

ISA100 Wireless Compliance Institute

ISA100 Wireless[®]

Universal Industrial Wireless Standard

IEC 62734

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International Society of Automation



International professional society for automation engineers representing many industry sectors including process industries, building automation, food & beverage, power generation, and many others. Highly respected for development of important industry standards.

ISA is an ANSI-accredited standards development organization (SDO) creating international standards through an open-consensus process. Participation in ISA standards is open to anyone around the globe desiring to volunteer their time.

3500+ participating individuals from 40 countries, representing more than 1500 organizations

100+ committees and subgroups

150+ published standards, recommended practices and technical reports

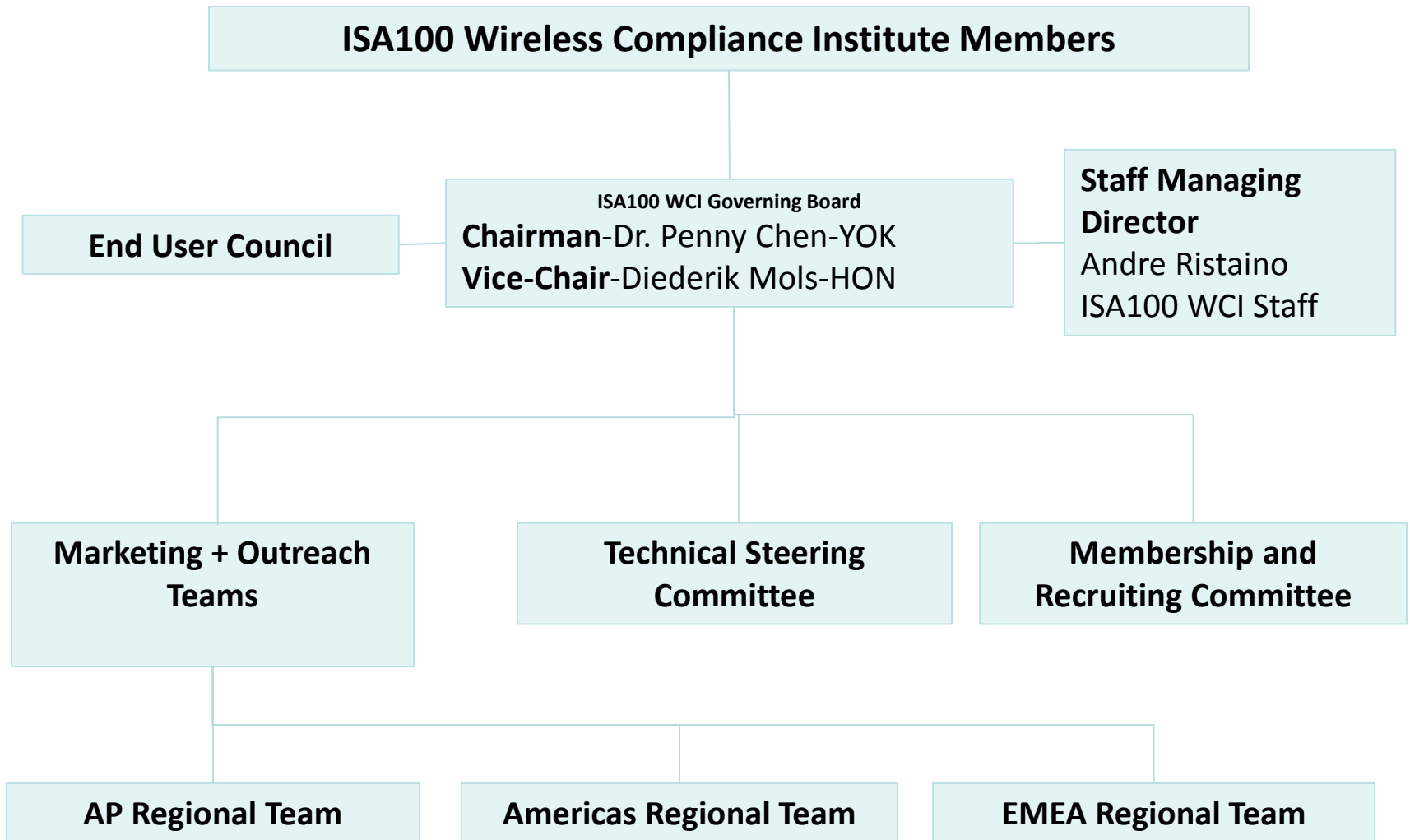
Extensive use of web meetings with periodic in-person meetings.

