



CFO VISION 2014

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# Capitalizing on the “Internet of Things:” A CFO playbook

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# Agenda

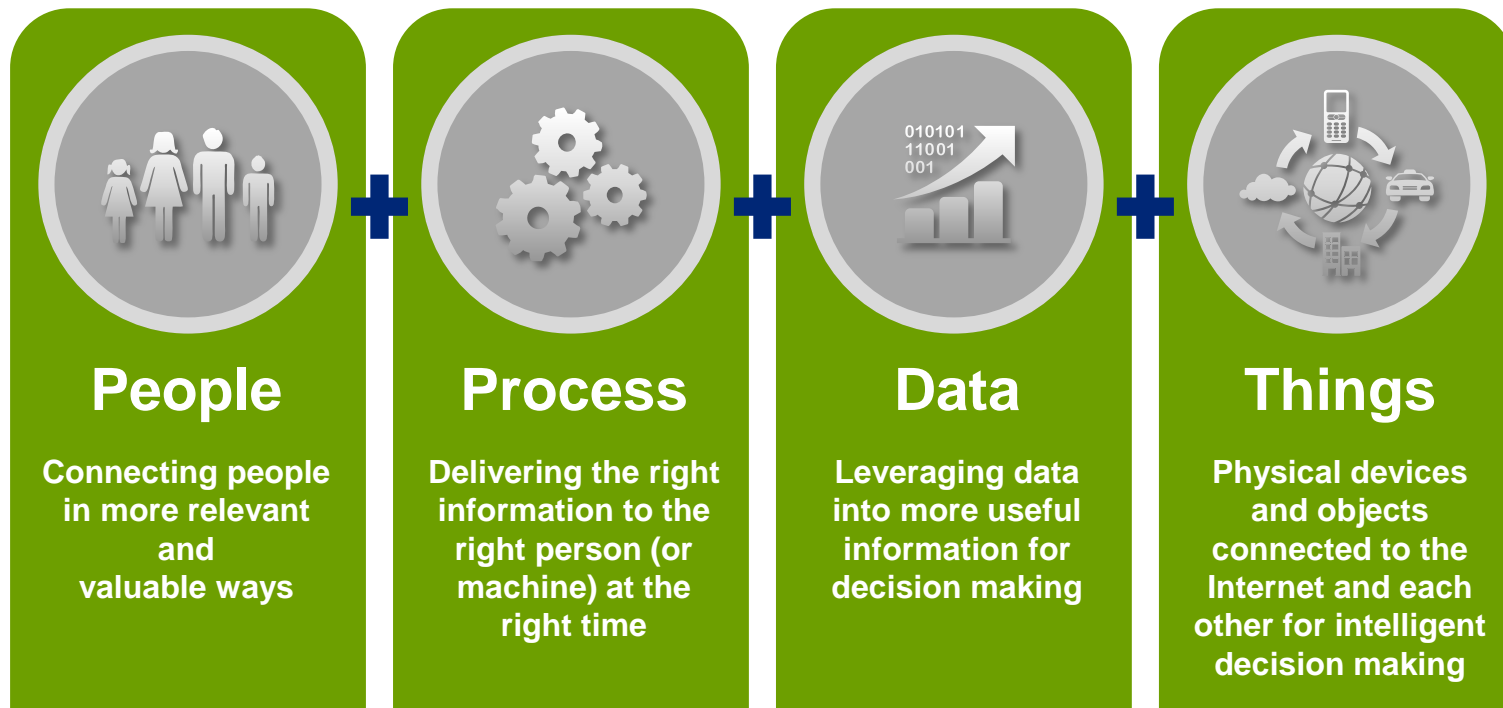
Internet of Things (IoT) definition and projections

