

Making Money at the Edge

Open Standards and MicroServices

Geoff Mulligan CTO, Jabil

May 16, 2019

JABIL



BUILT ON A SOLID FOUNDATION

JABIL

1966

FOUNDED IN
MICHIGAN, USA

3RD

THIRD LARGEST ELECTRONIC
MANUFACTURING SERVICES
(EMS) PROVIDER

330+

CUSTOMERS ACROSS
DIVERSE MARKETS

45

MILLION SQUARE FEET
OF MANUFACTURING
SPACE

100+

SITES IN 26 COUNTRIES



TENURED
MANAGEMENT TEAM

200k

DEDICATED
EMPLOYEES

\$22.1

BILLION REVENUE
IN FY18

The Jabil Value Proposition



accelerated **innovation** +

Disruptive experience design,
swift prototyping and speedy NPI

manufacturing **agility** +

Advanced Digital Manufacturing
enabled by Industry 4.0, Digital Product
Lifecycle Management, and additive
manufacturing

engineering **excellence** +

World-class engineers
and capabilities

supply chain **orchestration** +

Mitigating risk, saving time & reducing costs across the supply chain

empowered **experts** +

Jabil's teams accelerate process innovation, engineering excellence, advanced digital manufacturing and supply chain orchestration

Jabil brings domain-level expertise and industry knowledge in each unique industry in order to enable our customers to win

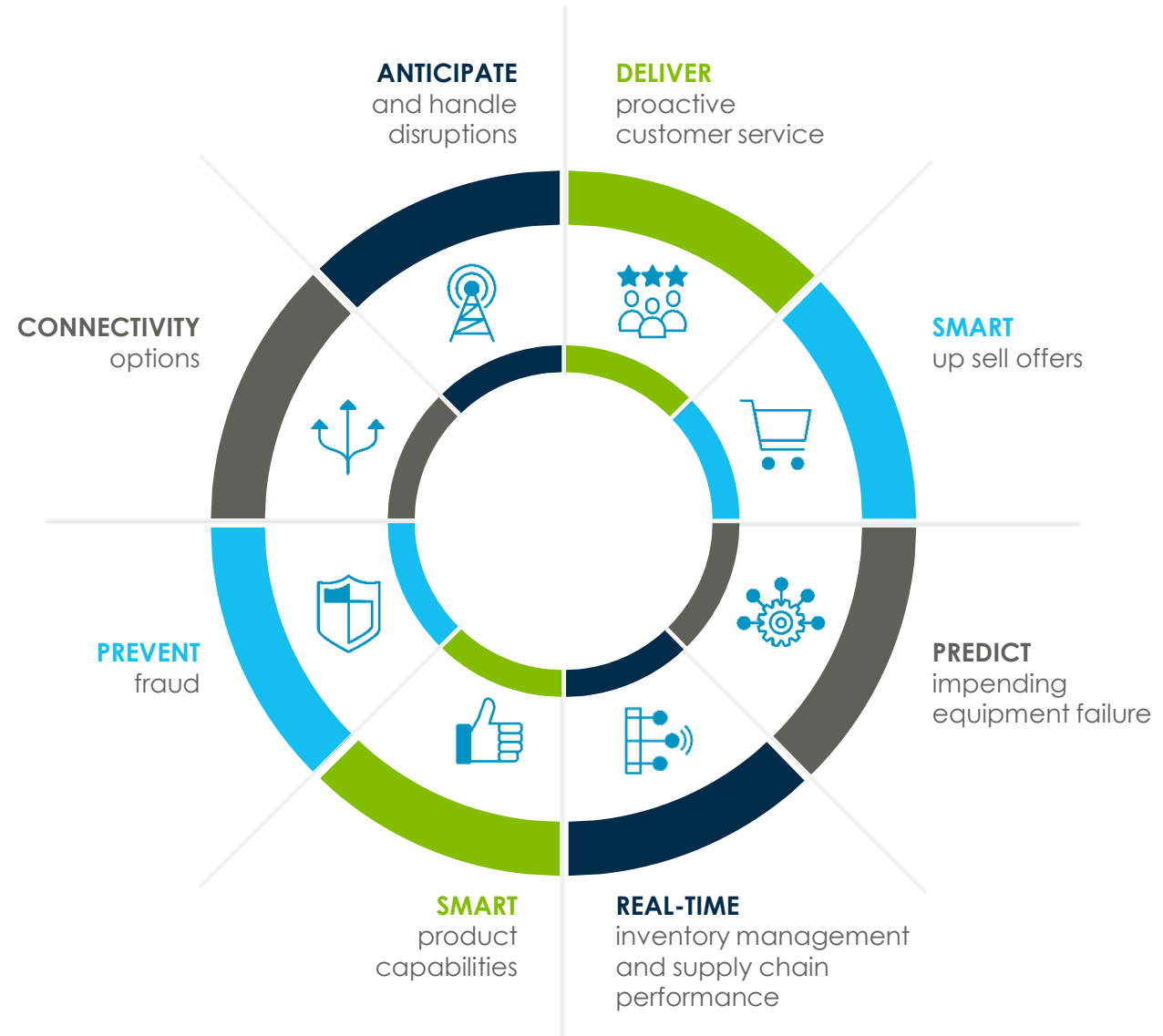
Our work cells provide a customer-centric approach to managing the unique needs of each customer



