The IoT Partner Profile— Which Partners Are Selling IoT Today?







Agenda





The Anatomy of a Sales Pursuit: Access to Decision Makers, Discovery, POC Definition & Development Lead the Sales Pursuit. This Partner then Decides Infrastructure Components Required.



IoT Solutions versus IoT Infrastruture

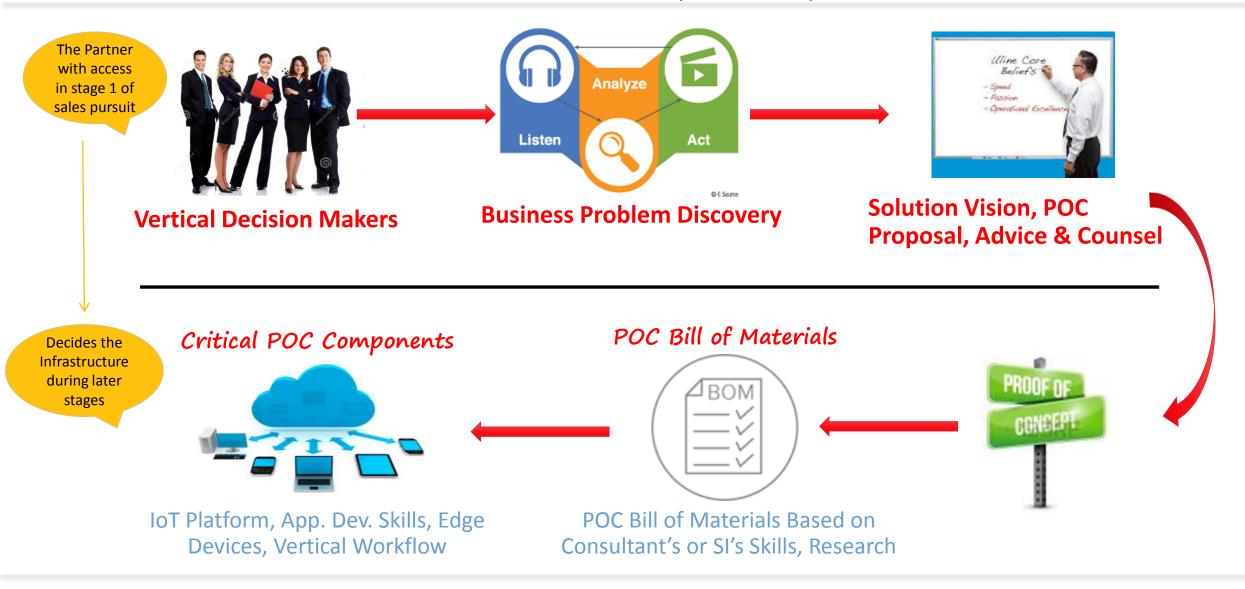
Design is the driver of user demand. Value creation at the end user sells, whether you innovate to achieve a faster cancer diagnosis, mitigate risk with a self driving car, create competitive advantage through last mile delivery by Amazon with robots, achieve efficiency in planting or irrigating on a farm. Direct ROI sells.

- Insights and foresight drive customer value
- It must be an amazing user experience

Source: Fred Thiel, Thiel Advisors



The Anatomy of a Sales Pursuit: Access to Decision Makers, Discovery, POC Definition & Development Lead the Sales Pursuit. This Partner then Decides Infrastructure Components Required.





Critical Capabilities to Capture End Customer Mindshare and Budget Start with a Solution Vision & POC

Skills critical to the sale of IoT:

- Vertical Expertise
- Solution Design Capability
- Development Capability

These may be standard with Global Systems Integrators (GSIs), but become partner differentiators when the partner is smaller and selling into the enterprise or down market.

30% of IT Infrastructure & 53% of OT Partners Recognize IoT Platforms and Development Skills as Critical/Important.

Source: IPED Intel IoT Study 2017

"There are too many IoT platforms.
Consider EdgeX Foundry."

