The State of IoT and a First Look at Partner Profitability

Continuing Education for IPED Channel Masters

IPED® Consulting

ChannelMasters®

Research Overview

Objectives

Quantify the state of IoT in the IT and OT channels with a first look at profitability.

Collect & analyze:

- IoT use case insights
- Top technologies used
- If selling IoT – Revenue & profit contribution
- If not selling IoT – Inhibitors

Determine product and service contribution to revenue and profit

Background

Methodology

Survey fielded June 2018 targeting TCC Award Winners, then OT and IT database

On-line survey with 479 survey responses:

- 274 IT partners
- **191 OT partners** — First effort

Data cleansed and normalized for outliers and because some OT partners don't understand our terminology.

In depth phone interviews with 11 partners to explore and further understand data and responses

- 6 OT
- 5 IT

Respondent Profiles

Background

IT Partners

Solution providers, IT integrators, consultants, resellers and managed service providers of traditional IT solutions offering IT infrastructure and services including, but not limited to HW, SW, Networking, Server, Cloud, Security or other IT technologies.

IoT revenue coming primarily from networking/ security infrastructure and data center/cloud computing.

IoT use cases primarily security strategy and digital surveillance

OT Partners

Consulting firms, integrators, resellers, implementers of non-IT solutions and provider of systems and services in the operational or industrial space; generally includes, but is not limited to operational systems/design/services, engineering, edge devices, process monitoring, operational data and analysis, monitoring/control of operational devices, processes or events.

IoT revenue coming primarily from industrial and operational products, OT project-based services, OT HW and some IT HW and services.

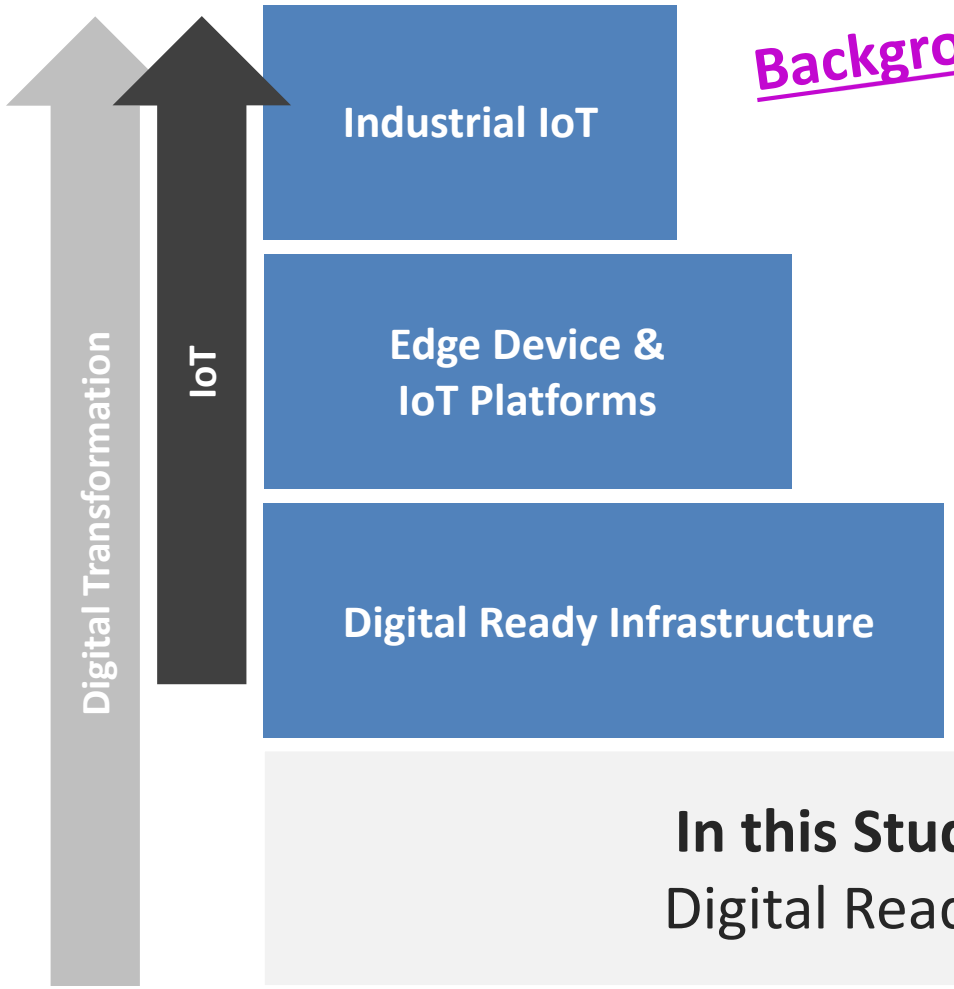
Primary IoT use cases - energy/utility monitoring/management and smart buildings.

Today's Discussion Topics

- A Required Look Back
- Executive Summary
- Those Who Sell IoT
- Partner Profits
- Vendors & Vendor Support Required

Digital Transformation Framework

Source: Channel Leadership Forum participants 2017



Background

R O I : data science provides business insight or foresight

TECHNOLOGY EXAMPLES

- Focus: decrease human costs, accuracy, new abilities, new data
- Leverage: ability to monitor or sense temperature, pressure, direction, speed, etc.
- Industrial control systems integration to cloud or with edge devices, e.g. Siemens, GE Digital, Bosch, etc.

- Focus: new approaches to business problems
- Leverage: Edge sensors & metering devices with an
- IoT Platform both IT centric (e.g. Azure, AWS, PTC) and OT centric (e.g. GE Predix, Siemens MindSphere, etc.)
- Application Development or a Market Ready IoT Solutions

- Focus: technology driven differentiation
- Leverage: retail Zebra RFID clothing tags or Aruba wireless location based services to navigate a venue on mobile device

In this Study: Best Effort to Focus on IoT involving Digital Ready Infrastructure and/or an Edge Device

Security required within each Digital Transformation category

Example IoT Solution Components… Your Telephony, IT or OT Legacy Biases Each View

Source: IPED IoT Research 2016

Background

Industrial Control Systems	Edge Devices	Edge & Control Hubs, Gateways	Cloud Logic, Analysis	Data Center (Processing)
 red lion	 KMC CONTROLS	 CISCO	amazon web services 	sas COGNOS 
Robotics, Critical Response Systems	Things with Sensors, Data	Secure Transport of Data, Fog Computing Logic	IoT Platform, Logic, Analysis (BI), Data Storage	IoT Platform, Logic, Analysis (BI), Data Storage

IP/MPLS Network

Source: IPED Secondary Research & Interviews

"We get to the front of the customer line because we can solve both OT & IT sides of the equation."

