

Future Field Operation

Siemens Industrialized Oilfield Solutions –
Well Performance Management

Restricted © Siemens AG 2017

siemens.at

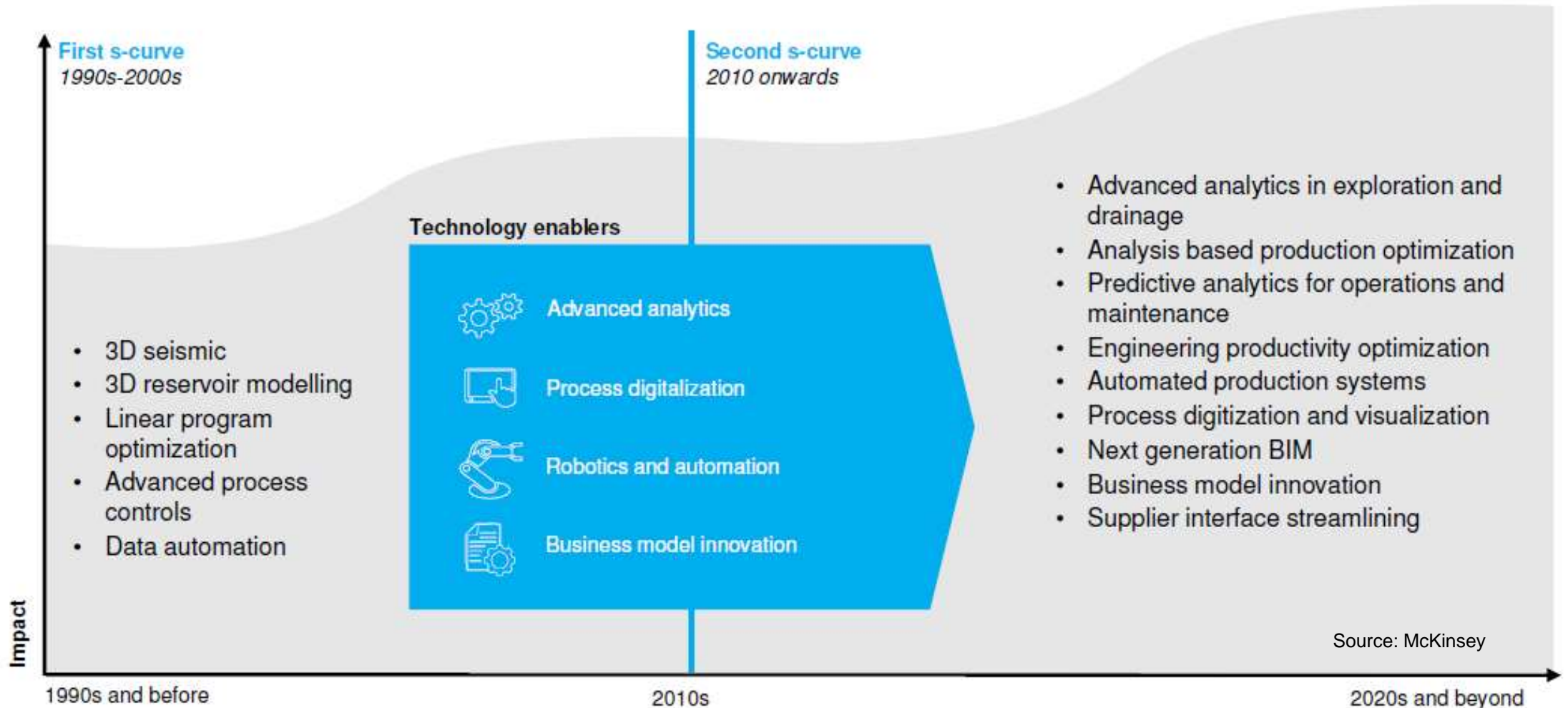
Discover your
untapped assets.

Turn data into value – with proven digital
solutions from an industry leader.

