



DX COE Survey Results & Internet of Things

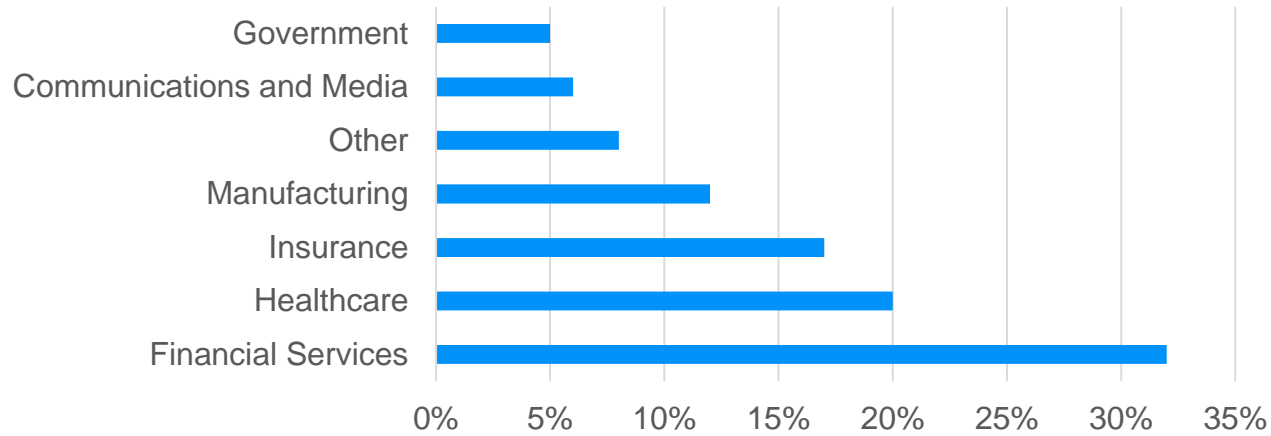
Paul Roeck and Dr. Setrag Khoshafian

10 November 2016

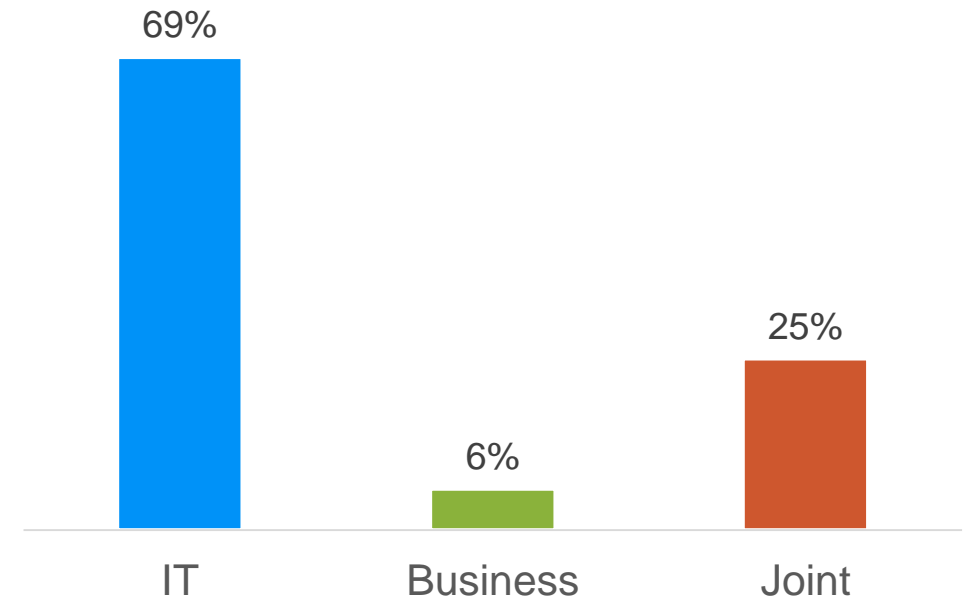
**BUILD
FOR
CHANGE®**

Survey Results: Industry, Tenure, Location

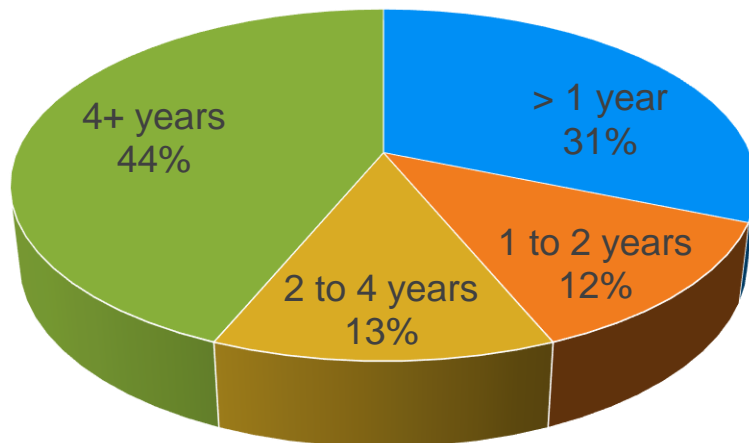
Industry



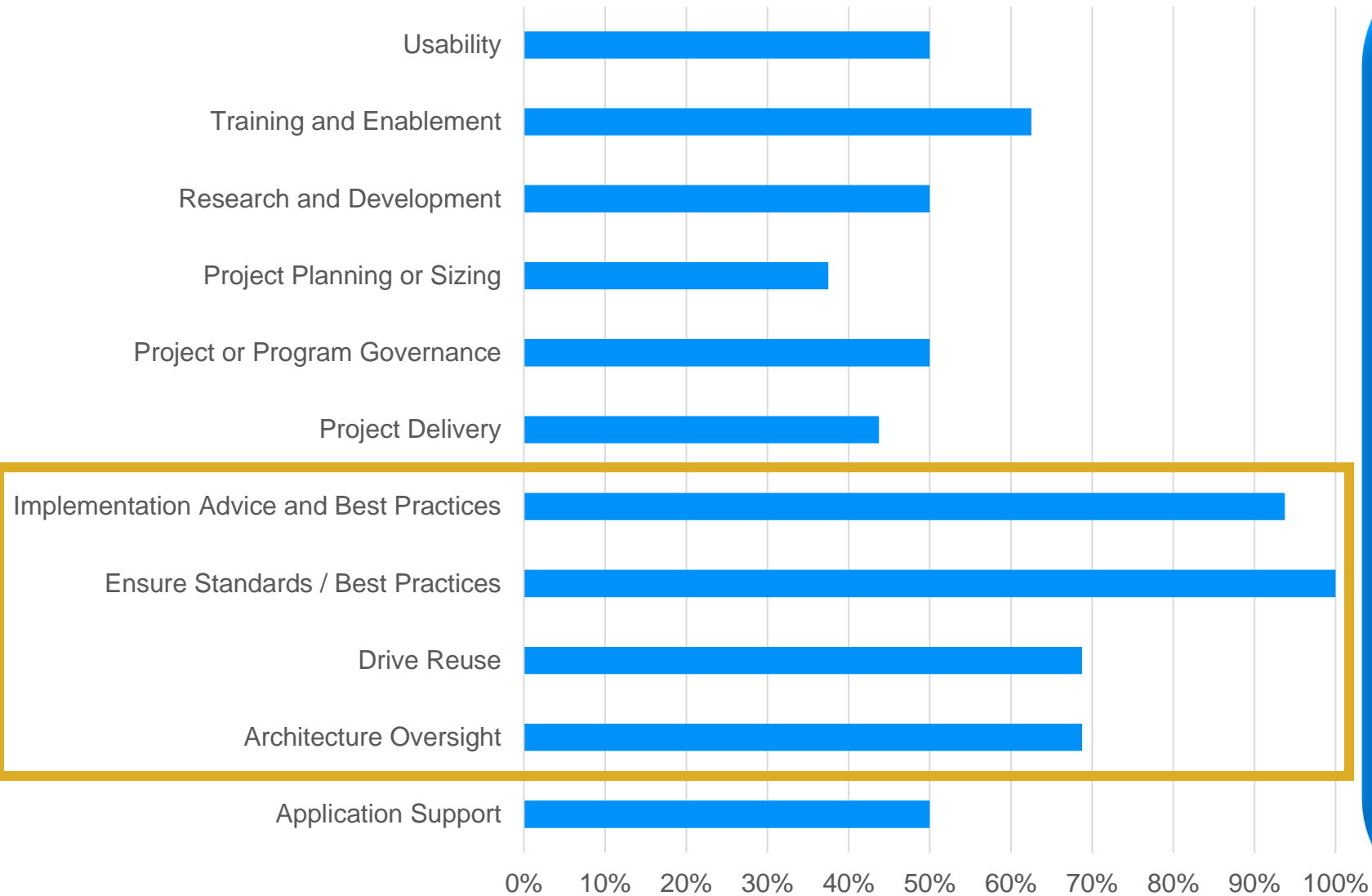
COE Ownership



Length of COE Operation



Survey Results: COE Focus

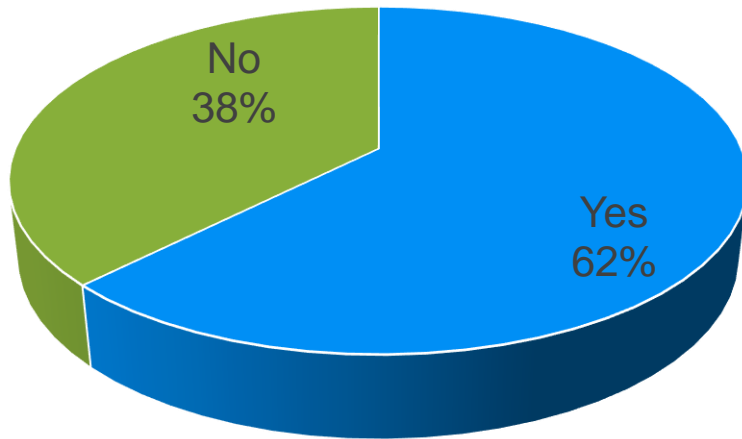


Observations

- **Top Focus areas** involve best practices and driving reuse
- **Newer COEs** are focusing mostly on the top 3 areas
- **After 1-2 years**, COEs are more commonly involved in application support and architecture oversight
- **Most mature** COEs are tackling usability, R&D and training/enablement

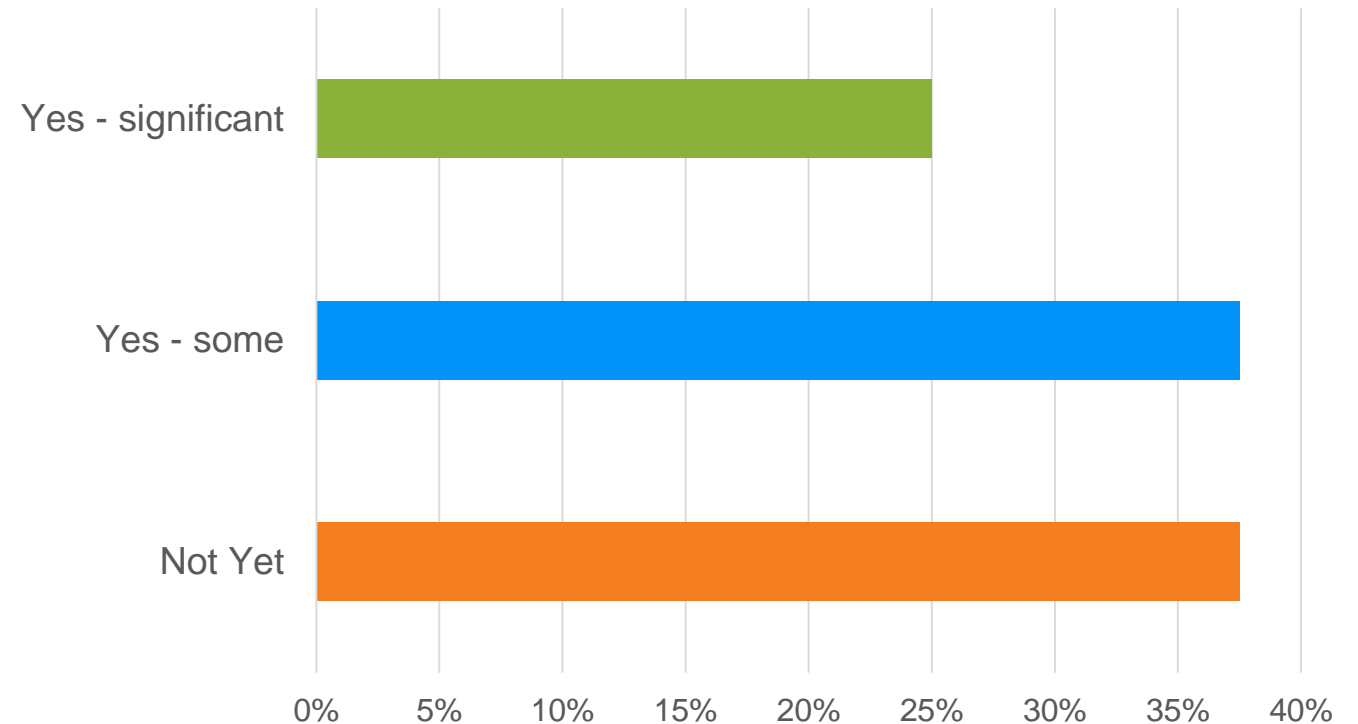
Survey Results: Perceived and Achieved Value

