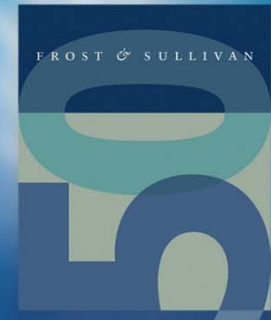


Yokogawa in Wireless Technologies & Solutions

Frost & Sullivan's perspectives in
Yokogawa User Conference
2-4 July 2014, Berlin

Presented By
Muthukumar Viswanathan
Practice Director
Industrial Automation and Process Control



The Frost & Sullivan Story



Pioneered Emerging Market & Technology Research

- Global Footprint Begins
- Country Economic Research
- Market & Technical Research
- Best Practice Career Training
- MindXChange Events

Partnership Relationship with Clients

- Growth Partnership Services
- GIL Global Events
- GIL University
- Growth Team Membership
- Growth Consulting

Visionary Innovation

- Mega Trends Research
- CEO 360 Visionary Perspective
- GIL Think Tanks
- GIL Global Community
- Communities of Practice

Our Global Footprint 40+ Offices

Scanning the Globe for Opportunities and Innovation



Our Industry Coverage



Aerospace & Defense



Measurement & Instrumentation



Consumer Technologies



Information & Communication Technologies



Automotive Transportation & Logistics



Energy & Power Systems



Environment & Building Technologies



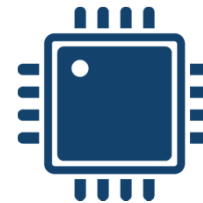
Healthcare



Minerals & Mining



Chemicals, Materials & Food



Electronics & Security



Industrial Automation & Process Control

Global Wireless Sensor Networks

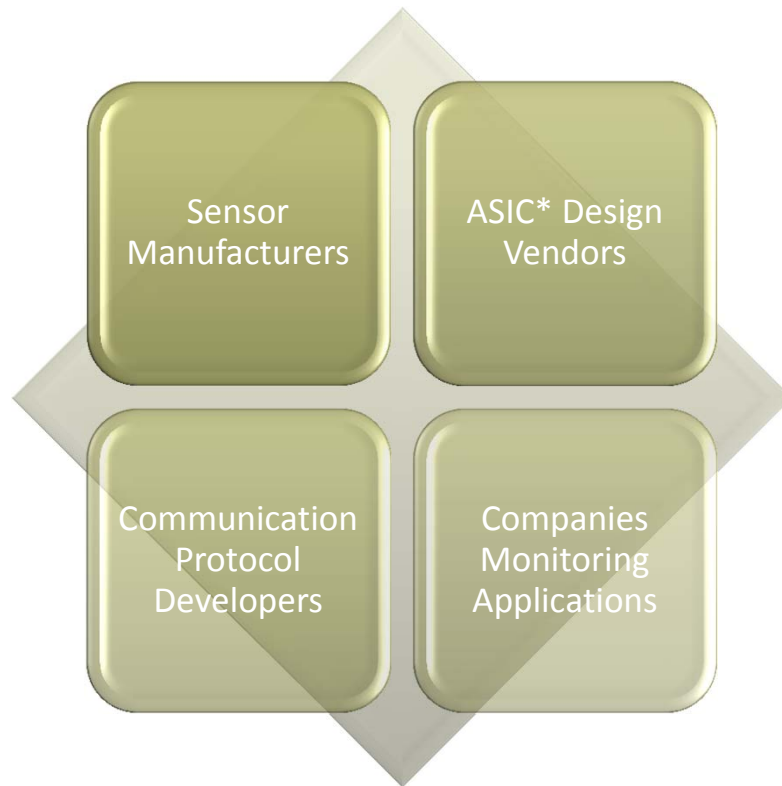
WSN is in growth stage as most end users are planning to adopt it for the first time and migration to standards has been rapid