Siemens leverages state-of-the-art data analytics and a comprehensive software suite to optimize the performance of critical oil and gas assets, from pre-FCID through operations and ultimately decommissioning. Discover how data-driven solutions—such as digital twins, condition monitoring, predictive maintenance, and artificial intelligence—can help you reduce costs by effectively managing the "new normal," whether you're drilling sites, moving product through pipelines, or manufacturing parts.

siemens.com/dataintovalue

We Believe, the Next S-Curve in O&G Competitiveness and Efficient Operation will Come From Digital and Advanced Analytics



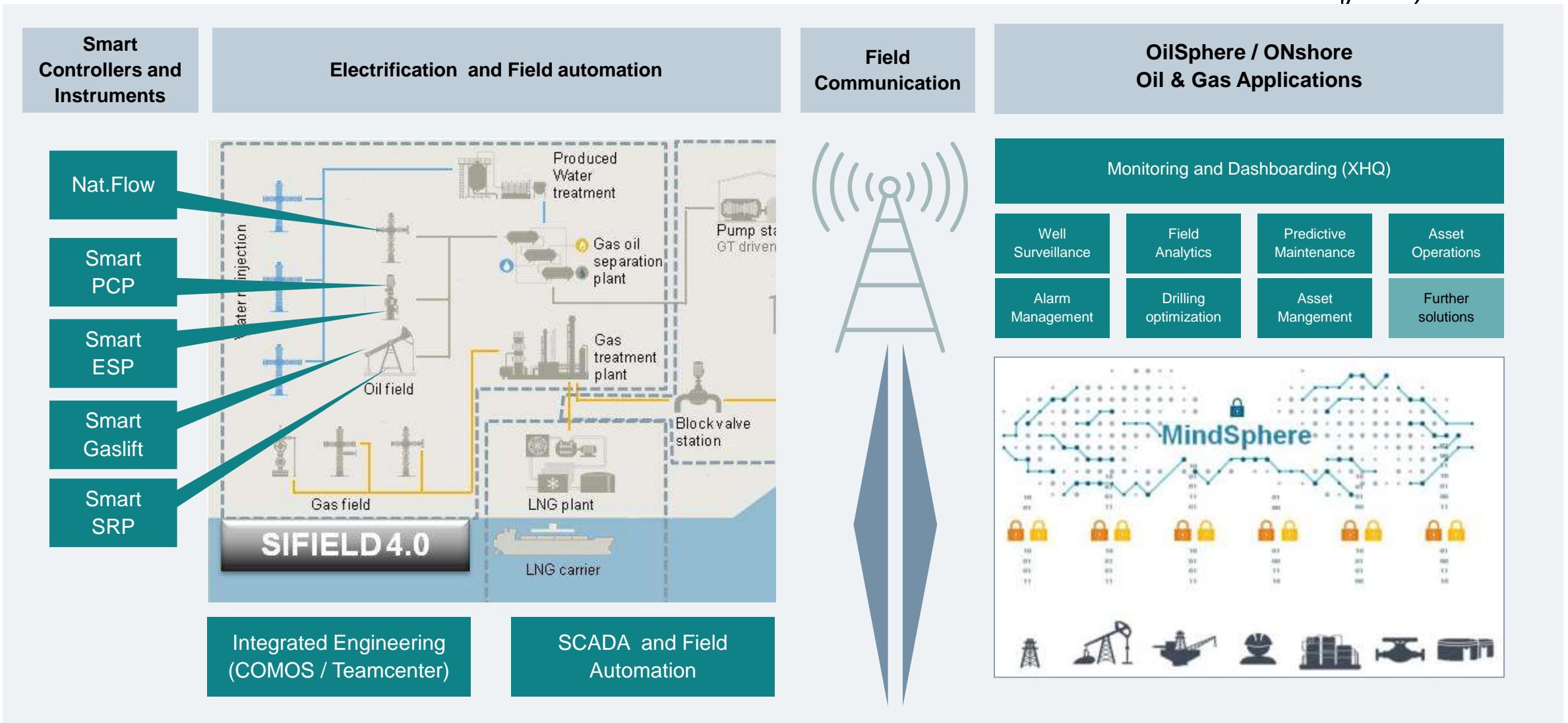
Source: McKinsey

Implementing the Digital Twin of Your Oilfield

Highly Modularized and Leading Technology Enables the End to End Digital Oilfield

