

IoT: The Next Generation of IT

Preparing for IoT Driven IT

Stephen DiFranco
September 2017

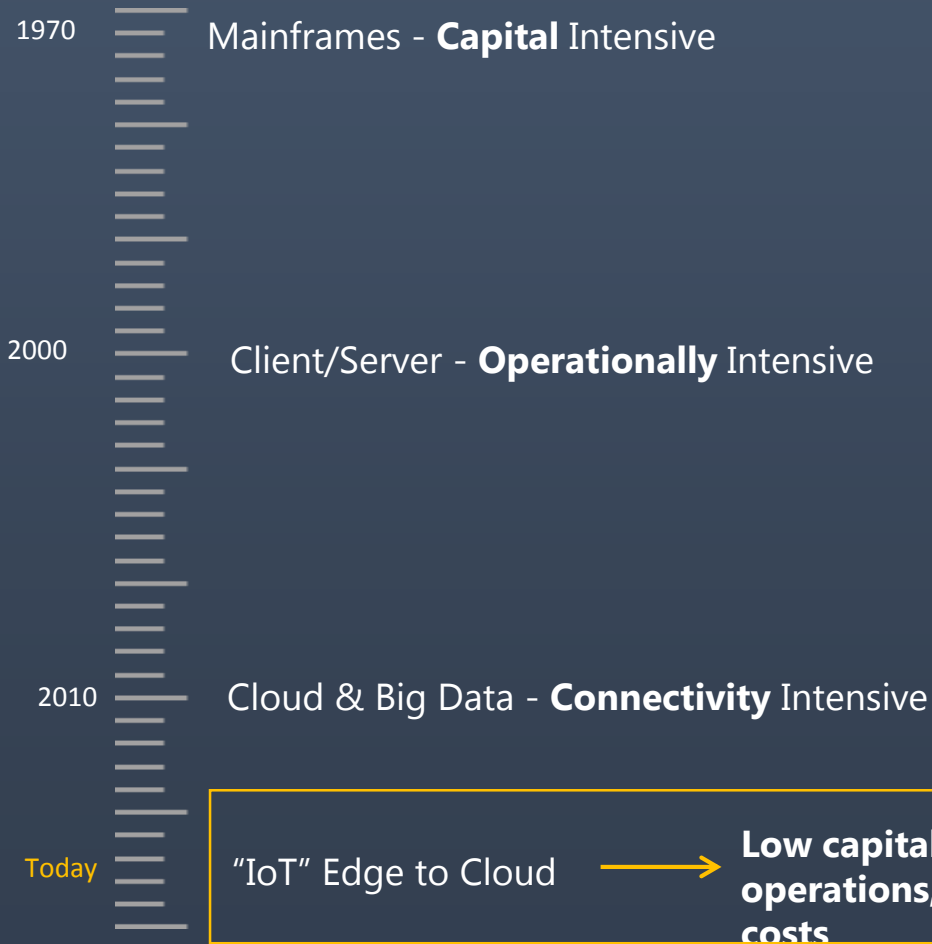
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The 4th Generation of IT

To advise, consult & deliver disruptive go-to-market plans for companies to leverage the IoT revolution

The Internet of Things represents the 5th phase of IT evolution:



Each phase:

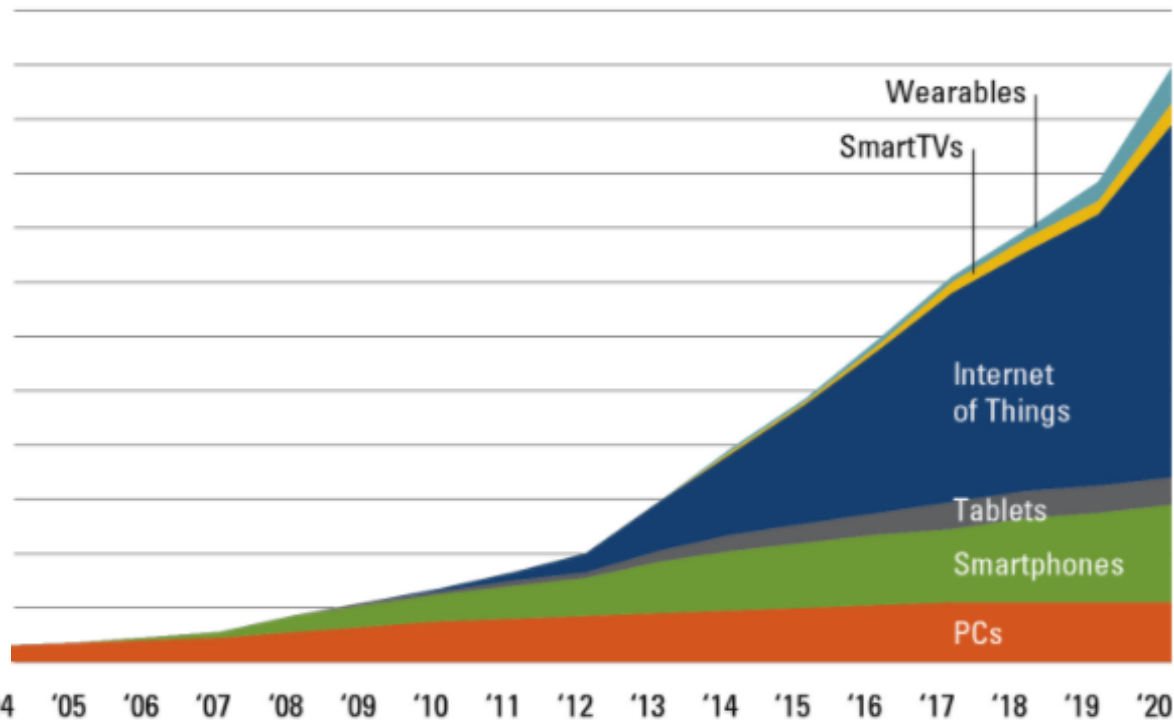
- i. Drove massive disruptions in **IT infrastructure investments**
- ii. Created an **opportunity for new & current players**
- iii. Required **new go-to-market** plans



A Glimpse into the IoT Market



By 2020, There Will Be More IoT Devices than PCs, Tablets & Smartphones



Sources: Gartner, IDC, Strategy Analytics, Machina research, company filings, BII estimates



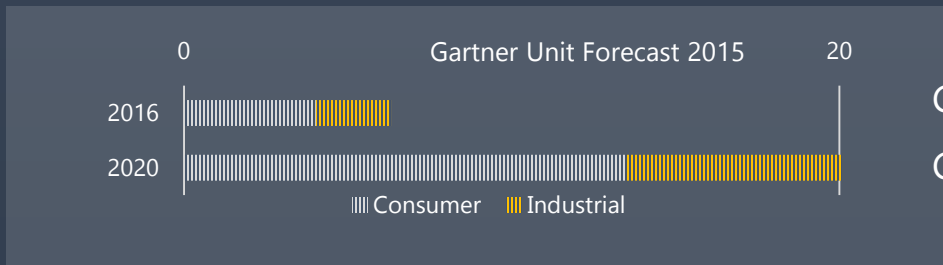
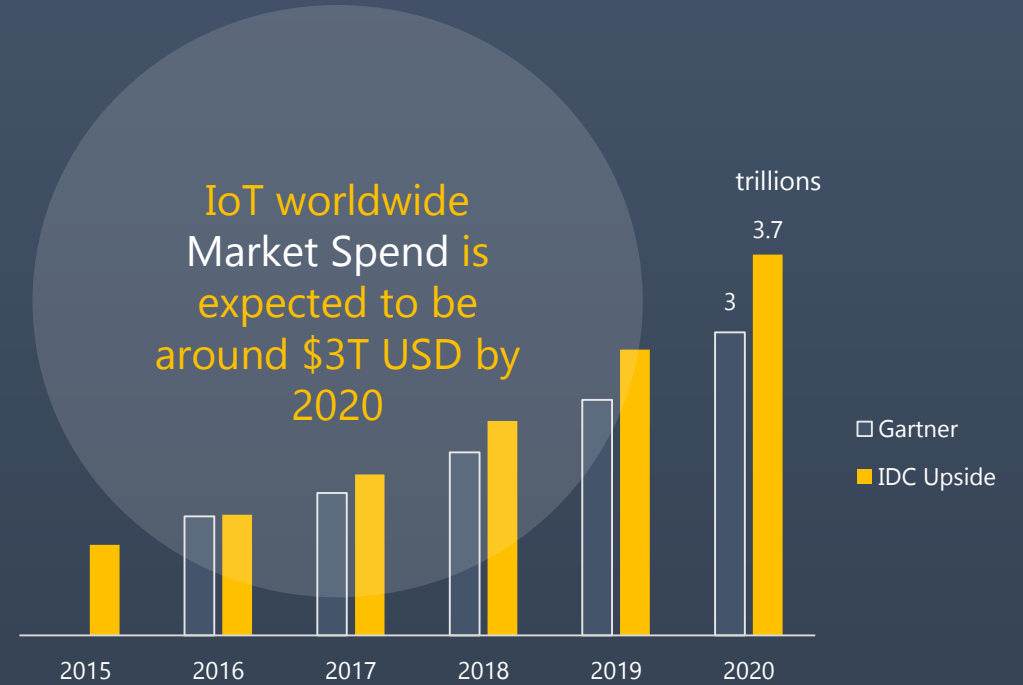
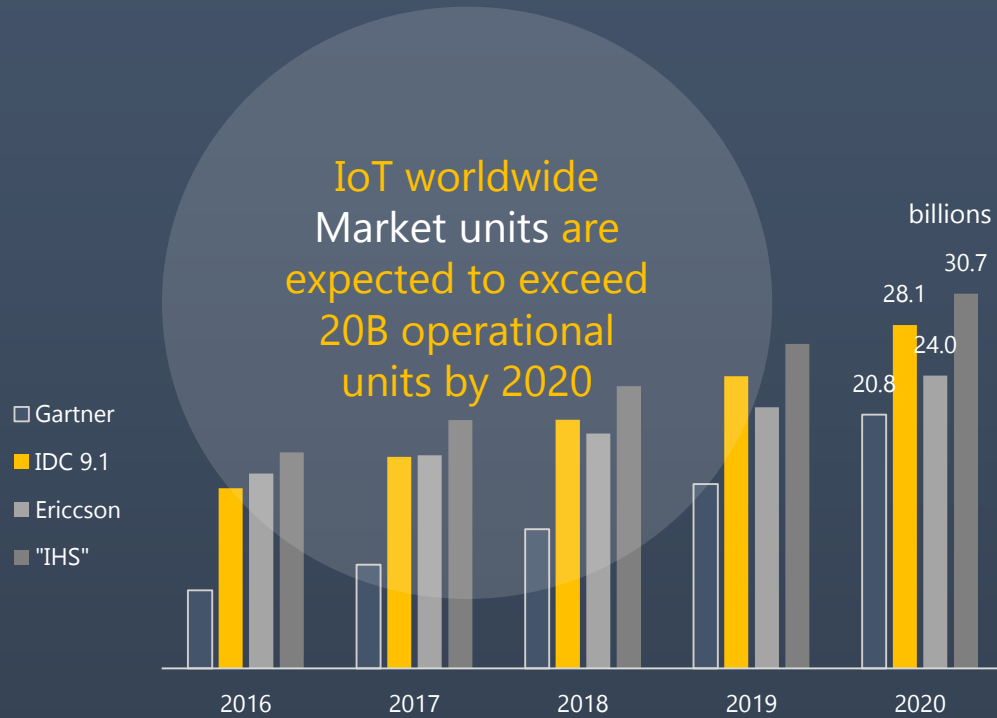
For every person living on earth, there will be at least 2, maybe even 6 connected "things" by 2020.