Key global ISA standards

- ISA18: Management of Alarms (IEC 62682)
- ISA84: Functional Safety for the Process Industries (IEC 61511)
- ISA88: Batch Process Control (IEC 61512)
- ISA95: Enterprise-Control System Integration (IEC 62264)
- ISA99: Industrial Automation & Control Systems Security (IEC 62443)
- ISA100: Wireless Systems for Industrial Automation (IEC 62734)
- ISA101: Human-Machine Interface
- ISA106: Procedure Automation for Continuous Process Operations
- ISA108: Intelligent Device Management

Note: Many original ISA standards are the basis for major IEC standards (the IEC standards are shown in parenthesis).

Organization Structure



ISA100 Wireless Compliance Institute Mission

- Manage the ISA100 Wireless certification program to assure interoperability and conformity to IEC 62734.
- Promote the ISA100 Wireless Standard globally
 - WCI will host a technology demo at Achema again in 2018.
 - Technology Demo in FCL at Achema June 2015 with 3 live networks, 36 devices, from 17 vendors showcasing the growing ISA100 Wireless technical ecosystem and excellent interoperability.
 - Regional events for suppliers and for end-users in AP, Americas, EMEA
 - Visit the www.isa100wci.org website for more show details
 - Live webinars that are recorded and posted to www.isa100wci.org for future viewing
- Advocacy for end-user needs through industry collaboration and growing the technical ecosystem.

ISA100 WCI Collaboration with industry groups

Fieldcomm Group - Formal agreement to support the Field Device Integration (FDI) interactive development environment (IDE) for Device Description Specifications. FDI Version 1.2 includes support for ISA100 Wireless sensor networks and devices as of Q4 2016.

FDT Group – Formal agreement to develop and support an FDT annex for ISA100 Wireless technology.

OPC Foundation – Formal agreement to collaborate on ISA100 Wireless technology using OPC UA technology.

ISA100 Wireless Technology Upgrades

- Ongoing technical projects to study new features and capabilities; cybersecurity is an example.
- TSC constantly evaluating new technologies that may be suitable for inclusion in ISA100 Wireless. Alternate radios are an example.
- ISA10 WCI is developing a standardized API and low-cost development kit to shorten product development time for suppliers; reduce to several days with the goal to enable creation of a working prototype within hours. And attract emerging IOT device suppliers.
- ISA100 WCI is a Liaison D organization to the IEC 62734 standards committee and submits recommended updates to IEC 62734 based upon actual experience with products and end-user feedback.

ISA100 Wireless Fast Facts

- International standard IEC 62734 since 2014
- Complies with ETSI EN 300 320 v1.8.1 (LBT)
- Native IPv6 to the device
- ISA100 Wireless Device Portfolio exceeds 52 devices
- Certified ISA100 Wireless Devices exceeds 30 devices
- April 2015 GasSecure GS-01 gas detector achieves a world first with SIL-2 Certification in Wireless Gas Detection; total of 3 SIL certified devices today
- Focus on Certification to Ensure Interoperability and best-in-class solutions
- Availability of ISA100 Wireless communication modules (stacks) (see contact details on www.isa100wci.org)
 1. CDS (formerly Nivis)
 2. Murata
 3. Yokogawa (2 stacks)
 4. Honeywell

2017 ON World Market Report on Industrial Wireless Sensor Networks (WSN) and the Industrial Internet of Things (IIOT)

Determined *ISA100 Wireless* to be the fastest growing Industrial wireless mesh standard, with adoption increasing at **2.5X the pace of its leading competitor.**