"There is no way to define Industrial IoT. We are trying to be ready. Our model is comprised of four Cs:

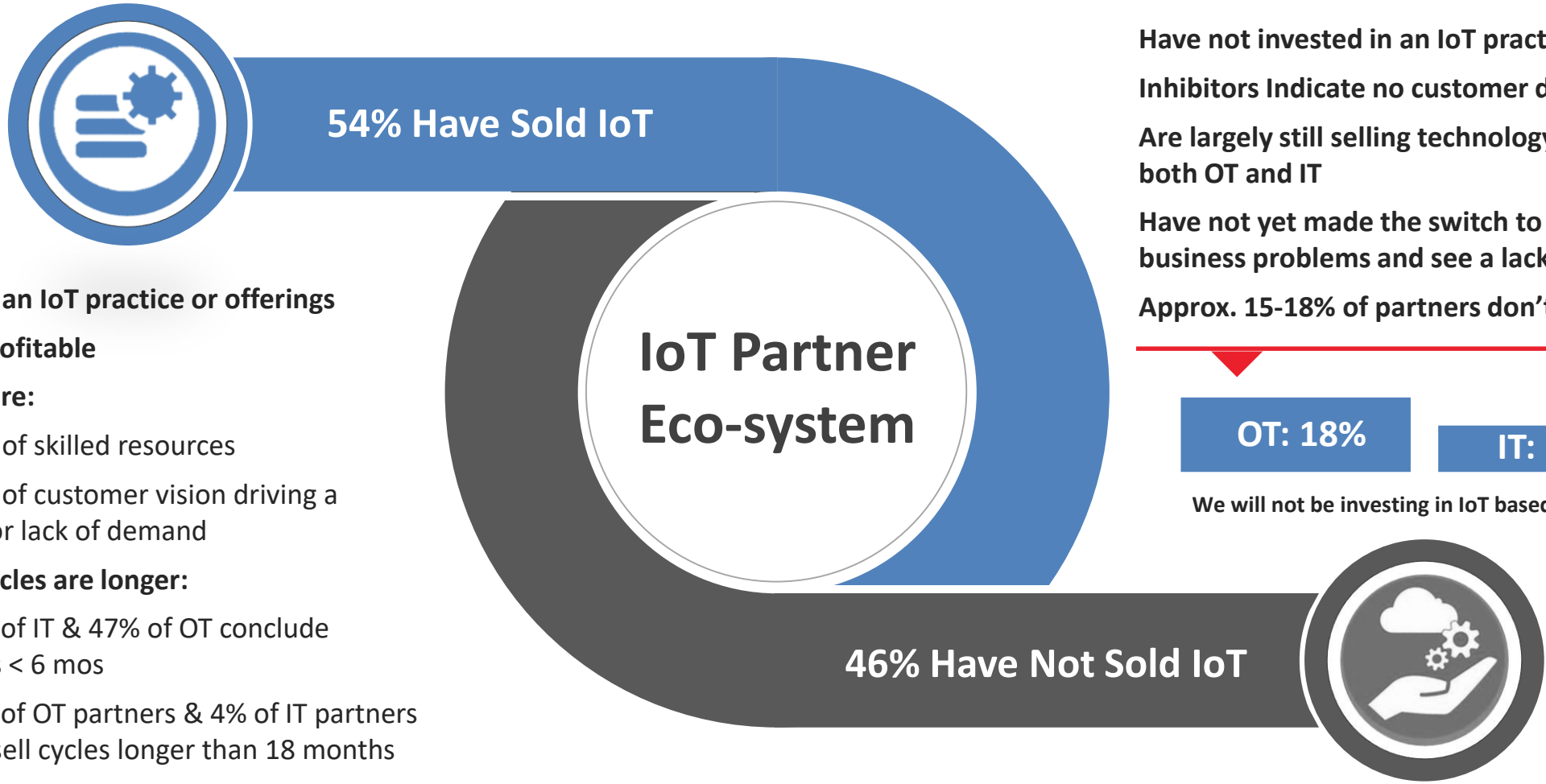
- *C: Collect Sensor Data from Field*
- *C: Connect Edge Devices*
- *C: Comprehend the Data*
- *C: Collaborate data with other platforms (e.g. MES, SCADA, Cloud, other)."*

"We get to the front of the customer line because we can solve both OT & IT sides of the equation."

"You need a scale to describe what level of IoT leverage a customer has implemented…sophisticated versus just an edge device with data.

Level 1 would be an edge device collecting data but no connection to existing systems…Level 10 would leverage all four Cs"

With 54% of Partners Having Sold IoT, We See an Emerging Tipping Point



Invested in an IoT practice or offerings

They are profitable

Inhibitors are:

- Lack of skilled resources
- Lack of customer vision driving a lessor lack of demand

IoT sales cycles are longer:

- 60% of IT & 47% of OT conclude sales < 6 mos
- 10% of OT partners & 4% of IT partners see sell cycles longer than 18 months

Existing relationships (78%) and referrals from customers account for the majority of sales

Have not invested in an IoT practice or offerings

Inhibitors Indicate no customer demand

Are largely still selling technology solutions both OT and IT

Have not yet made the switch to solving business problems and see a lack of demand

Approx. 15-18% of partners don't plan to invest

OT: 18%

IT: 15%

We will not be investing in IoT based Solutions

Study results are dramatically different when isolating those who have sold versus those who have not. Have not sold respondents were terminated after Inhibitors collected.

Critical Findings

Many OT Partner firms' revenues resulted from business consulting

- Gross margins, two to three times product gross margins
- Business Consulting Capability Stack added to IoT Model
- Some consulting firms offered straight engineering services (e.g. electrical engineers in product design)

Engineering staff (electrical, mechanical, civil, process, etc.) are the number one IoT investment cost across all partner types

IoT Critical Success Factors

Key OT IoT Skills:

- Relationships with key IoT Biz Decision Makers
- Custom App Development Skills
- Vertical Market Biz Process Consultants
- Advanced Edge Security Skills

Partners who sell IoT ask for vendors to invest in:

- Customer IoT education to show the possibilities of ROI
- Packaged IoT solutions
- Architecture/design training
- 79% of partners will team; so asking vendors to facilitate introductions to OT /IT partners so they may team

IoT Cloud Platform Vendors (Azure IoT, AWS IoT, IBM Watson, Google Cloud, Cisco Kinetic) in a splintered market, show up most frequently as critical strategic future relationships

How the Study is Skewed…Greater IT Response Than OT with Many IT Partners < $10M in Annual Revenues and Most OT and IT Respondents Recognizing <10% of Revenues in IoT Solutions

