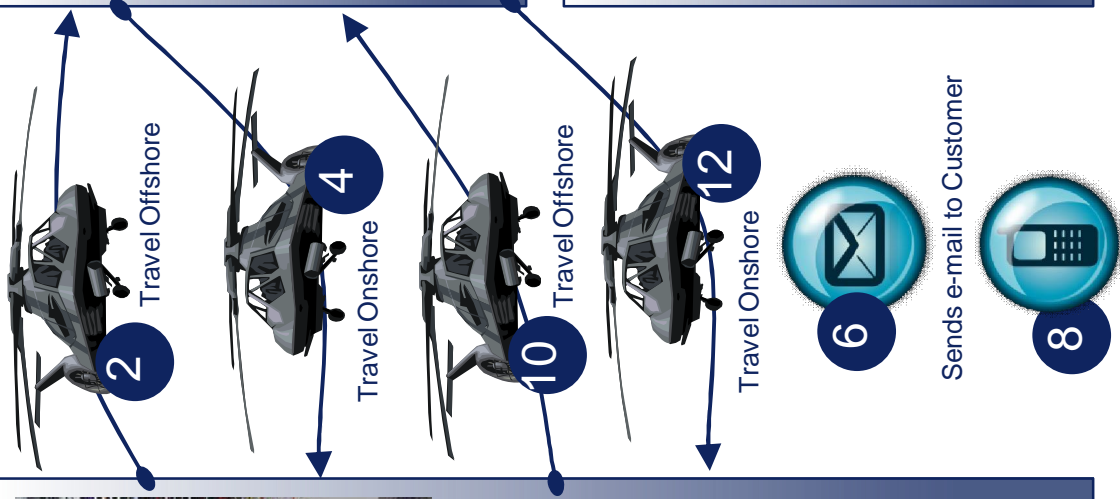
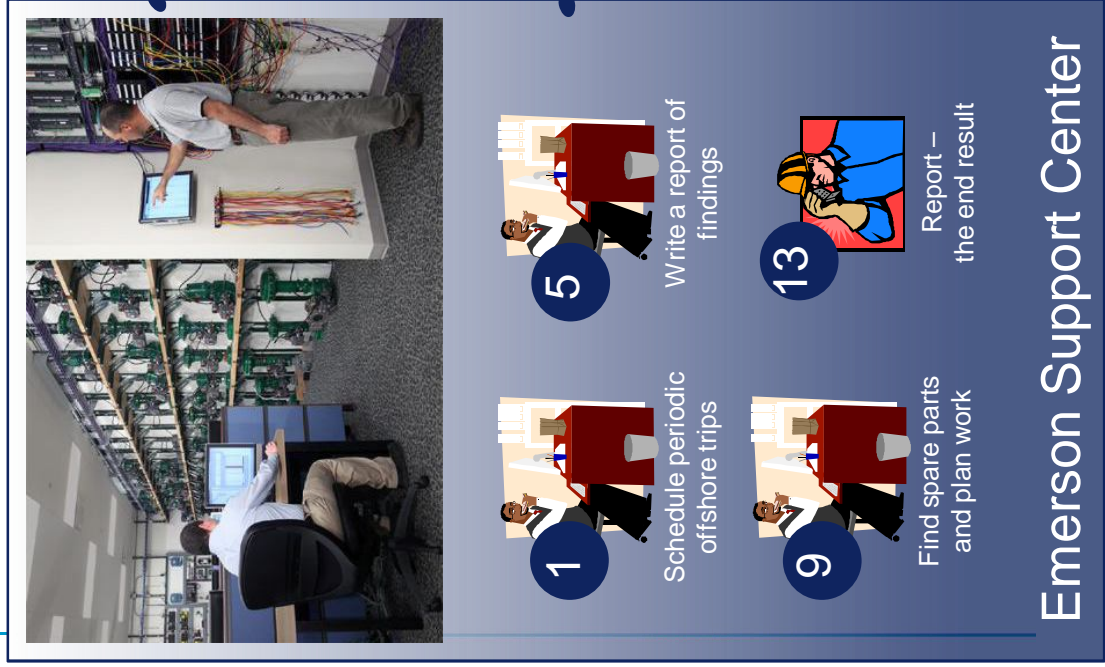


