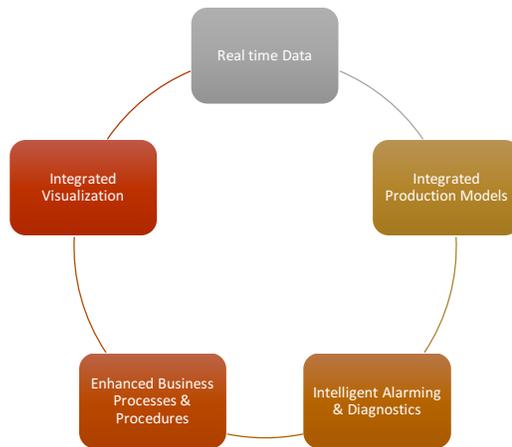# CONNECTING THE DIGITAL OILFIELD: DAY 2 SUPPORT

Putting technology to work to holistically manage production, personnel and safety, allowing for reduced costs, increased production and improved efficiency in the oil and gas sector. Day 2 support provides the ability to introduce a network model into an oil and gas field services domain.

DIGITAL OILFIELD

The digital oilfield holds a lot of promise, and in today's environment of lower revenues and high costs, it is an absolute necessity. However, it comes with challenges, given the geographical location of most oilfield sites. Whether it's productivity, profitability, technology or automation, improper digital infrastructure effects and challenges projects and companies; the industry faces common challenges in extending private networks to support real-time business applications across the project's life-cycle. This impacts the project's efficiency, in turn, impacting the company's bottom line. WireIE provides project and network management expertise that allows your team to focus on running production operations.

WIREIE'S DAY 2 SERVICE

New production comes from increasingly remote and challenging locations, where staffing sites with skilled workers is increasingly challenging. In addition, HESSE (Health, Safety, Security & Environment) as well as network security requirements account for a larger overhead, making the necessity to provide efficient and affordable services more accessible.

DAY 2 SERVICE is a valuable necessity in the successful deployment and operation of networks in the field.
WireIE focuses on the configuration, deployment and utilization of site specific, model-based solutions.

RESULTS

DAY 2 SERVICE is typically offered as part of, or as a value added service, to the WireIE Transparent Ethernet Solution.
Keeping the network up and running in the field can save thousands of dollars a day in lost revenue.

THE PROMISE

- The digital oilfield becomes an absolute necessity
  - ➤ Complete projects faster
  - ➤ Optimize production
  - ➤ Fewer staff
  - ➤ More predictability
  - ➤ More agility to redeploy resources where they're needed and to predict and prevent issues before they happen
    - ○ E.g. Predicting system failures or equipment malfunctions allows just in time delivery of replacements, minimizing project length and costly downtime.
- Real-time information sharing and reporting between remote oilfields and respective geographical dispersed business units around the world
- Team co-ordination and productivity is enhanced through ubiquitous access to communication, workflow automation, and office productivity tools.
- Digital monitoring of reservoirs, paired with remote production control capabilities makes it possible to be more dynamic when it comes to maximizing production, even revisiting old fields that had been thought to have exhausted their revenue possibility.
- Machine to machine communications allow increased automation, so that non-automated resources can be intelligently redeployed.
- Everything is connected. Corporate and regional command centers, exploratory and production oilfields, both on-shore and off-shore, pipelines and other midstream transportation facilities, refineries, and even partners and customers downstream.

TECHNICAL REQUIREMENTS

- Integrated coverage
  - ➤ Multiple interdependent moving pieces and interactive processes to work collaboratively.
- Reliability and recovery
  - ➤ Work with minimum downtime and the shortest possible time to recovery of service in case of any issues.
- Hardened to the environment.
  - ➤ The network must be suited to the harsh and remote environments in which it is deployed.
- Security and safety
  - ➤ Devices must adhere to HSSE (Health, Safety, Security and Environment) Standards.
  - ➤ Data must provide confidentiality, integrity, authentication and protection against loss in transit and at rest.
- Managed
  - ➤ All of the above-mentioned requirements must be managed by one responsible authority toward proactive network management. One point of ownership responsible for problem identification, prediction and prevention.
  - ➤ Central authority with deep carrier expertise, along with proven discipline in network monitoring, incident management, problem management, and project management. WireIE Day 2 Support provides such comprehensive support.

DAY 2 SERVICE: WHAT DOES WIREIE PROVIDE

PROBLEM MANAGEMENT
- Root cause
- Chronic issues
- Permanent solutions to recurring problems
- Uncover efficiencies

PROJECT MANAGEMENT
- Document processes and procedures; acceptance test plan
- Coordination and oversight of equipment moving along with the drilling and completion operations teams
- Facilitate communication and implementation of MACD process
- Provide just-in-time service when operations commence in the target wellpad
- Provide agile project management approach to adjust to an operations dynamic schedule
- Apply what-if scenario analysis and flexibility to meet fast-paced operational needs
  - Continue to present proven track record of successful service moves on short notice
  - Notifications and communication with operators
  - Faciliate and montior implementation of standard processes

INCIDENT MANAGEMENT
- Service desk - 1800 number
- Trouble ticketing
- Problem triage
- Staff dispatch
- Remote resolution

MONITORING AND ALERTING NETWORK & DEVICE
- Tech capability to detect health of components and services
- Quickly respond to (or pre-empt) incidents