Company Heritage

OT 40%

IT 57%

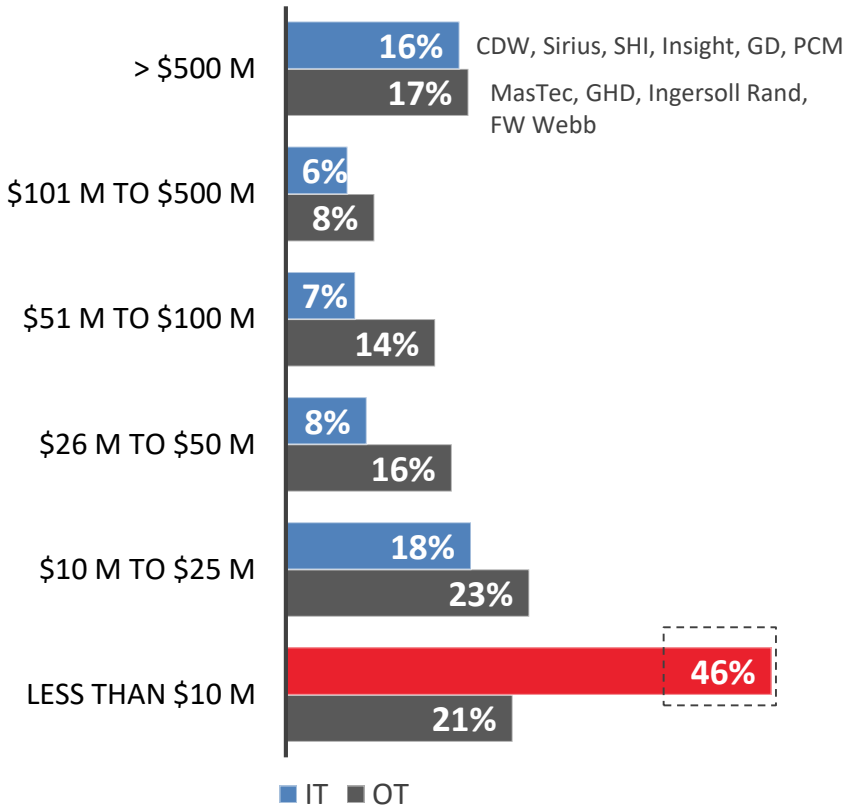
Invested In IoT Practice Or Offerings

Yes 54%

No 46%

Q: In the past 12 months, has your organization invested in an IoT-focused practice or participated in projects/services which solve business problems with IoT solutions? (n=479)

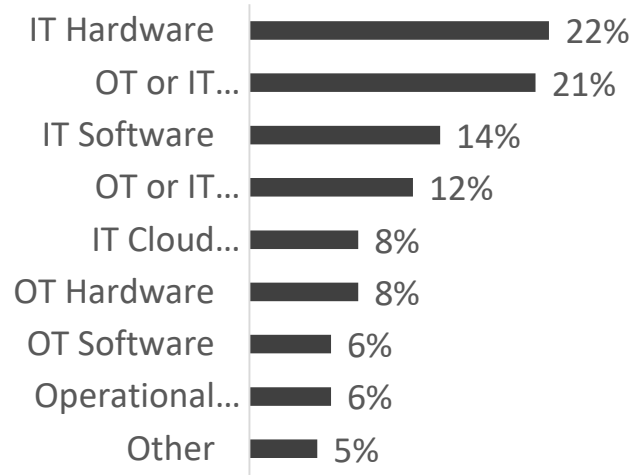
2017 REVENUES



% Revenue from IoT Projects

< 10% of Revenues: 56%
>50% of Revenues: 4%

2017 REVENUE MIX – ALL

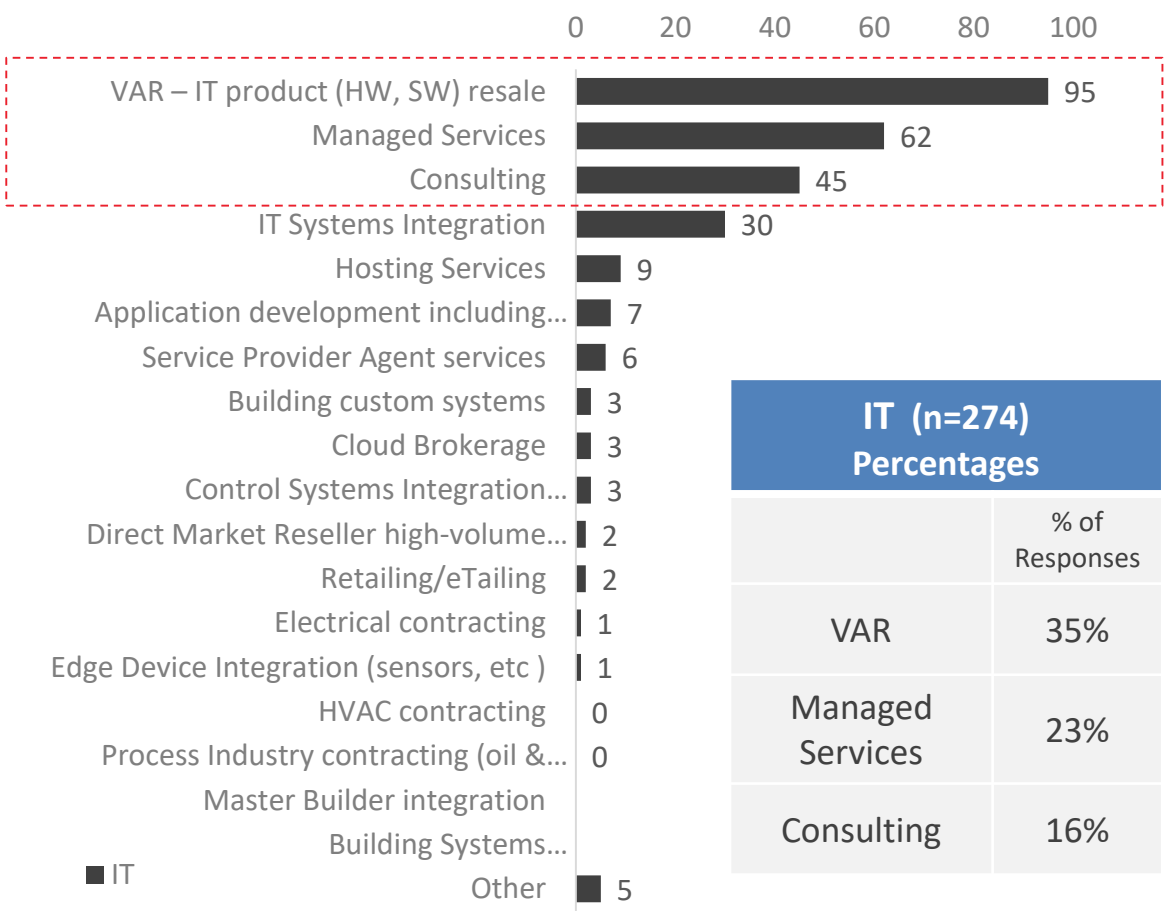


Q: What was your company estimated 2017 total revenues? (n=479)
Q: Do you consider the original heritage of your organization to be an IT partner, OT Partner, or Neither? (n=479)
Q: Please rank the top 3 following business engagement sources of revenue.