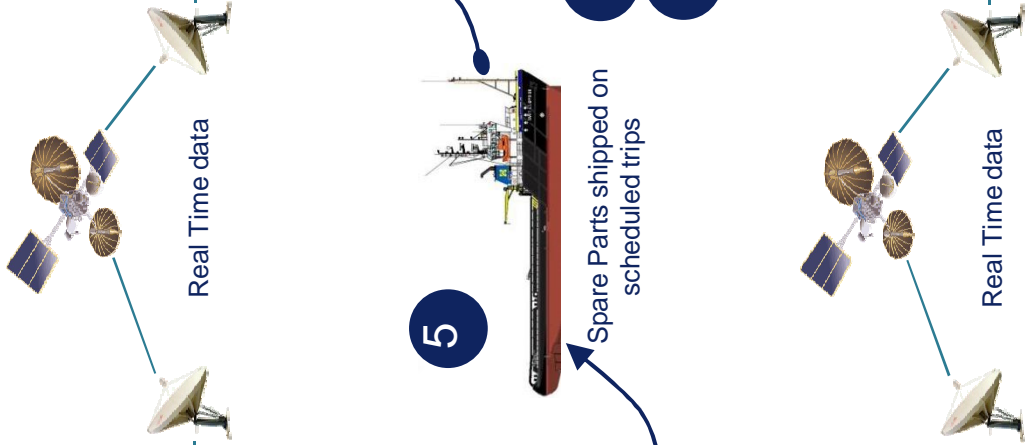
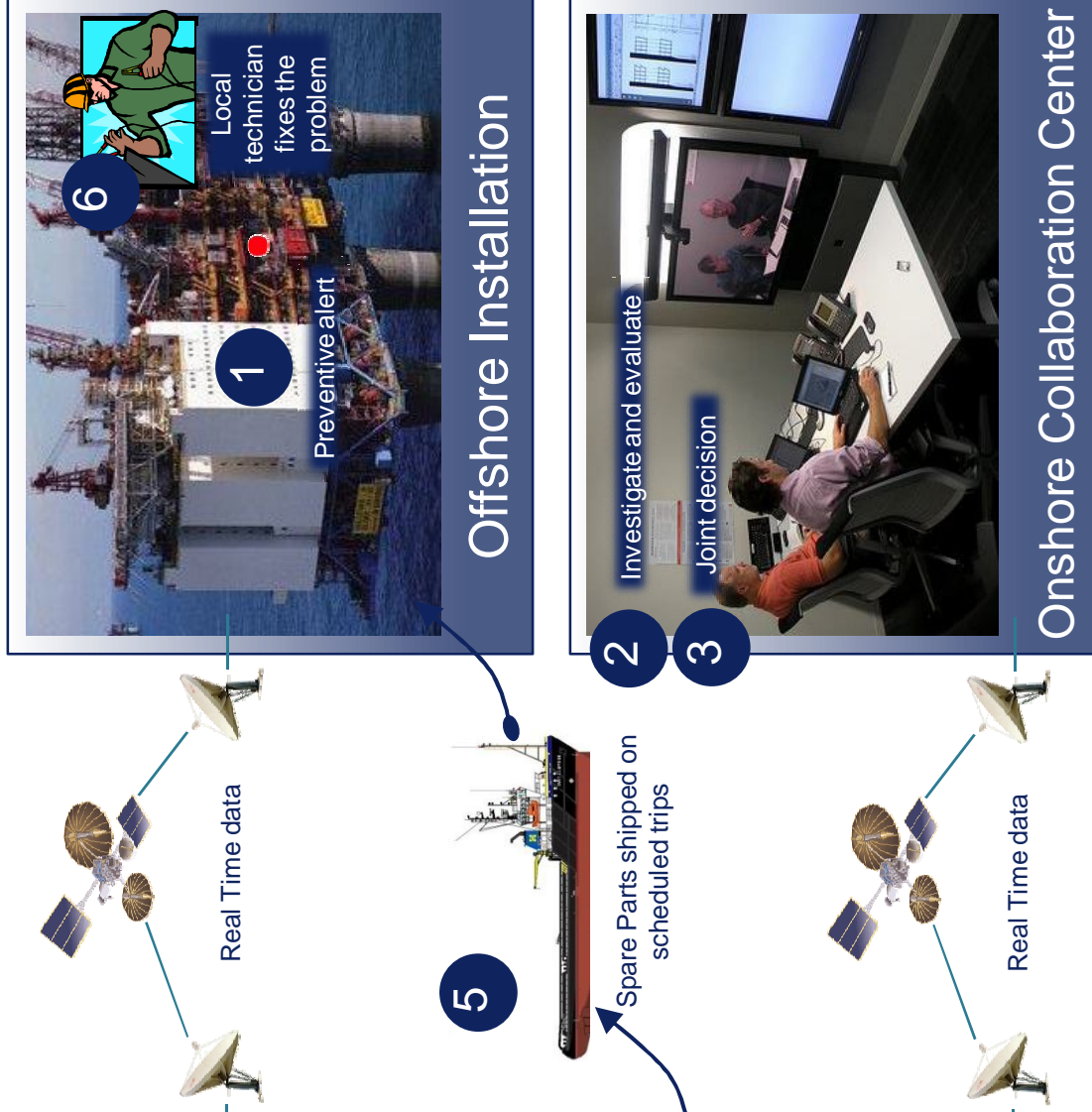