SIEMENS

Ingenuity for life

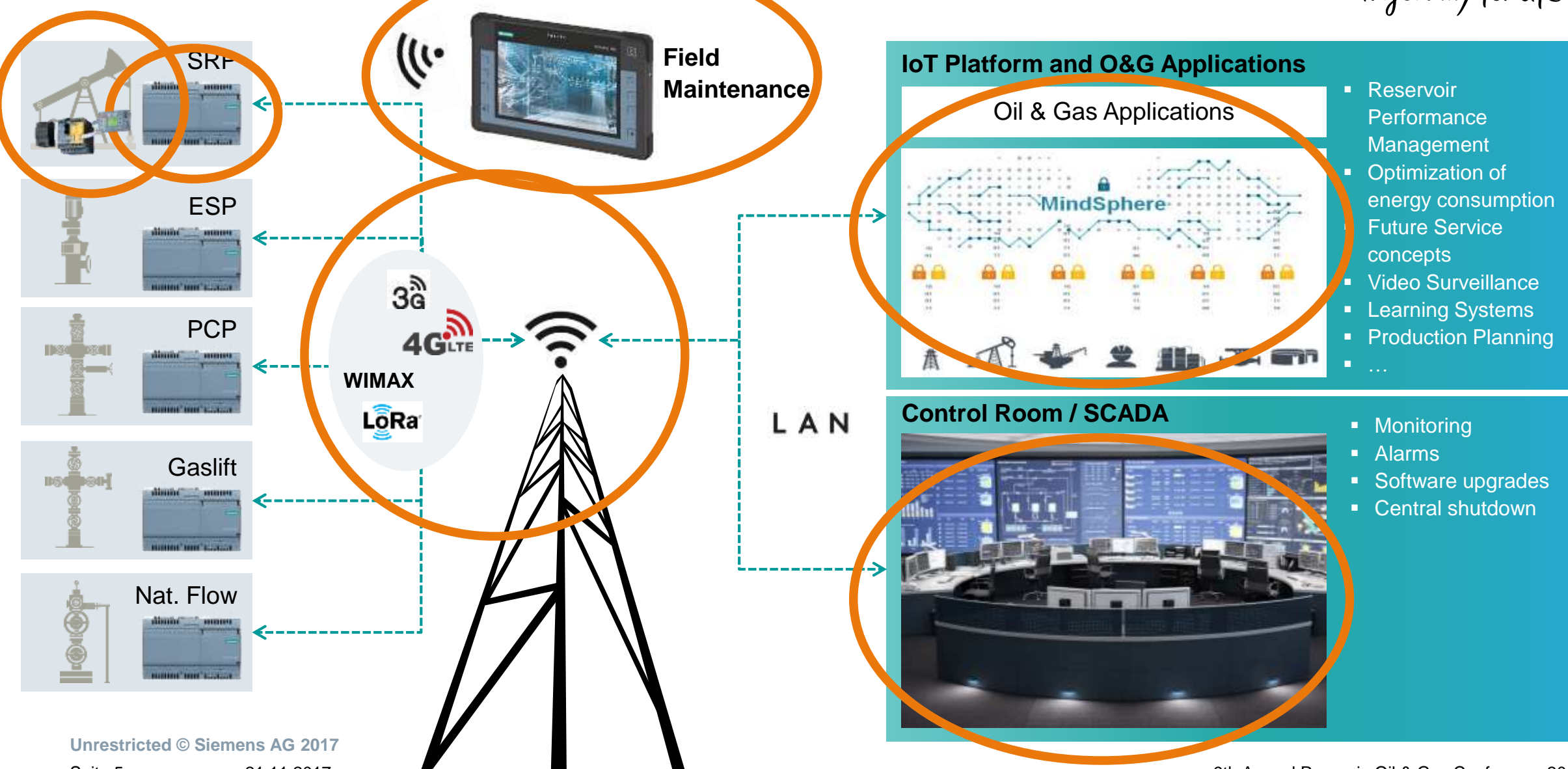


Future Field Operations – Artificial Lift

IoT based Well Surveillance and Reservoir Analytics

SIEMENS

Ingenuity for life



IoT Platform and O&G Applications

Oil & Gas Applications

- Reservoir Performance Management
- Optimization of energy consumption
- Future Service concepts
- Video Surveillance
- Learning Systems
- Production Planning
- ...