Respondent Profile

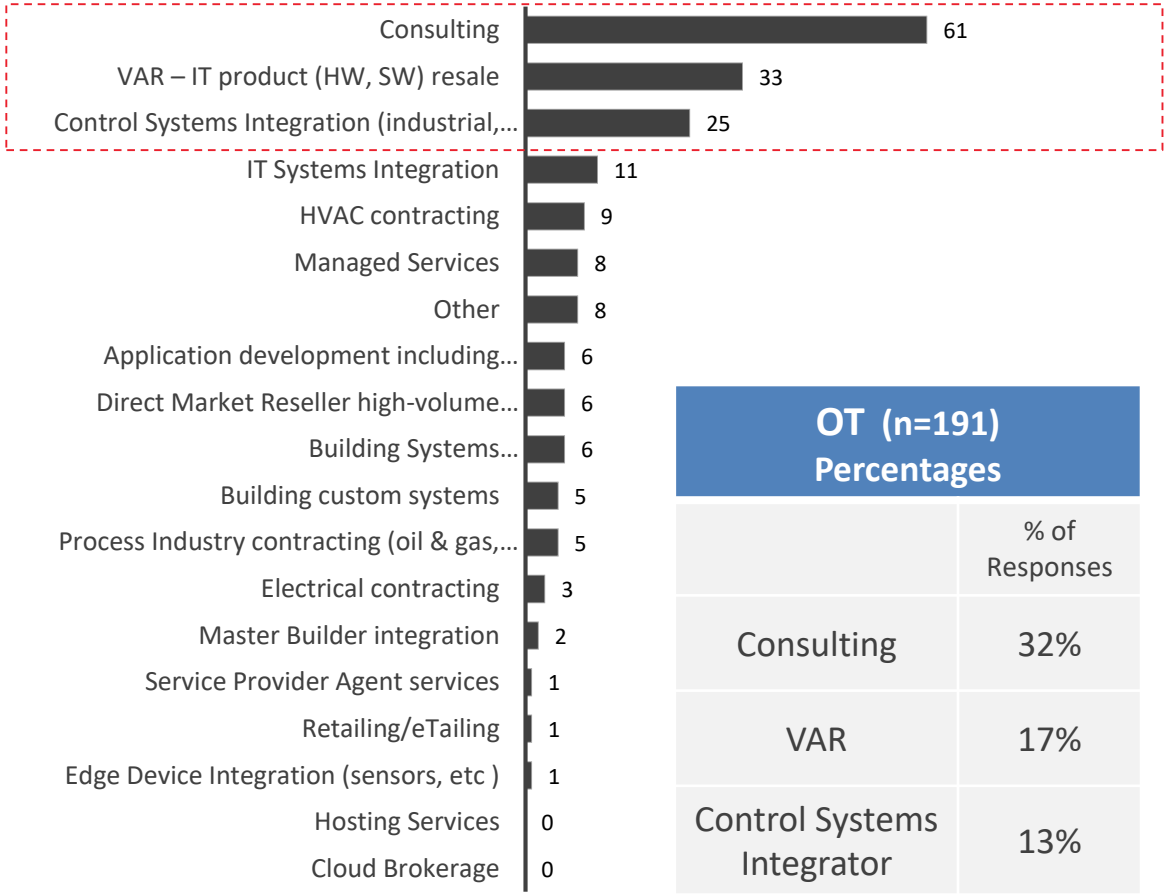
Primary Source of Revenue

IT



IT (n=274) Percentages	
	% of Responses
VAR	35%
Managed Services	23%
Consulting	16%

OT

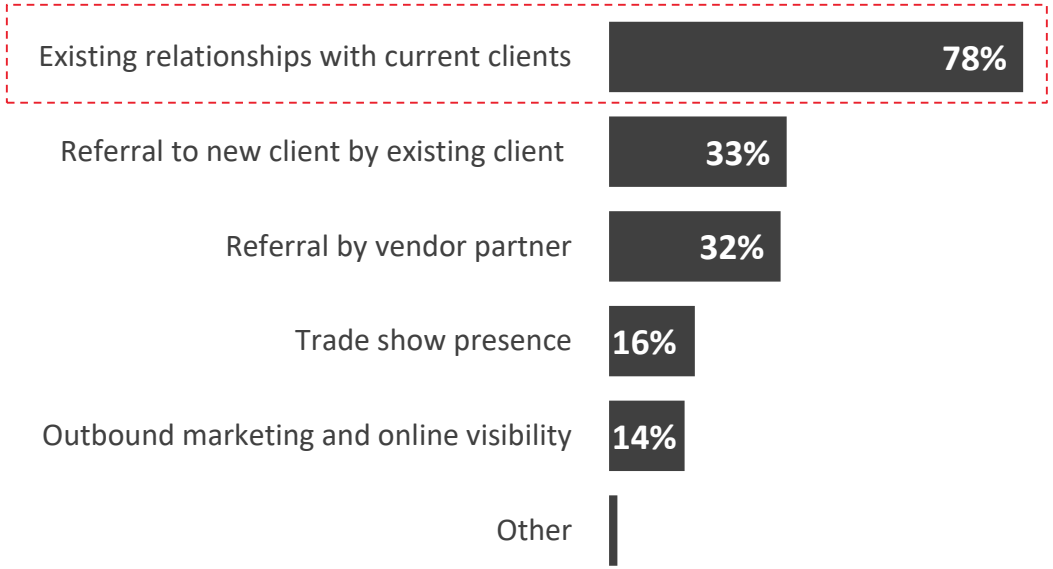


OT (n=191) Percentages	
	% of Responses
Consulting	32%
VAR	17%
Control Systems Integrator	13%

Q: What was your company estimated 2017 total revenues?
Q: Please rank the top 3 following business engagement sources of revenue.