**Total Wireless Sensor Networks Market: Revenue Forecasts,
Global, 2011-2020,
CAGR = 18.1%**

Global Wireless Sensor Networks

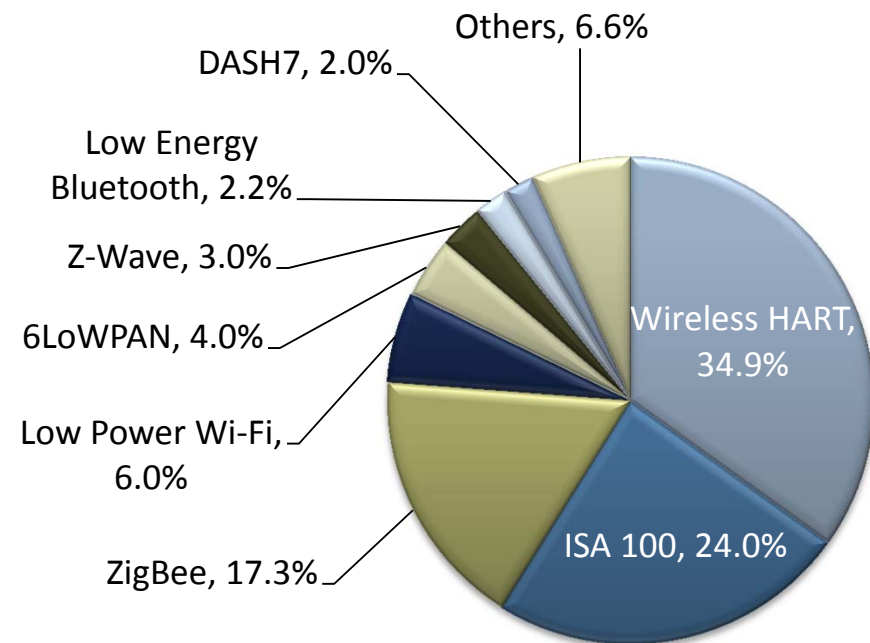
WirelessHART dominates the market but ISA100's readiness to IoT will see increased adoption in the ecosystem due to its full compatibility with IPv6

Wireless Sensor Networks Ecosystem, Global, 2013



* ASIC - Application Specific Integrated Circuits

Percent Revenue by Wireless Sensor Networks Type, Global, 2013

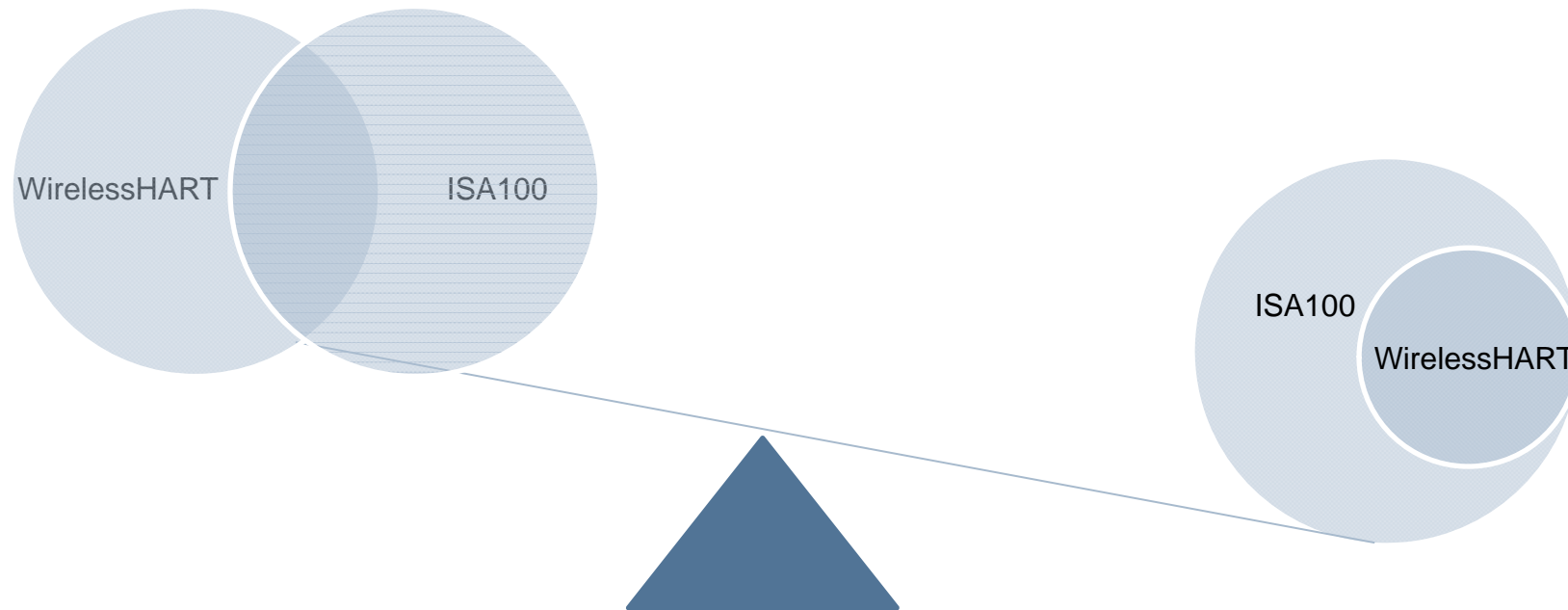


* Others include LXRS, RFID, and other proprietary protocols

Source: Frost & Sullivan Analysis (N92B-32)

Convergence or Encapsulation ?