This creates revenue opportunities for companies beyond what Apple, Google, and Facebook combined are selling together today.

20 Billion Units / \$3 Trillion by 2020

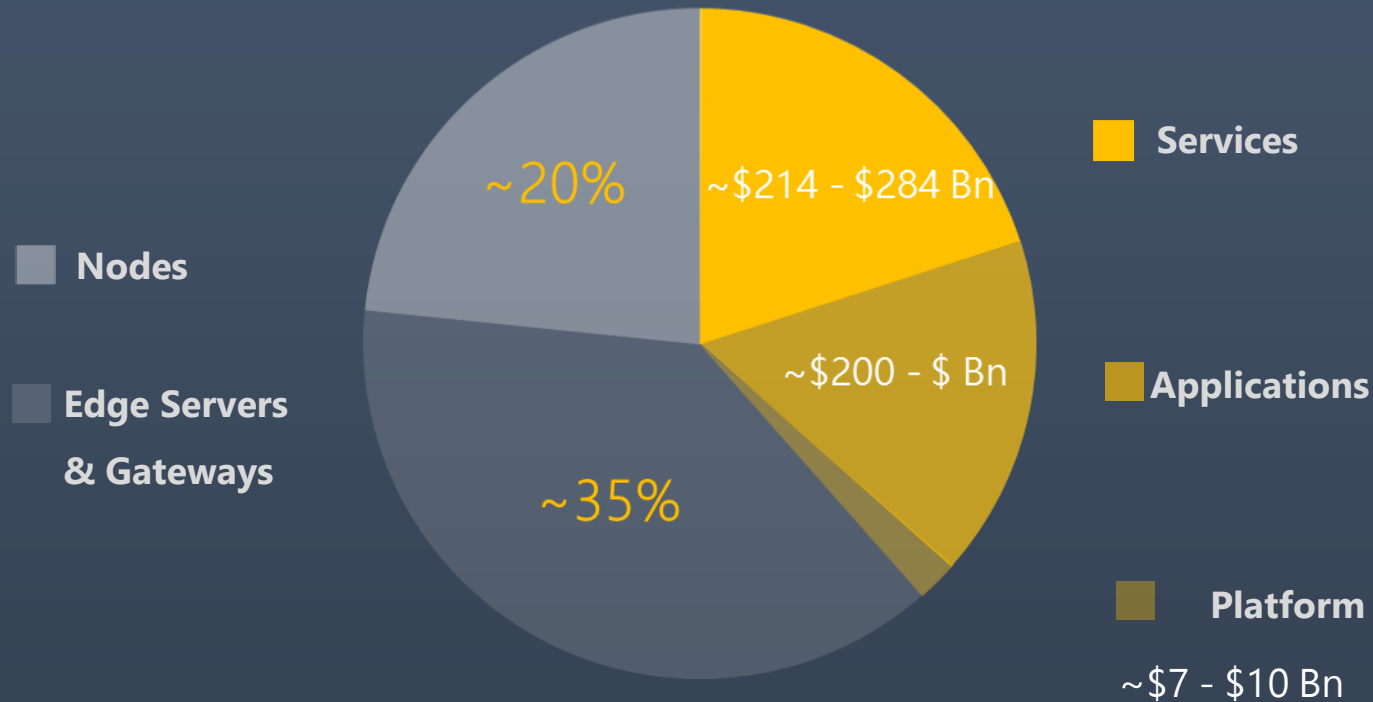
IoT Total Units forecast, IoT total expected spend with consumer / industrial unit break down



Consumer IoT market will dominate unit volumes.
Commercial will dominate service revenues.

Total Addressable Market-

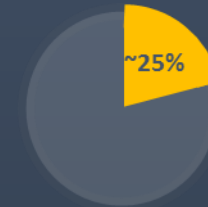
Revenue split by HW, SW and Services



IoT device management market is expected to grow from \$693M in 2017 to **\$2.6B** by 2020, at a CAGR of 29.8%



DEVICE MANAGEMENT



CONNECTIVITY MANAGEMENT



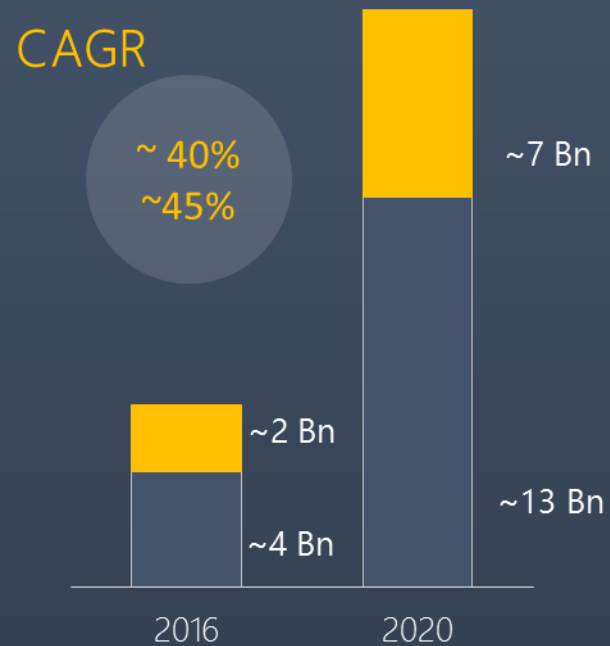
APPLICATION ENABLEMENT

Value of nodes vs. hardware vary depending on the vertical application

Total Addressable Market- Units & Revenue

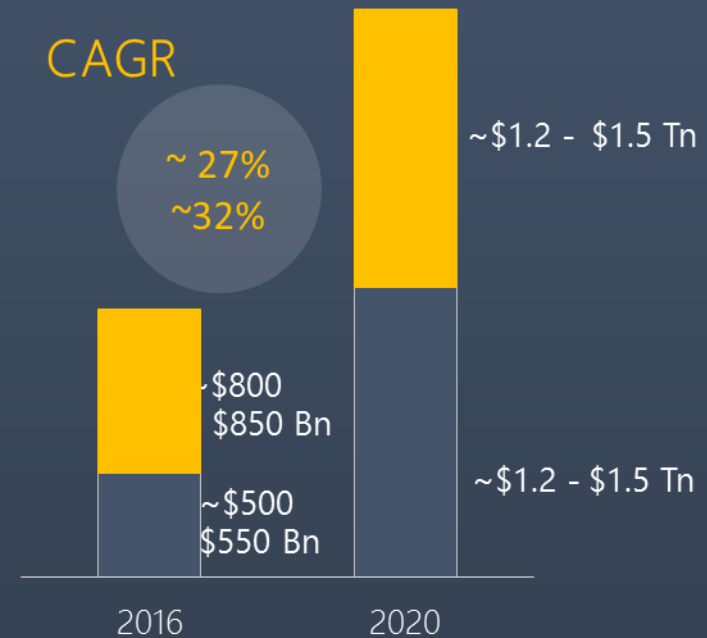
IoT total expected spend with consumer / industrial unit break down

Consumer IoT market will continue to dominate unit volumes through 2020



UNITS

Industrial IoT revenue will be as large as consumer revenue by 2020 driven by services.