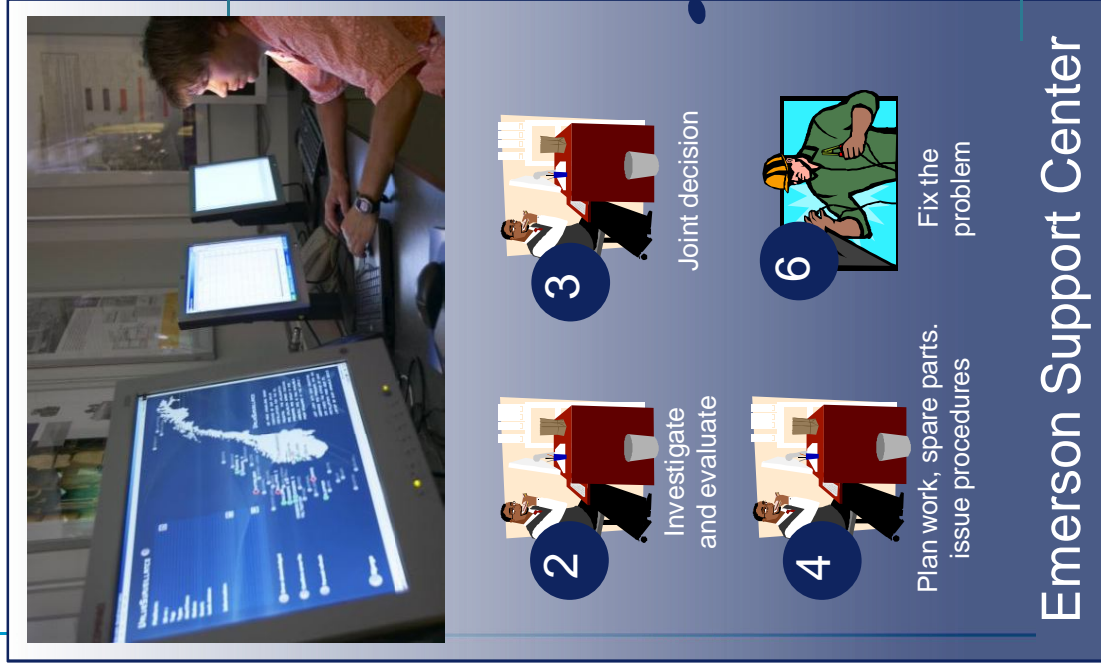
Oil & Gas Customers are Innovating with Smart Wireless Globally