Strategic Initiative with C-level Sponsorship



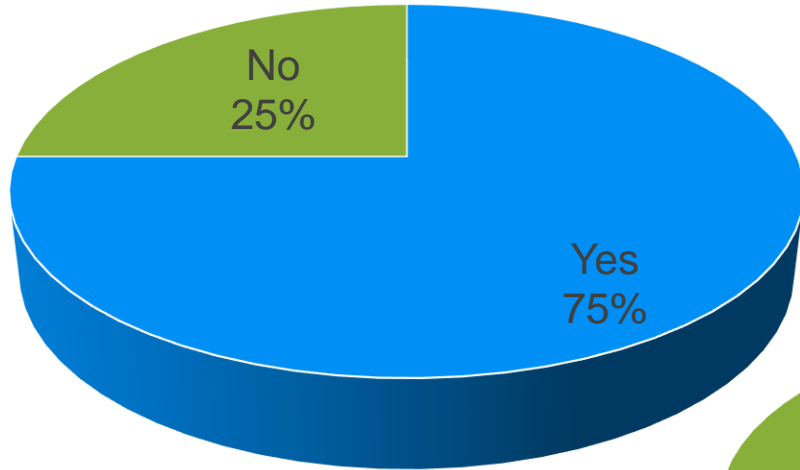
- **Executive Sponsorship** is critical to long-term success
- **91%** of COEs in operation for at least a year have seen some or significant ROI

COE ROI

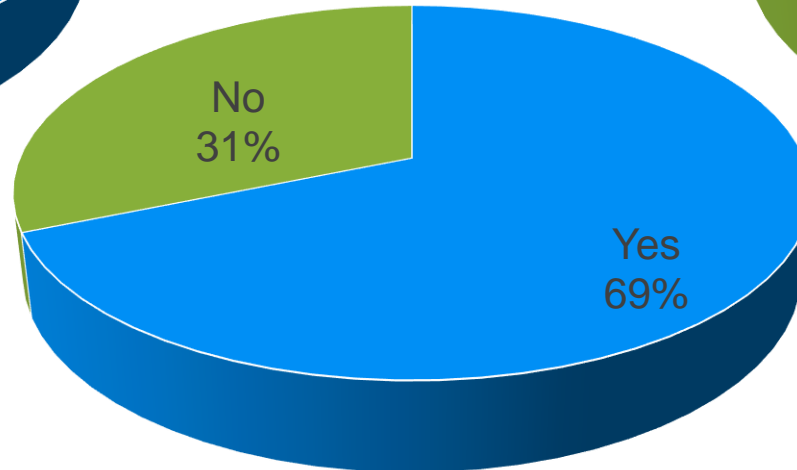
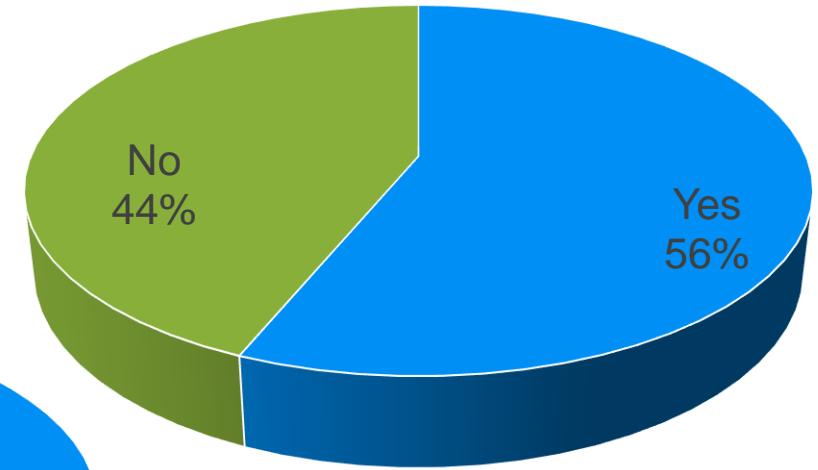


Survey Results: Team Composition

Process Excellence / Process Improvement in COE



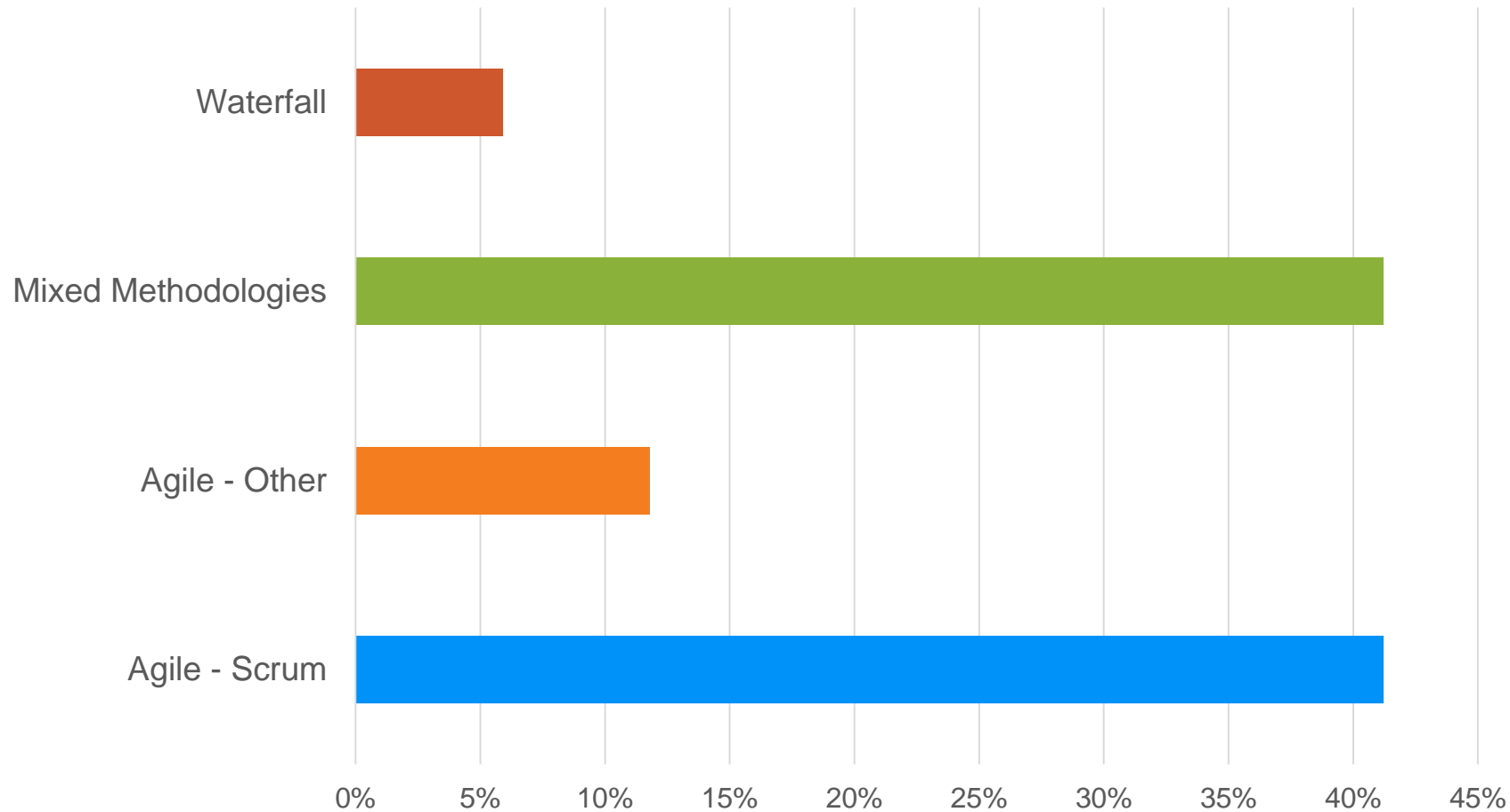
Business stakeholders and SMEs in COE



Process Excellence / Process Improvement in Scrum Teams

▪ Business involvement is critical! COEs should always have a business representative

Survey Results: Methodology



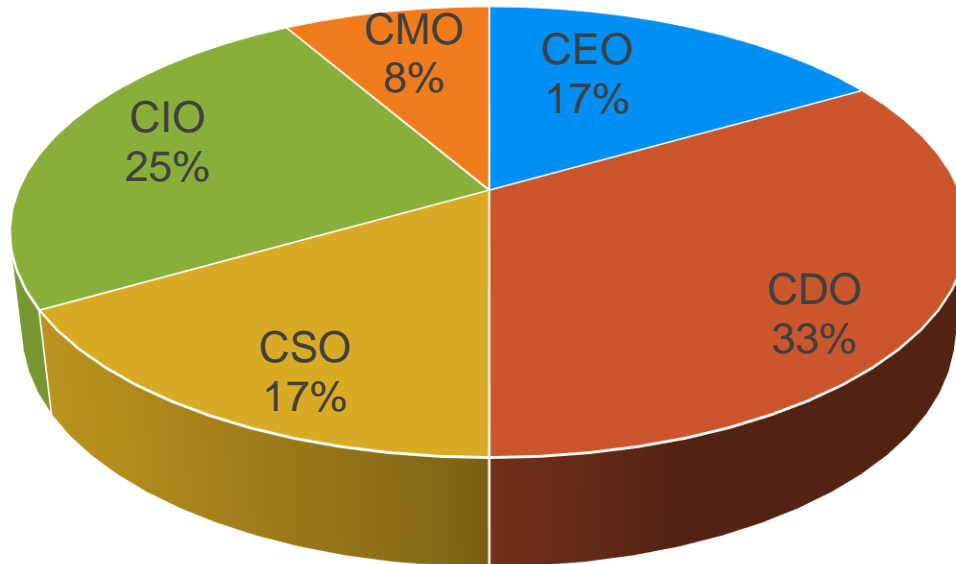
Observations

- The percentage of organizations using **Scrum** and/or other **Agile methodologies** continues to increase
- High response rate for **mixed methodologies** indicates that many companies are still in transition from a waterfall heavy environment

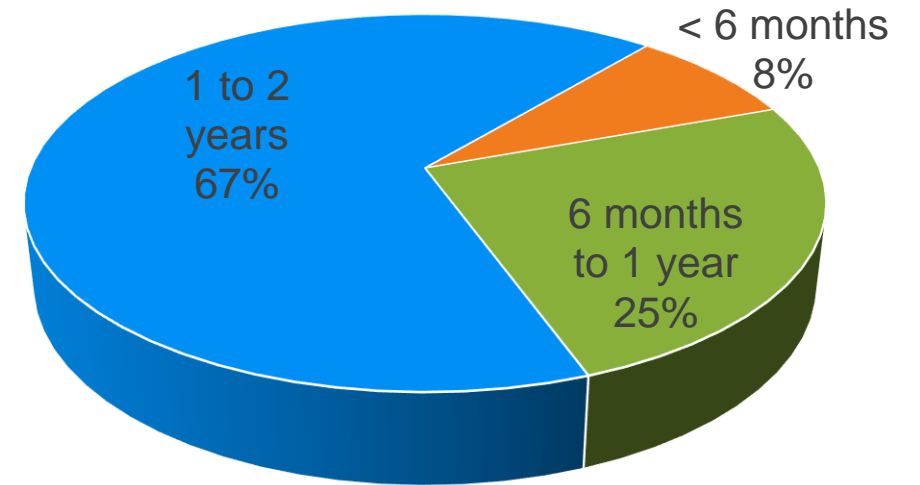
Survey Results: DX Strategy

50% of organizations surveyed said they have a digital transformation strategy in place

DX Strategy Owner

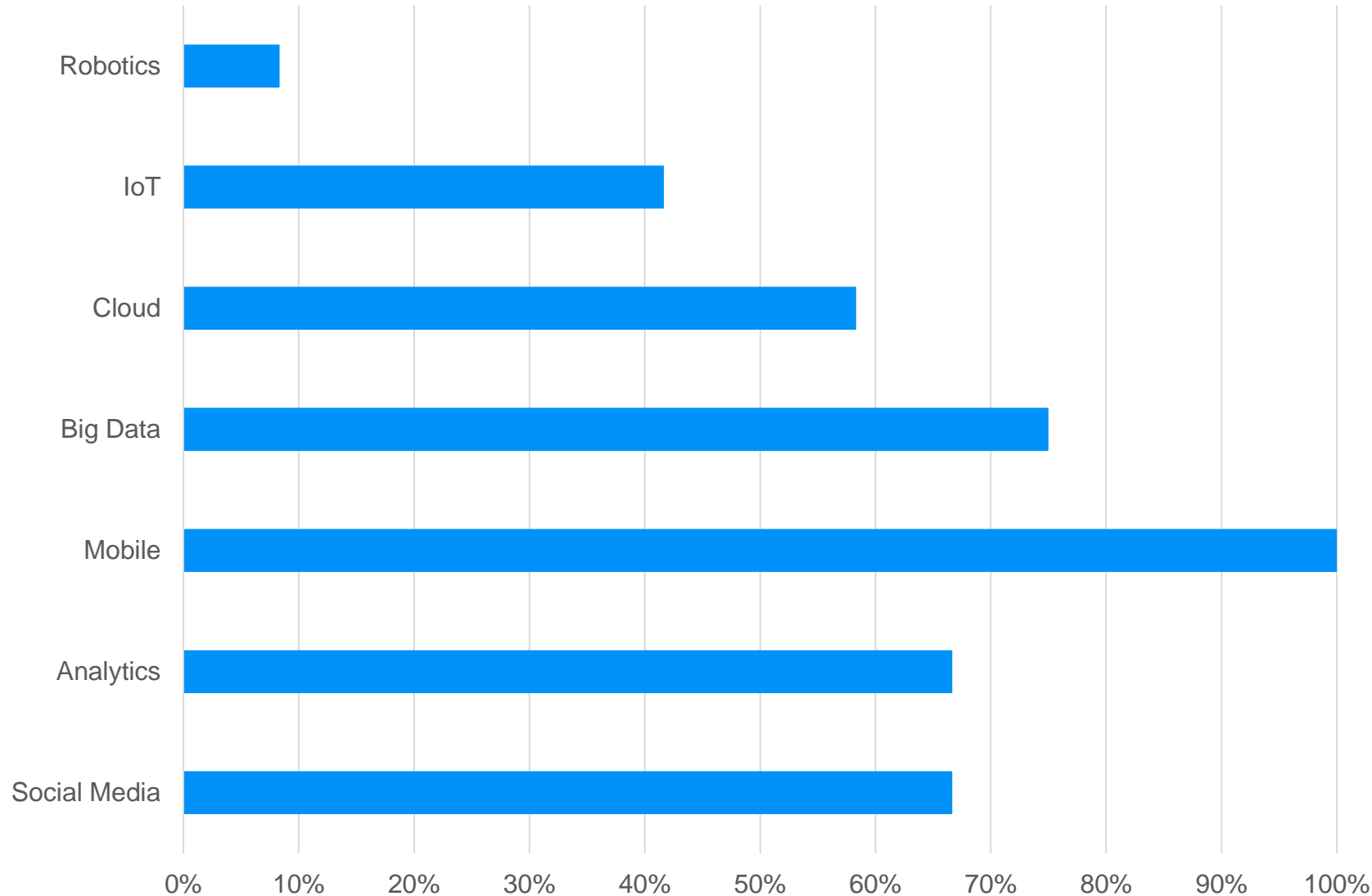


Strategy Maturity



- Not everyone is addressing Digital Transformation, and most of those who are addressing it are **early in the journey**