Dell

Start with an IoT Platform

"IBM Watson IoT platform...you need one platform to integrate the other platforms." IBM











The mission of the EdgeX Foundry is to develop a full edge software platform designed to facilitate hardware interoperability in the IoT ecosystem. EdgeX Foundry Project







Beyond an IoT Platform, DevOps and Container Skills are Frequently Cited in Successful Partners

Why do Containers matter in IoT? ... virtual machines (VMs) are too slow and too heavy on resources for use in IoT endpoints. Most endpoints require a light OS that uses few resources and can work quickly to automate various processes... these requirements are largely responsible for the increasing use of containers in IoT. Peter Dykes March 24, 2017 IoTNow

Container Market Pegged at \$2.7B by 2020

January 10, 2017 by George Leopold Source: EnterpriseTech

What is Docker?



"10% of enterprises use containers in production today, 1/3 are testing them."

Dave Bartoletti, Forrester Research

Docker is a software platform that allows you to build, test, and deploy applications quickly. Docker packages software into standardized units called containers that have everything the software needs to run including libraries, system tools, code, and runtime. Using Docker, you can quickly deploy and scale applications into any environment and know your code will run.

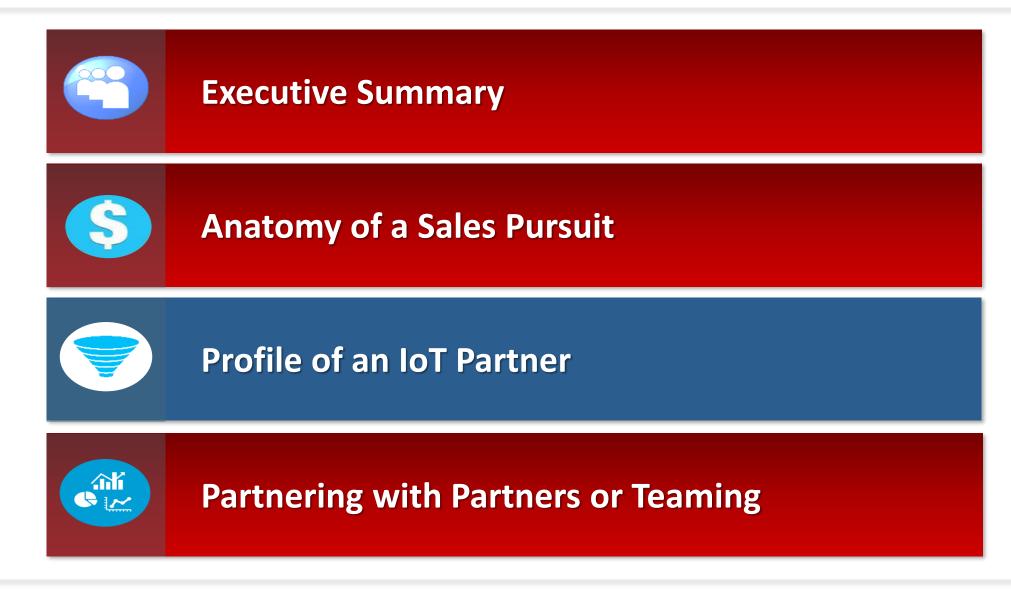
DevOps is the combination of cultural philosophies, practices, and tools that increases an organization's ability to deliver applications and services at high velocity: evolving and improving products at a faster pace than organizations using traditional software development and infrastructure management processes.

"Having partners that use a development platform and have some level of app. dev. skills is critical to our future."

KMC Controls | Source: IPED Intel IoT Study 2017

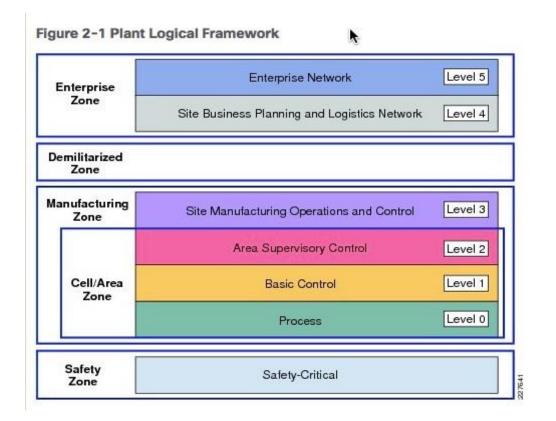


Agenda





Why is the Industrial Partner Distinction Necessary in the IoT Partner Profile?