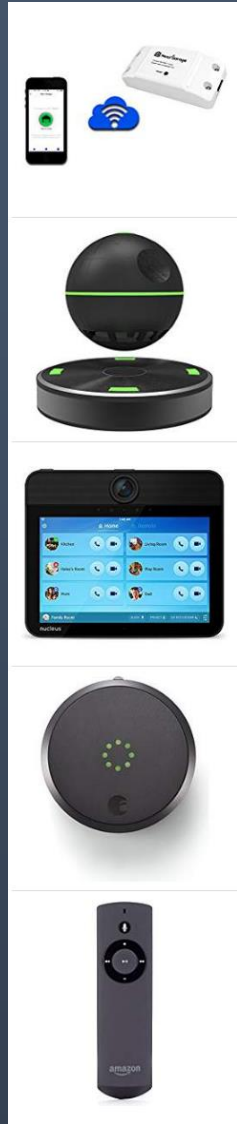


REVENUE

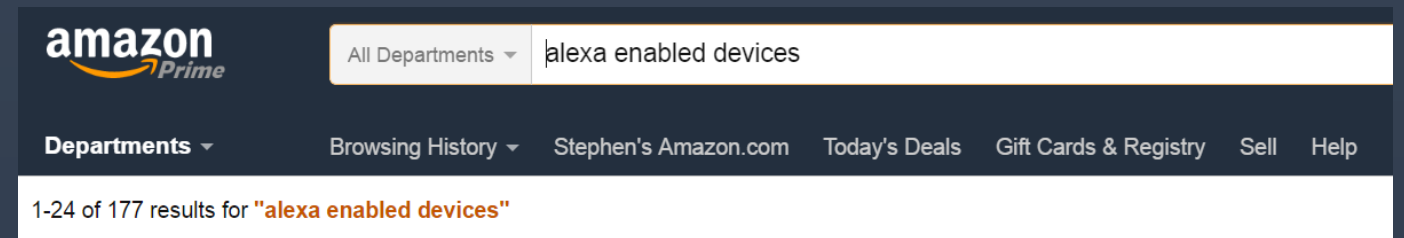
Consumer Industrial



IoT Services
Applications, Analytics & Security will dominate
IT spend by 2025



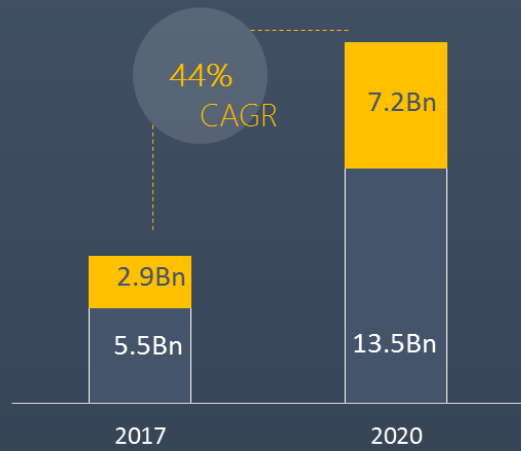
Voice is the “killer app” of consumer IoT.



Industrial and Commercial TAM

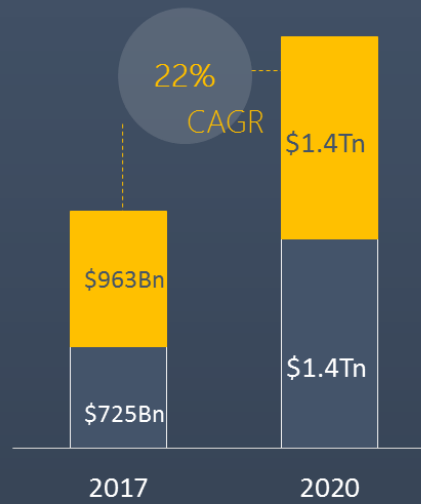
IoT total expected spend with consumer / industrial unit break down

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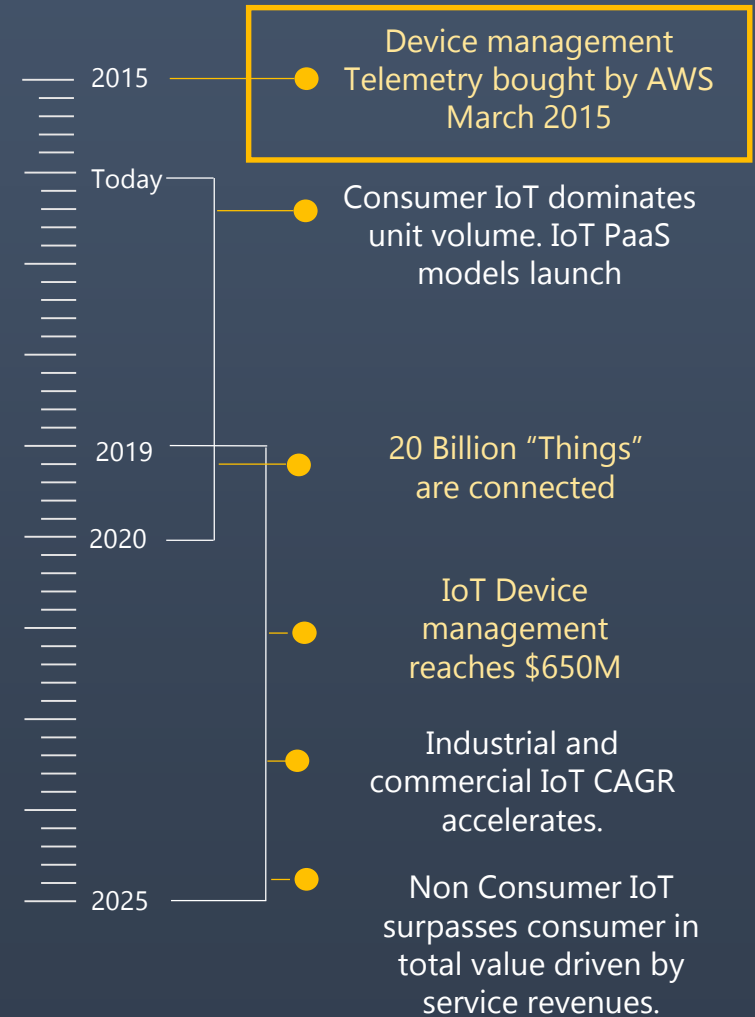
UNITS

IIoT revenue will be as large as consumer revenue by 2020 driven by services.



\$ REVENUE

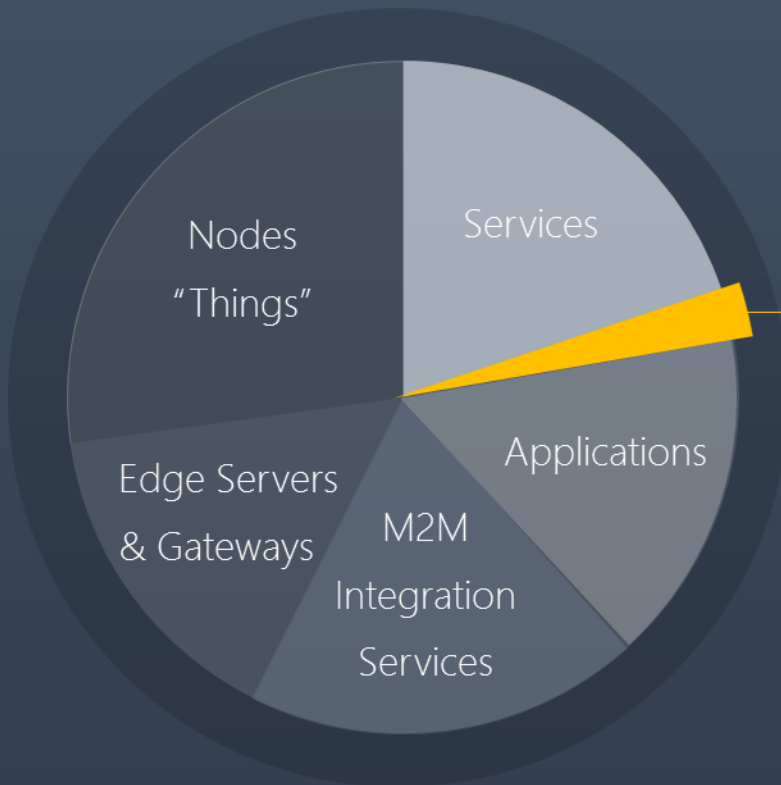
■ Industrial
□ Consumer



Industrial IoT TAM by Category

The potential value of the middleware and the device management platform

According to Gartner by 2020 the IIoT will be a **\$1.4 Tn Market ***



"Management Platform"

~\$9 - \$11.5 Bn

The Management Platform consists of:



According to Markets & Markets the IoT device management market in the middleware is expected to grow from \$693M in 2017 to **\$2.6B by 2022**, at a CAGR of ~30%.

IoT AG estimates IoT device management to be **~\$1.5B to \$2B by 2020**

* The TAM break down is directionally guided by Machina Research and IoT AG.