Customer Name	Country	Industry/ Project	Application
 Petronas Labuan Gas	Labuan Malaysia	Gas Distribution (Process upgrade)	Natural Gas pipeline pressure & tank level
 Santos	Australia	Onshore Production (Wellhead monitoring)	Wellhead Pressure & Temperature
 Nexus Energy	Australia	Offshore Production (Wellhead monitoring)	Sub-sea umbilical health monitoring
 HESS Corporation	Indonesia	Offshore Platform (Wellhead monitoring)	Wellhead pressure & temperature
 British Gas India	Gujarat India	Offshore Production (Platform Revamp)	Gas lift injection & flare gas monitoring
 British Gas India	Gujarat India	Offshore Production (Platform expansion)	Wellhead Pressure & Temperature Monitoring
 CUEL	Bangkok Thailand	Offshore EPC (Greenfield Platform)	Wellhead Pressure, Flowline Temperature
 Shell Sabah	Barton Malaysia	Offshore Production (Wellhead monitoring)	Wellhead pressure on remote platform
 Brunei Shell Petroleum	Brunei	Training Centre (Technology Trials)	Pressure & Temperature on process tanks

Valve “Condition Monitoring” – the Old Way



Valve Condition Monitoring – a Better Way



Using Best Technology to Improve Offshore Field Production

CHALLENGE

- Require real-time control of gas and water injection and centralized monitoring of product flow of six (6) unmanned platforms
- Crowded wellhead area prevents installation of cabling

SOLUTION

Smart Wireless + FOUNDATION Fieldbus

- 223 Rosemount 3051S Wireless Transmitters
- 137 Rosemount 648 Wireless Temperature Transmitters
- 7 Smart Wireless Gateways
- 82 Rosemount 3095 Multi-Variable FF transmitters communicating with Fisher DVC 6000 for Control-in-Field
- 7 Rosemount 3420 Fieldbus Interface Module
- AMS Device Manager with ValveLink & Wireless SNAP-ON
- Backhaul 5.8 GHz Radio Communication System
- Solar Power System Integration to existing Honeywell Experion

EXPECTED RESULTS

- Optimized oil production rates
- Improved reservoir management for increasing recovery from reserves

TALISMAN
ENERGY



WirelessHART

 **EMERSON**
Process Management

Wireless... From Field To Enterprise...

With Emerson....

You Get:

- Improved Well Integrity
- Optimized Production
- Efficient Injection Program
- Access to Scarce Resources
- Proven Communication Standards
- Eliminate Exposure to Health and Safety Risks
- Effective Tank Management



EMERSON
Process Management

Wireless Instrumentation & Control

Vinayak Kore
Fellow Engineering,
Honeywell Technology Solution Lab,
Bangalore
vinayak.kore@honeywell.com