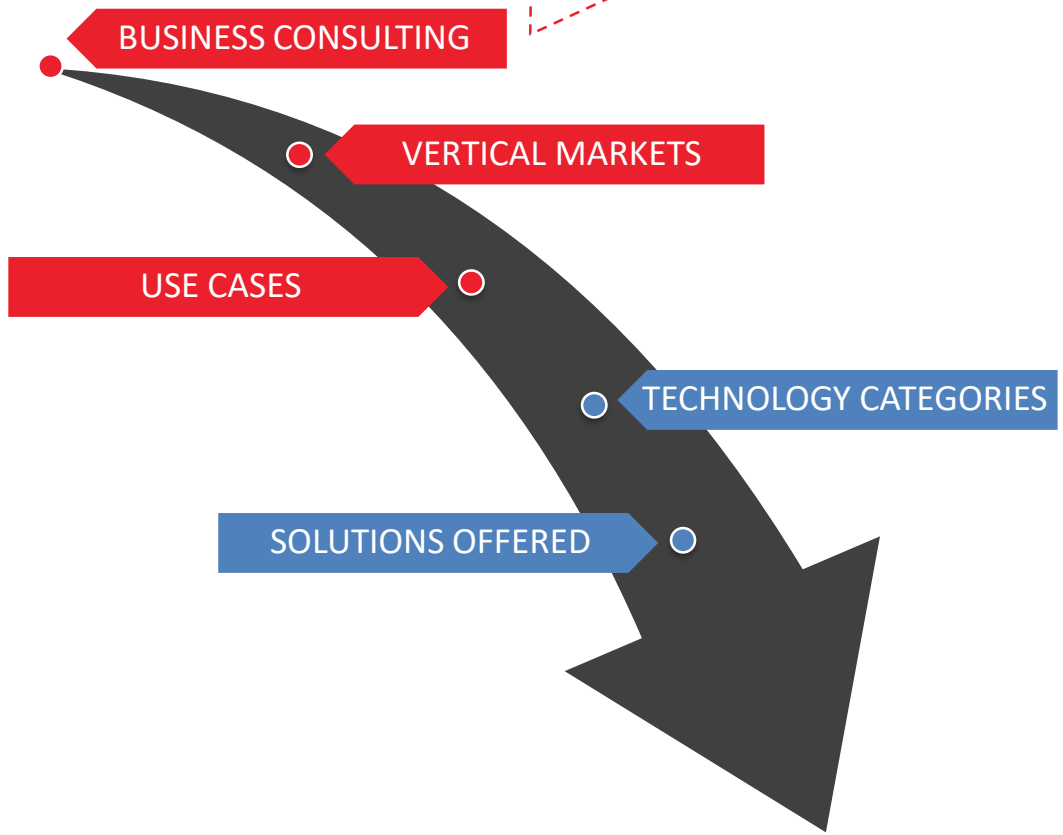
From Those Who are Selling!

78% Find Opportunities With Current Clients



You are looking for a partner with credibility in his/her install base, who is called upon to solve business problems, so much so, that they pull him/her out of the data center or networking closet to the line of business operation.

In IoT, Biz Consulting, Vertical & Use Case **are always part of the conversation**



INHIBITORS FACED

Q: For the first few IoT-related deals your company sold, how did you find the opportunity? (n=261)

Partner Profile Capabilities – Business Consulting, Architecture & Design Added to IoT Capabilities Stacks for a Total of Eight (8) Stacks

RED: Typically OT Partners

BLUE: Typically IT Partners

Combo Red/Blue: both OT & IT Partners

Business Consulting

- ☐ Strategic Company Direction
- ☐ Operational Efficiencies
- ☐ Product/Portfolio Strategy
- ☐ IoT Solution Vision
- ☐ Risk/Reward Assessment
- ☐ Engineering, Building, Other

Architecture & Design

- ☐ Design
- ☐ UX/UI
- ☐ POC
- ☐ The balance here will be added with your assistance

Operational

- ☐ Vertical Expertise
- ☐ Site Surveys
- ☐ Cabling
- ☐ Edge Sensors
- ☐ MRO

Industrial

- ☐ Operational Stack
- ☐ Point Solutions, e.g. SCADA
- ☐ Purdue Model
- ☐ Electrical – Mechanical – Chemical Engineers, etc.
- ☐ Circuit Design/Build
- ☐ IoT Platform Dev.

Applications

- ☐ Office 365, ERP/SCM, Vertical, etc.
- ☐ DevOps, Containers
- ☐ AWS, Azure Dev/Production
- ☐ IoT Platform Dev.
- ☐ Business Intelligence (BI)
- ☐ Mobile

Telephony

- ☐ On-prem PBX
- ☐ Cabling, Batteries
- ☐ Wireless
- ☐ Unified Comms
- ☐ Voice & Data
- ☐ Managed PBX

Networking

- ☐ Routers, Hubs
- ☐ Security
- ☐ SDN, SD WAN
- ☐ Unified Comms
- ☐ Comm as a Service

Data Center

- ☐ Servers
- ☐ Storage
- ☐ Systems Mgt. Software
- ☐ VDI, Business Intelligence (BI)
- ☐ IaaS, BDR, etc.

Source: The Channel Company IoT Advisory Board 2017 Research and 2018 Re-design

"Knowing what questions to ask of the data and applying it is the trick."

"Client understanding of how to put pieces together and why is lacking. We build procedure, processes then infrastructure to collect, analyze and utilize the data."

IoT Solves Business Problems

"In IoT you want to develop solutions that solve business problems, not just fix a problem. People don't understand, so they don't keep up."

"Iot was a natural extension of our business."

"Never had to make an IoT investment decision, just kept solving business problems. In this case, compliance."

"The first thing is to identify the business problem. The look for case studies where the problem has been solved. I read Security News, CRN, not sure how many read the way I do. I look for vendors who have already implemented a similar solution."

"The real benefit of IoT is AI & Analytics. Analyze data and feed it back into new processes.

"Business outcome….it's a White Board versus PowerPoint presentation. Give me a White Board!"

It didn't take us long to build IoT capabilities because we stayed with our core expertise, infrastructure."

IPED® Consulting

ChannelMasters®

Vertical and Use Case Differences Are Greater Than Technology Differences

Vertical Differences

	IT	OT
1	Healthcare	Manufacturing
2	Manufacturing	Energy/Utilities
3	Retail	Healthcare
4	Financial Services	Construction
5	Electronics	Electronics

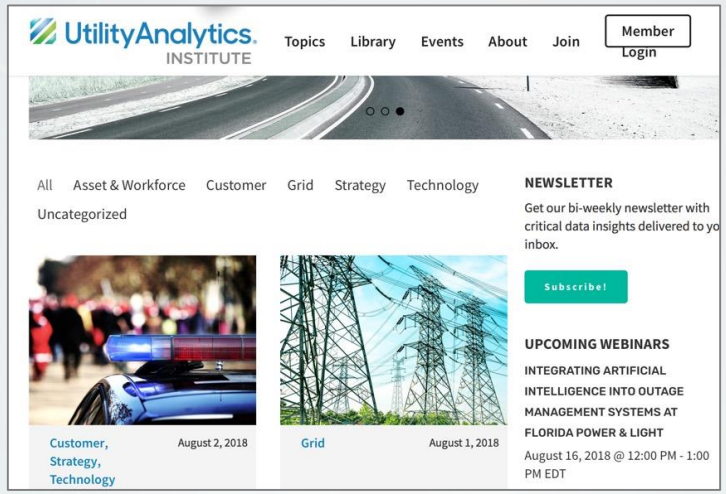
DIFFERENT

*Energy/Utility Monitoring & Mgt.