"The industrial solution is a function of the critical nature of the application. The use case determines the cross over point from OT to IT and at which layer (Purdue Model)."

"Additionally, deterministic real time is the separator of an Industrial IoT solution. Real time is the difference between 1M events/second and 1 event per second."

Dell

"The Industrial profile requires system control capabilities 100% of the time. If it shuts down, all profit is gone or the consequences are damaging beyond profit."

OT Wachter

"Beyond our traditional Bar VAR, we will look for a new Industrial Partner profile. We are integrating into their software, we will use their channel to bring our products to market."

Zebra

The Purdue Model for Control Hierarchy (reference ISBN 1-55617-265-6) International Society of Automation ISA-99

Source: Cisco Chapter: Converged Plant wide Ethernet Solution

http://www.cisco.com/c/en/us/td/docs/solutions/Verticals/CPwE/CPwE DIG/CPwE chapter2.html



Operational and Industrial Capabilities as a Reference



SCADA

Supervisory control and data acquisition (SCADA) is a system of software and hardware elements that allows industrial organizations to:

- Control industrial processes locally or remotely
- Monitor, gather, and process realtime data
- Interact with sensors, valves, pumps, motors and more through humanmachine interface (HMI) software
- Record events into a log file
 Source: Inductive Automation

MRO

- Maintenance, Repair and Operating Supplies (MRO)
- MRO items are used in production and plant maintenance and can be items such as maintenance supplies, spare parts, and consumables used in the production process.

Source: The Balance (SCM)

Staffing: Electrical, mechanical, chemical, etc. engineers staff engagements.

"OT vendors have been providing purpose build design machines in the industrial environment. Schneider, Johnson Control, Rockwell, these are the heavy weights. They are bridging the divide by moving into the IT world. We look at solutions on the factory floor, we stitch IT to OT in the middle. This is nascent, but it's being done and is dependent on an IoT Platform."

IT Dimension Data



Dimension 4: Partner Profile Capabilities – Introduction to the Model

Operational	Industrial	Applications	Telephony	Networking	Data Center
	Operational Stack Point Solutions, e.g. SCADA Purdue Model Electrical – Mechanical – Chemical Engineers, etc. Circuit Design/Build IoT Platform Dev.	Office 365, ERP/SCM, Vertical, etc. DevOps, Containers AWS, Azure Dev/Production IoT Platform Dev. Business Intelligence (BI)	 On-prem PBX Cabling, Batteries Wireless Unified Comms Voice & Data Managed PBX 	Routers, Hubs Security SDN, SD WAN Unified Comms Comm as a Service	Servers Storage Systems Mgt. Software VDI, Business Intelligence (BI) laaS, BDR, etc.

New Capabilities tend to be adopted:

- Vertically within a stack then
- Across to adjacent stacks

Managed, cloud or recurring revenue in Blue

IT = Blue Stack
OT = Red Stack

10 IoT Threats Solution Providers Should Look Out For

by Lindsey O'Donnell on June 26, 2017, 11:35 am EDT

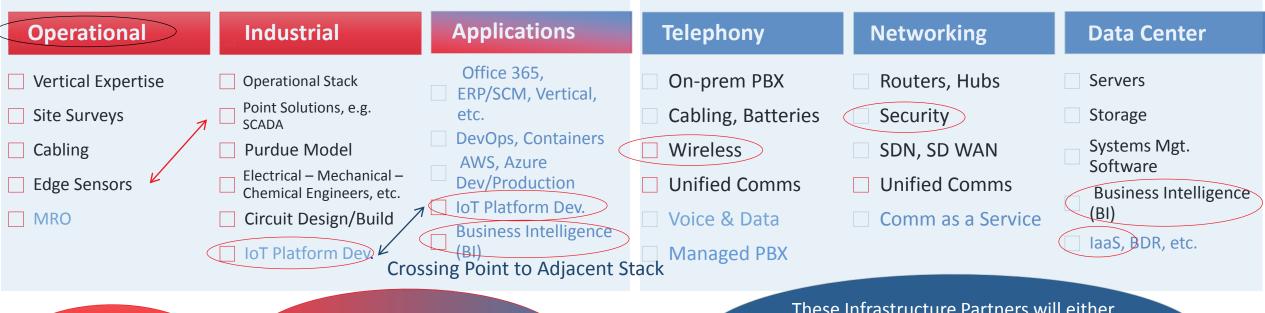
- Security is required in all stacks, including application data
- First line of defense security called out in Networking stack

Note: Model is skewed towards IT; more OT/Industrial work is required to build out the RED stacks.



