li> <li>Innovation factory</li> <li>Equipment and material easy returns</li> <li>Cloud platform for blockchain</li> <li>Asset manager for field operations</li> <li>Wellhead production optimization</li> </ul>
<p><b>Extensions</b></p> <ul style="list-style-type: none"> <li>Integrated business planning</li> <li>Innovation management</li> <li>Enterprise project connection</li> <li>Visual enterprise</li> <li>Master data governance</li> </ul>	<ul style="list-style-type: none"> <li>Aviation refueling</li> <li>Analytics cloud</li> </ul>

- Internet of Things
- Machine Learning
- Analytics
- Data Intelligence
- Blockchain
- Big Data

**SAP Cloud Platform:** API Business Hub - Market Place - Portal - API Management - Collaboration Services - Mobile Services - UX Services - Big Data Services - Security Services - Analytics Services - Integration Services

**SAP Data Management:** SAP HANA - SAP Data Hub - Meta Data & Lifecycle Management - SAP Vora - Orchestration & Governance - Smart Data Integration - 3<sup>rd</sup> Party Spark / Hadoop - Streaming Analytics - Data Lifecycle Management