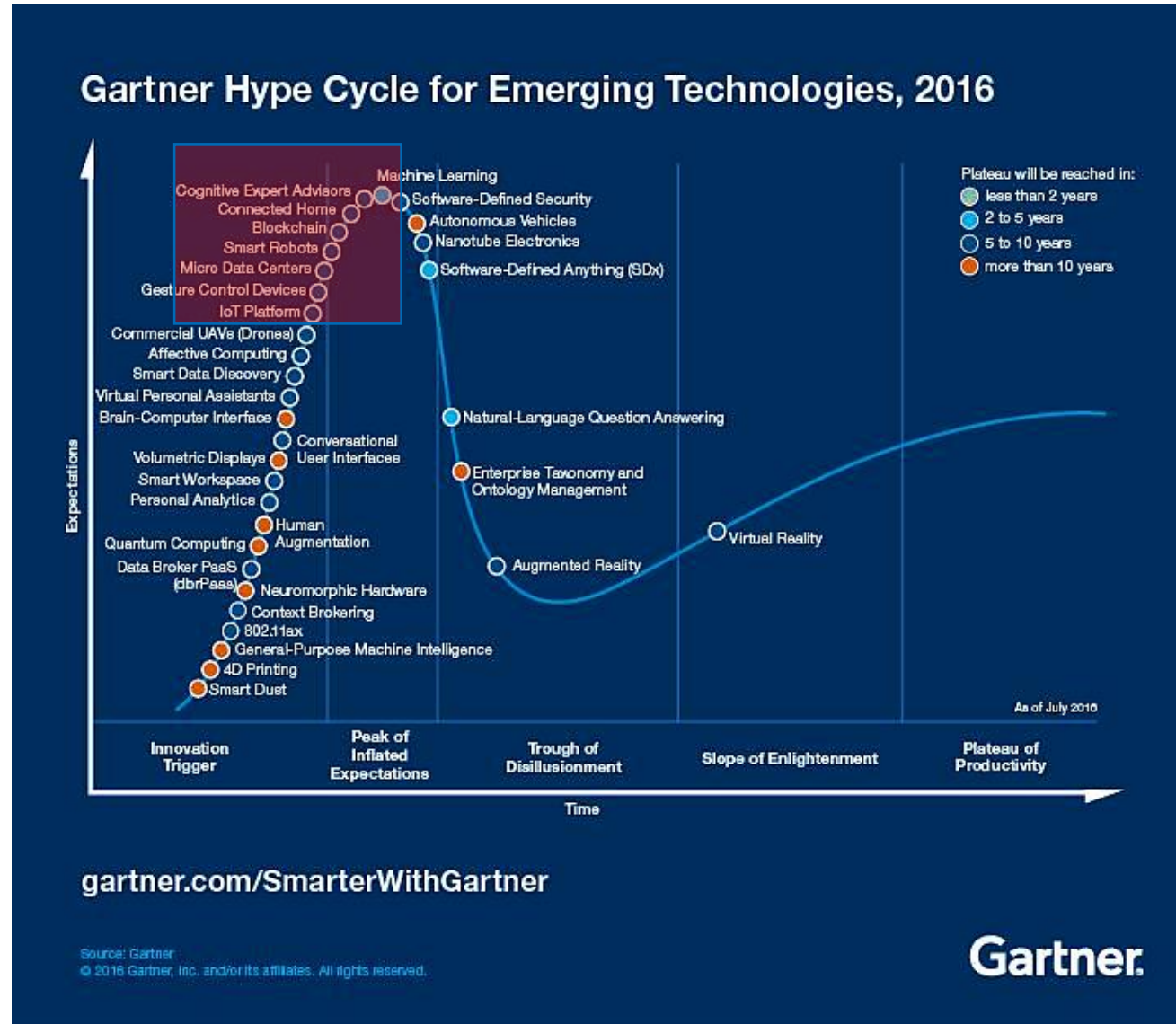
Survey Results: SMAC'T in DX Strategies



Observations

- 100% of participating organizations have incorporated **mobile technology** into their business
- Big Data, Analytics and Social Media have strong adoption (over 60%)
- **IoT and Robotics** lag behind with fewer than half of organizations incorporating them into their DX strategy

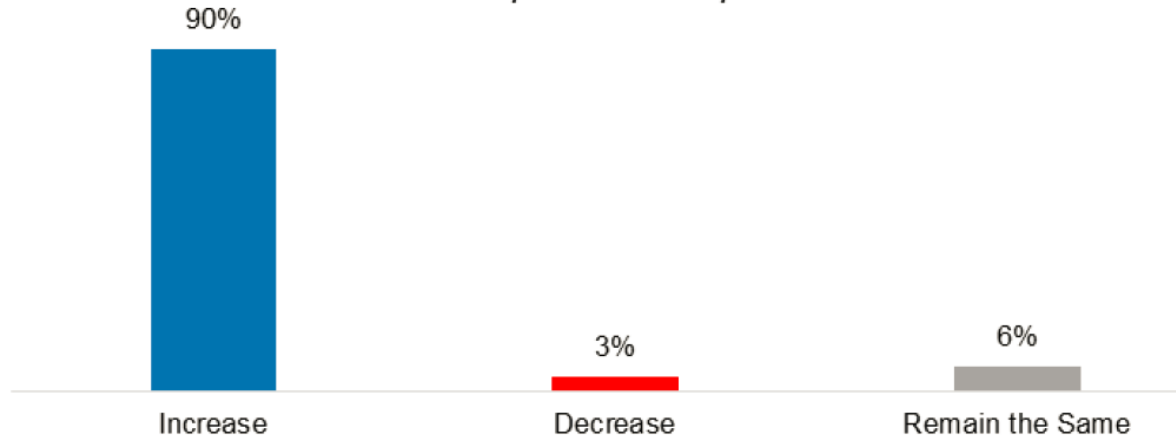
Where are we in the IoT Hype Cycle?



IoT Trends

IoT Spending Next 12 Months

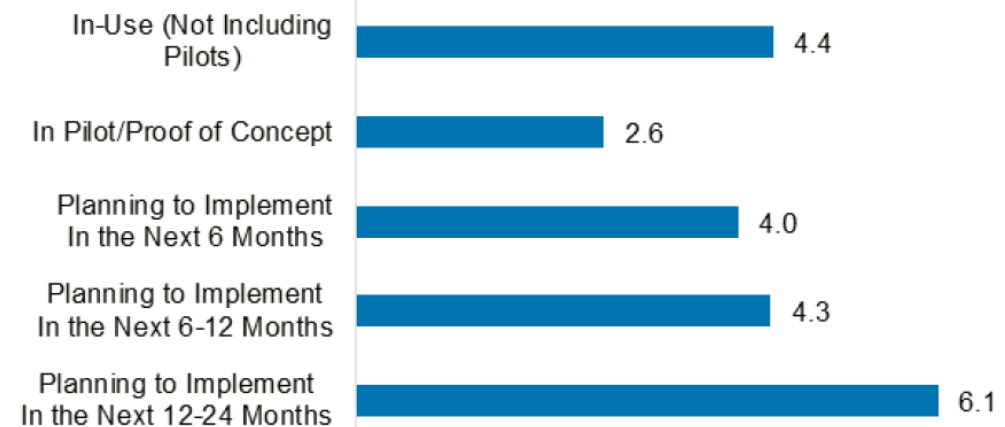
Approximately how much do you expect your organization's overall IoT-related spending to change over the next 12 months compared to the previous 12 months?



© 2016 451 Research, LLC.

Status IoT Initiatives

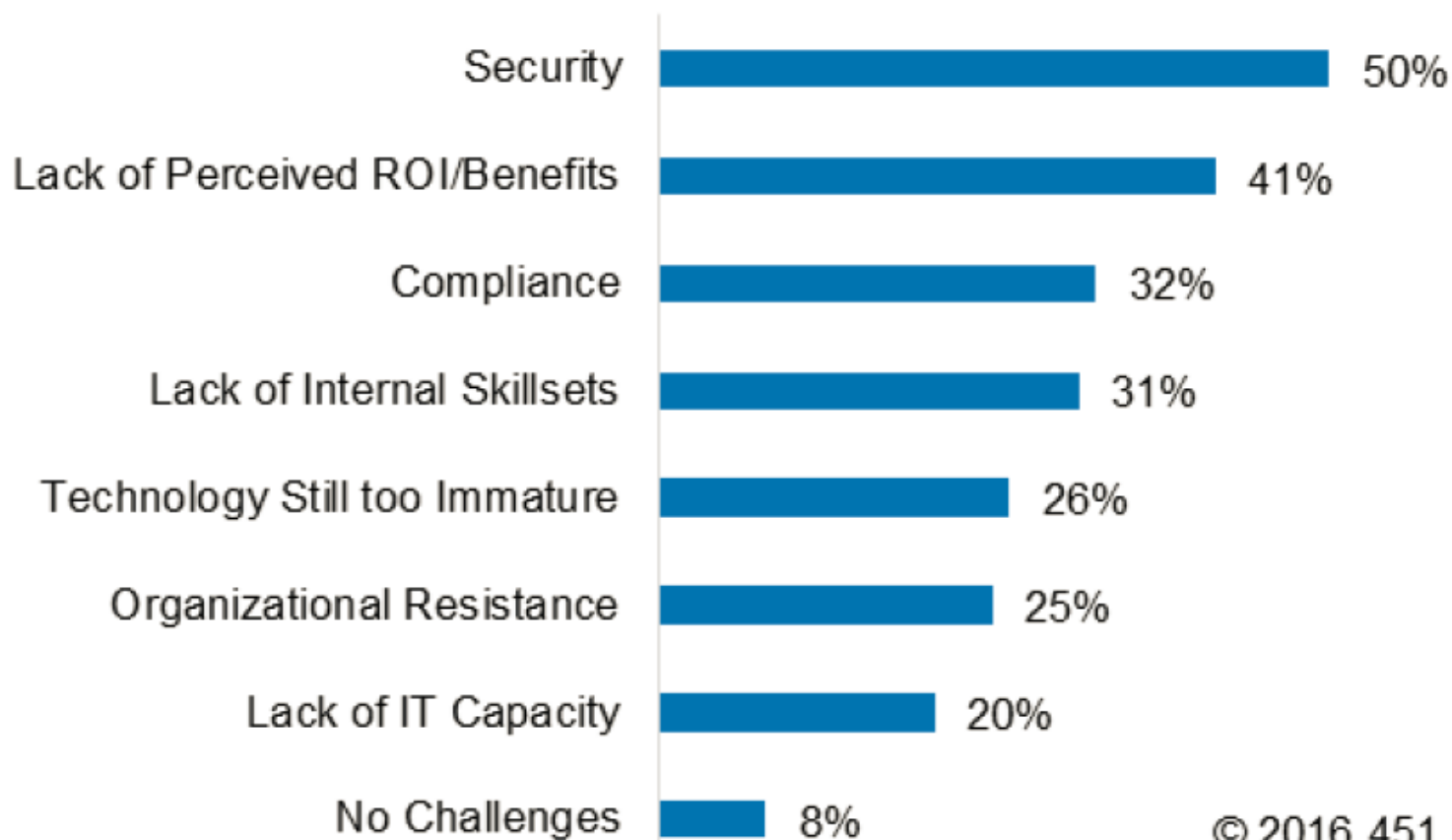
*How many IoT initiatives does your organization have in the following phases of implementation?
(Mean)*



© 2016 451 Research, LLC.

Inhibitors to IoT Adoption

Which of the following are, or do you expect to be, impediments to deploying IoT initiatives?



© 2016 451 Research, LLC.