Dimension 4: Partner Profile Capabilities – The OT and IT Collision then Transformation.

Red Circles indicate IoT end to end solution skills required.



These OT partners will need to team or develop skills

The IT & OT Collision is happening in the Industrial & Applications Stacks

IT = Blue Stack
OT = Red Stack

"The other OT partners aren't asking IoT questions. They don't know what to ask, they aren't ready for it." OT Partner

"I decided to move away from sensors to SCADA software." OT Control Point These Infrastructure Partners will either team with an Industrial, OT or Applications Partner or develop their own IoT Platform, Development or BI skills

More than 70% of IT Infrastructure partners don't see customer demand.

IPED Intel IoT Study 2017



Dimension 4: Partner Profile Capabilities – Relative to the Sales Pursuit

Operational	Industrial	Applications	Telephony	Networking	Data Center
Vertical ExpertiseSite SurveysCablingEdge SensorsMRO	 □ Operational Stack □ Point Solutions, e.g. SCADA □ Purdue Model □ Electrical – Mechanical – Chemical Engineers, etc. □ Circuit Design/Build □ IoT Platform Dev. 	Office 365, ERP/SCM, Vertical, etc. DevOps, Containers AWS, Azure Dev/Production IoT Platform Dev. Business Intelligence (BI)	 On-prem PBX Cabling, Batteries Wireless Unified Comms Voice & Data Managed PBX 	 Routers, Hubs Security SDN, SD WAN Unified Comms Comm as a Service 	Servers Storage Systems Mgt. Software VDI, Business Intelligence (BI) IaaS, BDR, etc.

The IT Partner, likely leads the sales pursuit in the <u>non-industrial space</u>

- Trusted Advisor status has been established due to vertical and IT track record
- Line of business buyers engages Partner outside of IT
- Business vertical, App. Dev. and Security skills are leveraged as well as Infrastructure capabilities
- The IT Partner likely teams with OT Partner for operational vertical and Edge capabilities

The IT Infrastructure only Partner, needs to team to participate in IoT

IT = Blue Stack
OT = Red Stack



Dimension 4: Partner Profile Capabilities – Relative to the Sales Pursuit

Operational	Industrial	Applications	Telephony	Networking	Data Center
 □ Vertical Expertise □ Site Surveys □ Cabling	 Operational Stack Point Solutions, e.g. SCADA Purdue Model Electrical – Mechanical – 	Office 365, ERP/SCM, Vertical, etc. DevOps, Containers AWS, Azure Dev/Production IoT Platform Dev. Business Intelligence (BI)	On-prem PBXCabling, BatteriesWireless	□ Routers, Hubs□ Security□ SDN, SD WAN	Servers Storage Systems Mgt. Software
■ Edge Sensors■ MRO	Chemical Engineers, etc.Circuit Design/BuildIoT Platform Dev.		☐ Unified Comms☐ Voice & Data☐ Managed PBX	☐ Unified Comms☐ Comm as a Service	VDI, Business Intelligence (BI) IaaS, BDR, etc.

The Industrial Technology Partner, in the <u>industrial space</u> likely leads the sales pursuit.

- Trusted Advisor status has been established with buyer
- Operational vertical and technical knowledge, staffing and capabilities are required
- Tends to develop IoT Platform skills
- May team for security and additional development, BI skills

The Operational (OT) Partner may be one who has not immediately embraced IoT Platforms, and other skills, etc. This partner looks to team.

IT = Blue Stack
OT = Red Stack



Partner Business Model Transformation Has Been and Will Continue to Happen

We have Edge partners with IT skills

Traditional Bar Coding VARs

They are hiring software developers to develop solutions and to differentiate themselves...

For a smaller number, there is another path. Rather than solutions, some will remain sellers of our legacy printers, scanning technology and consumables. They have become efficient by adding web and inside sales. The value add is product knowledge and efficiency.