IoT Business Value Framework

Strategies to unlock IoT's business value

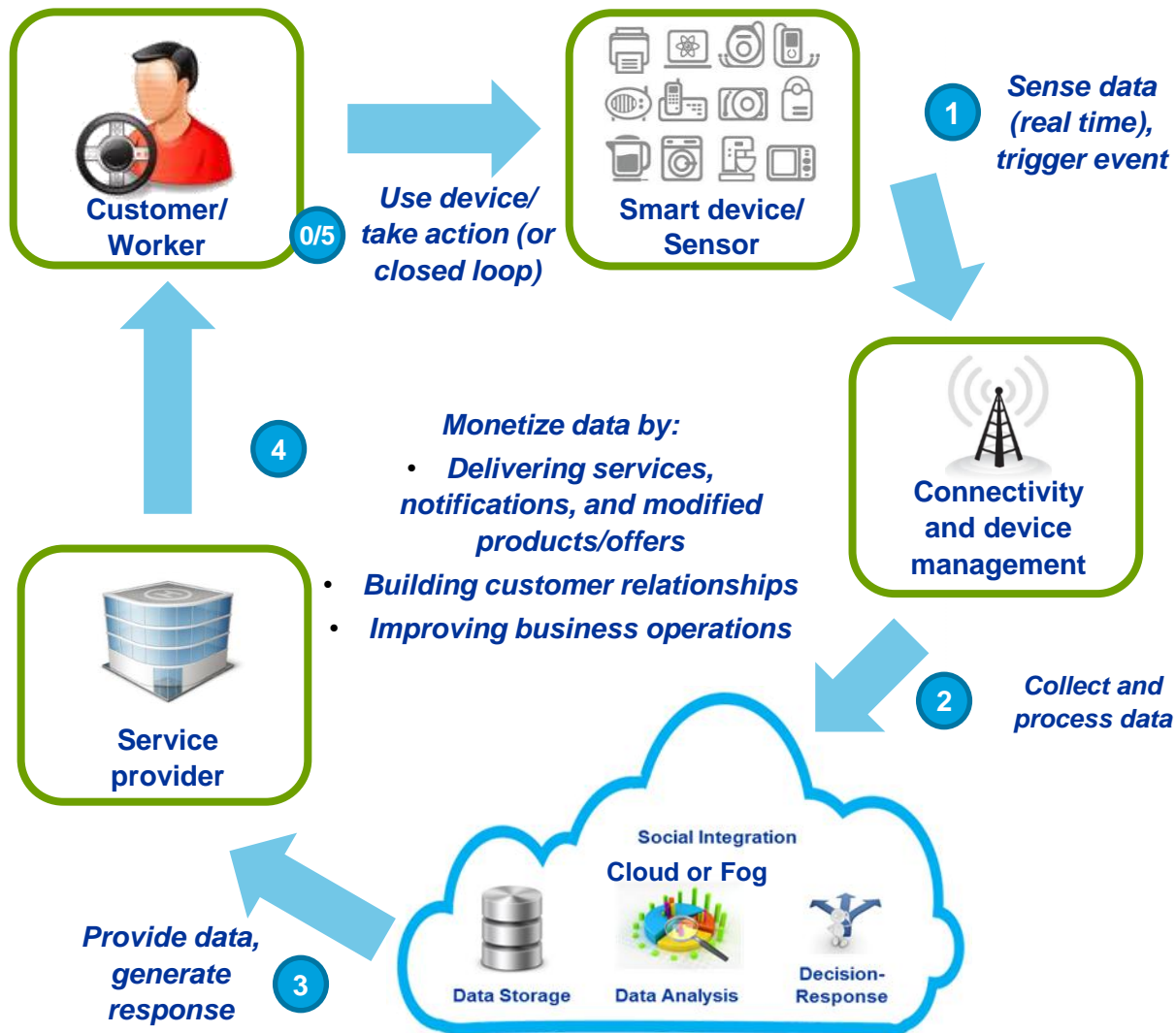
Considerations for CFOs

# IoT enables companies to turn data into insight, action, and new business models through ubiquitous connectivity.



Advances in a number of related technologies, including sensors, analytics, network, cloud, security, and M2M management platforms, are allowing companies across industries to illuminate their dark assets. They can collect, analyze, share, and act on the data to drive operational efficiencies or new growth models in new ways.