Today's Best-in-Class Performance Will not Suffice for Tomorrow

Manufacturing in the Digital Age

Transform or Be Left Behind

33%

of all industry leaders
disrupted by digitally-enabled
competitors by 2018



Changing business
requirements—enabled by
technology—drive this trend



Digital consumers want
personalized products
and shopping
experiences



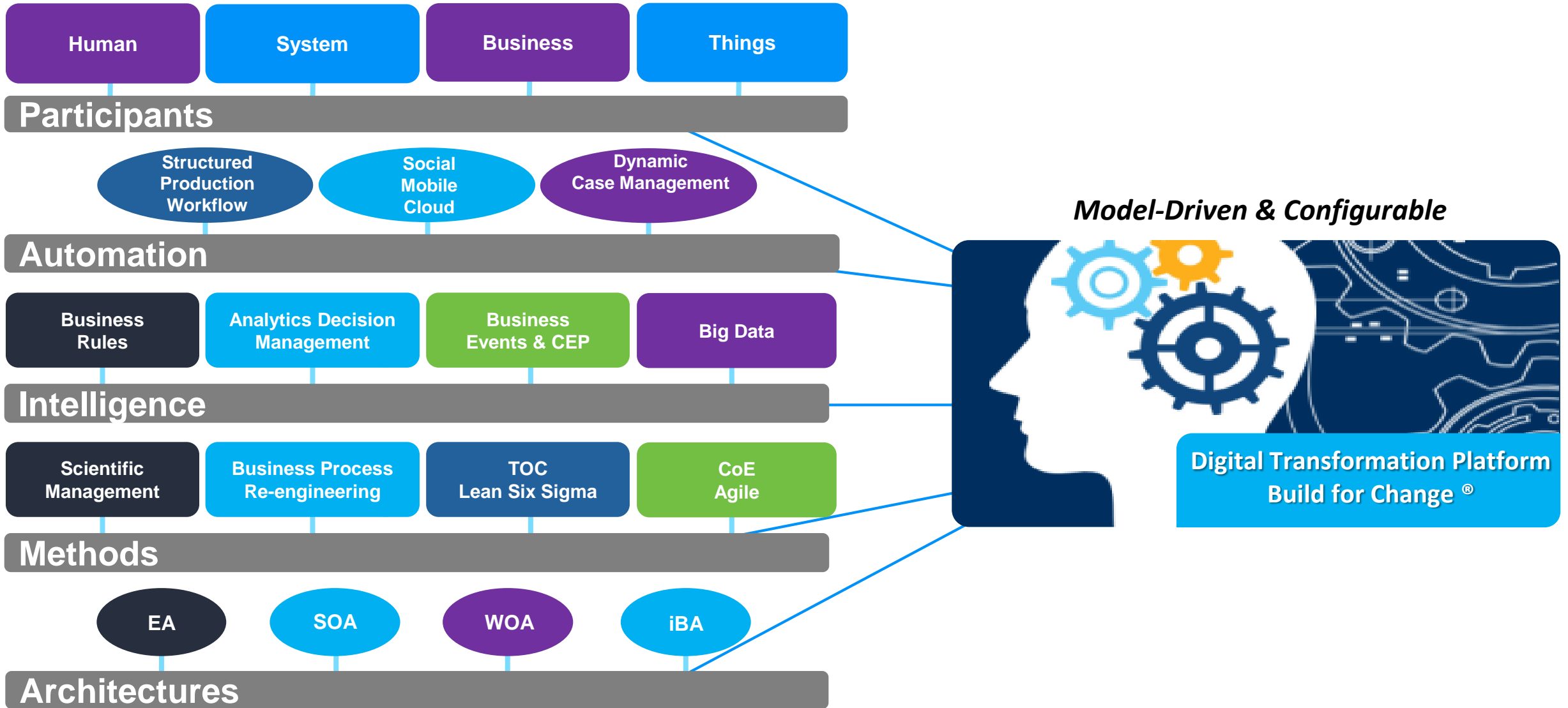
Technology-enabled
global visibility
required



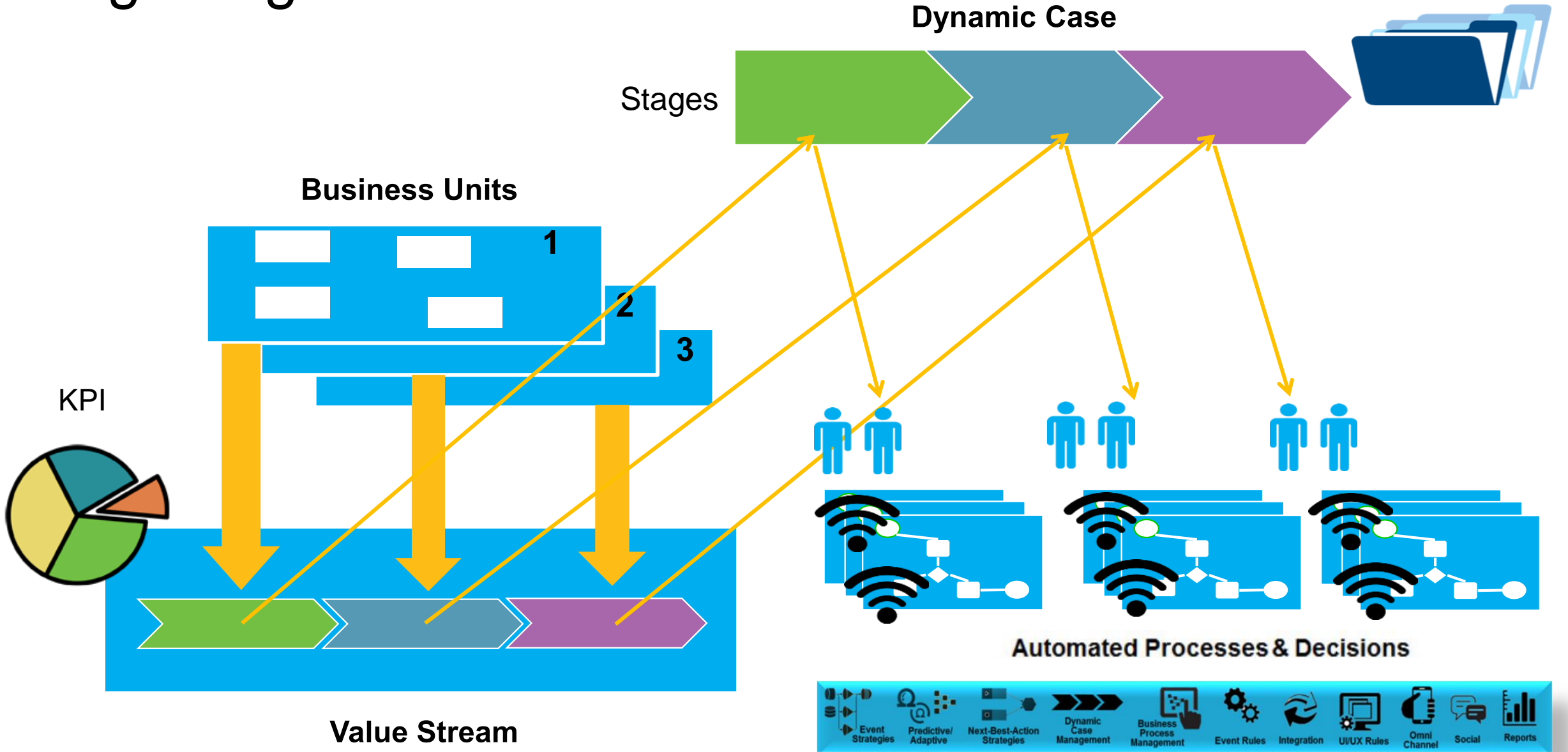
Manufacturing
supply chains not
ready to meet these
changes



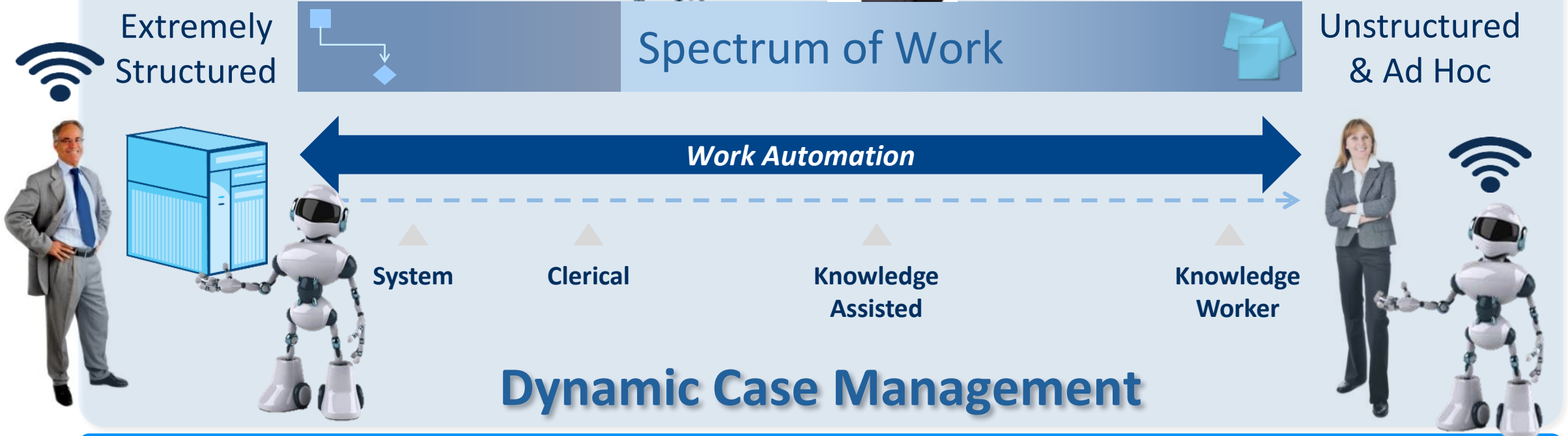
Five Elements of the Digital Transformation Platform



Digitizing Value Streams



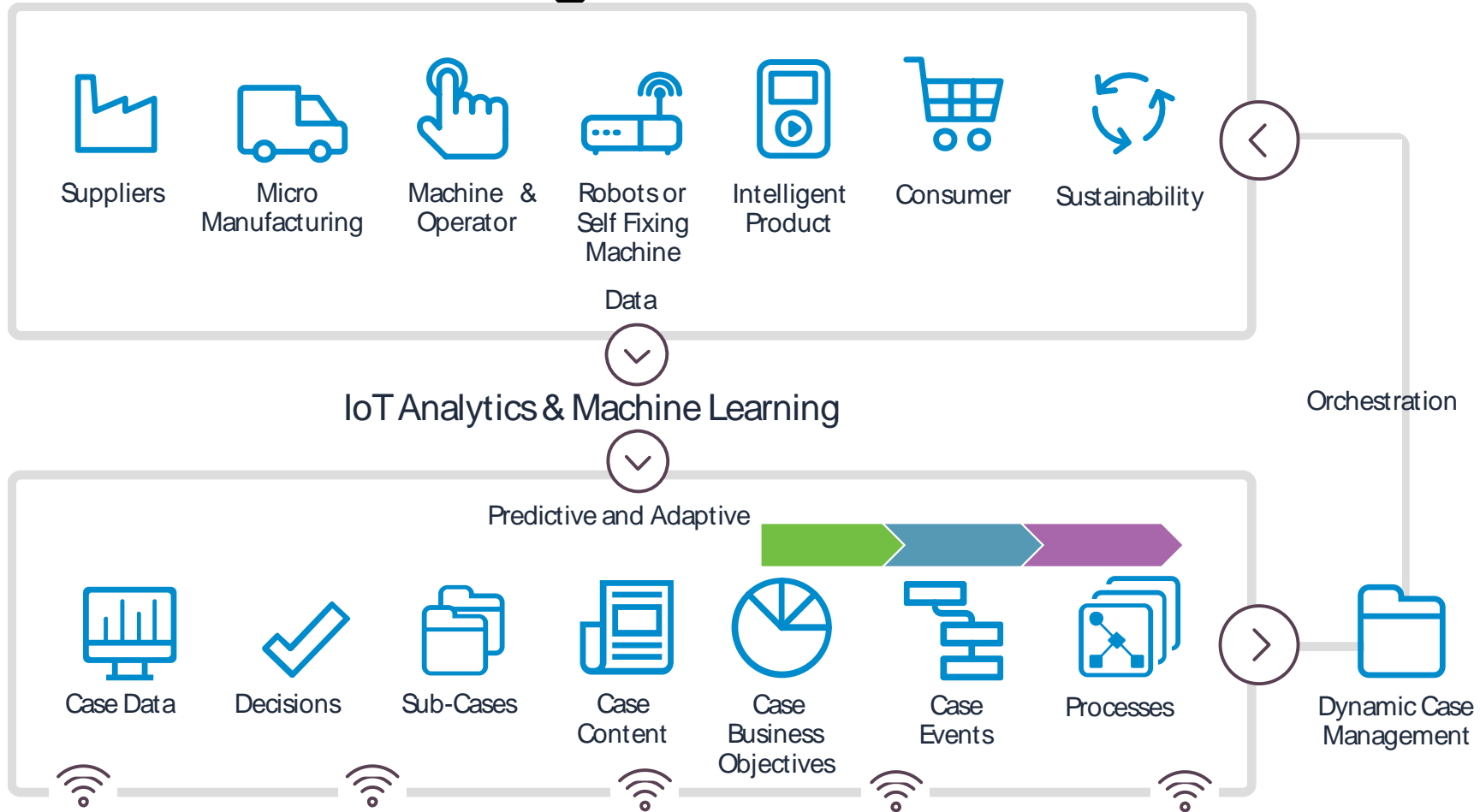
Automation is Digitally Transforming with IIoT ...



Dynamic Case Management supports all work needed to handle a case, regardless of type or who is performing it



Dynamic Case Management in Action



A horizontal bar containing ten icons representing key capabilities: Event Strategies, Predictive/Adaptive, Next-Best-Action Strategies, Dynamic Case Management, Business Process Management, Event Rules, Integration, UI/UX Rules, Omni Channel, Social, and Reports.

4 Use Cases for IoT with Pega

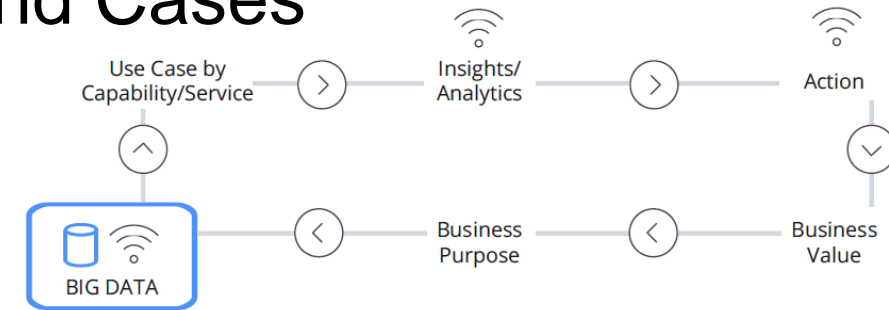


- Things as Participants in Digitized Process and Cases

- E.g. Check Temperature; Shut off; Deliver Package

- Events activating DCM to handle the event

- E.g. Connected Car broke down – instantiate maintenance and warranty



- Stream of Events: to correlate and handle complex scenarios

- E.g. High pollution levels by different sensors within 5 minutes instantiates case

- Big Data and Predictive Analytics to detect patterns and act

- E.g. Detected elevated blood pressure and glucose level annual trends to prescribe medicine, lifestyle changes etc.