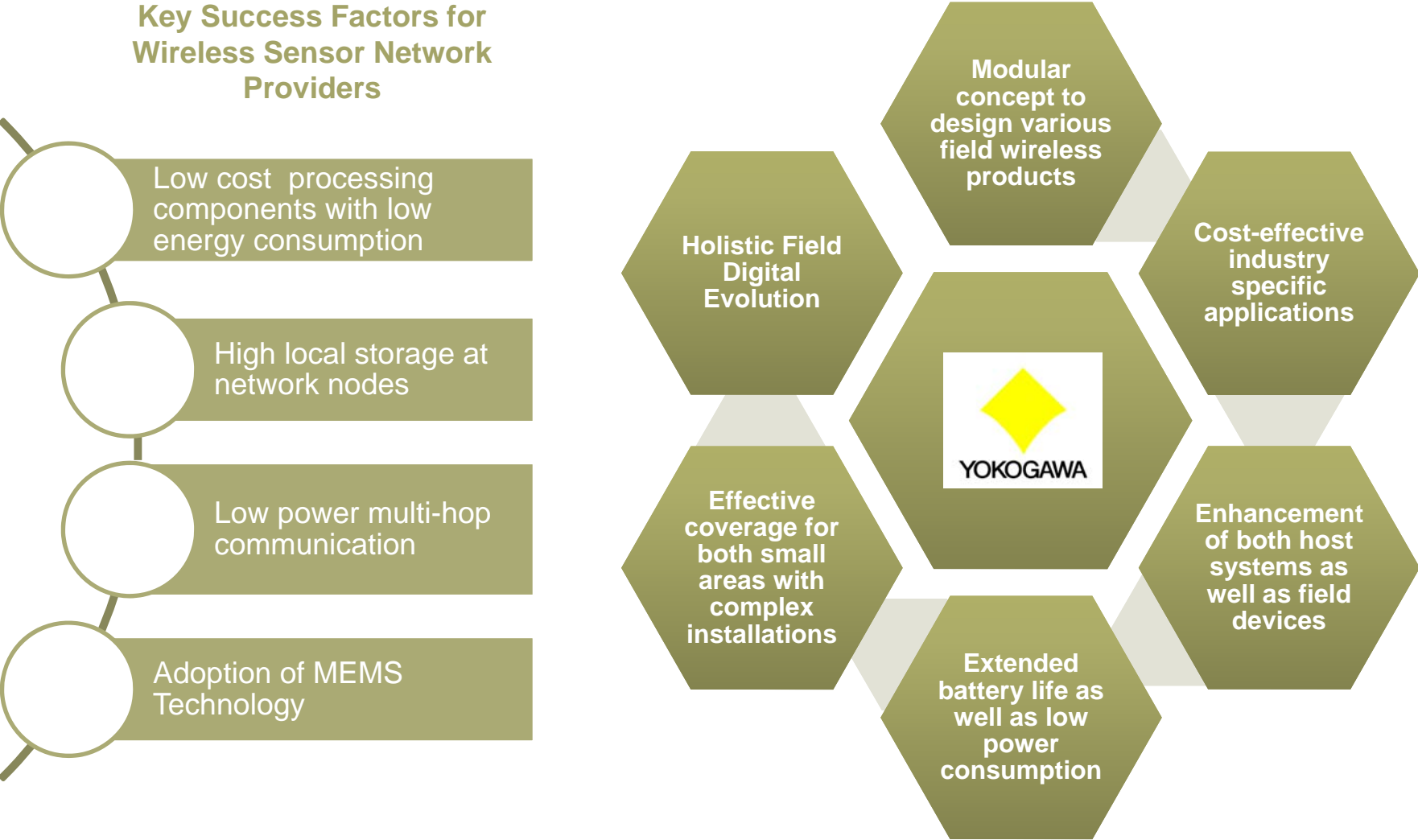
End users are switching from “wait and watch” policy mode to a demanding mode for a Universal Industrial Wireless Network



I²OT (Industrial Internet of Things) will favor ISA100 for its ability to remain an open and flexible framework that accommodates legacy applications regardless of protocol and protect end user's existing application investments. This gives ISA100 Wireless the advantage of seamless end-to end routing effectively in a single wireless network environment in spite of multiple field devices with varied communication protocols. Owing to increased market presence of WirelessHART currently, we might see convergence between ISA100 and WirelessHART in the medium term but ultimately encapsulation by ISA100 in the longer term.

Yokogawa ISA100 Wireless Solutions

In the path of meeting key success factors rapidly with unique differentiation factors from both technology and market fronts



**2014 Global
Wireless Solutions Enabling Technology
Leadership Award**

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