Deliver IoT Fueled Business Solutions

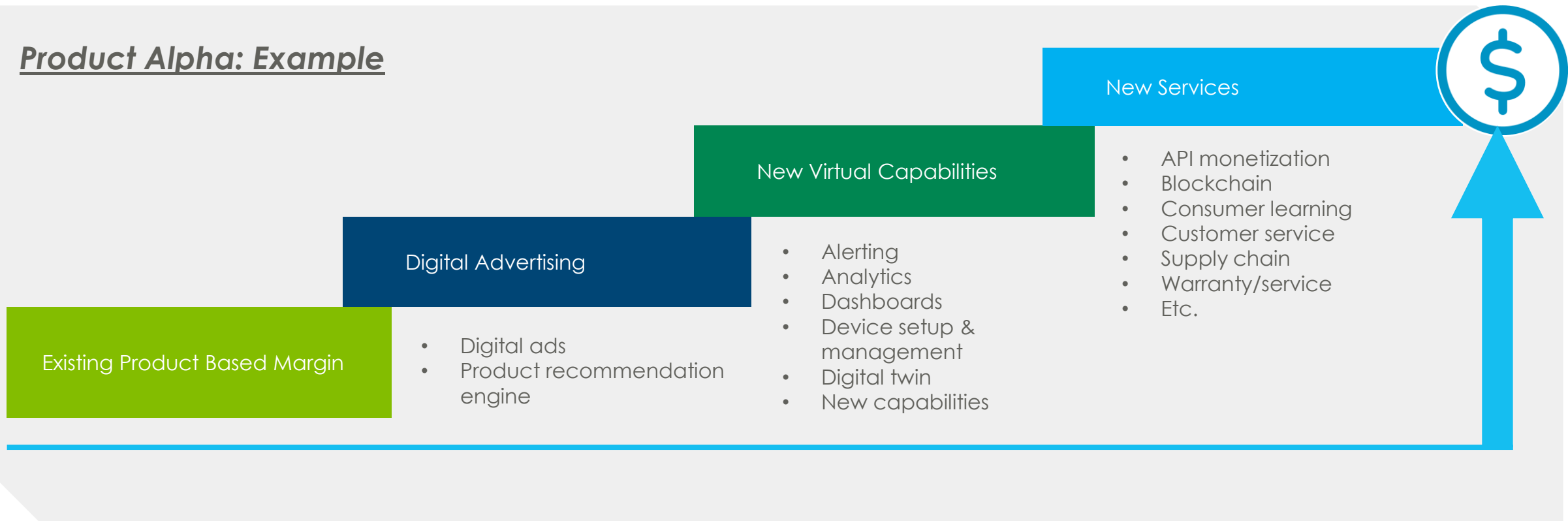


- Critical business moments begin at the edge and impact every facet of enterprise operations.
- Edge and IoT solutions drive competitive differentiation, customer satisfaction and business success.



Take the steps to increase margins and profitability in your product portfolio

Product Alpha: Example



The IIoT Business Model Can Powerfully Disrupt and Transform Financial Results and Overall Value



Margin and profit pools with and without IIoT business model

What you capture today

What we can capture tomorrow

1st year
\$630,000 Profit

This product is projected to achieve a
4X+ PROFIT INCREASE!