IoT in RETAIL

FIVE METHODS

Smart Shelves Traceability Loss Prevention JIT Promotions Custom

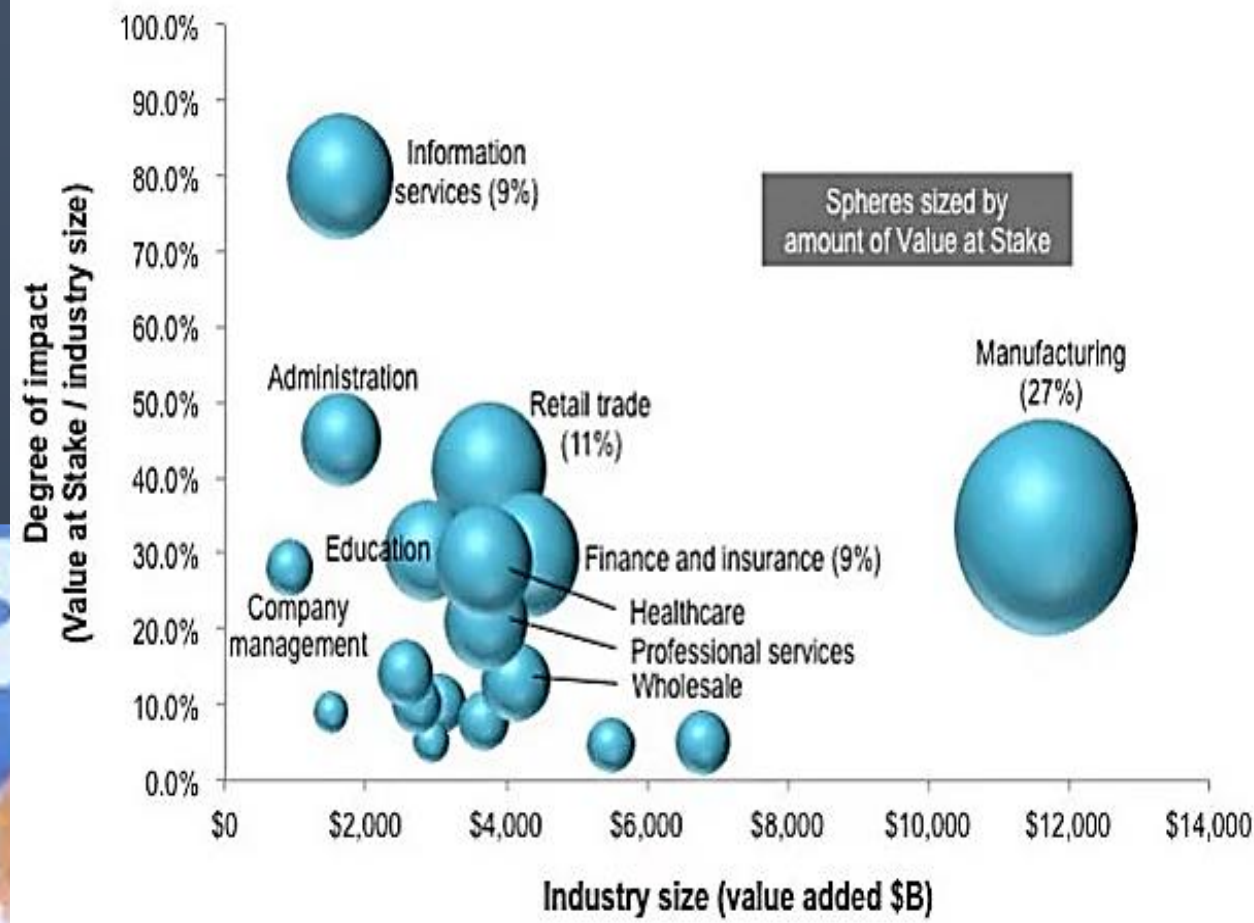


Early IoT Industries

Manufacturing
&
Logistics

Retail
&
POS

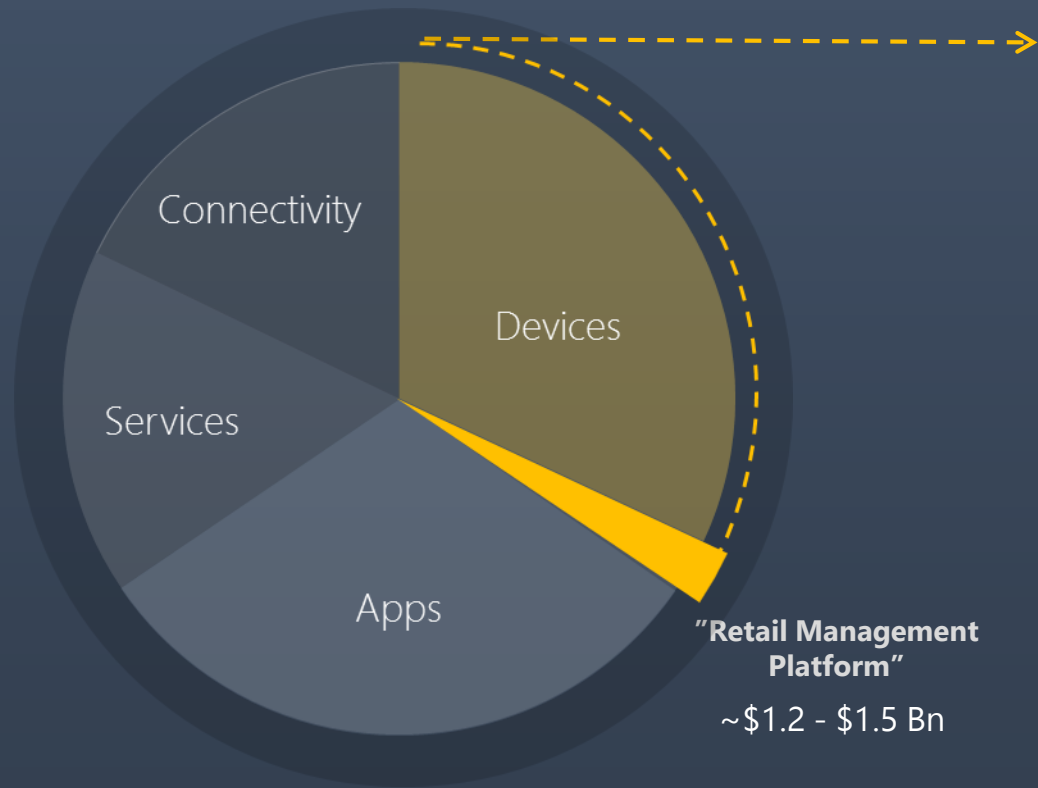
Hospitals
&
Extended Care



IoT in the Retail Industry

The potential value of Healthcare

According to Markets and Markets the IoT Retail Market will grow from \$14.3 Bn (2015) to **\$35.6Bn** by 2020 at a 20% CAGR



STORE OPERATIONS



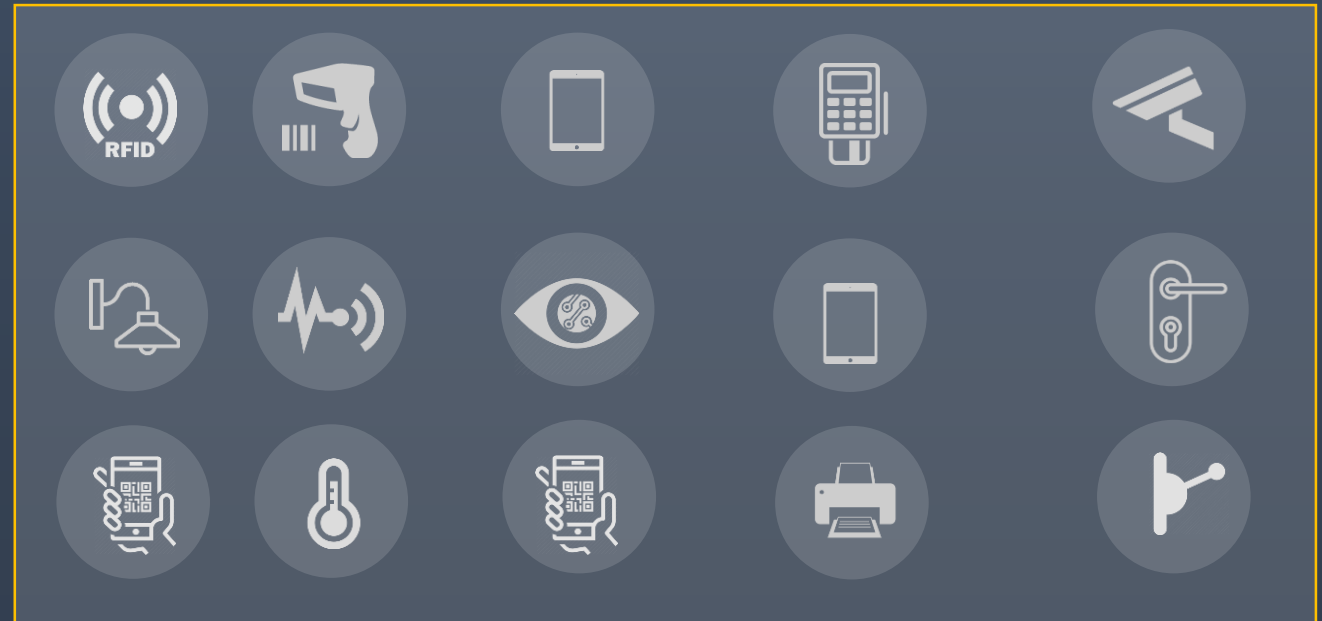
OMNI-CHANNEL



POS



SECURITY



Amazon Just Bought a Playground for IoT



The IoT Retail market is segmented as follows:



STORE OPERATIONS



OMNI CHANNEL



SECURITY



POS

The trend marketing and **omni-channel** retailing with **RFIDs** price decreasing, will accelerate adoption of:



Online/Offline analytics to In-Store ops.



In store visitor engagement for Real-Time promotions



POS Data Collection and Analytics



The IoT in retail market is estimated to grow at a **CAGR of 20.07%** from 2015 to 2020 to reach USD **35.6M** by 2020.



The hardware market is expected to reach USD **10.5M** by 2020, at a **CAGR of 14.9%**



RFID is expected to be the **fastest growing** component, with a **CAGR of 16.2%** from 2015 to 2020



IoT services in retail market is expected to grow at 21% CAGR to **\$6.23B** by 2020.