4 Evolved CRM Use Cases for IoT with Pega: Omni-Device

1. **Customer-Device Interaction for NBA**
2. **Things as CRM Channels: Omni-Device**
3. **Connecting With Manufacturers: Prescriptive Maintenance**
4. **Extending the Ecosystems with Merchants**



Web



Email



Chat



Social



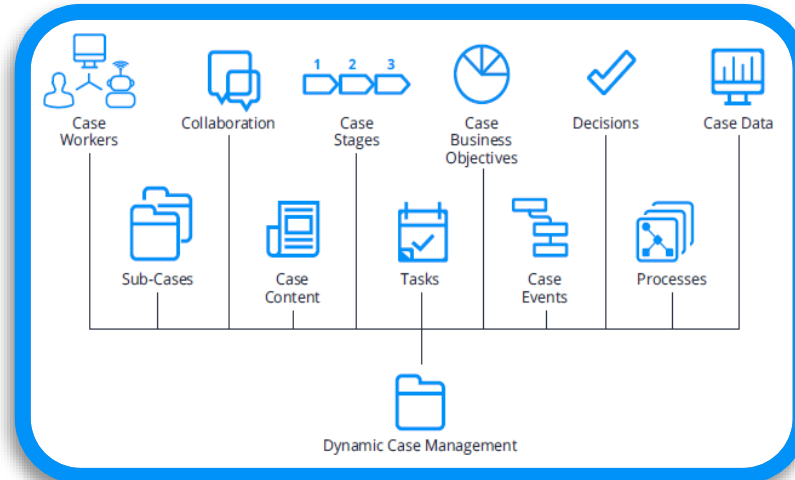
Mobile



Sensors



Machine Health



Pattern Detection with Real Time Analytics



Operationalize, Process and Respond



Outcomes

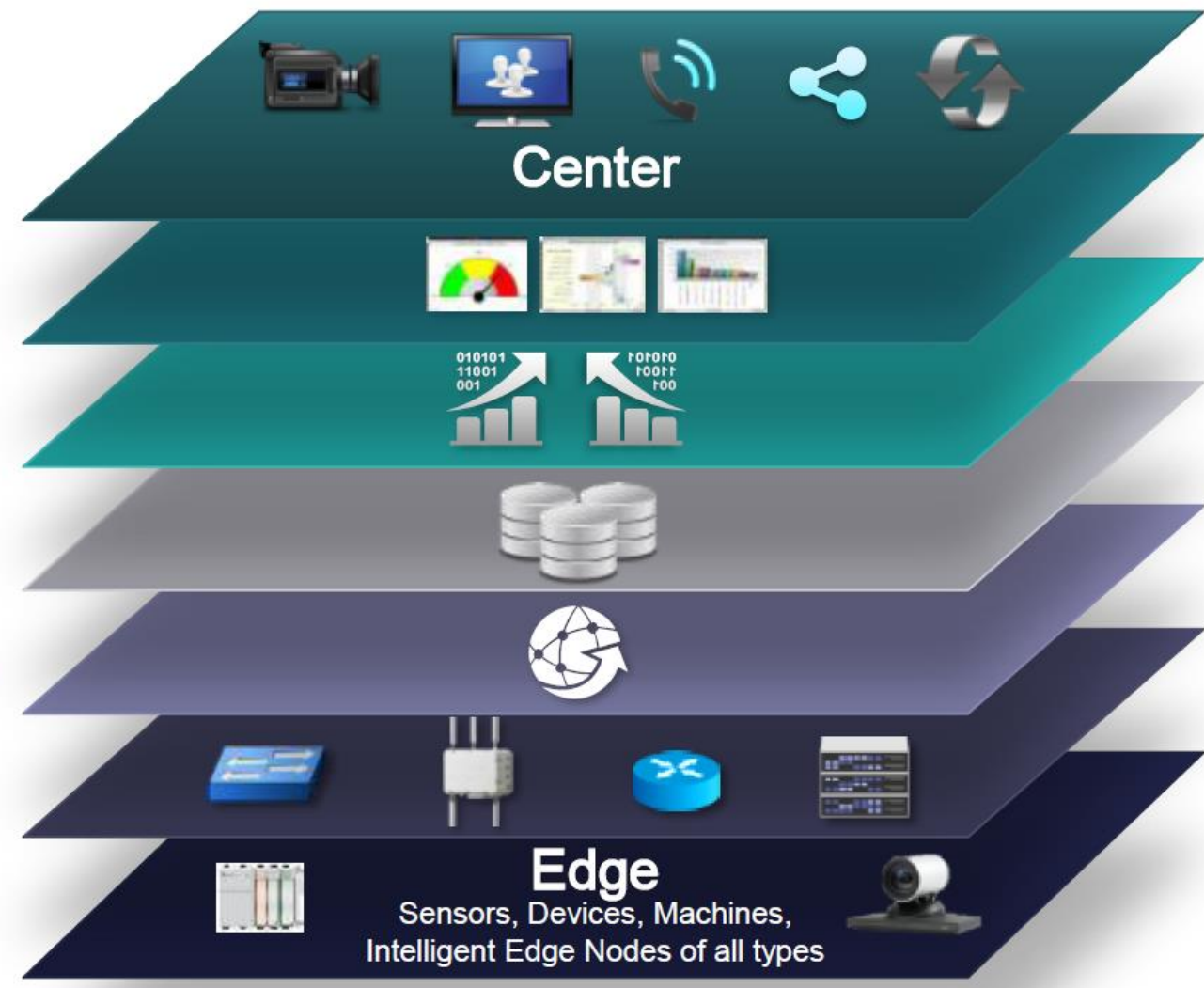


IoT World Forum Reference Model

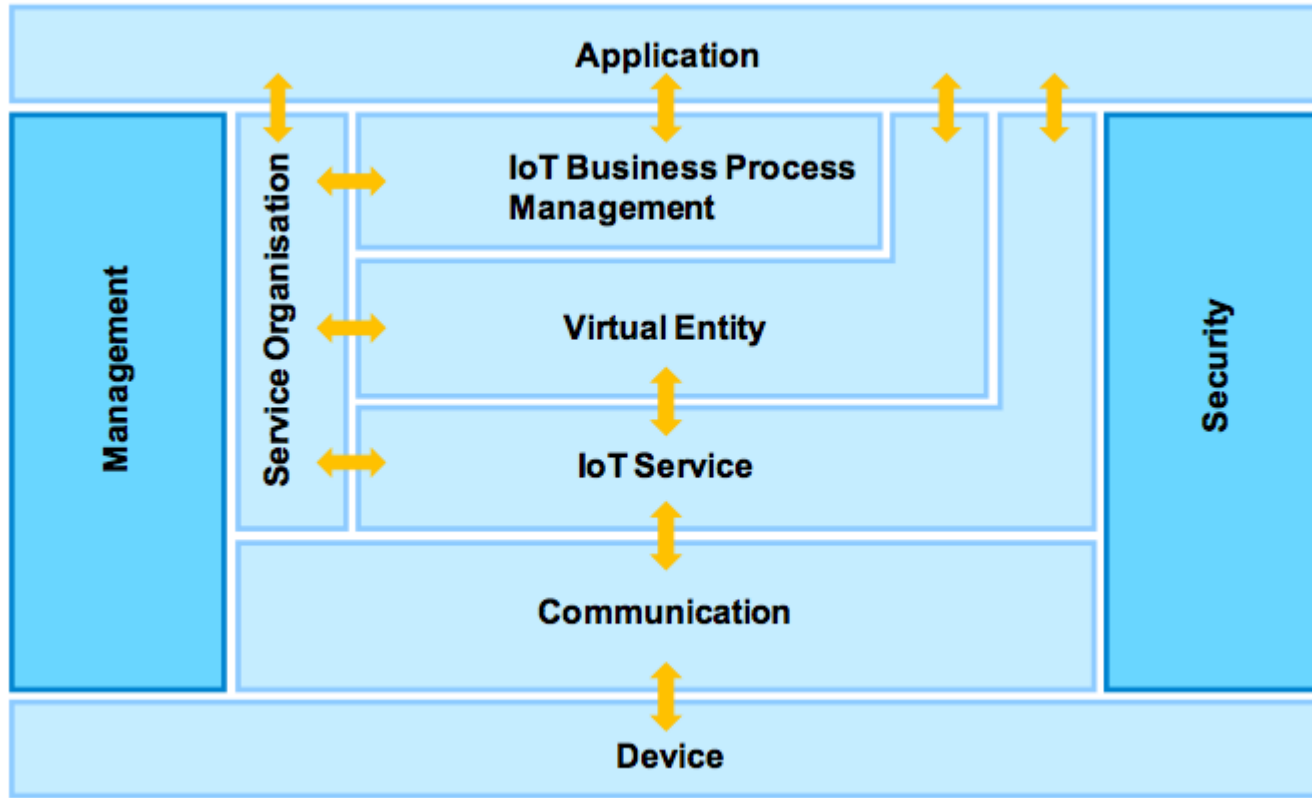


Levels

- 7** **Collaboration & Processes**
(Involving People & Business Processes)
- 6** **Application**
(Reporting, Analytics, Control)
- 5** **Data Abstraction**
(Aggregation & Access)
- 4** **Data Accumulation**
(Storage)
- 3** **Edge Computing**
(Data Element Analysis & Transformation)
- 2** **Connectivity**
(Communication & Processing Units)
- 1** **Physical Devices & Controllers**
(The "Things" in IoT)