Vertical & Use Case Sentiments

"For the first time, power usage in the US is down from the previous year! Attributed to use of smart appliances and some alternative energy use.

Utility Analytics Institute put together a consortium to promote IoT, best practices, etc."



"Vertical expertise came first, we have an 80 year legacy."

"It took us four (4) years to build IoT capabilities in order to sell IoT engagements to our vertical client set."

First we solved a customer biz problem, then we took that solution to other customers/verticals. This works especially well in IoT infrastructure (WiFi, Security, Storage)."

IPED® Consulting

ChannelMasters®

Drilling Down From Technology Categories To Solutions. There is Mostly Similarity Between OT and IT Partners.

IT SOLUTIONS MOST OFTEN USED

IT Partners ….	OT Partners…
1 Networking	1 Networking
2 Wireless	2 Wireless
3 Data Center	3 App Development
4 Security	4 Data Center

DIFFERENCE

Q: What traditional IT or OT offerings have you leveraged most to solve your early IoT business problems?

Sample IoT Solution Components Sold: Payment Card Compliance

Non-industrial IoT Solution Components

- Sprint Wireless
- Samsung Galaxy tablets
- MaaS360 application to track data usage from Sprint
- IBM hosting with an Azure platform, licensed by Microsoft
- Integration (largest revenue and GMs)
- Managed services (2 years)
- SW modifications for tablets to take payments online for compliance purposes

Supporting Payment Card Industry Data Security Standard (PCI DSS) Compliance

- "We knew industry wide this was coming, we didn't want to scramble, we started searching for solutions and found tablet/cell with secure applications
- We then found the application that would secure the transaction and controlled entitlements of each user.
- We monitor their personal actions to break security protocol. This is critical."

Sample IoT Solution Components Sold: Healthcare

Infrastructure & OT IoT Solution Components

- Router/Switch (Cisco)
- Medical devices
- Scanners
- Engineering
- Voice
- Wireless
- Teamed for: large deal project management, IoT device manufacturers

Healthcare Nurse Call Systems & Security

- “In nursing home and independent living, we engaged Cisco for voice/wireless switching.
- Then Stanley Healthcare for nurse call and emergency equipment.
- Schneider was designed in on the next phase as well as HPE for desktop servers.
- We used Stanley Healthcare assistance for design
- Stanley and Schneider for implementation assistance.
- We lost money on voice/wireless, but made money overall. ”

Customer Demand/Vision & Shortage of Skills are Top Inhibitors. It's More Complex if You Have Not Invested in IoT; If You Have Invested, the Security Risks are More Clearly Felt.

Yes, Have Built an IoT Practices or Offerings ….	No, Have Not Invested in IoT…
1 Shortage of Skilled Resources	1 Absence of Customer Demand
2 Absence of Customer Demand	2 Complexity to Build an IoT Solution
3 Lack of Customer Vision	3 Shortage of Skilled Resources
4 Data Privacy & Security Customer Concerns	4 Lack of Customer Vision

DIFFERENCE

Technical Inhibitors

"Cisco sells the backend, infrastructure and analytics, but they don't sell all the middle pieces. API integrations are minimal…and it is really hard. We have to integrate all the systems, without APIs. Municipal governments…every department does their own thing, e.g. body cam system, the vendors overpromise the integration with the existing systems. We have to make it work. Trying to get Siemens to talk to Siemens…impossible…therefore many of these business problems get surfaced and solved."

Customer Vision & Customer Demand

"Customers do not understand IoT and where to begin. It doesn't hold us back, we are proactive with customers and are ahead of the curve."

"We need vendors to educate partners AND customers!"

"What would I change? Vendors & industry do more education at the customer level."

"There is no lack of customer demand, however, customers need to be continually educated to understand the full benefits and how to utilize IoT ..."

"Typically, very large companies are investing in IoT ready infrastructure to forward invest at today's rather than future costs."

"End user education results in a lot of business for integrators."

"Lack of customer demand, I am 100% in disagreement."

"Demand comes from customers who want to stay in business and need data to make decisions."

In IoT, Biz Consulting, Vertical & Use Case **are always part of the conversation**

