Transforming Upstream Decision Making
IIOT and Cloud Solutions – Schneider Electric and Halliburton partnership
The strategy-to-execution gap

Management
- Strategic Direction
- Portfolio Optimization
- Share Holder Value

Planning
- Field Planning
- Actual vs. Budget
- Pricing

Operations
- Production vs. Capacity
- Well Integrity
- Downtime
Combine the best of two worlds: IT/OT convergence

<table>
<thead>
<tr>
<th>System Platform IOM</th>
<th>DecisionSpace Production</th>
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</thead>
<tbody>
<tr>
<td><strong>Operation Technology System</strong></td>
<td><strong>Information Technology System</strong></td>
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<tr>
<td>• IIoT Cloud Platform or Distributed Field servers</td>
<td>• Comprehensive Cloud Platform for the E&amp;P Lifecycle</td>
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<tr>
<td>• Integrated Operation Centers</td>
<td>• Industry Leading Interpretation Tools</td>
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<tr>
<td>• Real Time Performance Management</td>
<td>• Integrated Cross Domain Workflows</td>
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<tr>
<td>• Distributed Asset Management</td>
<td>• Single Instance Data Management</td>
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<tr>
<td>• Real Time Analytics &amp; Just-in-time alarming</td>
<td>• Multi-dimensional Analytics Engine</td>
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<tr>
<td>• Mobile Work Force</td>
<td>• Connected Decision Makers</td>
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Transforming upstream decision making
Closing the gap between operations and enterprise

IMPROVED ASSET PERFORMANCE
• Increased operational reliability and collaborative insights using a Cloud Solution

SIMPLIFIED DECISION MAKING
• Full visibility on strategic and operational KPIs with Connectivity and Mobility innovations

ENHANCED OPERATIONAL INTELLIGENCE
• Increased safety and asset integrity with shared workflows and Predictive Analytics
# EcoStruxure Platform

### EcoStruxure Industrial Software
- Process Modeling & Optimization
- Operations & Data Management
- Predictive Maintenance
- Operator Training
- Enterprise Pipeline Management: Software Planning & Scheduling

### Well Management
- Artificial Lift Advisor

### Fuels Supply Chain Automation

### Connected Field Services
- EcoStruxure Asset Advisor

### Sustainability & Energy Resource Advisor

## Apps, Analytics & Services

## Connected Products
- Transformers
- IPMCC (Intelligent Power & Motor Control)
- Uninterruptible Power Supply
- LV Drive Systems
- MV Switchgear
- Smart Breakers
- MasterPack MTZ
- Pre-fabricated E-house
- Telemetry
- Weather Stations
- Measurement & Control
- Mobile Inspections
- Security Cameras

## End-to-end Cybersecurity

## IT Management
- Pre-fabricated datacenter
- Smart Bunker

## Cloud and/or On Premises
- Edge Control

## Integrated Power & Process Management

## Power Supervision
- EcoStruxure Power SCADA Operation
- EcoStruxure Power Monitoring Expert

## EcoStruxure Industrial Management
- PlantStruxure, Modicon, Foxboro, Triconex, SCADAPack, SCADA

## Well Management Advisor

## Artificial Lift Advisor
Seamlessly integrating IT/OT worlds

**Operations Management**
- Volumes tracking and reporting
- Facilities and equipment maintenance & management
- Smart work practices.

**Production Surveillance**
- Real time performance KPIs
- Analytics based notifications
- Integrated analysis tools
- Role-based visualization

**Production Management**
- Field planning & development
- Integrity Life Cycle
- Downtime & failure analysis
- Well diagnostics

**Collaborative Context Aware Workflows**

<table>
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<tr>
<th>Integrated Platform, Production Information Management &amp; Security</th>
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<tr>
<td><strong>Data Quality</strong></td>
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<tr>
<td>Digital Services Platform</td>
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<td>Data Generators</td>
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## Connecting disciplines for smart operations through IoT

<table>
<thead>
<tr>
<th>Business Value Solutions</th>
<th>Production Optimization and Field Lifecycle Management</th>
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<tr>
<td></td>
<td>Production and Operations Management</td>
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<tr>
<td></td>
<td>IOC Field Surveillance, Data Management and Reporting</td>
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</table>

### Data Sources
- **Real-time data**
- **Transactional data**
- **Unstructured data**

### Connect
- Universal Connectivity
- Drivers, Toolkits, and Templates

### Collect
- Energy, Alarms, Events in multiple data formats
- Data organization, and aggregation

### Contextualize
- Operational Context for Actionable Insight
- Predictive Analytics, Visualization

### Close
- Rules, Models, and Workflow
- End-User Apps, Mobility, etc.

### Infrastructure
- On-Premise and Cloud Infrastructure
- Scalability and Cybersecurity
System platform and decision space collaborative workflow demo

Well Integrity Workflows – Surveillance, Collaboration, Proactive Intervention, and Knowledge Sharing

- Connectivity – IIOT
- Mobility
- Analytics
- Integration

**Integrated Systems:**

- Decision Space
- Avantis PRISM – Predictive Analytics
- System Platform – Connectivity
- IntelaTrac – Mobility
Integrated operations and E&P lifecycle management collaborative workflow demo
Creating a collaborative and connected business in the cloud

Modular Scalable Approach
- Single Integrated platform for Operation Centers
- Real-Time Performance Management
- Data Management – Digital Tween, Cloud IT, and Data Centers
- Real-Time Edge Optimization and Control

Simplification
- Collaborative System design, implementation, and deployment
- Reduced project execution risk
- Integrated software system and field control

Peace of mind
- Top experts in cybersecurity and critical infrastructure providing global solutions