IoT Reference Architectures

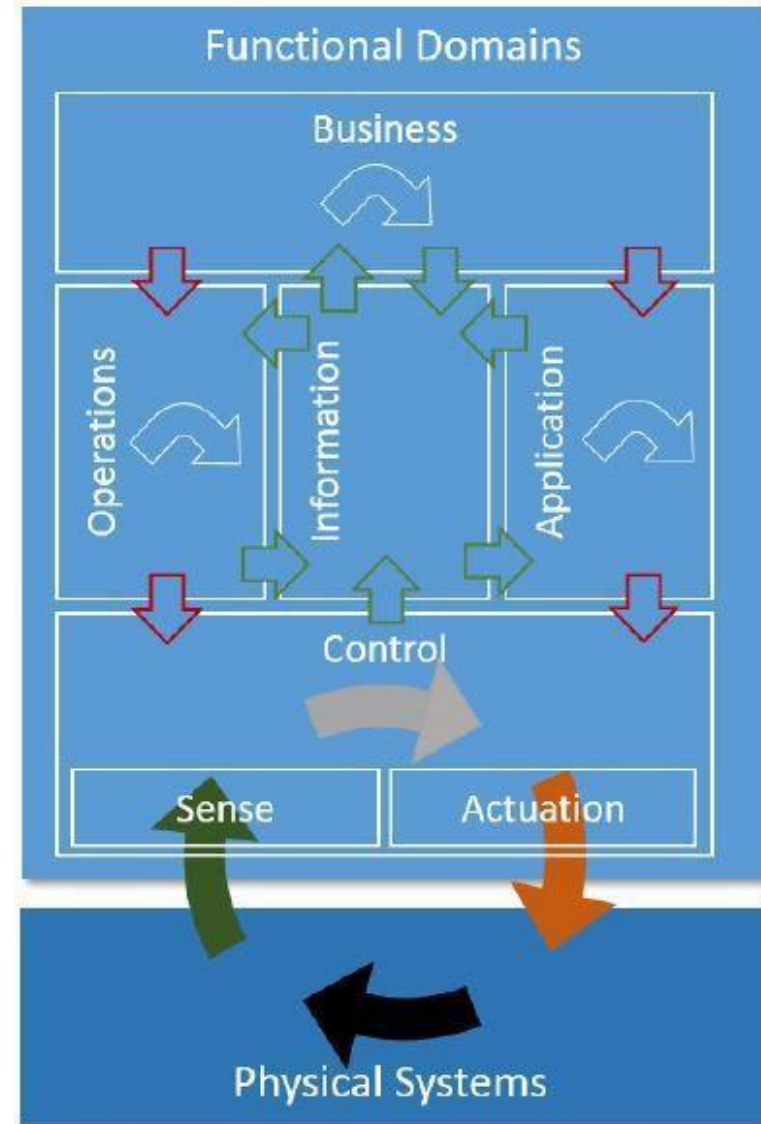


Source: IoT-A

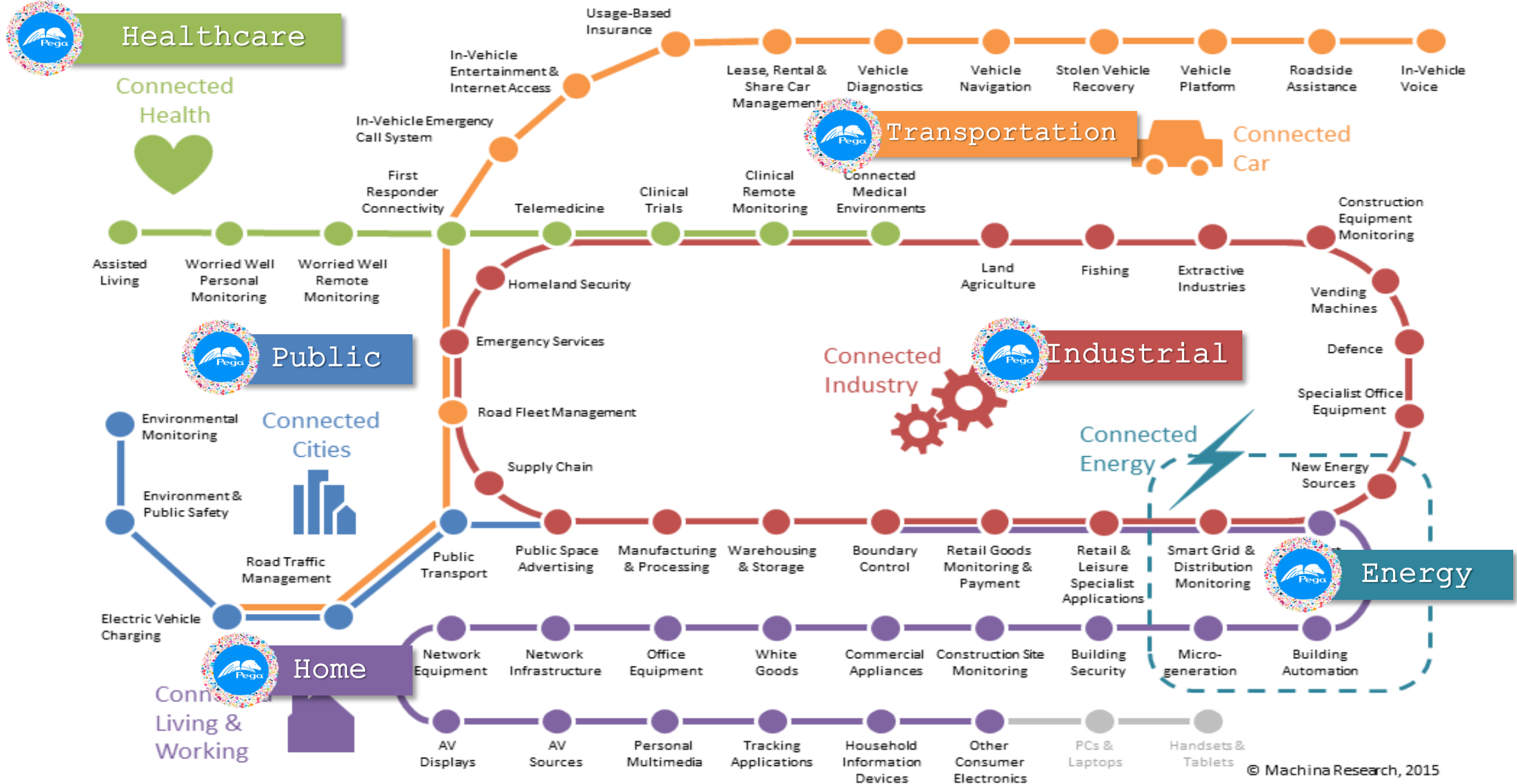
Human Users



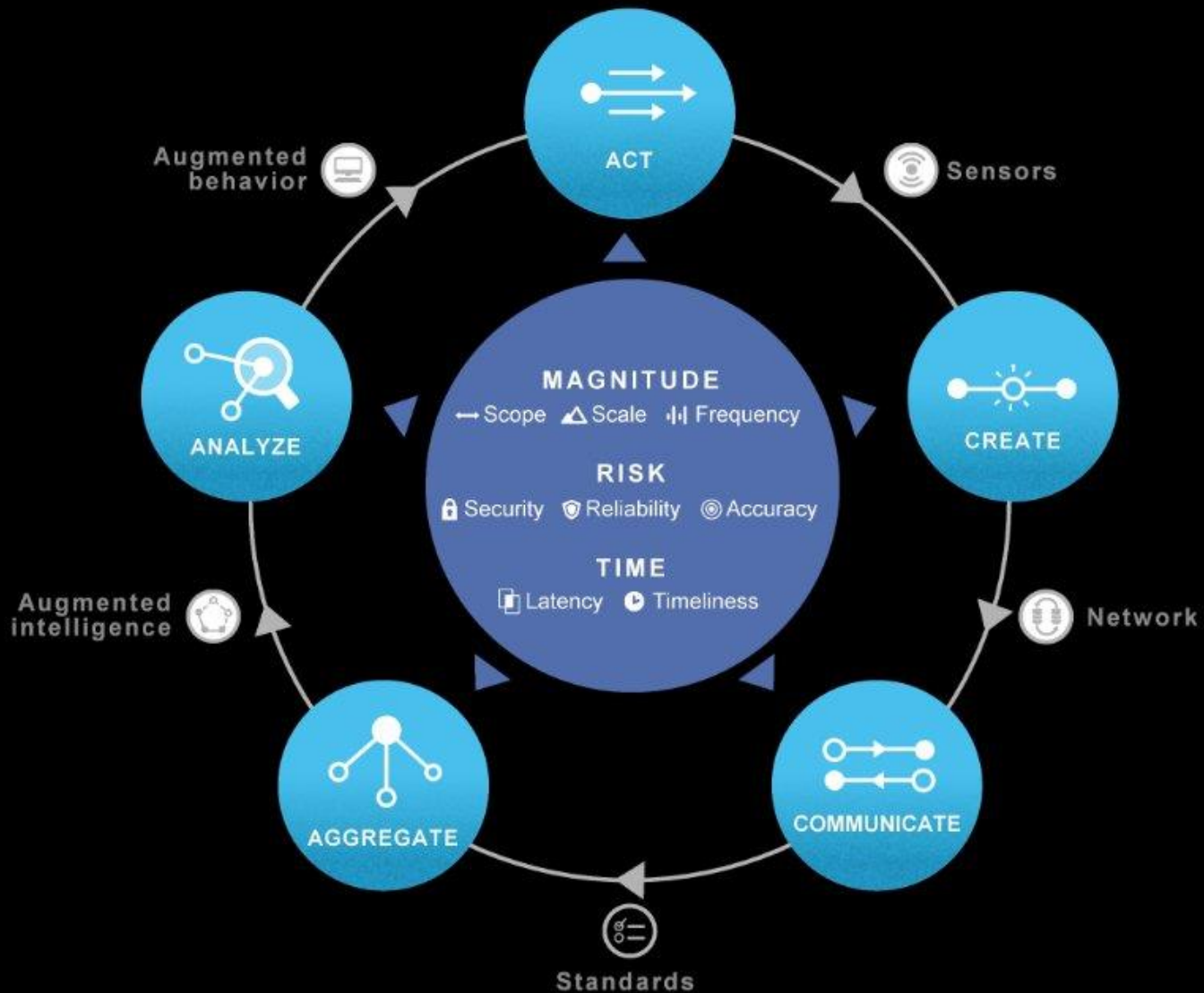
Source: IIC



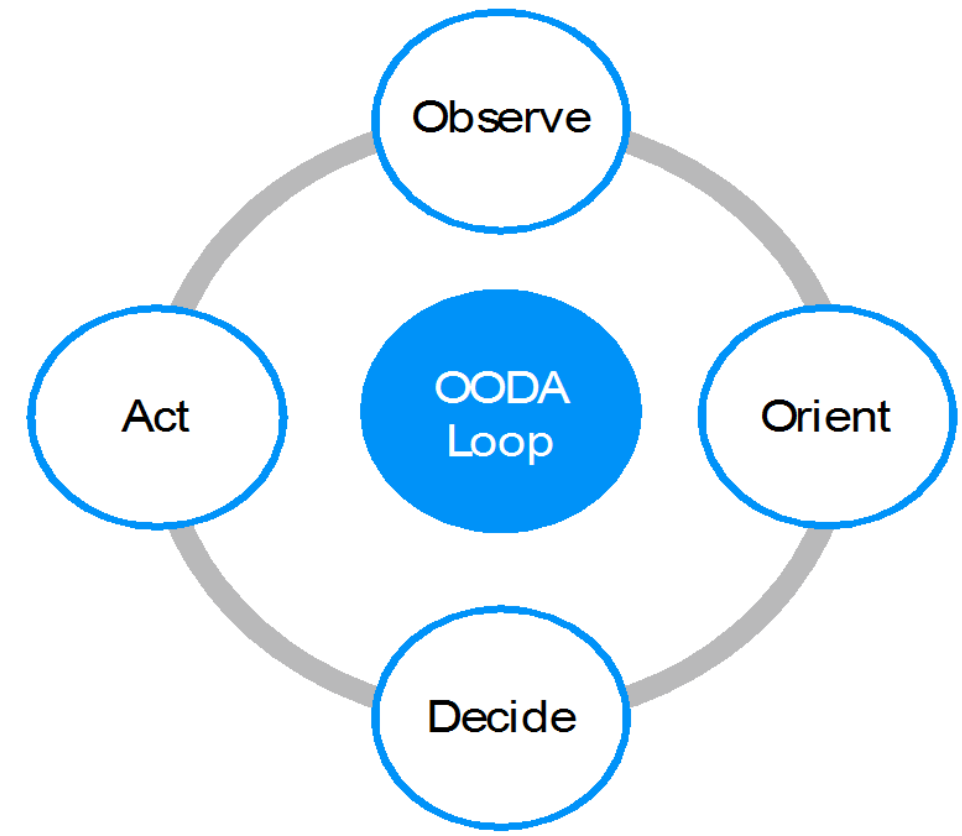
Pega IoT Applications across Multiple Industries



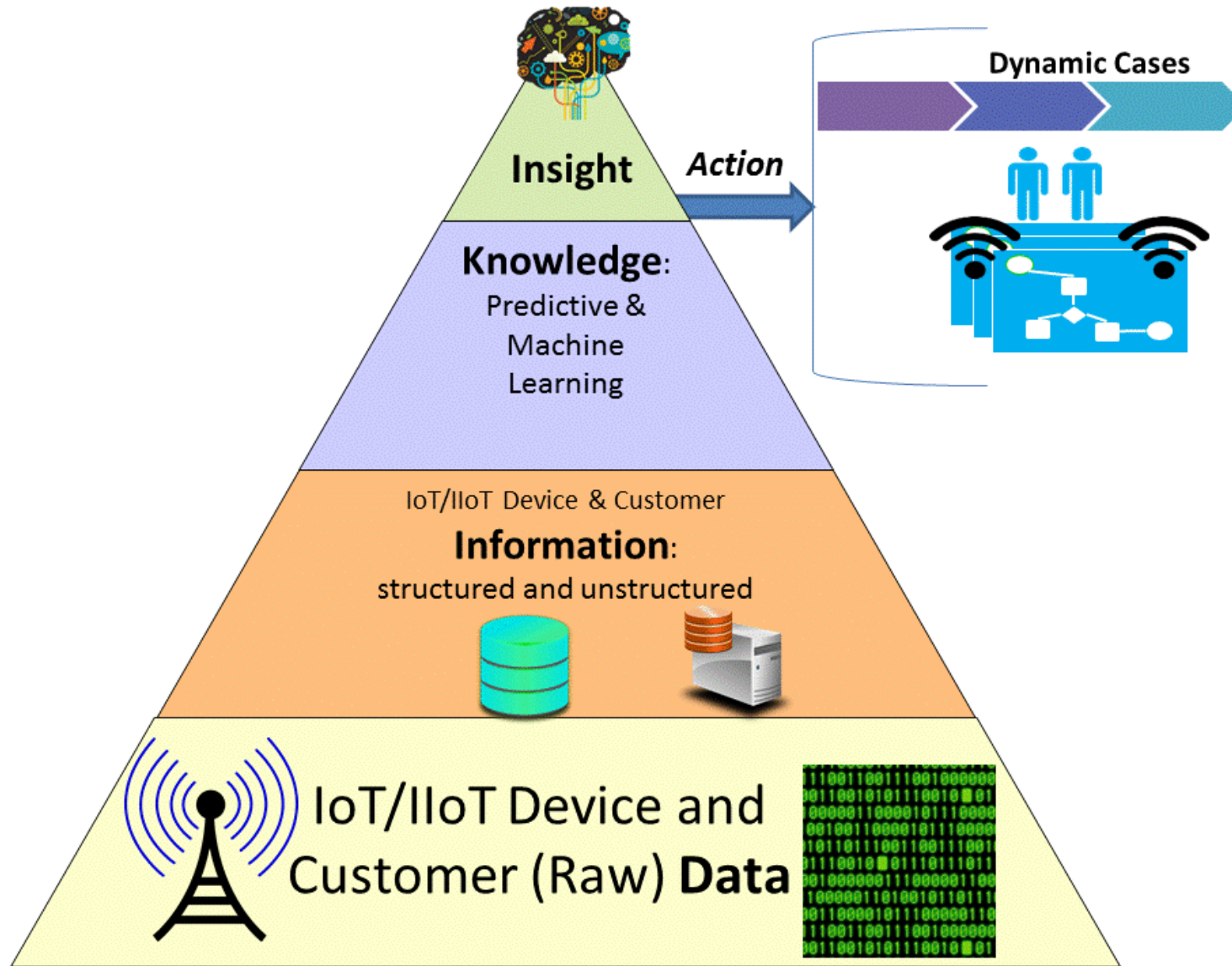
Deloitte's Information Value Loop for IoT