BUSINESS CONSULTING

VERTICAL MARKETS

USE CASES

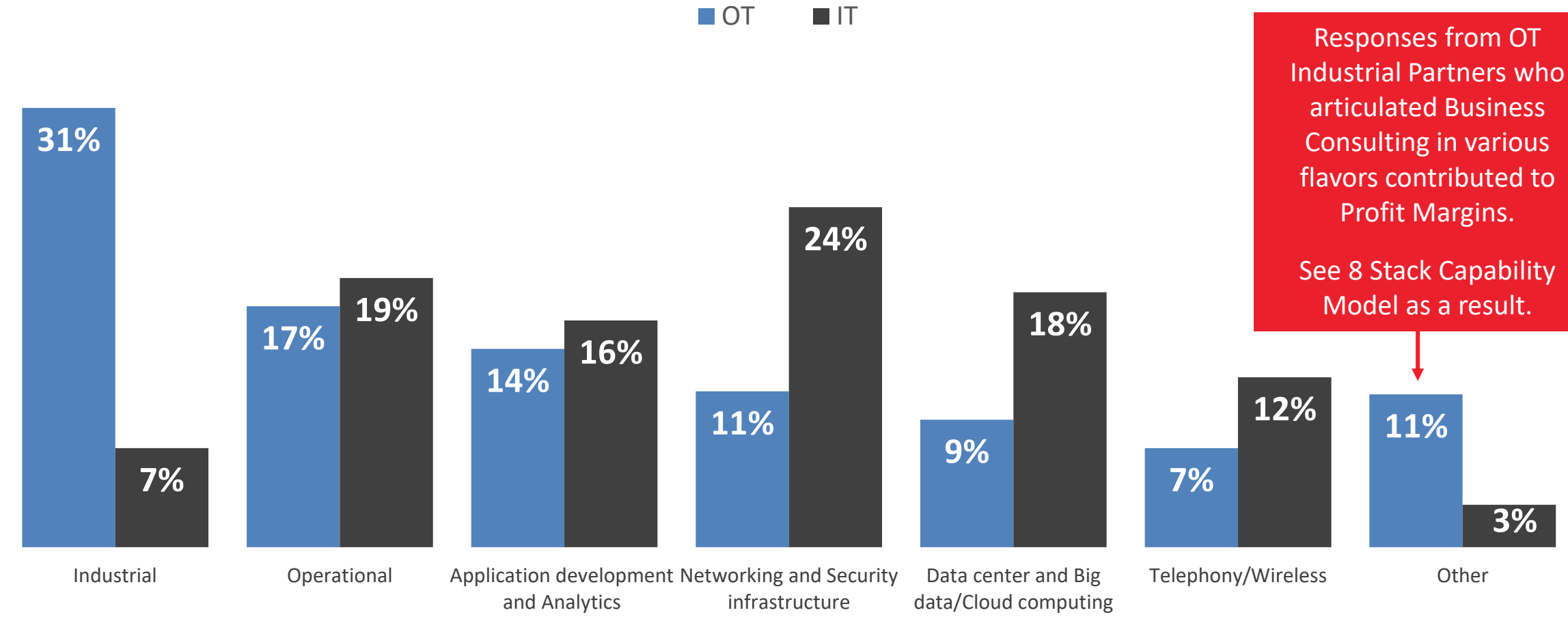
TECHNOLOGY CATEGORIES

SOLUTIONS OFFERED

INHIBITORS FACED

Gross Margin Sources; Revenue Almost Linearly Related in the Categories Below

% of IoT Related Gross Profit Margin



Responses from OT Industrial Partners who articulated Business Consulting in various flavors contributed to Profit Margins.

See 8 Stack Capability Model as a result.

Q: What percentage of your estimated 2017 IoT-related gross profit margins came from the following product/service categories?

Improving My IoT Profitability

"I need more IoT packaged solutions from vendors. A major issue is utility transformers, they are expensive…Customers wait for them to blow, there is no predictive maintenance application for this problem."

"GMs are 5-20% HW, services go to 30%, analysis & analytics 40-70%."

"Our margins for IoT infrastructure are 15%-20%."

"Product GMs are 15-20%, services well over 50%."

"90% of my IoT revenue comes from application development."

"We solve problems versus push product. "

"I'm profitable when solving a business problem. When it's 'standard' it will be an Amazon play. We'll move to another market."

"IoT iPads, we moved them to a managed contract, that's a big part of our profitability."

"This is our first MRR and we are at POC stage."

Improving My IoT Profitability

"We had to invest and looked at ROI. We invested in education, building partnerships, we ran into problems and tried to overcome. We overcame. The engineering side of our business subsidized our investment and we put in additional capital to make it happen."

$10M OT partner

"We invest in key vendor relationships, use off the shelf components when possible with middleware and hire SMEs with vertical market expertise who speak the "language". We engage early with the customer offering a technical solution with a business outcome."

Partners Most Often Build Practices Based on Customer Demand, They then Team with an IoT Vendor or with an IT Partner

The Costs to Invest in IoT (Ranked)

Resource Costs	Other Investments
1. Electrical/Mechanical or other Engineers	1. Technical Training
2. Pre-sales Engineers	2. Sales Training
3. Pro Services Implementation Staff	3. Capital Equipment (vans/trucks, tools)
4. Post-sales Engineers	

"We invested in middleware software, we're hiring a coder, we had to hire more engineers, we trained existing engineers on Cisco DNA Center, we used canned assessments from the services division these included example POCs, Bills of Material, Costs that can be repeated. We need more training on the Cisco IoT platform to help us drive better IoT assessments."

Q: What are the categories of investment costs to your company to sell IoT or build an IoT practice? (n=261)

Q: As you think about the next 18-24 months, how is your company most inclined to develop (or not) IoT solution capabilities? (n=479)

Today's Revenue Snapshot… Let's Look at the IoT Future

Top IT or OT Vendors (Revenue Contribution) – OT & IT Combined

Count	Vendor Rank
70	Microsoft
57	Cisco
38	Dell
34	AWS
22	IBM
19	HP
17	Google
17	HPE
10	Verizon
8	Azure
7	GE
7	Oracle
3	Honeywell
3	Siemens
2	Apple
2	Intel
2	Axis
2	KMC Controls
2	GE

Q: Who are your top 3 IT or OT vendors based on revenue contribution to your company? Please list up to 3. (n=483)

The Vendor Landscape Doesn't Change Dramatically; However, IoT Platform Vendors Grab Strategic Significance Looking Forward

	Top Vendor Revenue	
	REVENUE	
	IT	OT
1	Microsoft	Microsoft
2	Dell	Cisco
3	Cisco	Dell EMC
4	HP	Autodesk
5	HPE	Oracle
6	IBM	Siemens
7	Intel	Google
8	AWS	HP
9	Ingram Micro	Emerson
10	Lenovo	Rockwell

IPED® Consulting

Q: Who are your top 3 IT or OT vendors based on revenue contribution to your company? Please list up to 3. (n=483)
Q: Please indicate the Vendors' IoT program or IoT specialty tracks to which you belong.
Q: Of those Vendors you have selected in Q21, please rank their programs/tracks in order of strategic value to your IoT business growth.

ChannelMasters®

Best of Breed Vendors

"Cisco's analytics monitor network usage down to the individual; it is very good.

Vendors should inject themselves to help get to the business outcome. IoT is like a Lego set. Vendors need to know where to play and with what pieces."

Best of Breed Vendors

"A vendor like Microsoft does not push their product but describes how their OS is used to control devices."

Microsoft & Intel are best of breed. They present themselves as a core piece of the solution. They then educate to that solution."

"Schneider is great! They are transitioning from a HW company to an information business company."