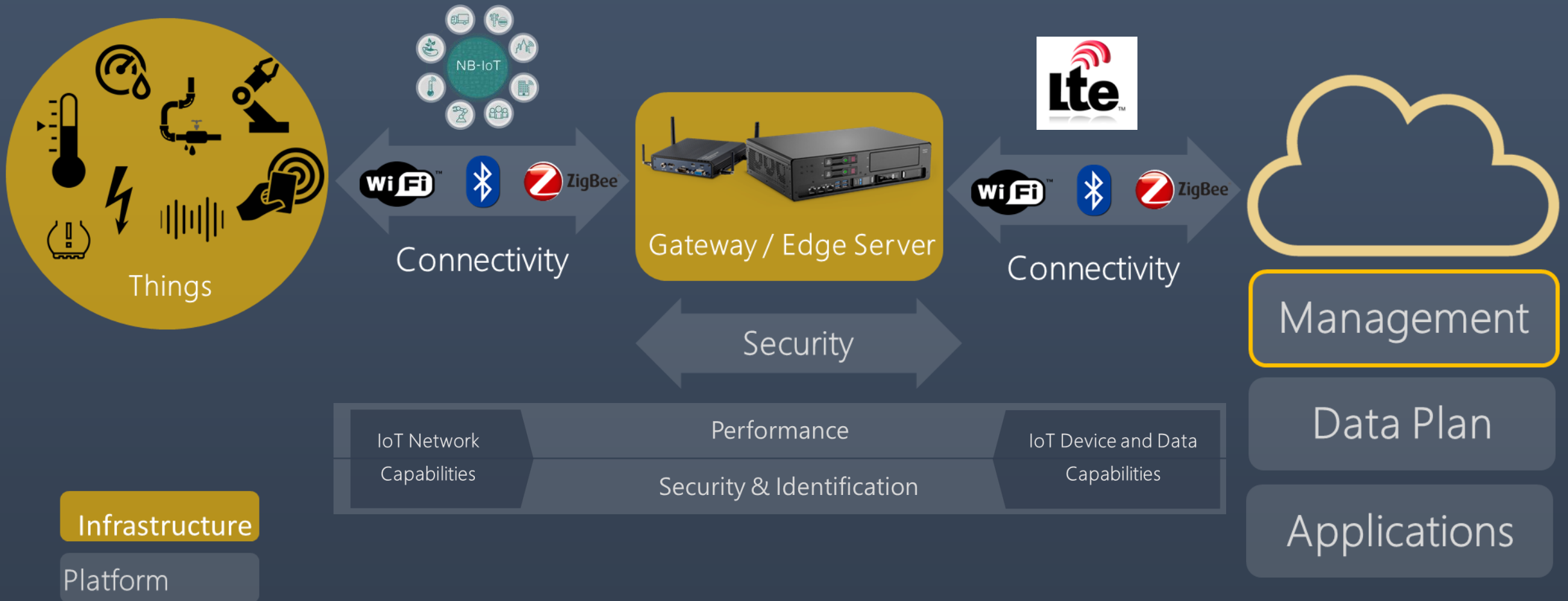
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Nodes to Networks



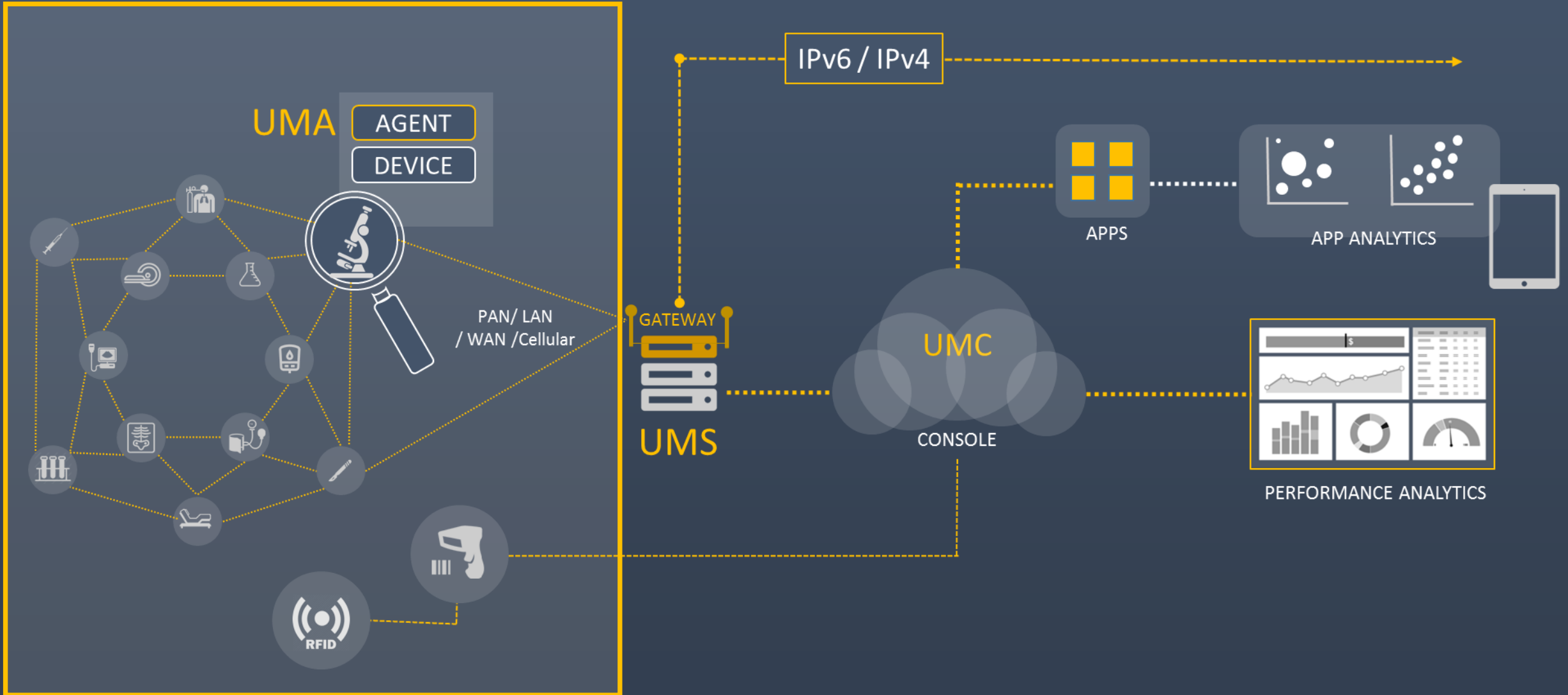
IoT Taxonomy.. Nodes to Networks

IGEL could rapidly embrace IoT device management by leveraging their current assets and business model