Control Room / SCADA



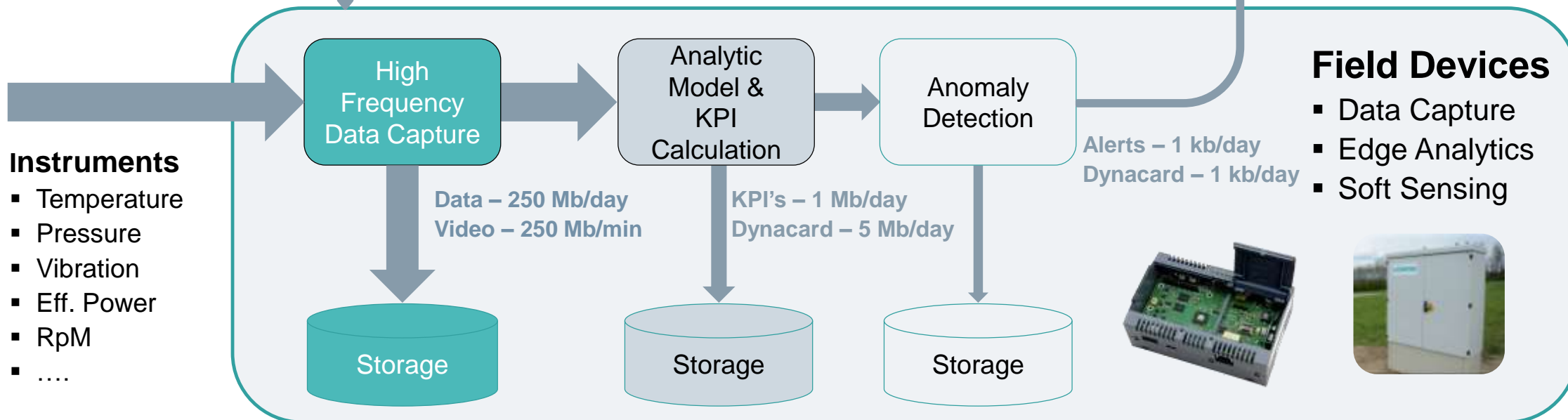
- Monitoring
- Alarms
- Software upgrades
- Central shutdown

The Edge Analytics Concept Enables Independent Operations in the **SIEMENS** Field and Connectivity to the Backbone