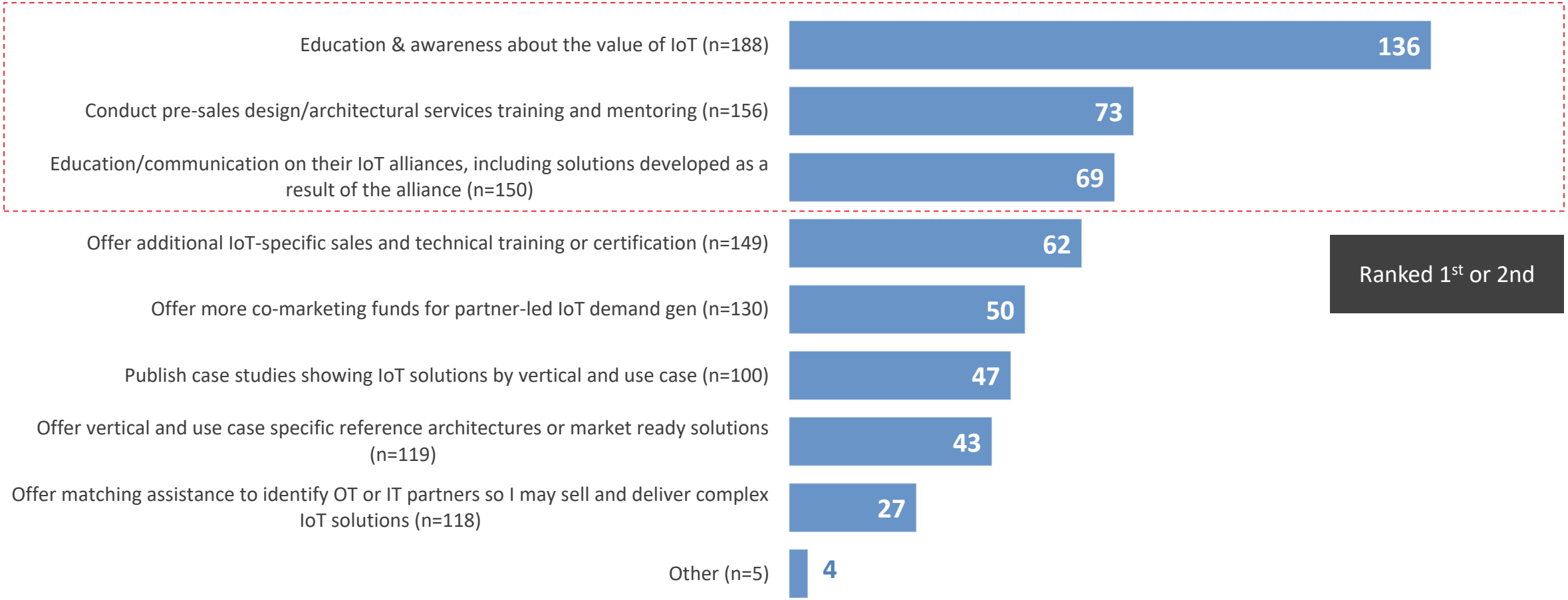
"At INSPIRE, Microsoft did not focus on product, they presented a solution & how MSFT plays in that solution."

SHOW PROBLEM – TELL STORY – PRESENT SOLUTION

"Intel went on an end user education campaign with video, chats, white papers. That opened the door for us…customer then able to articulate a problem and desire. If vendors made info more accessible to end customers in terms the customer understood, that would be the greatest help."

Vendor Support

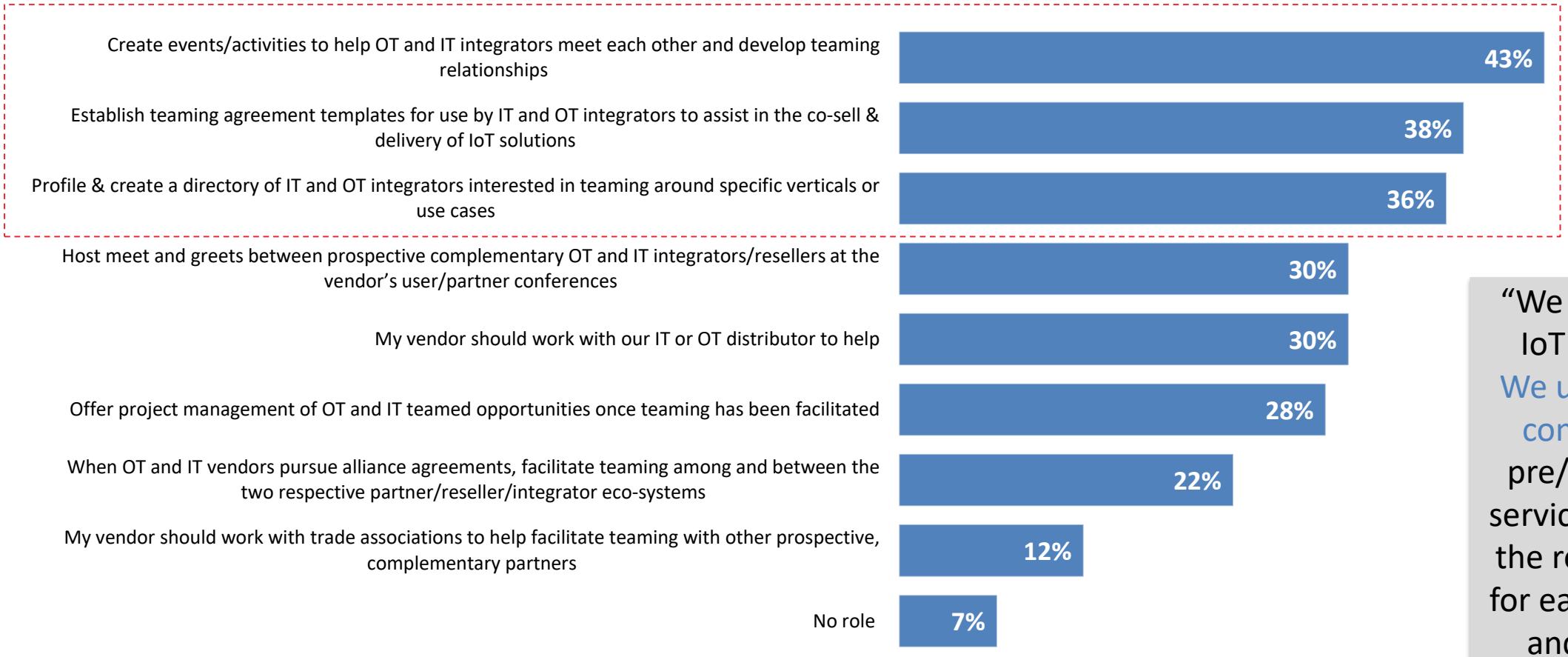
Support Expected from Strategic It Vendors | Ranked 1 or 2



Q: Please rank , 1-5, the following types of support your company expects most from its strategic IT vendors to grow your IoT-solutions practice.

Partner with Partners and Vendor Roles

Roles of IT and OT Vendors



"We team with IoT vendors. We utilize their consultants, pre/post sales service, leverage the relationship for early training and market knowledge. "

Q: Thinking about offering complete IoT solutions around their technology, what role should your leading IT and OT vendors be taking in promoting collaboration or teaming between complementary OT and IT solution providers/integrators? (n=261)

Looking Forward

Violent Agreement, Though Differing Magnitude Regarding the Top 4 OT Skills Going Forward:

1. Relationships with key IoT Biz Decision Makers
2. Custom App Dev Skills
3. Vertical Market Biz Process Consultants
4. Advanced Edge Security Skills

62% Expect a 1% – 25% Growth in IoT Gross Margins

79% Will Be Partnering to Achieve Growth Expectations with 47% Growing Through Acquisition

Thank you!

For More Information Contact:

Lisa Sabourin
Director of Engagements
C 561.339.5517
lsabourin@thechannelco.com

The Channel Company
thechannelco.com