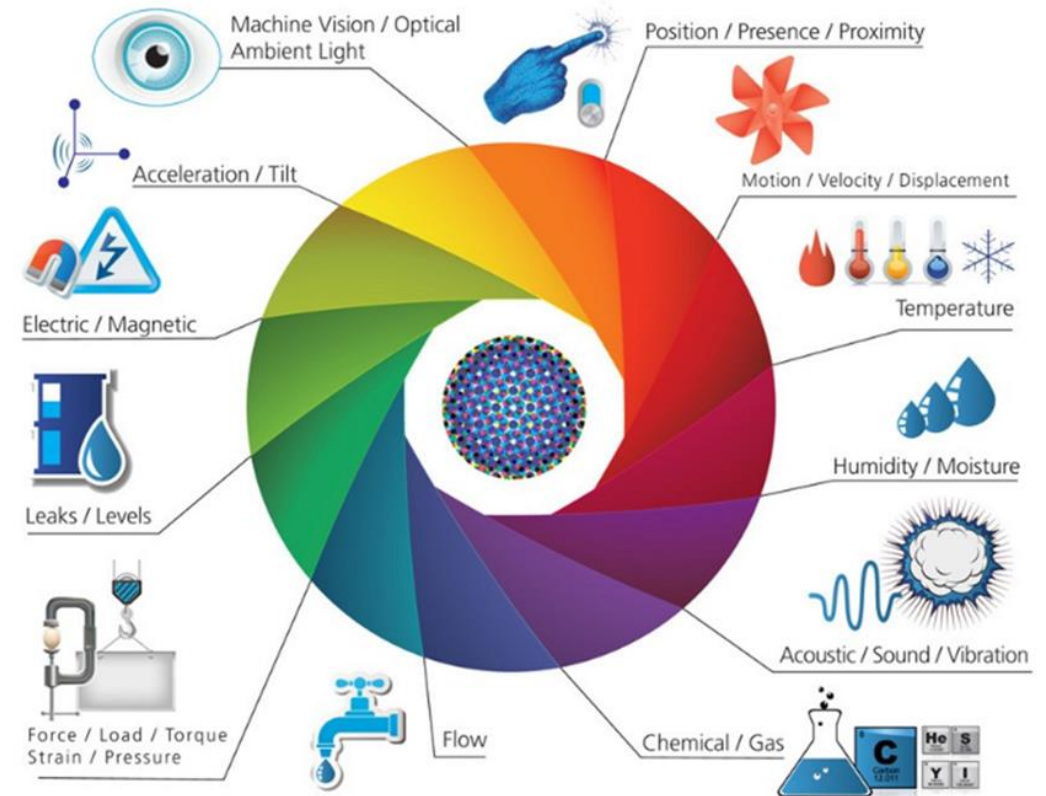
The IoT End-Points

Flexible enough to support multiple device deployment models



IoT Things Come in All Shapes and Sizes

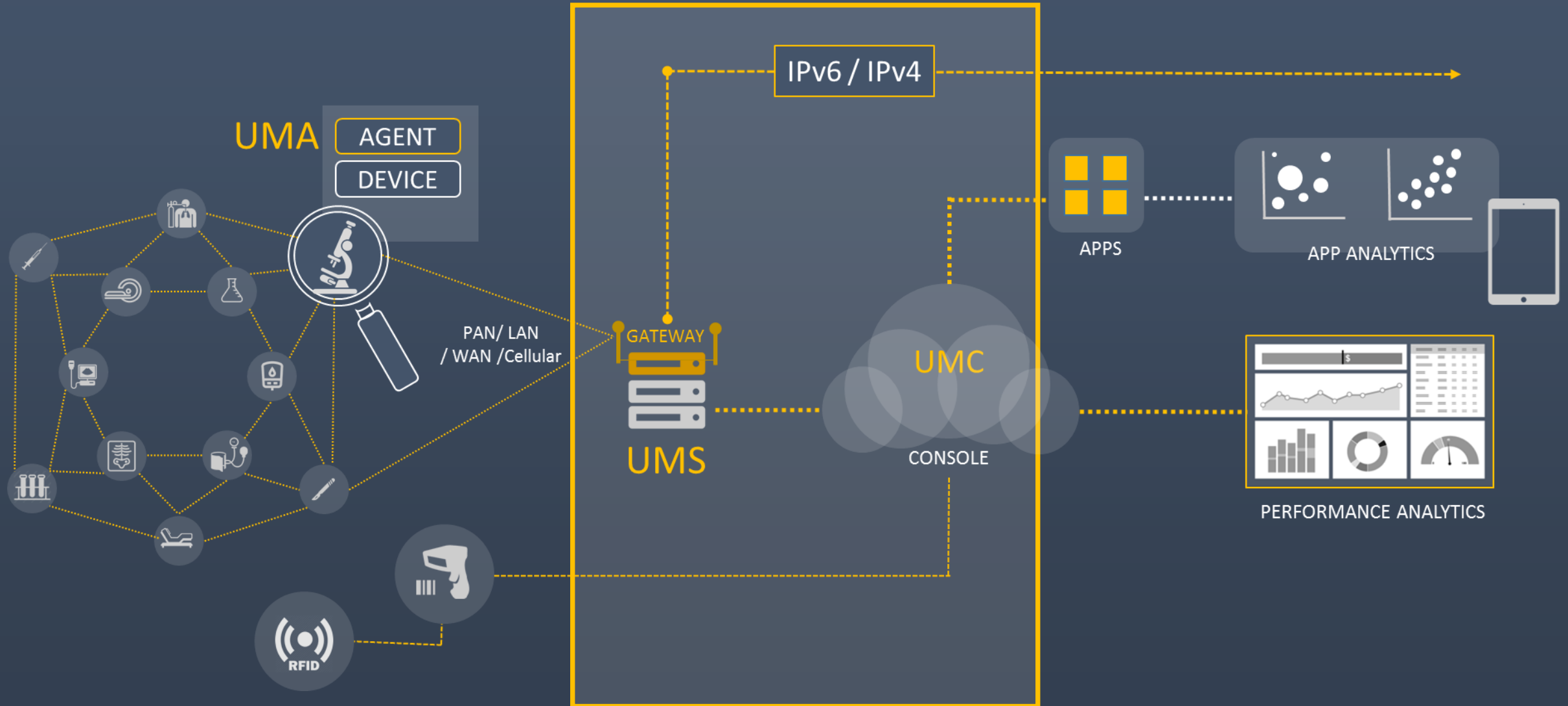
Sensor Nodes need to be “collected” at a Gateway



<http://www.postscapes.com/trackers/video/the-internet-of-things-and-sensors-and-actuators/>

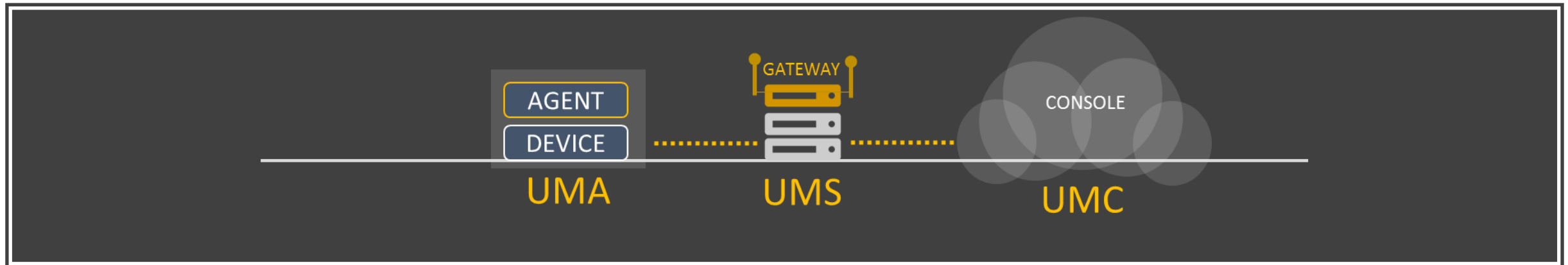
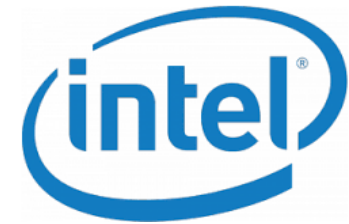
The IoT Edge

Flexible enough to support multiple device deployment models



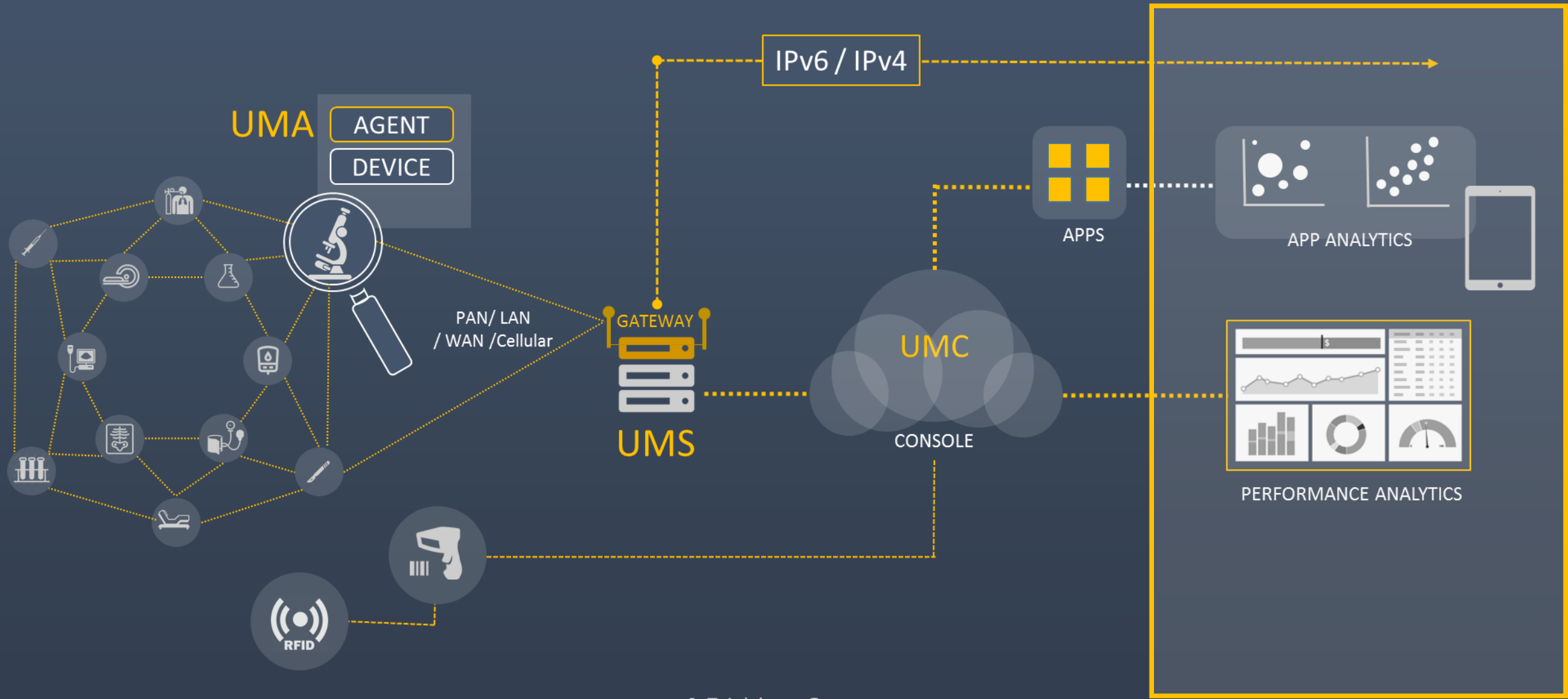


LANTRONIX [CONNECT SMART. DO MORE.]