Honeywell

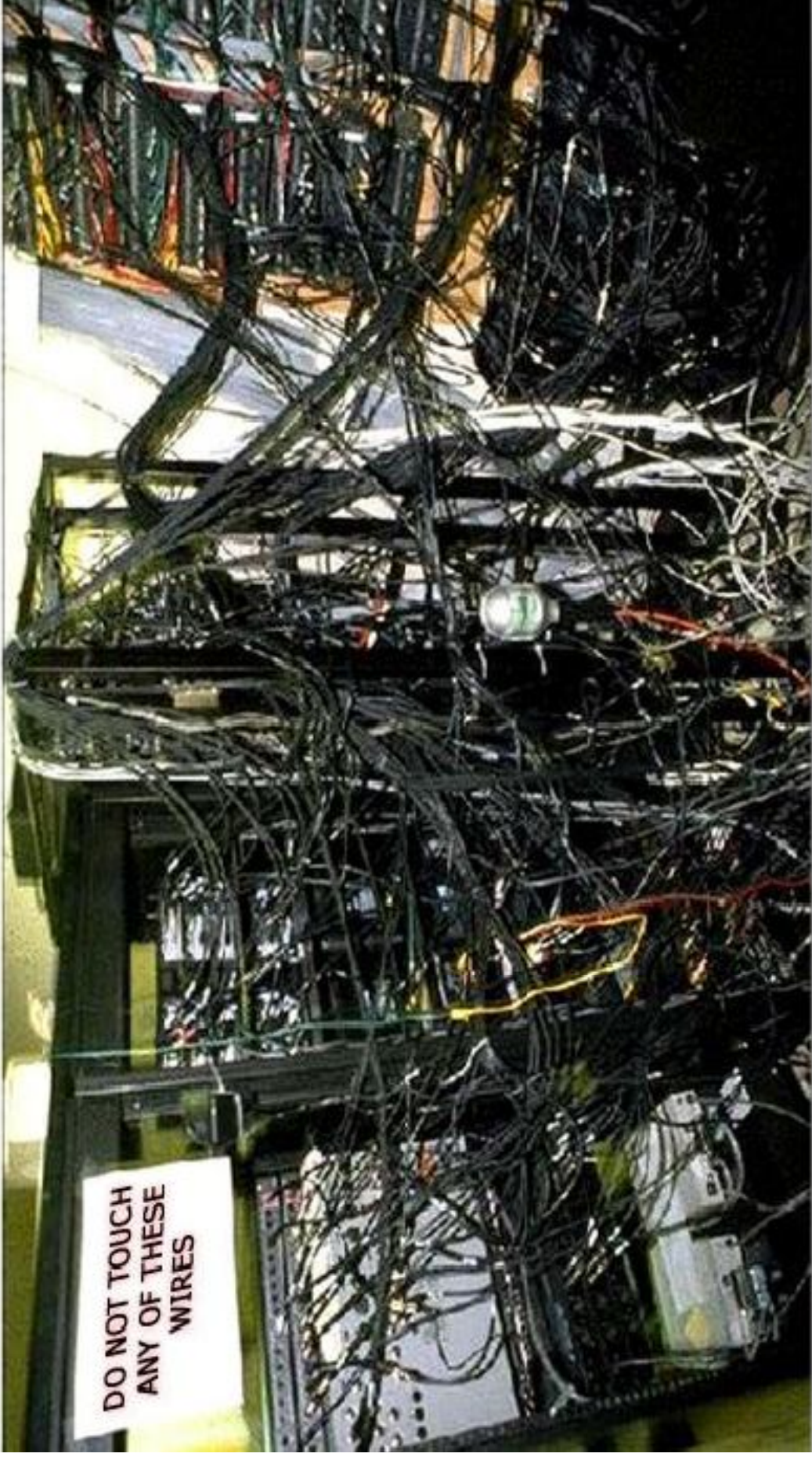
Agenda

- **Critical-to-quality factors for an automation network**
- **How the CTQs are addressed by ISA100 technology**
- **Case study - Honeywell's OneWireless system & applications**
- **Q & A**



Why wireless?

Honeywell

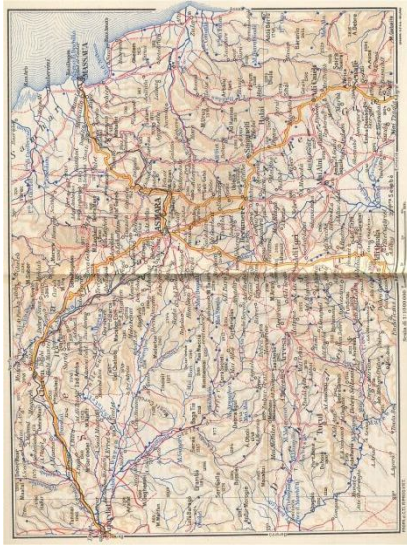


Wireless is a game changer

Wireless improves the way we do things today...



Wireless allows us to do what was impossible before...