# Value is created by analyzing context-specific data to drive action serving a specific purpose.



## Sample use cases

**Condition-based maintenance**  
e.g., aircraft engines

**Optimization**  
e.g., HVAC

**Marketing**  
e.g., proximity marketing

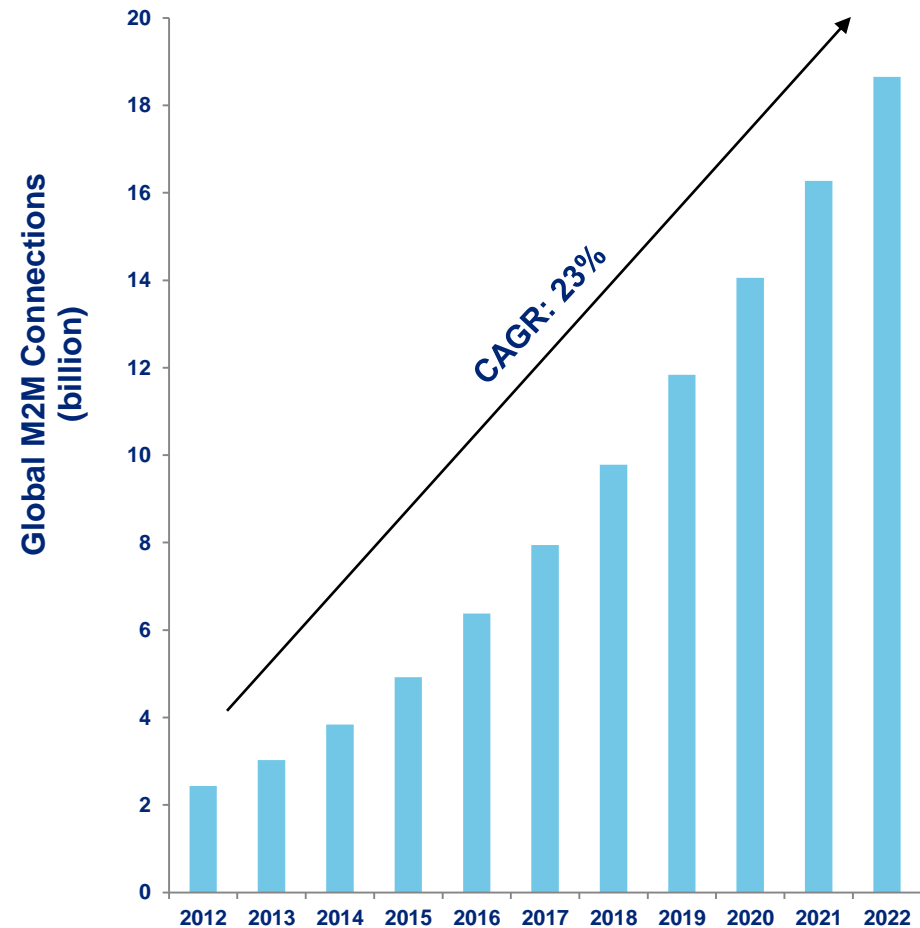
**Inventory management**  
e.g., retail

**Innovation**  
e.g., product, service

# The global IoT market is expected to reach \$1.9 trillion by 2020.

- **\$1.9 trillion** global economic value creation by 2020
- **26 billion** embedded devices and intelligent systems by 2020
- **4 billion** connected people
- **50 trillion** GBs of data
- **25+ million** apps
- **75%** of executives exploring/adopting IoT

Global M2M Connections 2012–2022



Source: Machina Research (2013); Pyramid Research (2012); Gartner, Nov. 2013; IDC, Oct. 2013; *The Economist*, Oct. 2013; Deutsche Bank May 2014