Zebra

Large Avaya Reseller Chooses Wireless as IoT Entry Point

"We eventually decided our role was to enable smart devices to talk back. We started with ball fields then added smart trash cans.

Most have control panels, we just have to turn them on, but every device is managed differently. Dashboards matter.

From the IT side, it's just wireless which we do with Meraki.

We don't do large industrial IoT projects, we don't see an easy path to success for us."

Sigmanet



<u>HVAC innovator</u> becomes OT Automation specialist, using smart partnering strategy to open IoT doors



HVAC Contractor

to

10T Pioneer

- "Started 50+ years ago as a typical residential mechanical firm (HVAC contractor) – then became a union firm
- Began innovating in energy management way before digital and automation - "how can we make this HVAC more efficient in this building?"
- As digital and relay tech has evolved, we have followed – committed to be on leading edge with automation – so natural progress toward IoT
- Have evolved gradually over 30 years toward networks, automation and IoT – not a single decision or quick transition"

"I am not an IT guy – I am just good with buzzwords"



This will be a 10+ year journey for us - we are in it for the long haul

Our strategy is a mix of internal hires + smart partnering. We can be more nimble through partnering.

- "KMC introduced us and got us involved with IoT KMC is on the cutting edge
- Have also participated with Dell and Intel in some interesting beta testing work around IoT
- Dell IoT has been a real partnership their IoT team have visited our locations and facilities.
- Working with K-12 school now to gamify classrooms for energy conservation instruction
- Working on hospital environments creating Customer Experience Charts (required for Obamacare reimbursement).
- Involved now in building designs using open automation that we would never have been able to be involved with even 5 years ago"



<u>Tiny Web Hoster grows to end-to-edge service provider with aggressive "we can do-it-all", hacker mentality</u>



Web Hoster

to

End-to-Edge SI

Summary

- "Started life as a web hoster one server in a closet 20 years ago
- Late 90s didn't have Internet access and co-lo facility we owned fiber networks in the ground this started to move us into the consultative space.
- We are infrastructure providers. CFO says we are services consulting company. We are a blend.
- Customers are mid-market or upper mid-market, \$100M and \$325M customer revenues, 1000 people to 3500 people; we do SMB but MM is growing."



We do the edge in-house

We will not partner for skills - hacker nature of our team, our team wants to do this, to solve what is not easy to solve

- "The consulting services led us to edge devices and we consumed them first through security.
- We start with DC infra then work our way to desktop, then to the application support last, that pulls us to IoT
- Edge threats are different, sometimes aren't IT, they could be gophers. This forces us to look at things a different way. This is not access control list oriented, this is think outside the box, act of god oriented.
- Gap between sensor and implementation. Get commodity part from Schneider, combine with our own hw/sw (raspberry pi/linux), then purpose build for a customer business problem."



<u>OT Distributor</u> – partners with Verizon to build specialty around wireless data communications, M2M and IoT



OT Distributor

to

Wireless Specialist

Summary

- "Owner background of selling sensors and controllers onto factory floor – process related – did that for 10 years prior to Control Point
- Founded in 2000 as a representative for high technology automation and data acquisition products.
- Now OT distributor serving Manufacturing and State/Local Government markets with focus on municipal water and waste water
- We've been doing Ethernet for 15 to 20 years.
 Controllers on factory floor are Ethernet connected today, but when it started it was simpler not Ethernet"



We built this capability through trial and error, working with vendors who had new Ethernet functionality

Partner with wireless carriers and OT System Integrators to deliver tech to factory floor

- "Communications and Ethernet got us to Cellular plant-to-plant or remote site plant and this is IoT
- Have developed a specialty around wireless comms, specifically Cellular – now a telephony agent and Verizon reseller partner
- Partnered with Verizon to help them understand factory floor, Verizon taught us Cellular, M2M
- Introducing new technology to help water plant talk to pump stations
- We do understand both sides of the equation (IT/OT) and can do a bit of translation for the companies who haven't bridged that gap.
- We are serious into understanding how things work, this differentiates us"



<u>IT System Integrator</u> – partnering at the edge to deliver innovative IoT solutions



Traditional IT SI

to

Partnering for IoT

Summary

- "We are a SI (transitioned from pure VAR) now very solutions focused
- We are a woman owned business that has opened some doors and conversations at conferences that have been helpful
- Company saw an opportunity, made a decision to focus on asset tracking, brought in vertical market expert from HPE to lead
- Once you start talking about tracking assets you need sensors – and that gets us to IoT"



Can our solution solve that directly? If not we need to bring in a partner.