The IoT Application

Flexible enough to support multiple device deployment models

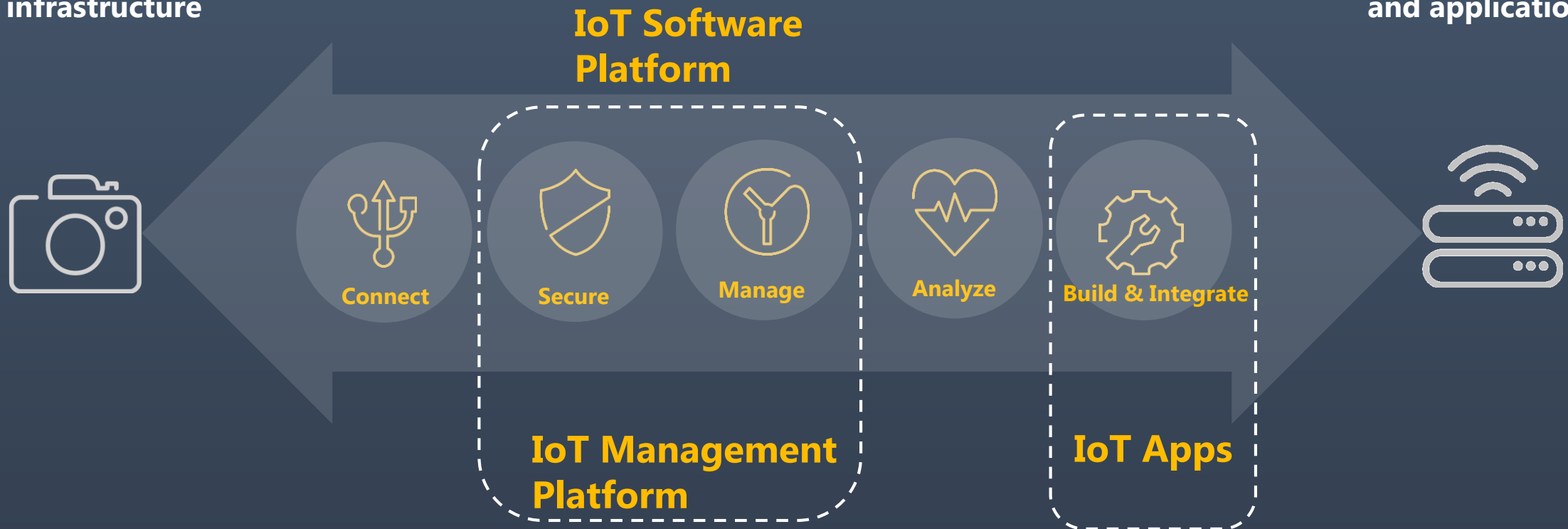


Core functions of an IoT Platform

IoT AG can help you define the platform right for your business

Connected devices
and infrastructure

Enterprise systems
and applications



Device Mgt - Device Security - Messaging Security - Data Collection - Data Analytics

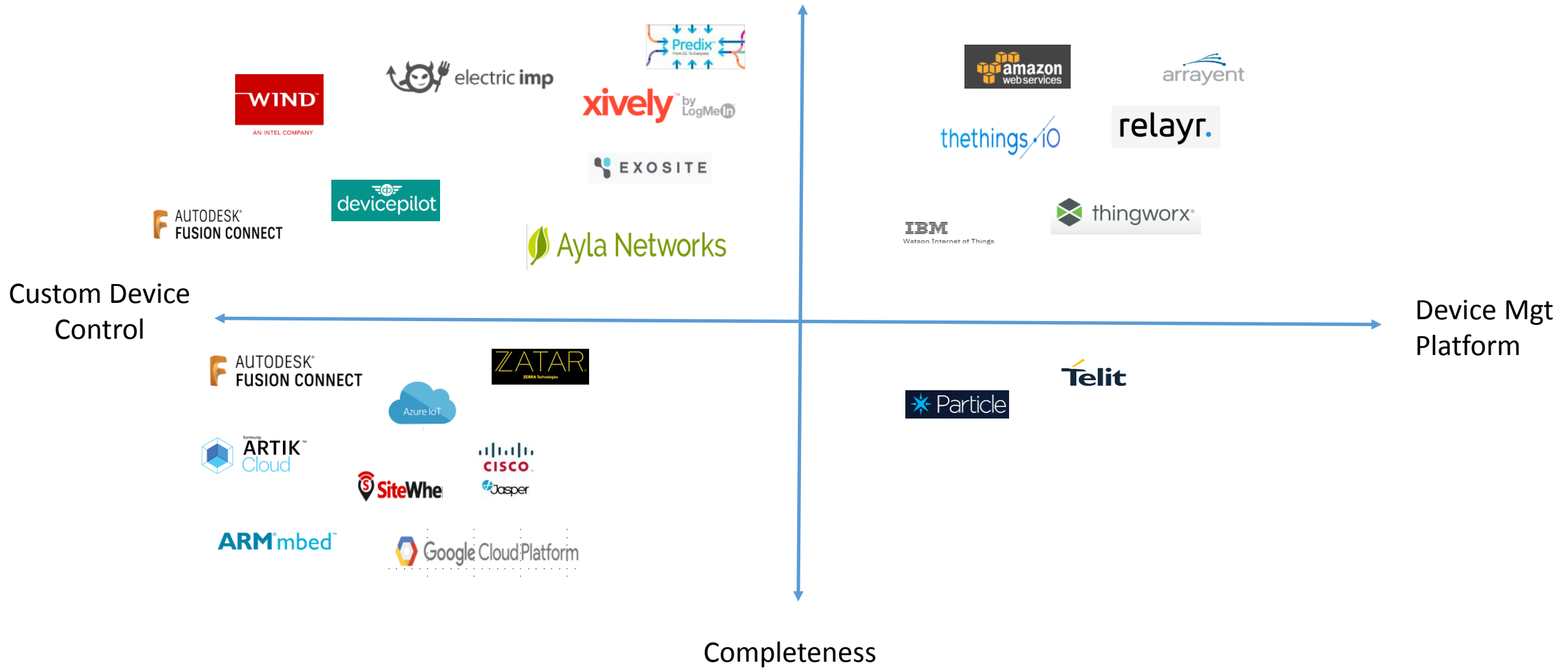
The IoT Platform Ecosystem

With more than 450 platforms, IoT can help you create the value and partnerships to succeed in IoT

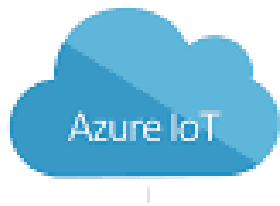


- Management of thousands of End Points
- Agent for End Points
- Control of Edge Gateway & Edge Server
- End Point Control Panel
- API to Connect to Application
- Reporting on Edge & End Point Status
- Security to End Points

IoT Device Mgt. Platforms...



IoT Clouds



- IoT Clouds manage data from unconventional sources & timing
 - Nodes sending millions of very short messages
 - Sensors sending non-scheduled data
 - Cameras sending structured & meta data
 - Data delivered to Gateways, Beacons & Nodes at precise times

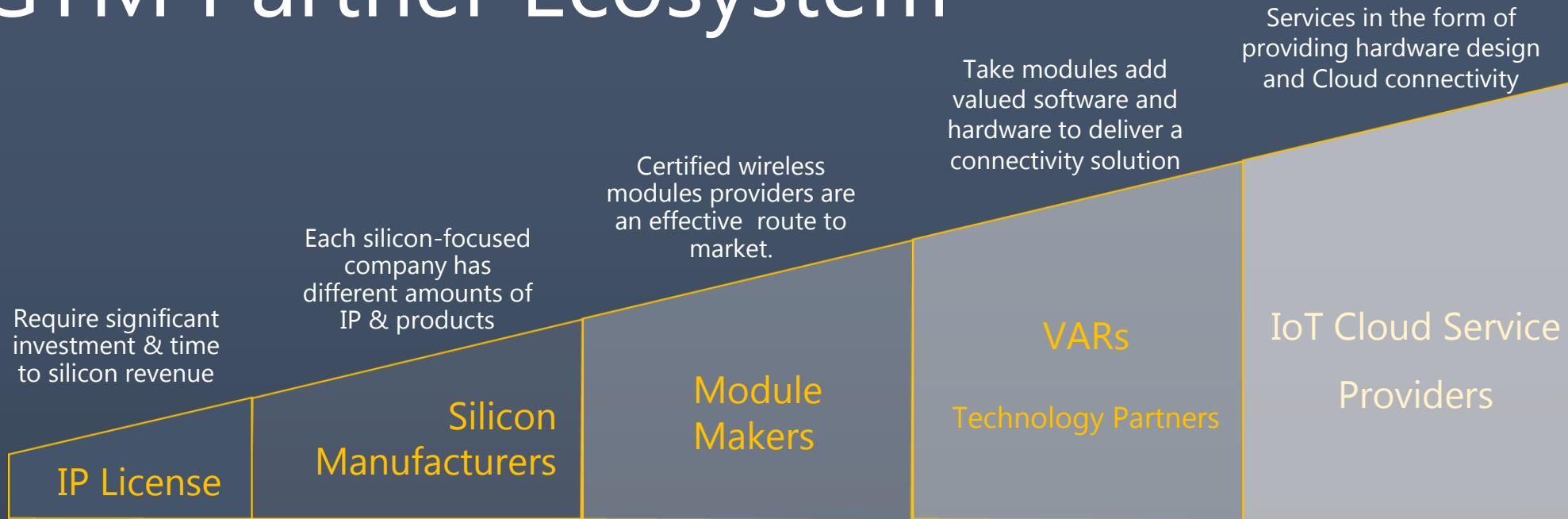
Clouds Instances
designed for small
message data