Ingenuity for Life

SCADA + IoT Platform

- Dashboards
- Decision Support
- Workflows
- Analytical Apps
- Central Control



Operating your assets with leading edge technology



Integrated Engineering COMOS




Door interlock

Temperature controlled ventilation

Insulation of outer box

Access for service personnel

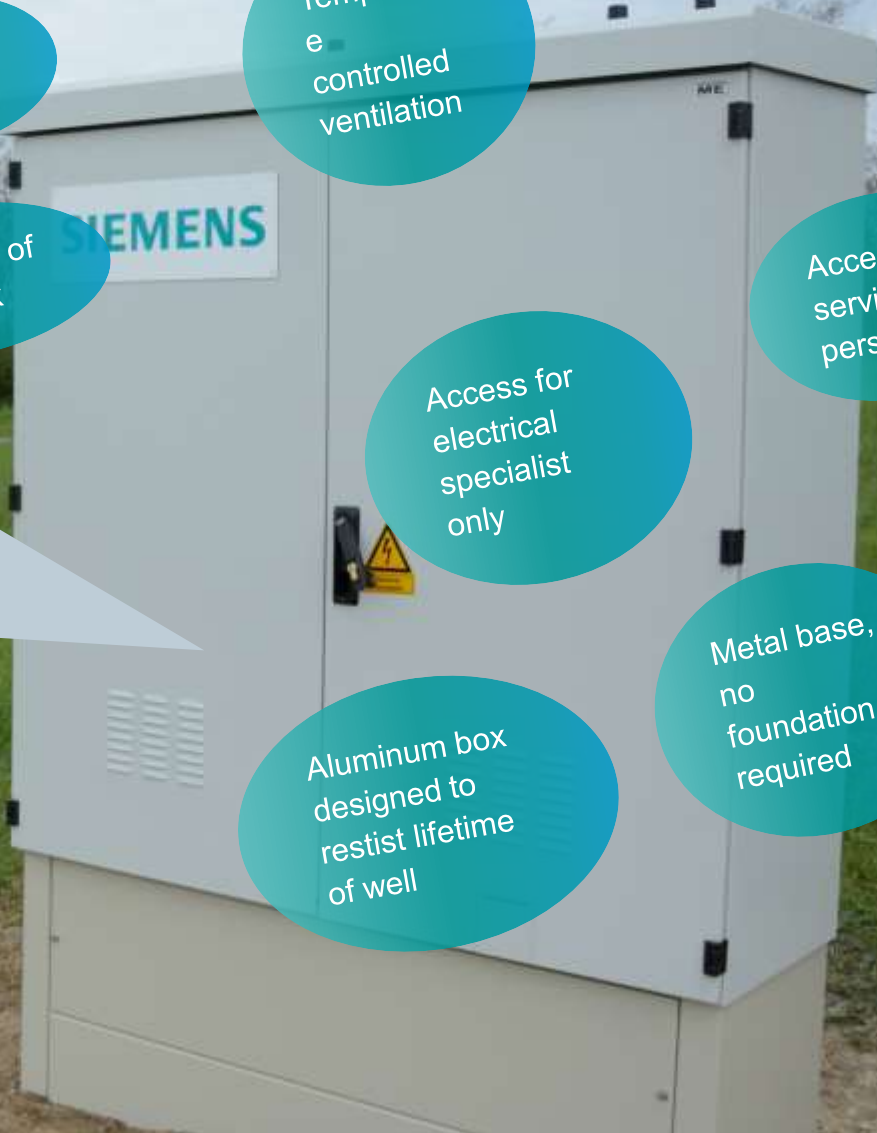
Industrialized Approach – Ready to Run Out of the Box

- 1 Smart Motor Control**
 - Motor Management
 - Safety/automation functionality
 - Power measurement
- 2 IoT gateway / Edge Analytics**
 - Industrial Intel®-based gateway
 - Soft sensing
 - Alarming
- 3 Connectivity**
 - Wlan, 3G/4G, LoRa, WIMAX
 - Industrial Tablet
 - Industrial IoT Platform
 - SCADA
- 4 Power supply:**
 - Complete equipment for power supply