Industry Challenges

Safety



Eliminate Hazards
\$20B losses per year
in US Petrochem
Industry

Reliability



Reduce Downtime
Millions lost per year
due to unplanned
production losses

Efficiency

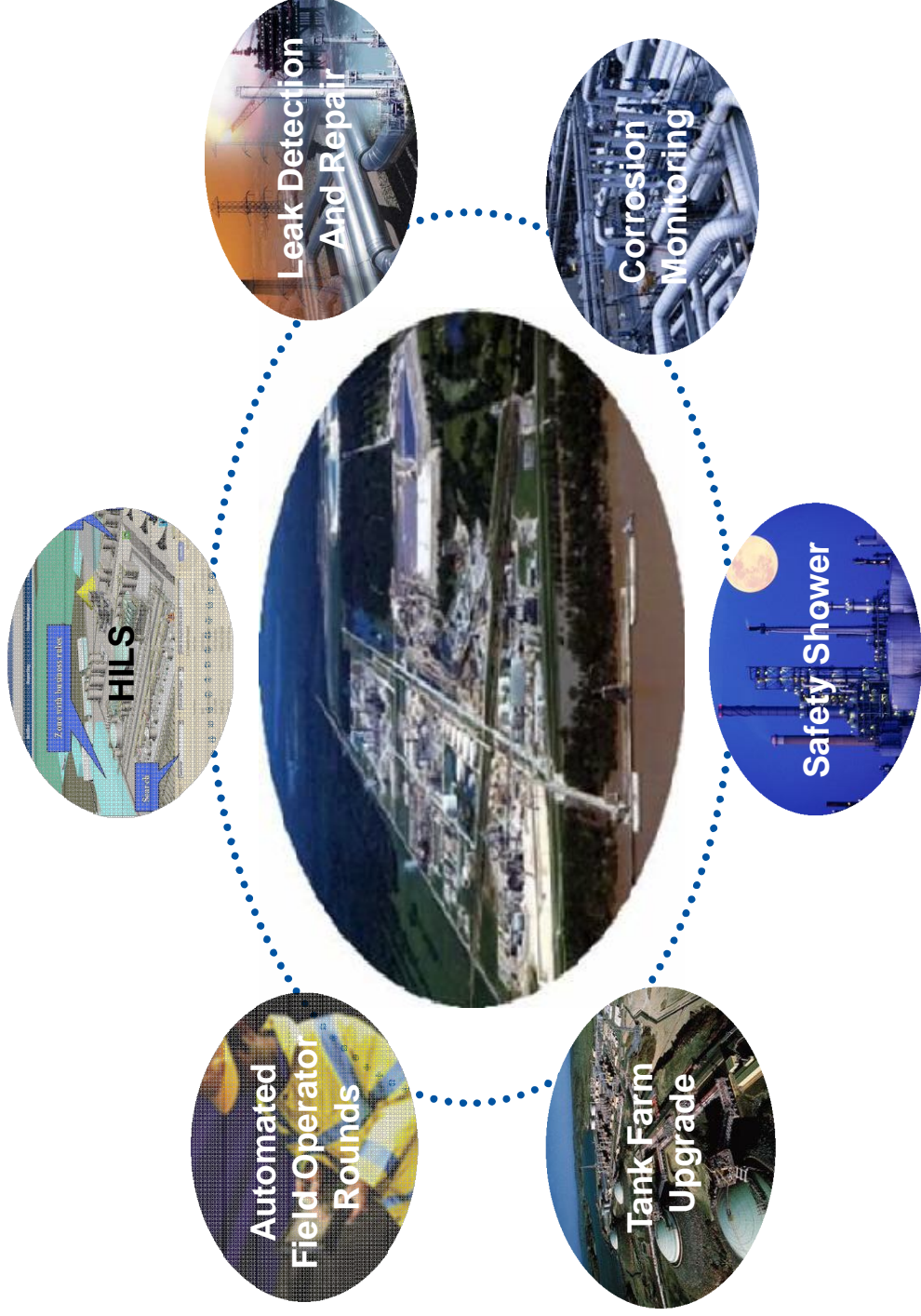


Reduce Costs
Improve Productivity
Ease of Installation
Process optimization

Fundamental Pillars to Achieve Operational Excellence

Examples of Wireless Solutions and Associated Benefits

Honeywell



Wireless improves safety, reliability, and efficiency

Honeywell Confidential and Proprietary