# A number of market forces are driving this rapid growth in IoT adoption in terms of both demand and supply

Today and going forward, businesses must increasingly:

**Accelerate product development to stay current given the pace of technology innovations**

- Decrease in technology costs, increase in Big Data capabilities and cloud computing enabling IoT implementations
- Tech innovations spawning new features, services, platforms, and business models
- Increasing complexity in business operations and systems
- Technology innovation as a differentiator

**Cater to increasingly sophisticated customer needs**

The modern customer is more:

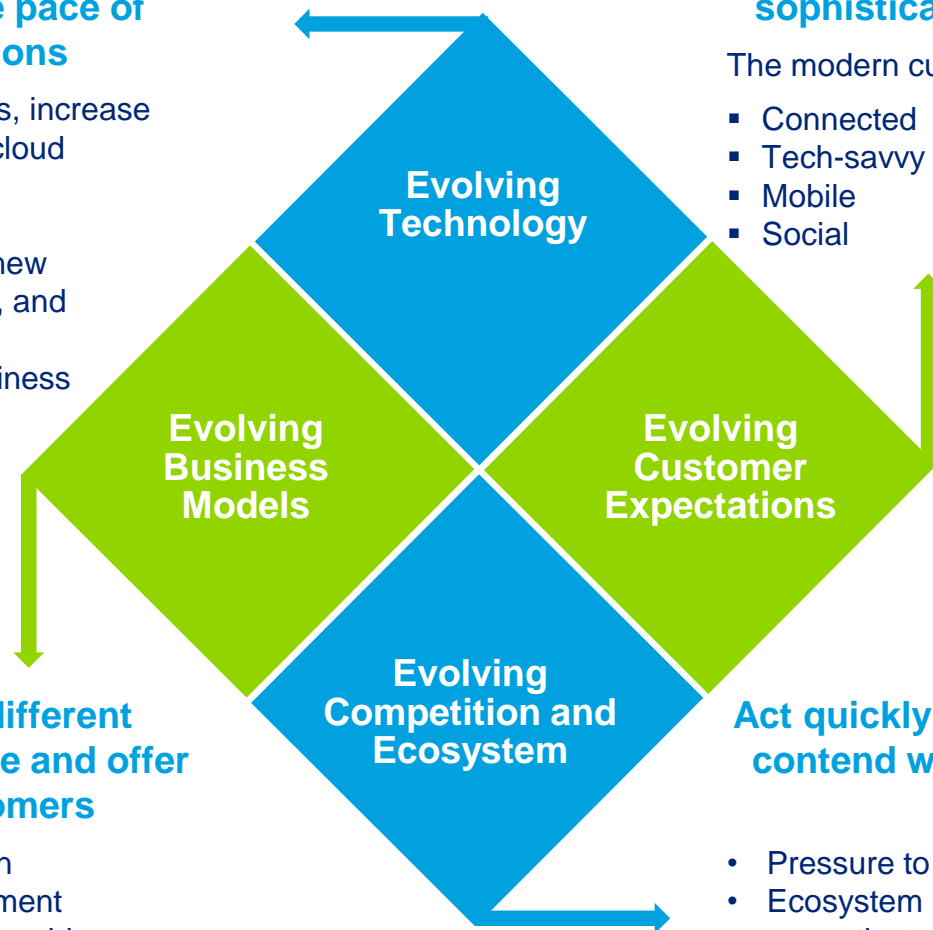
- Connected
- Tech-savvy
- Mobile
- Social

**Look for new and different approaches to package and offer services to customers**

- Mechanisms for monetization
- Customer life cycle management
- Models of product/asset ownership