Access for electrical specialist only

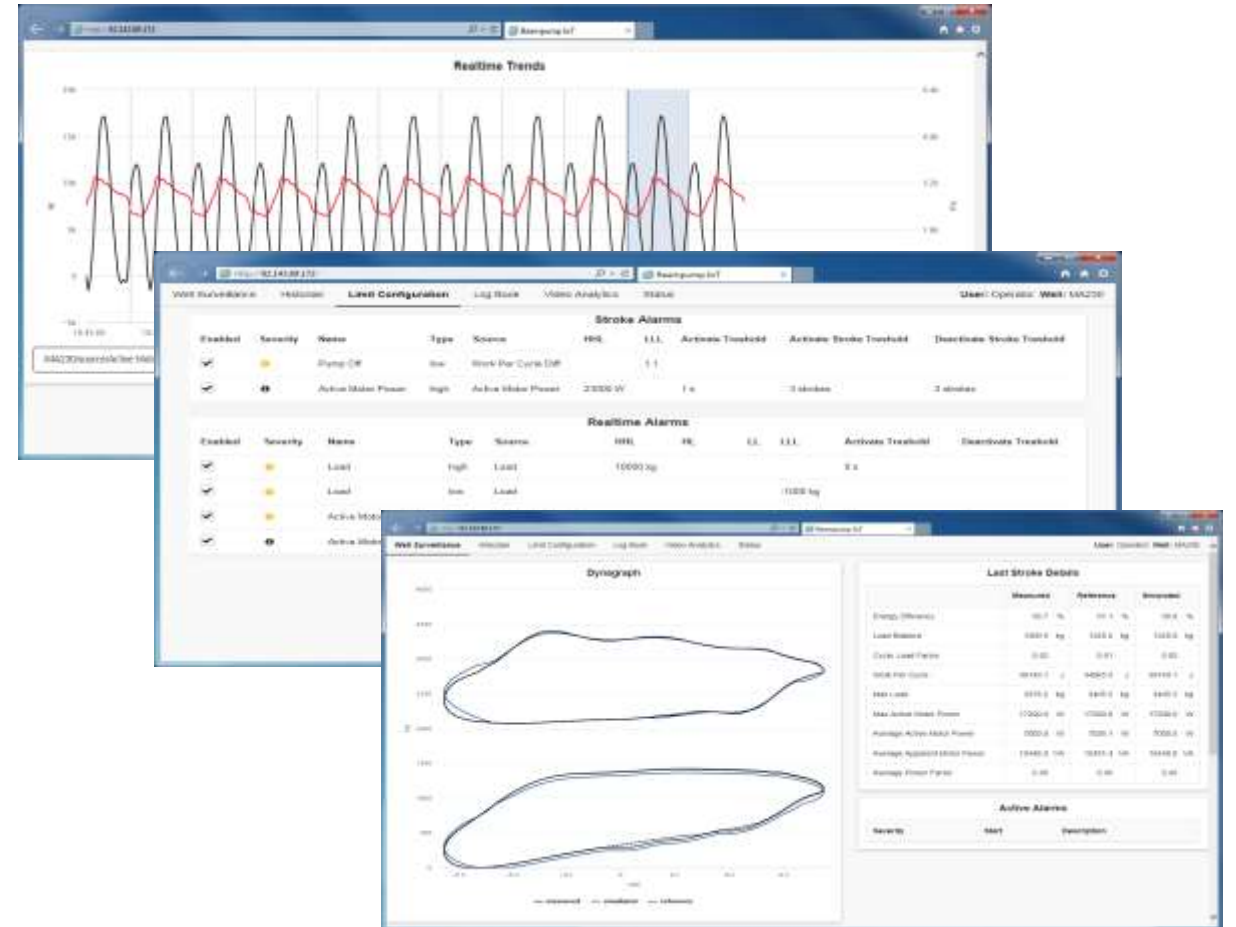
Metal base, no foundation required

Aluminum box designed to resist lifetime of well



Customized User Interfaces based on Open Standards enable Efficient Interaction and Maintenance

SIEMENS
Ingenuity for life

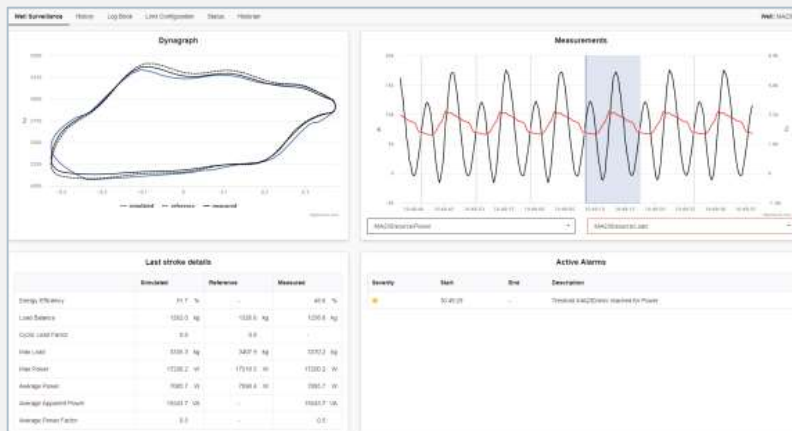


Proven End-to-end Beam Pump Monitoring / automation solution at lower TCO

Proven values



- ✓ **Production optimization**
- ✓ **Early production losses identification**
- ✓ **Minimized well interventions/workovers**
- ✓ **Maintenance optimization**



Thank you for your attention