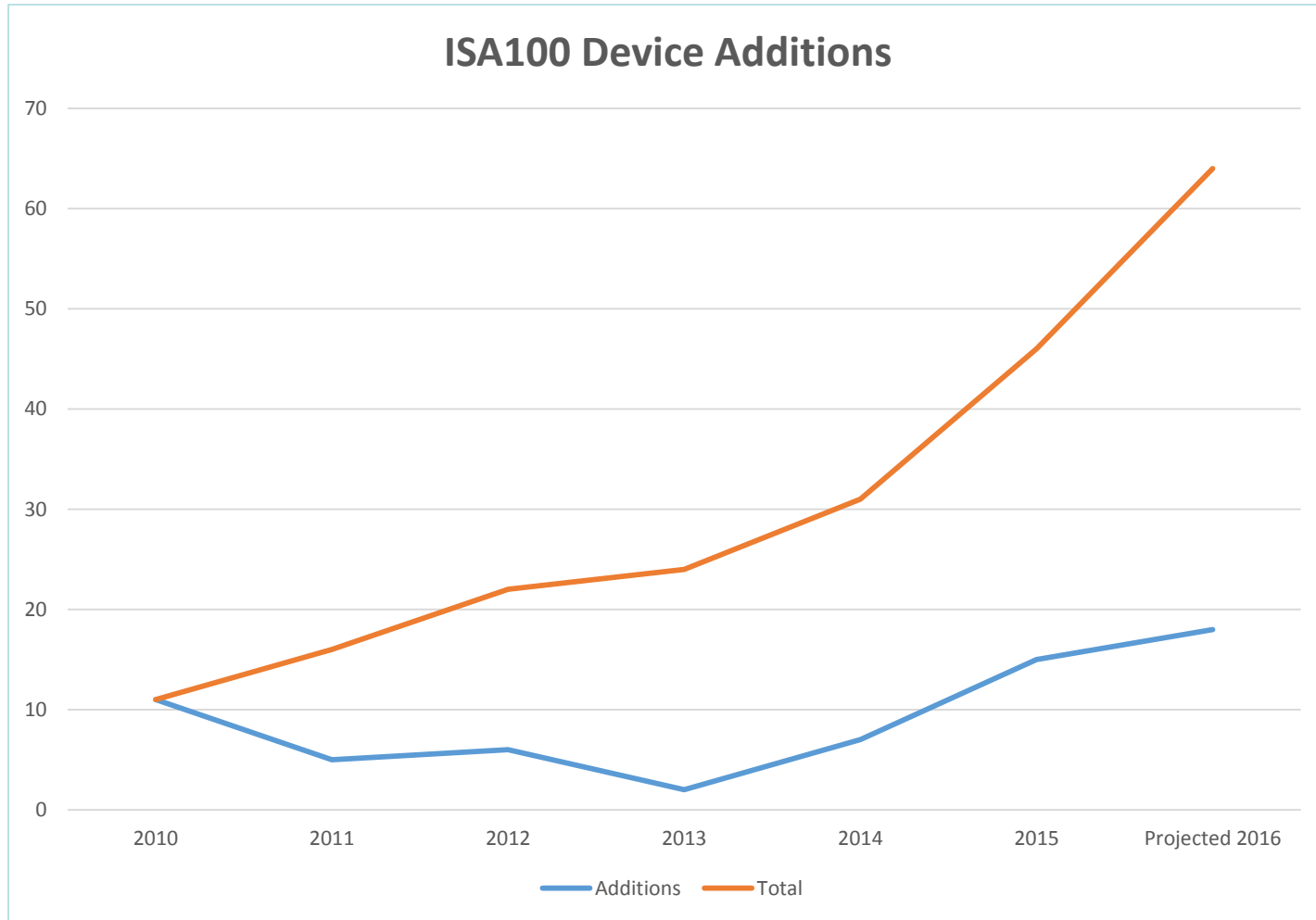
ISA100 Wireless adoption increased **67% over the past two years.**

Key factors driving ISA100 Wireless adoption over its competition include:

1. Flexible time scheduling
2. Software/protocol tunneling
3. Support for flexible topologies such as star and mesh.

These features are especially important for growing wireless applications such as **gas detection, steam trap monitoring** as well as oil and gas wellsite **remote monitoring.**