20 Billion new
“Things” requires:
4K New Data Centers
400M More Servers
200K MWt of Power

Mark Thiele, CSO @ Apcea

GTM Partner Ecosystem



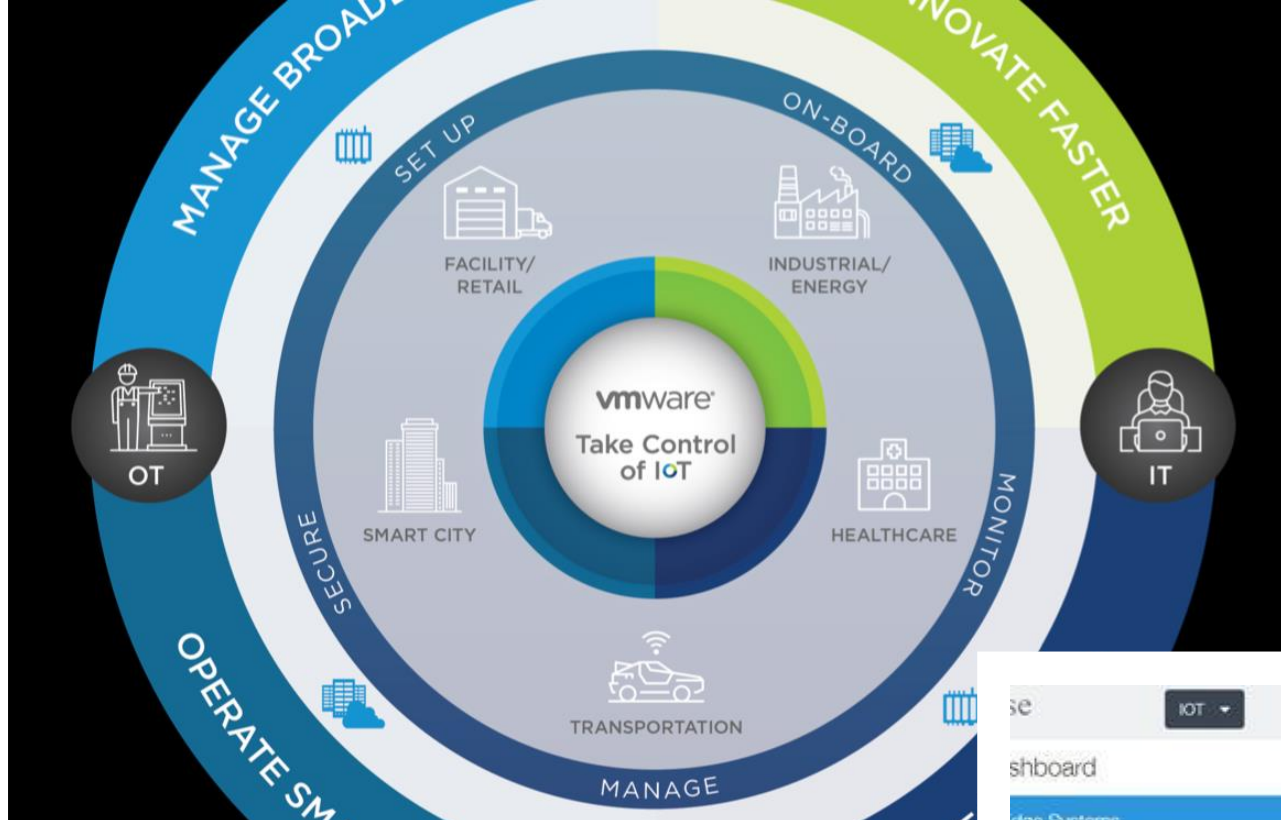
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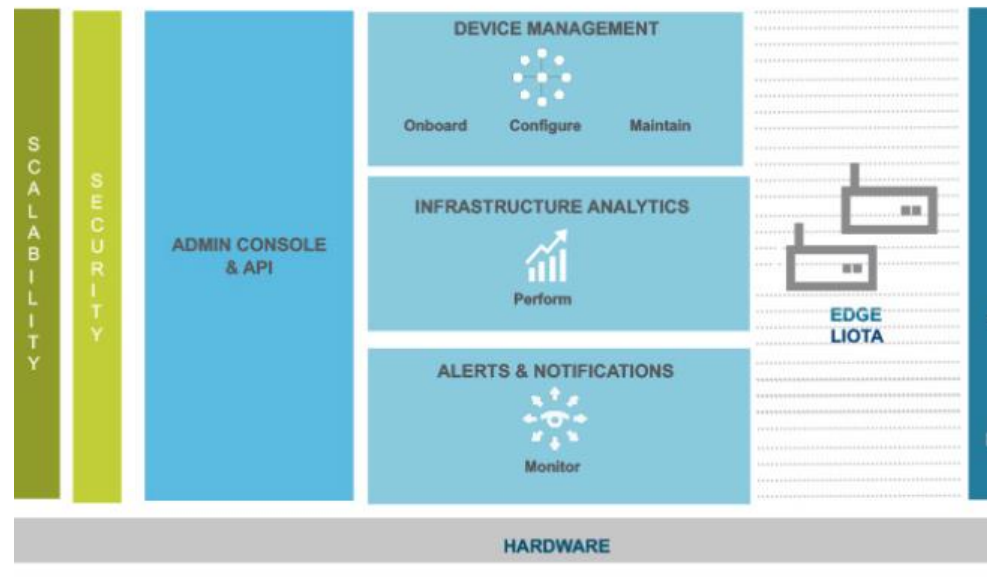
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IoT Examples



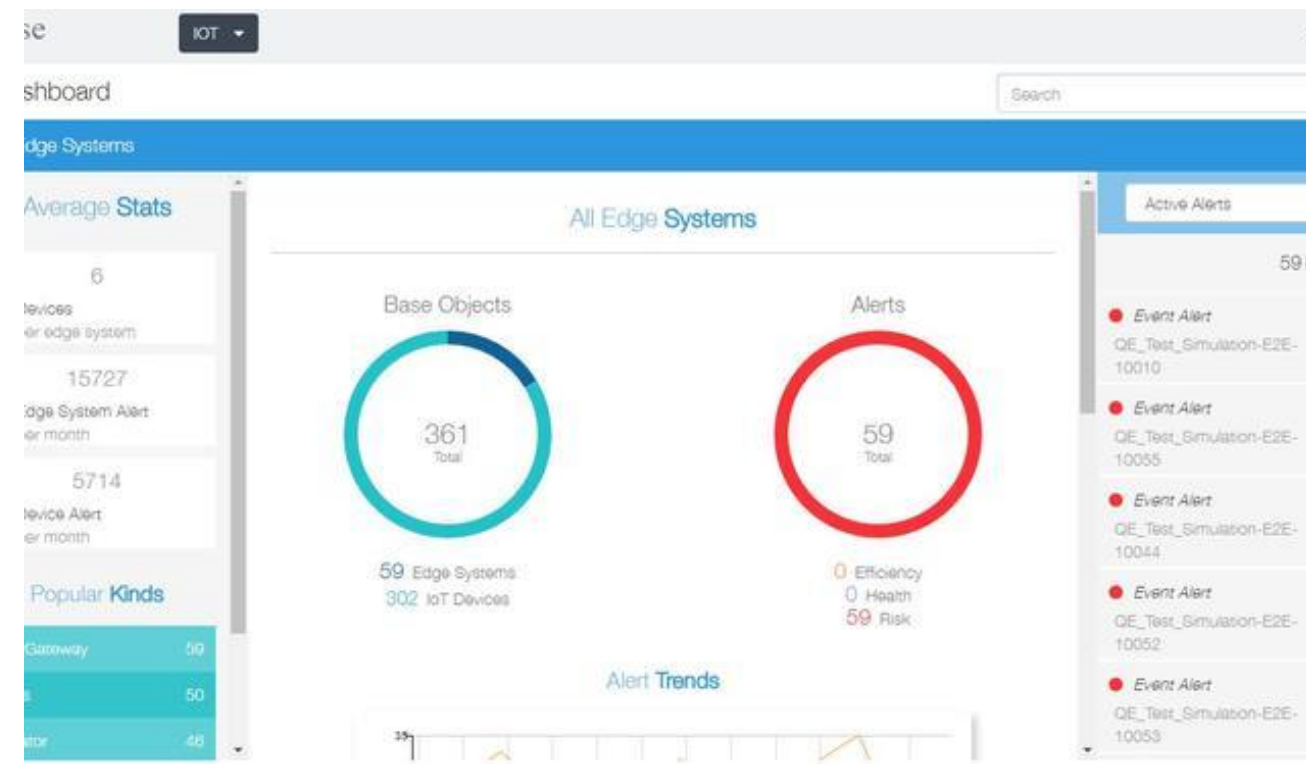


VMware Pulse IoT Center



vmware®

Pulse™



FACILITIES, ENCLOSURES AND RACKS Integrated Solution

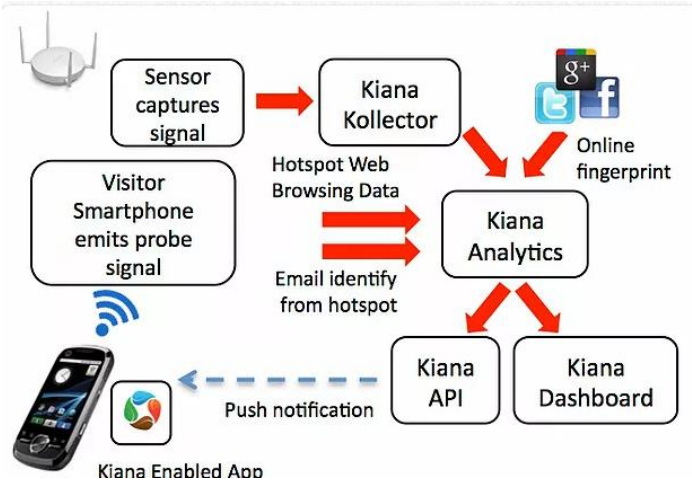




Building Controls

KMC Commander IoT Software and Cloud Services





Visitor Traffic & Security



Always on
Authentication



nymi™



Advisory



Go-to-Market Strategy



Partnerships

IoT – The IT of “Things”

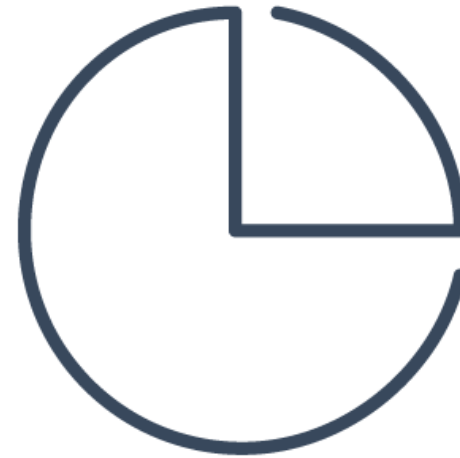
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@sdfIoT



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