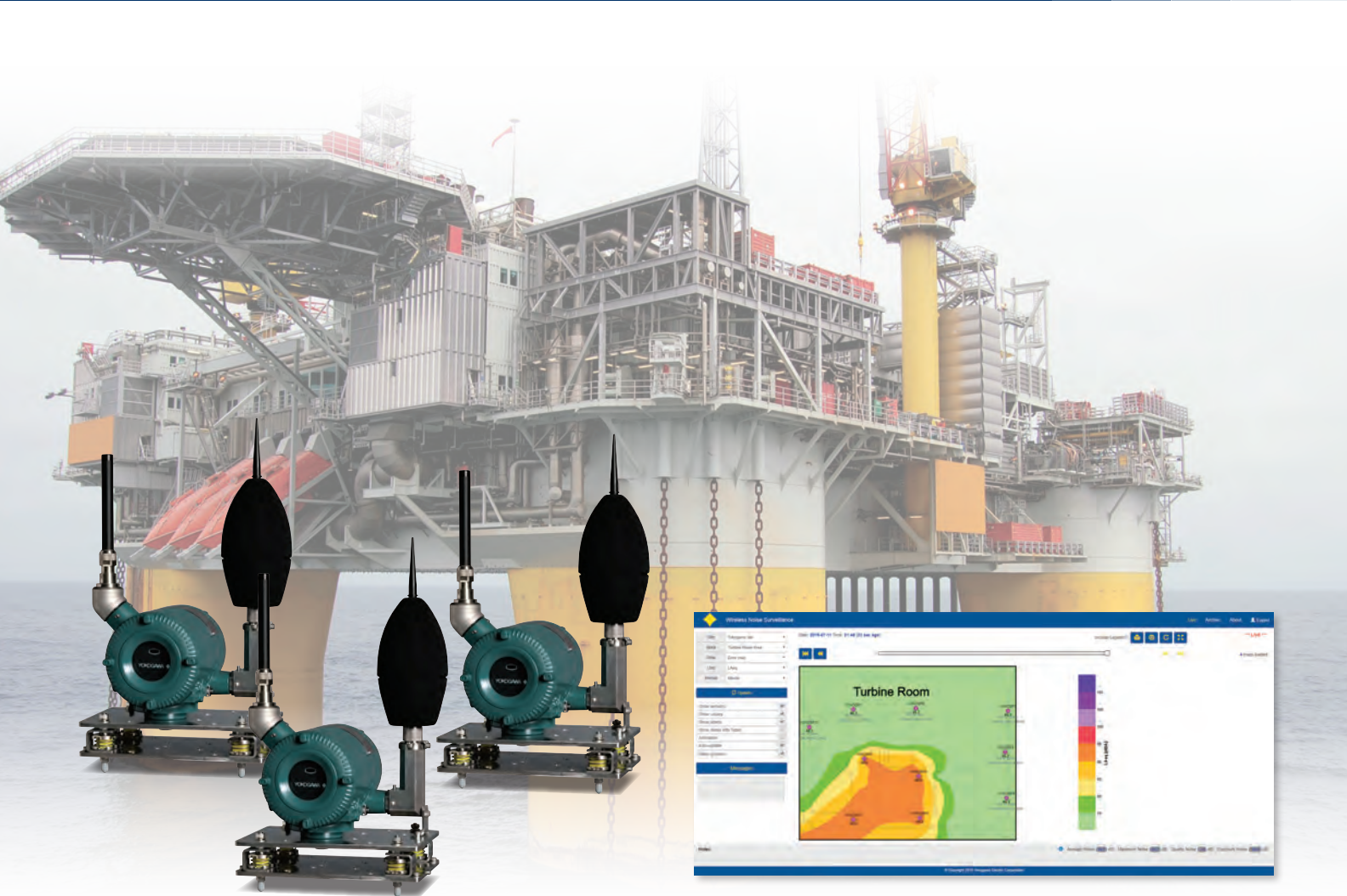# OpreX™ Measurement

Wireless noise surveillance system
New digital HSE solution – real time sound noise map
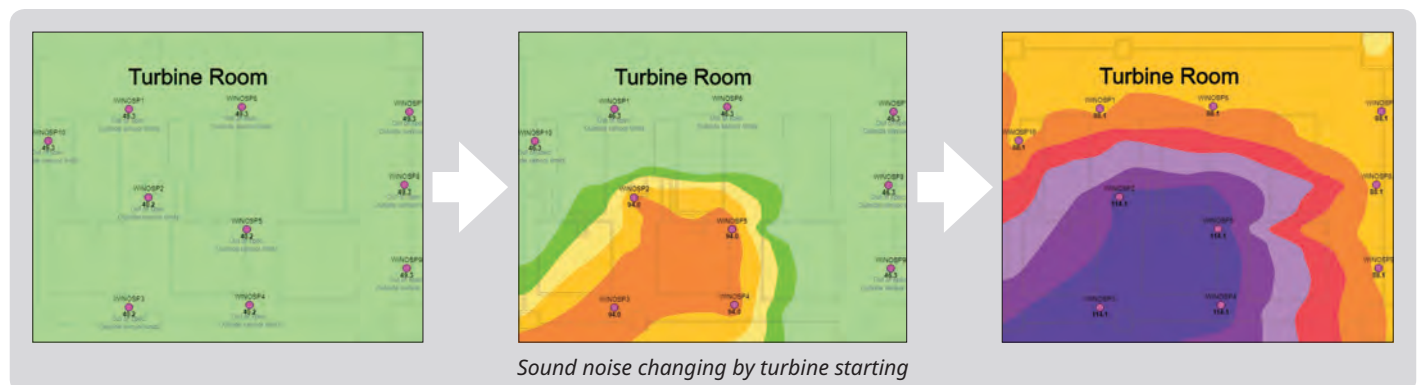