Point solution partners

– edge specialists –

those are who we look

to work with

- "Initial opportunity focus was around manufacturing, oil and gas and utilities, but moving to Healthcare and then State & Local Government
- Partnered with RFID expert to develop a cloud solution for large oil & gas distributor – we were the prime
- Another RFID specialist brought us in to link and analyze data on muffin racks (yes, muffins) – we were the sub
- We are very partner centric look to close gaps through partnering where we can."



<u>End-to-End IoT Practice:</u> started from electrical OT, grown to full service IT/OT service provider with huge assist from Cisco

Electrical Contractor

to

OT/IT Integrator

Summary

- "We are an 85+ year old electrical contractor
- We grew quickly through the 80's, entered infrastructure cabling and fiber in 90's
- Landed Fortune 500 retailer as client and grew business with them
- 10 years ago, approached by Cisco to help partners with physical side of security, access control. We made the jump to the IP enabled world (and IT skills).
- We've experienced exponential growth since the 80s. Significant share of revenues derived from partnerships with Cisco IT partners where we are sub to their prime. The balance of our revenue we lead and are prime on the contract.



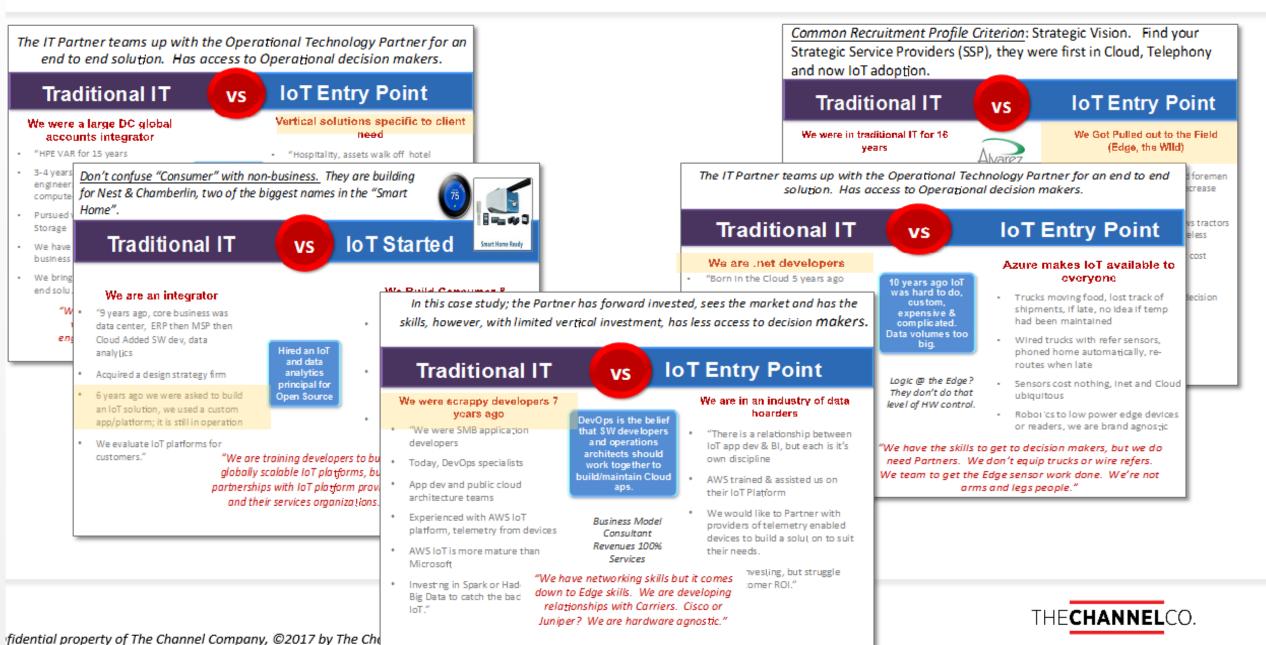
"We are still on this journey"

We prefer to build versus partner – now our culture.
We bought a Cisco Gold partner 5 years ago to shore up IT skills. Only partner now for niche/specialty areas.