6 YEAR TOTAL

Y1 Product **400K**

Annual Microservices **210K**

Annual Data **70K**

Digital Ads **0**

= 1.68 M
instead of 400K

Example Only



Profit **\$400,000**

20% Margin

1. Low cost sensors
2. Edge compute
3. No gateway

Hardware

EDGE

Profit **\$0**

70% Margin

1. No digital ad opportunity on this application

Digital Ads

IIoT PLATFORM

Profit **\$210,000**

70% Margin

1. Compliance \$1
2. Safety \$1
3. Security \$1

Microservices

Profit **\$70,000**

70% Margin

1. Consumer Learning – internal and CPGs .50
2. Warranty support .50

Data

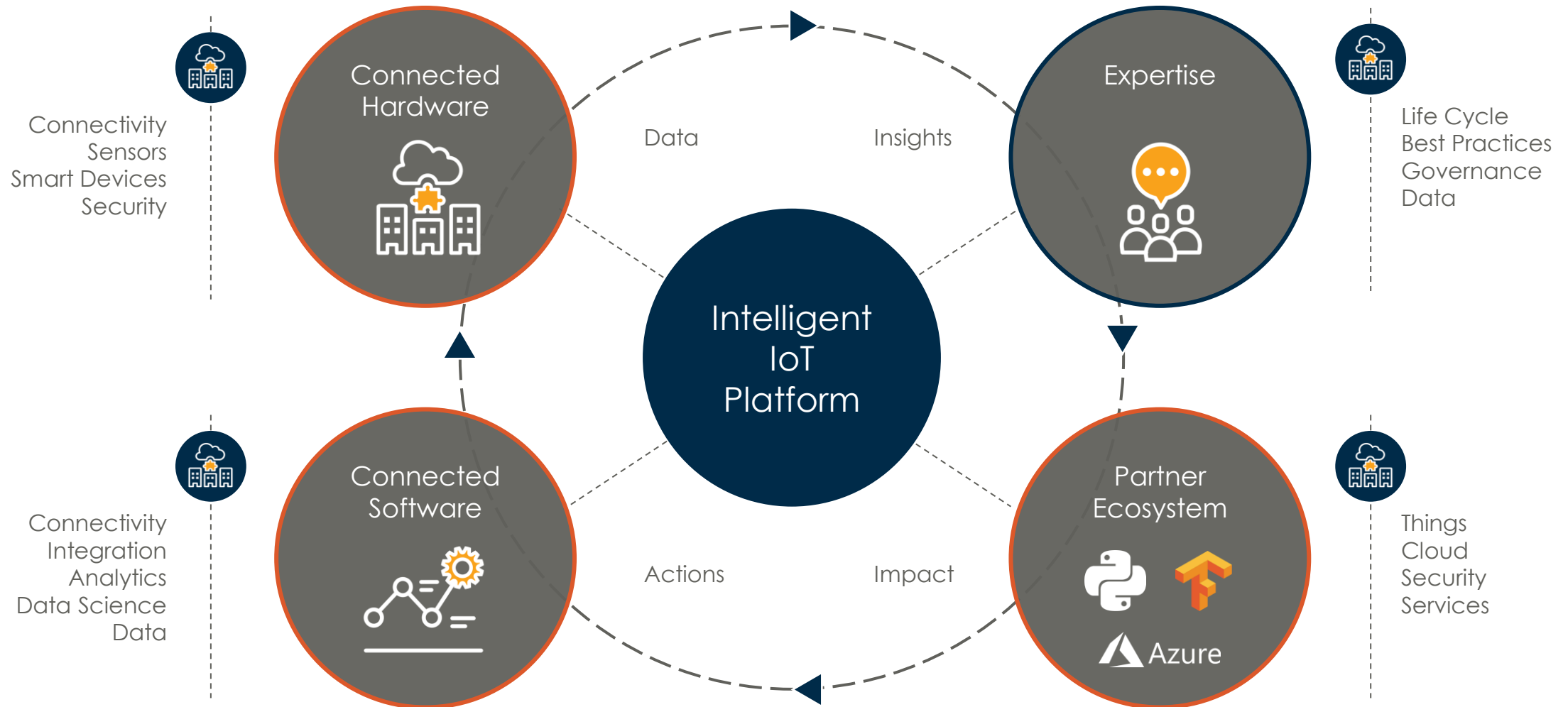
ENTERPRISE



Total Wallet 1st year

Assumptions: 1. 100K units per year @ cost of \$20/unit and sale price of \$24

A Broad Set of Capabilities are Required



Ownership | Privacy | Security | Governance



DISCOVER

- UX Report
- Markets/Opportunity Roadmap Report
- Customer/Stakeholder Report
- Product Requirements workshop
- Determine problem you are solving



DESIGN

- Technical or Product Requirements Document (PRD)
- Industrial Design
- EVT Design package
- BOM/Supply Chain
- Rapid POC & Field Trial
- Define Physical & Digital Experience



