

IEC 2018 Automation Week

What is Driving *WirelessHART* Gas
detection adoption?



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“IIOT and Industry 4.0
will forever change
our approach to new
products”



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UE View of IIOT & Industry 4.0

- IIOT / 4.0 is the industrial subset of IOT.
- Huge enterprise integration-2nd Industrial Revolution
- More than “sensor to the boardroom integration”
- 4.0 data bypasses BPCS
- AI will enable smart edge devices.
- Integration will increase business risk.
- Need strong business case before deploying enterprise-wide.
- 4.0 Will disrupt current landscape



Current Drivers of Industry 4.0

- 4.0 Increases production, safety, employee optimization, while lowering cost
- Loss of knowledge due to retirements
- Limited information in the field
- Instruments are not mistake proof
- Cost of integration is becoming inexpensive
- Increasing complexity of smart field & 4.0 devices

2017

7,500,000,000

2050

9,600,000,000



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Roadmap of IIOT & Industry 4.0

Monitor

- Objectives
- Integration
- Gather
- Real-time data
- Historian

Control

- Structure
- Analyze
- Algorithms
- ID Patterns/Trends
- Suggestions

Optimization

- Dynamic real time adjustment
- Machine Learning
- Prescriptive Instruction
- Management by exception
- Remote operations

Autonomation

- Artificial Intelligence
- Self actualization
- Autonomous field devices
- Intelligent SAAS
- Virtualization



UE High Level UE Roadmap for 4.0





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WirelessHART Gas Detector Application



Application:
Vapor Recovery Unit

Location:
Texas

Industry:
Gasoline Storage & Transfer

Networks

Past

Proprietary protocols are developed by vendors but lacks reliability and usability.

Present

Open short range wireless made wireless available and useable for all.

Future

Licensed Low Latency LTE and 5G
Standardization allows all data from field devices to self-map to user interface.

Diagnostics

Past

Is there a signal or not?

Present

Communication and sensor checks indicate problem. Alarms are prioritized in an industry standard way, like NAMUR NE107.

Future

Smart, edge devices have diagnostics onboard that can fix themselves when an issue happens.

Sensor

Past

Sensors cartridges are replaceable on a preventative maintenance schedule.

Present

Interchangeable smart sensors self configure and are replaced on a predictive maintenance schedule.

Future

Sensors last the lifetime of the device and self calibrate or require no calibration.

Future Application



A Wireless Gas and Flame
detection system
=
A disruptive advance
in plant safety

Thank you for your time.

We would be happy to take any
questions



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