VALUE DRIVERS STAGES TECHNOLOGIES



Insight to Action – Needs COE Governance and Best Practices

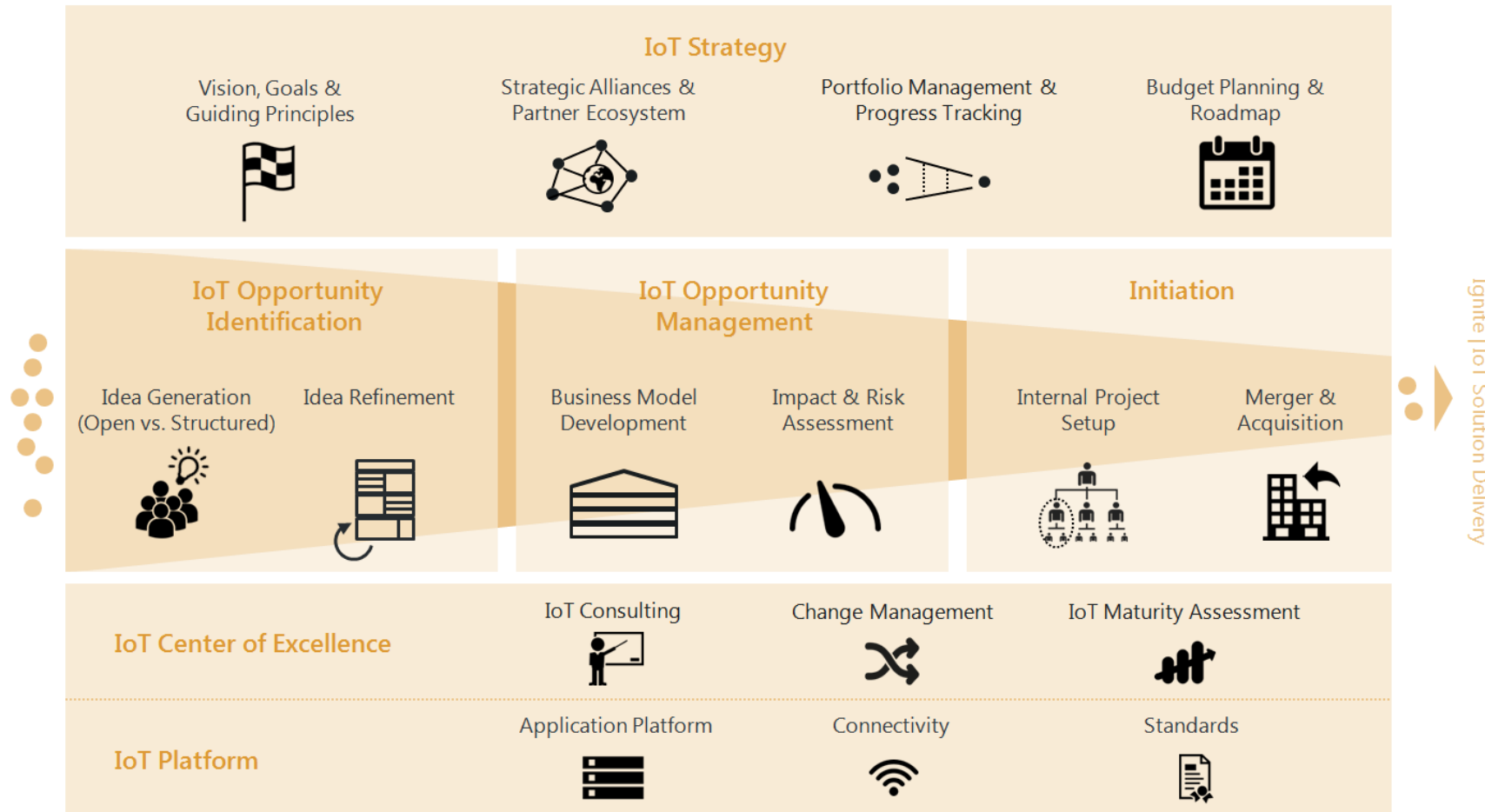


IoT Center of Excellence

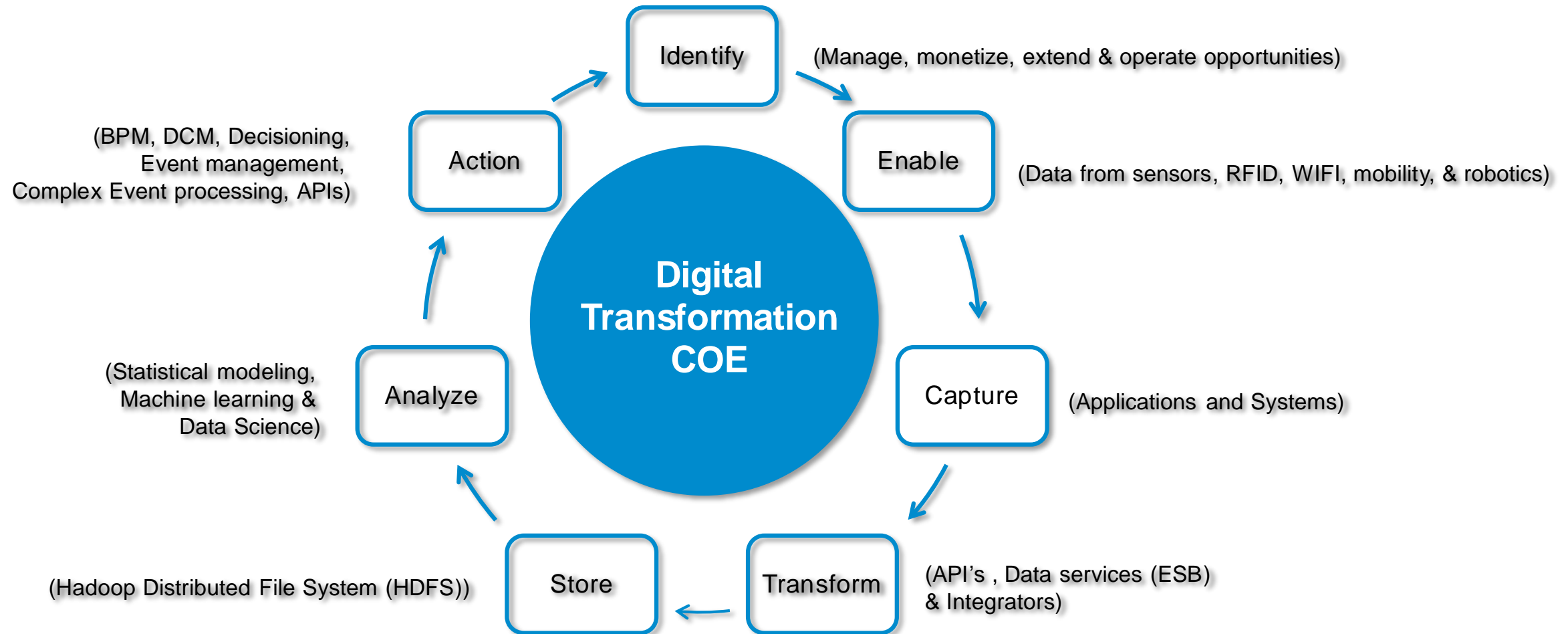
Source Enterprise IoT <http://enterprise-iot.org/book/enterprise-iot/part-ii-igniteiot-methodology/igniteiot-strategy-execution/>



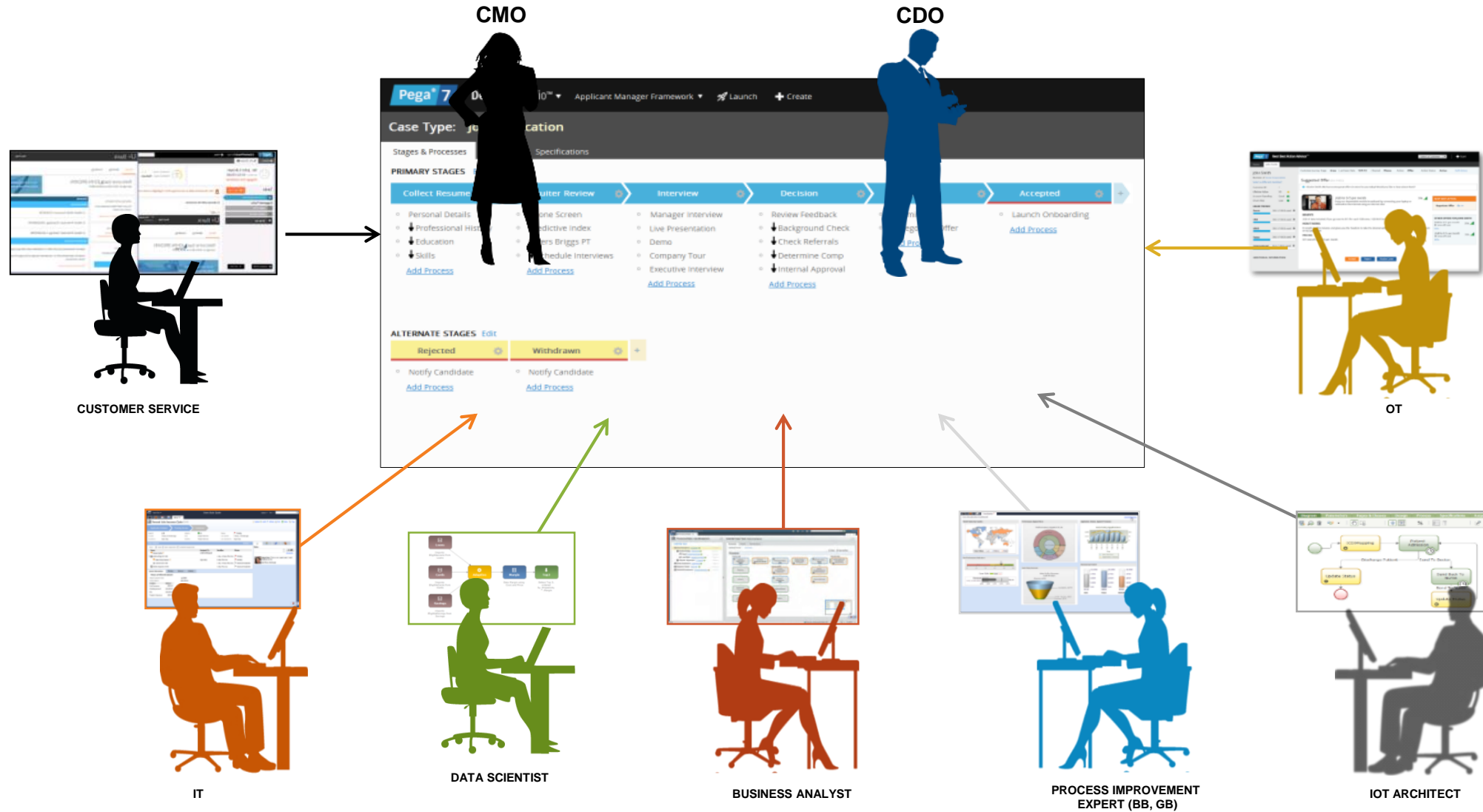
Ignite | IoT Strategy Execution



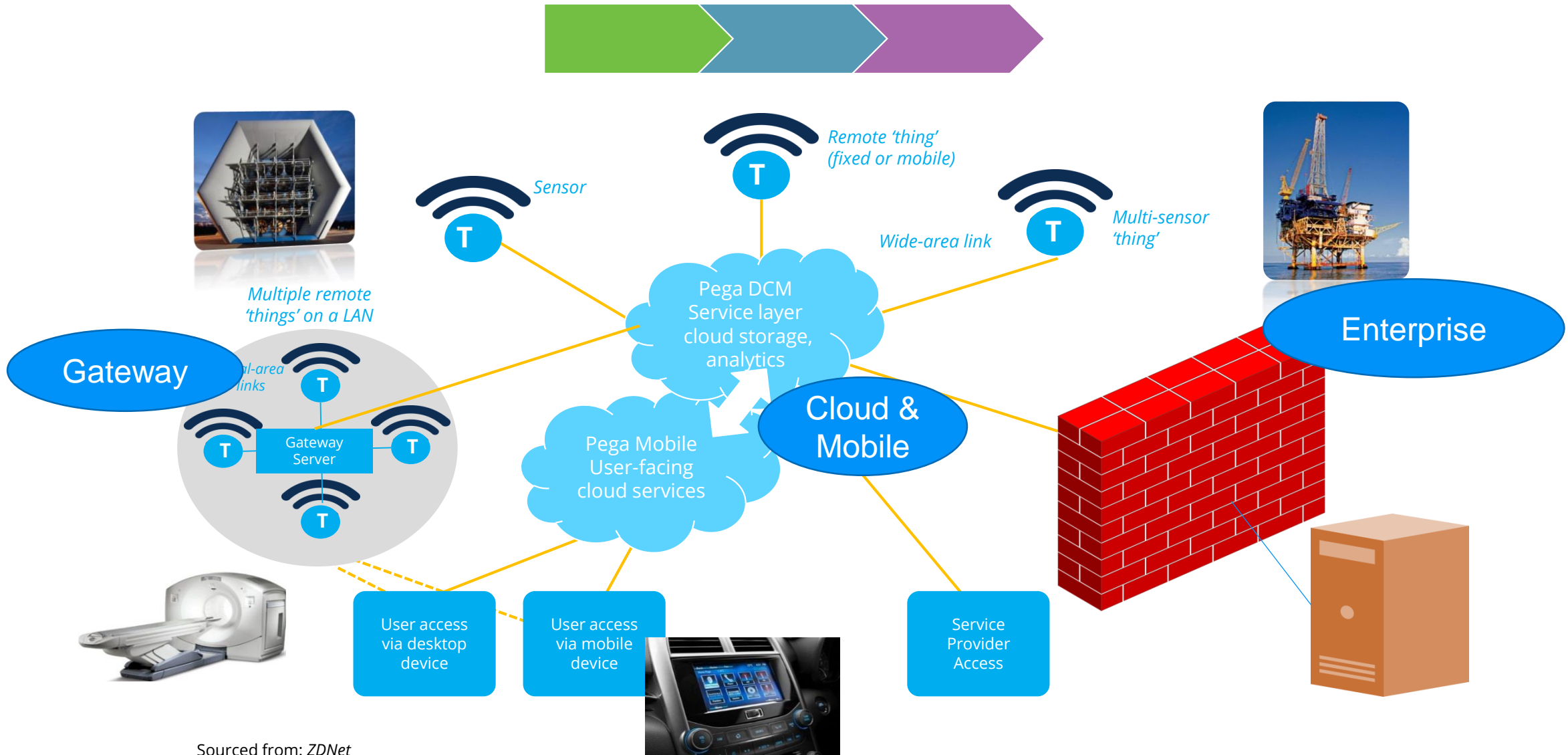
Digital Transformation Center of Excellence