This online plant noise surveillance system employs ISA100.11a Wireless technology and explosion-proof sensors, an industry first*[1]. Even in plants where noise levels change drastically over time, noise mapping can be applied to plan work schedules that will ensure workers do not exceed specified limits for number of work hours in a noisy environment.
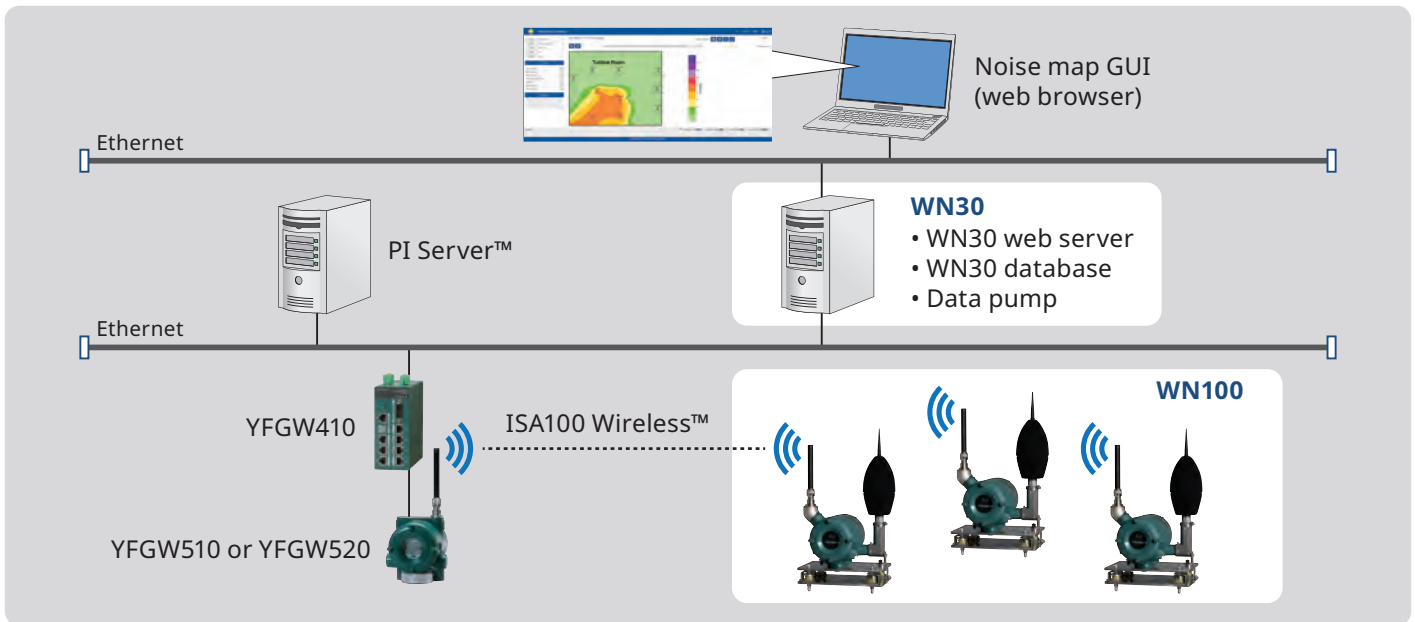
Through the release of such solutions, Yokogawa is helping to improve health, safety and the environment (HSE) and bolster work productivity.
(*1 Based on a June 2019 Yokogawa survey)

Sound noise changing by turbine starting

System overview

The principal components of this system are the WN100 wireless noise meter and the WN30 noise mapping software. Compliant with the ISA100 Wireless network protocol, WN100 sensors can be installed at many locations throughout a plant to measure noise levels and transmit this data in real time to servers via gateway devices such as the Yokogawa YFGW410 field wireless management station. From this data, the WN30 software can then construct in real time a noise map and superimpose this onto an actual map of the plant. Via an Ethernet connection, computers in the central control room and other key locations can then display these graphics in a web browser.

WN100 General Specifications

Communication Protocol	ISA100.11a Wireless
Sound Level Measurement	60 to 140 dB (LAeq,T) 70 to 140 dB (LCeq,T) 80 to 143 dB (LCpeak)
Spectral Analysis	1/3 Octave Band Analysis: 25 Hz to 16 kHz
Battery life	2 years (Typ.)
Explosion protected type	Intrinsically safe: ATEX
Ingress protection	IP55
Ambient temperature	-20°C to 70°C

WN30 General Specifications

Update period	1 min. (Typ.)
Noise map drawing source	LAeq,T, LCeq,T, LCpeak
Noise map viewing	Live mode/ Archive mode
User PIMS interface*	PI Server
System requirements	Microsoft Windows Server OPC Server Framework: .NET Framework 4.5 Database Server: Microsoft SQL Standard

*PIMS is not mandatory. WN30 can work even if there is no PIMS.

https://www.yokogawa.com/solutions/products-platforms/field-instruments/field-wireless/wireless-noise-surveillance-system/

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