DEVELOP

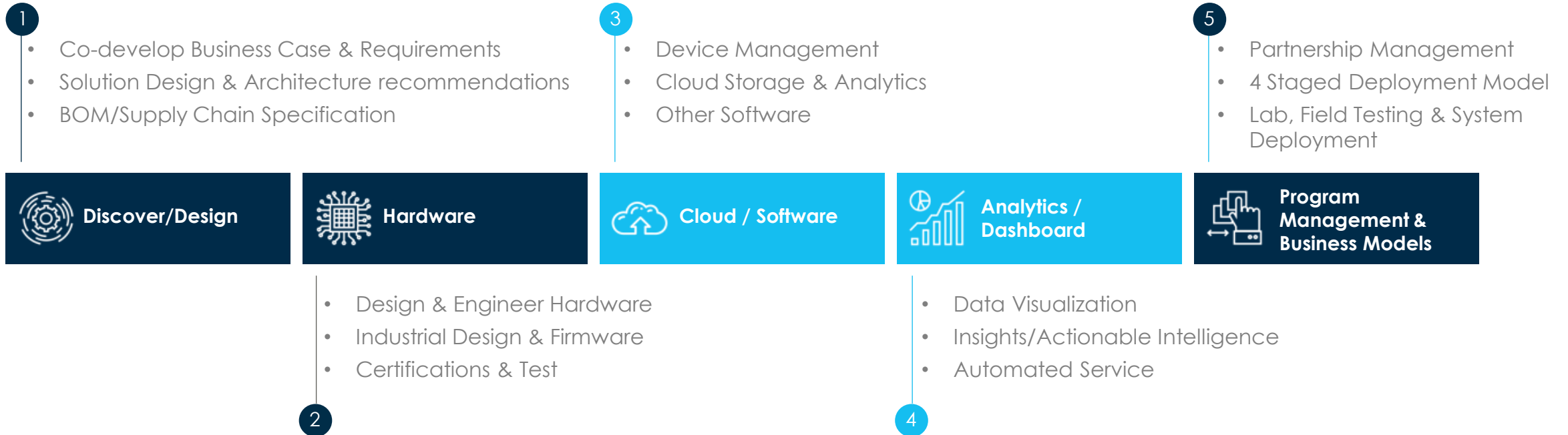
- Test, Monitor & Refine HW/System Architecture & Components
- Prototype Test Results
- DVT & PVT Design
- DVT & PVT Field Trials
- Digital Offering



DELIVER

- Commercial Product Solution Architecture
- Tooling
- PVT Production
- Scaled Supply Chain & Operations/Production Plan
- New Business Models and Recurring Revenue Streams with higher margins









Jabil – Simple / Pluggable Flexible Architecture



Sensor	Communication	Protocol	Data	Cloud
Temperature	BT Mesh	HTTP	JSON	AWS
Humidity	WiFi	HTTP/2	XML	Google
Vibration	LoRa	MQTT	CSV	Azure
Light	802.15.4	COAP		Private
Hall Effect	2G/3G			
Location	LTEm			
Pressure	NBLoT			
CO / CO2 / Gas				

Service	URL	Data/Response
Registration	http://url/m:a:c:a:d:d:r/register	{ "Name": "John Doe", "Company": "ABC" }
Configuration	http://url/m:a:c:a:d:d:r/config	{ "TempH": 40, "ReportIntvl": 300 }
Data Send	http://url/m:a:c:a:d:d:r/data	{ "Temp": 30, "Lux": 250 }
Data Retrieve	http://url/m:a:c:a:d:d:r/json	{ "TimeStamp": 12345, "Temp": 30, "Lux": 250 }
Dashboard	http://url/m:a:c:a:d:d:r/dashboard	Returns HTML

IIoT Quick Start POC Programs for OEM's

	POC Bundle Name	Example Applications	Use Cases	Description
	Product Registration / Provisioning	<ul style="list-style-type: none">• Warranty upsell• Supply Chain Management• Product Serialization	<ul style="list-style-type: none">• Auto Replenishment• Access Manuals• Video Training• Synchronize provisioning with manufacturing and product assembly	<p>Simplify and streamline product registration process while adding value add services.</p> <p>Life Cycle Management as a Service</p>
	Equipment Monitoring & Predictive Maintenance	<ul style="list-style-type: none">• Factory of Future• Wind Turbine• Engine Monitoring• Smart Sub Metering	<ul style="list-style-type: none">• Predictive Maintenance• Anomaly Detection	<p>Monitor Engines, Utility Meters, Refrigeration on a Scheduled basis. Predictive Maintenance</p>
	Asset Tracking	<ul style="list-style-type: none">• Factory of Future• Wind Turbine• Engine Monitoring• Smart Meter	<ul style="list-style-type: none">• Precious Cargo Monitoring• Track & Trace• Anomaly Detection	<p>Location tracking, environmental conditions, product handling and condition</p>
	Custom	<ul style="list-style-type: none">• Smart City• Campus of the future• Connected Vehicle		<p>Any permutation of the above</p>

Contact us today to schedule a IIoT Planning Workshop

Take the first step to increase margins and profitability for your business

Contact: Geoff Mulligan
Email: Geoff_Mulligan@Jabil.com
Cell: +1.719.963.5281