Digital Transformation Center of Excellence

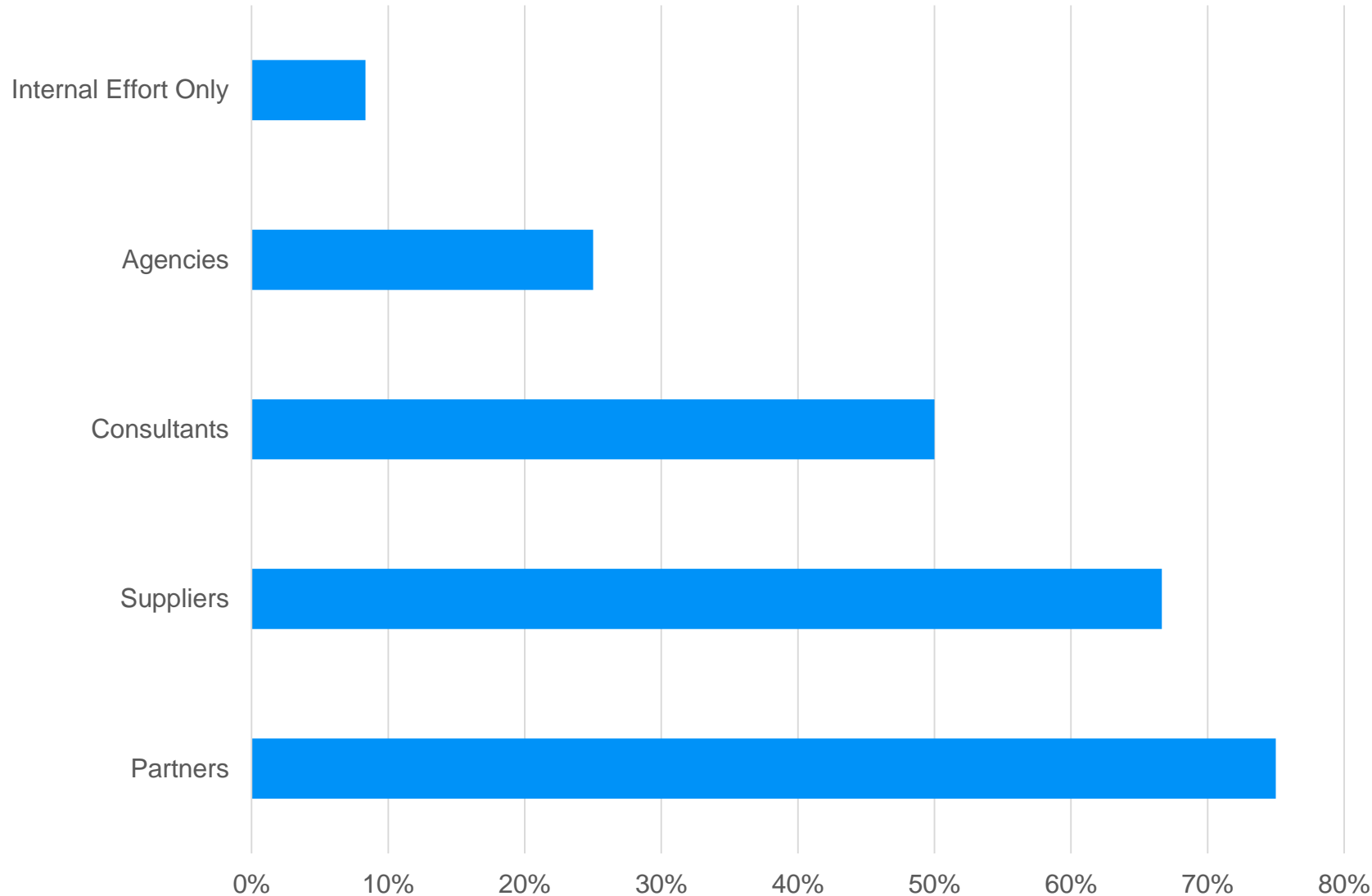


Digital Transformation with Pega IoT



Sourced from: ZDNet

Survey Results: DX Support Organizations

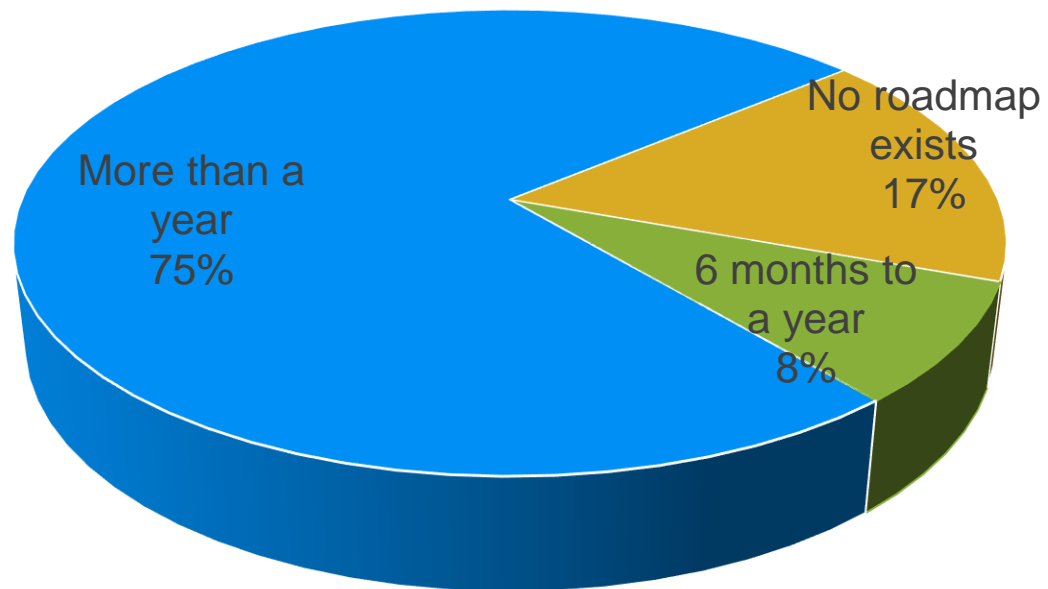


Observations

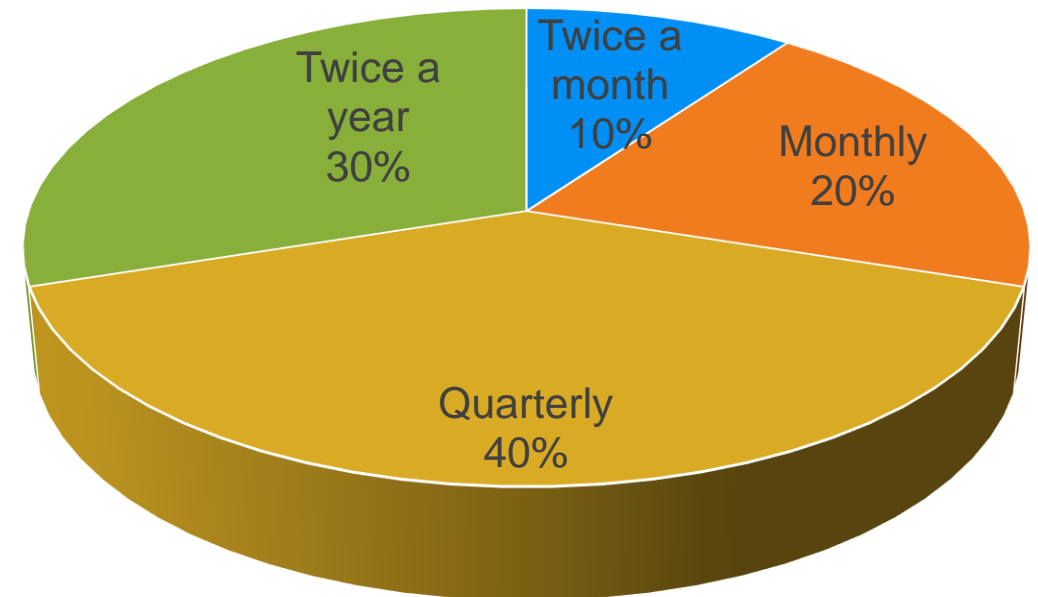
- Very few organizations are tackling Digital Transformation without outside support
- Partners are instrumental in driving DX strategies
- Engaging third-party vendors and suppliers helps to **fill gaps that are essential to your roadmap**
- Must select partners that have **proven expertise** and commitment to the kind of transformation you are seeking

Survey Results: DX Roadmap

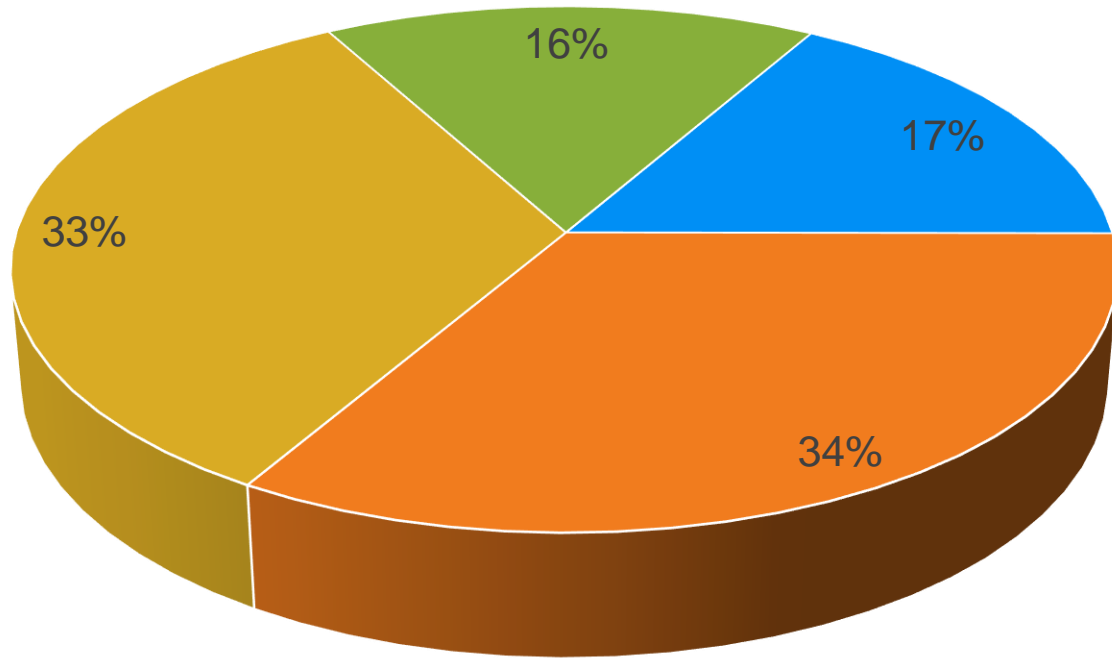
Period of time covered by roadmap



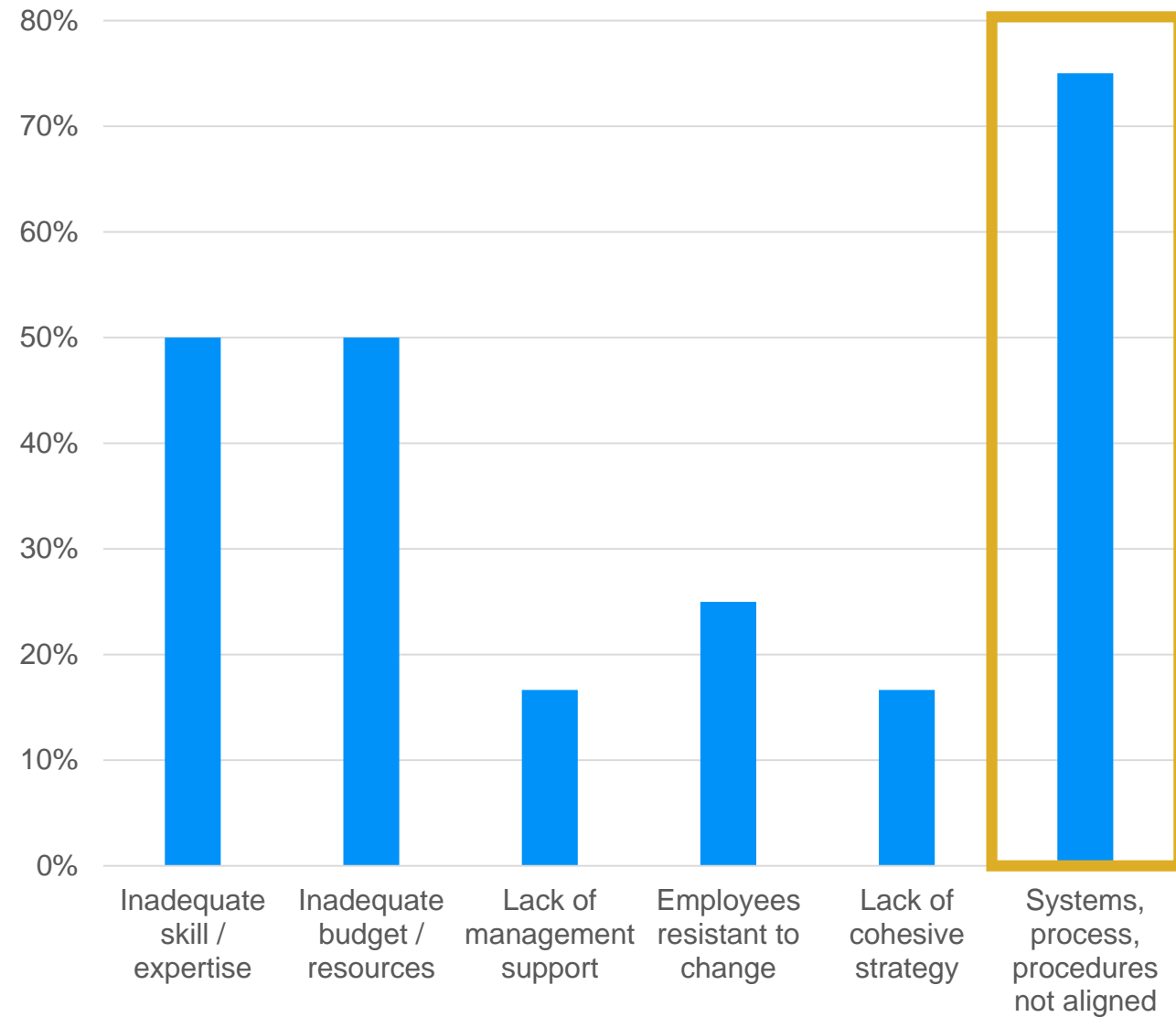
Roadmap review frequency



Survey Results: Challenges



- Getting the right resources
- Launching transformational practices
- Scaling transformational practices
- Sustaining transformational processes



Wrap Up

- For more on IoT, visit <https://www.pega.com/products/pega-7-platform/iot/resource-guide>
- Contact us to learn about a **FREE** Digital Transformation Innovation Workshop
- Send an email to PegaCOE@pega.com for more information or to ask us a question