Growth of ISA100 Device Portfolio



Recent ISA100 Wireless Device Certifications

19 certified devices added in CY 2015 - 2016

7 certified devices added as of Sept 30, 2017

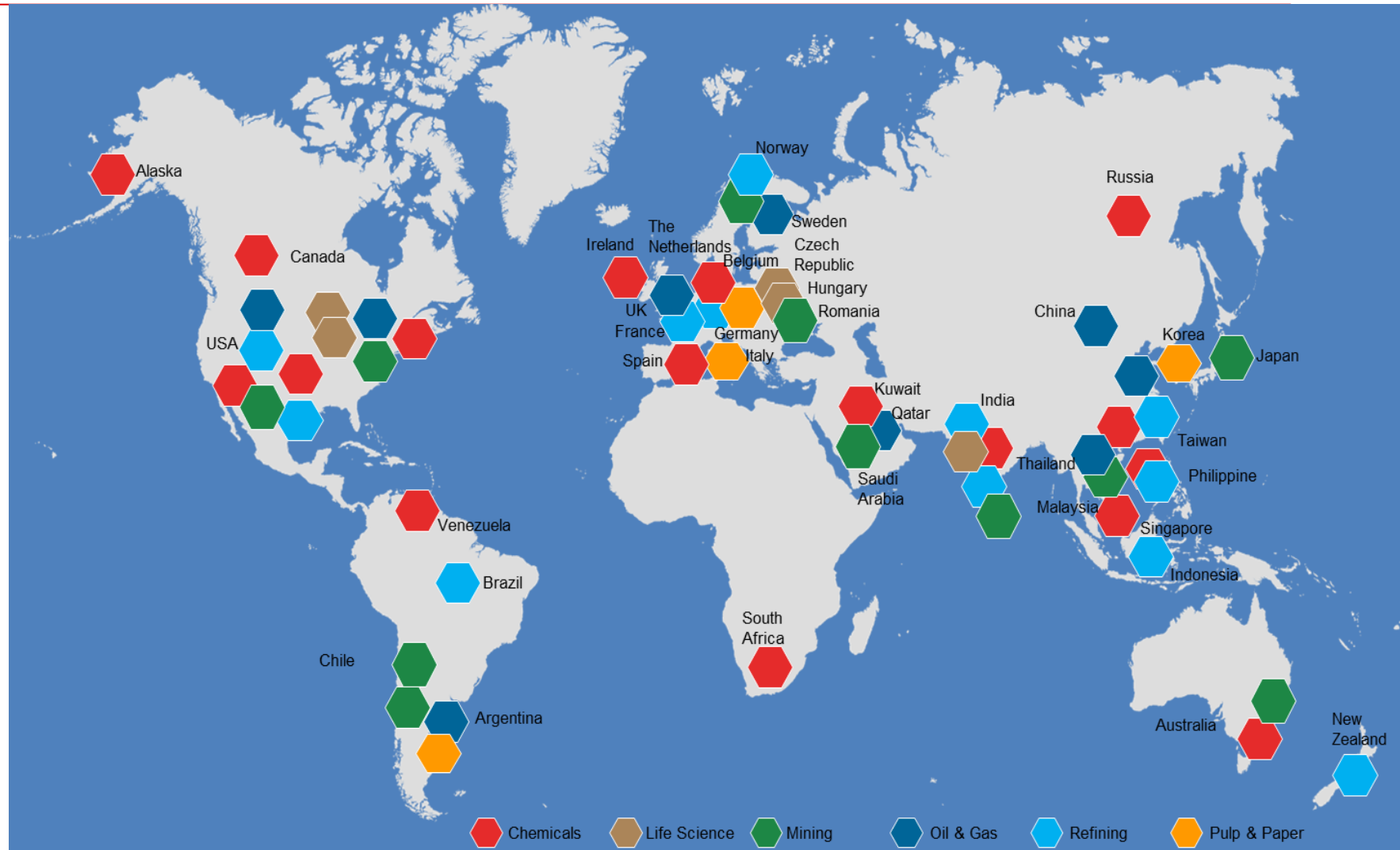
Spirax Sarco	STAPS Steam trap monitor	1/V1.1.0.0	Aug-17
Yokogawa	Temp Transmitter	YTA510	Apr-17
Yokogawa	Pressure Transmitter	EJX-B Series	Apr-17
Yokogawa	Pressure Transmitter	EJX-L Series	Apr-17
Yokogawa	Communication Module	F9914BF	Apr-17
Armstrong International	Steam Trap Monitor	AIM ST6700	Feb-17
CDS	Communication Module	VersaNode 210	Feb-17

Total ISA100 Wireless device portfolio = 52

Total Certified ISA1000 Wireless Devices = 30

ISA100 Wireless Global Installation Map

Many Billions of Operation Hours



ISA100 Wireless Certificate


67 T.W. Alexander Drive
P.O. Box 12277
Research Triangle Park, NC 27709

CERTIFICATE OF CONFORMANCE

Manufacturer: Armstrong International, Inc.

Model Number: AIM Model ST6700

Name/Description: Steam Trap Monitor

Stack Version: V N310-I/02.09

Hardware Revision: 1.4

Application Firmware: 01.00

Test Kit Version: DTK 1.14

Certification Type: Device

Test Profiles: Analog Input / Application Firmware Download

Test Lab/Site: ISA100 Wireless Compliance Institute

Test Date: 4/6/2015

Registration Date: 4/7/2015

Registration Listing: www.isa100WCI.org



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Managing Director, ASCI



Interest is Growing for ISA100 Wireless

Website Traffic Growth

	2014 EOY	2015 EOY	Average thru Sept 2017
Visitors/month	15,000	17,293	20,050
Page Views/month	20,000	27,091	32,579

Visit the ISA100 Wireless Website

1. ISA100 Wireless Technology Overview Whitepaper available for download from website - *authored by Jay Werb, Technical Director*
2. Stability and Reliability of ISA100 Wireless - *Independent study authored by Nippon Steel and Sumikin Engineering, Ltd.*
3. Improving Asset Management and Safety of an Offshore Platform – *Independent study authored by Petronas Wireless for Safety Research*

Event / News

1. Phillips 66 receives 2017 Excellence in Automation Award
 2. Yokogawa releases Pro-Safe RS SIL-2 Wireless Gas sensing application
 3. Petronas receives 2016 Excellence in Automation Award
- Full list of certified/registered ISA100 Wireless devices
 - Use cases and customer stories
 - ISA100 WCI website receiving over 30,000 web views per month



Thank You for Attending!

Questions?

www.isa100wci.org