- "Partnering through Cisco program ultimately led us to IoT solutions
- Cisco brought us on to help IT partners who did not have physical infrastructure skills. Cisco Golds don't want to roll trucks, hang cameras, etc.
- We now have true IoT solutions e.g. Industrial,
 Virtual Patient Observation systems
- Our business model is to "forward invest" stay ahead of the commodity curve
- We are now differentiated from OT due to IT skills and within IT due to OT heritage"



2016 IPED IoT Research Profiled Five IT Partners Selling IoT Solutions



Agenda







Market Ready Solutions

"For smaller buildings that are budget conscious buyers, we now have solutions."

- "98% of the buildings in the US are are small to mid-size and only about 10% have any type of automation.
- Our traditional channel for the light commercial market has been mechanical contractors through distribution partners..
- This year, we launched a pre-packaged, easy to install solution for light commercial.
- It is available today via distributors that can train and support contractors and resellers."

EcoStruxure Building Expert Building Management System Out-of-the-box cloud-based building management

&

We are ready for IT Partners in the Midmarket

"We are now rolling out packaged solutions and the opportunity to team with our existing distributors. We have been well received."

Helping Partners Team

"We can offer IT Partners a way to get started today."

- "IT Partners who want to team for or build smart building skills are of interest to us.
- Our distributors provide classroom training on a variety of products and solutions.
- Our distributors are engineers as well and provide design and installation support to resellers.
- We will match IT Partners with a distributor in their area to help them get going.
- The IT partner retains the customer relationship.
- Our existing channel are the perfect OT partner for teaming. "



Partner Nomination Best of Breed Vendor



Market Ready Solutions

"Intel security platforms are hardened in...anymore people want it baked into the HW level encryption and security."

Bosch MCMS Solution Overview

What it Is

An end-to-end, microclimate management solution using pollution data analytics

Dell*/V5* Security Solution Overview

- V5 Systems provides a self powered, optimized power management platform for outdoor en
- 100% self-powered³ with a combination of propriety bullet resistant V5 Systems solar panel management system

Vortex Edge PMQ Overview

What it Is:

Vortex Edge PMQ is a fully integrated hardware, connectivity, and predictive analytics solut next generation of smart Industrial Internet of Things systems.

&

Our Program.

"We are teaching edge and vertical skills, but we love to have partners who come with that background."

"They will outsource system control capabilities. IT partners don't want to get into the weeds on this."

Helping Partners Team

Partner testimonial: "Success is seen when real people engage as PMs for the opportunity..."

- "Yes we help partners team. We do so on a 1:1 basis or with the business unit.
- We are involved through the process with SI, original device mfg. (ODM), OEM or ISV, we will stay involved to see it through to implementation.
- We network them to the product people. Our goal is to make it programmatic.
- Future vision: we will do online matchmaking, support the partner portal directory. There is a solutions directory available today.
- The vision is a customer puts out a need and someone can fulfill or bid on the customer request. This would be our end state, that they can match themselves with other partners within the ecosystem. "



Agenda





Partner Imperatives: For IT Infrastructure or OT Partners

#1 Team Your Capabilities: IT - security/networking, wireless, business intelligence/analytics and OT – edge and vertical expertise are critical to end-to end IoT solutions.

Team for pre-sales IoT capabilities to participate in IoT solutions sold by another. Aggressively engage your network and vendor matchmaking programs.

#2 Build If building skills, AWS or Azure IoT platforms, if supplemented an OT edge partner, offers a fast start to simple data collection and analysis IoT solutions.

Or sell non-complex/non-Industrial IoT solutions leveraging security/networking, wireless, BI/Analytics, edge and vertical expertise by adding a capability from another stack .

See Sigmanet: "We eventually decided our role was to enable smart devices to talk back. Most have control panels, we just have to turn them on...from the IT side, it's just wireless which we do with Meraki."

#3
Solutions

Aggressively watch for market ready (aggregated) mid-market or enterprise IoT solutions. Look for the vendor or distributor to offer programs, education and support. Consider Intel, Cisco, Dell, Bosch, AT&T, Schneider, and others' solutions today. Watch for distributor solutions over time.





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