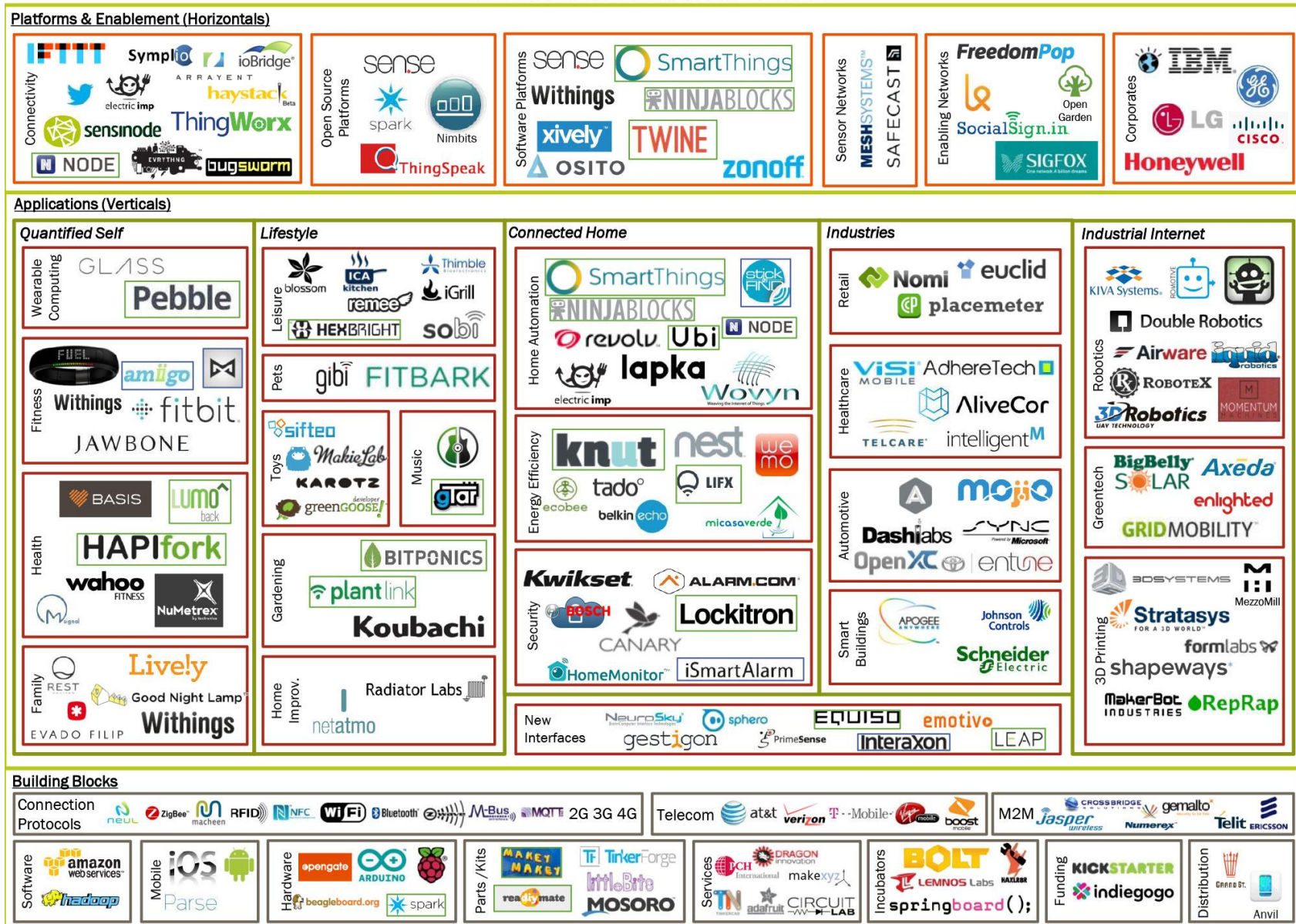
**Act quickly to keep up with competition and contend with rapidly changing ecosystem dynamics**

- Pressure to innovate
- Ecosystem movements (new players, acquisitions) mean that competition is coming from new quarters
- Increasing trend of partnerships to improve product offering and time to market



# The current IoT landscape is one that is highly fragmented, particularly in terms of capabilities and vertical solutions.

## INTERNET OF THINGS LANDSCAPE

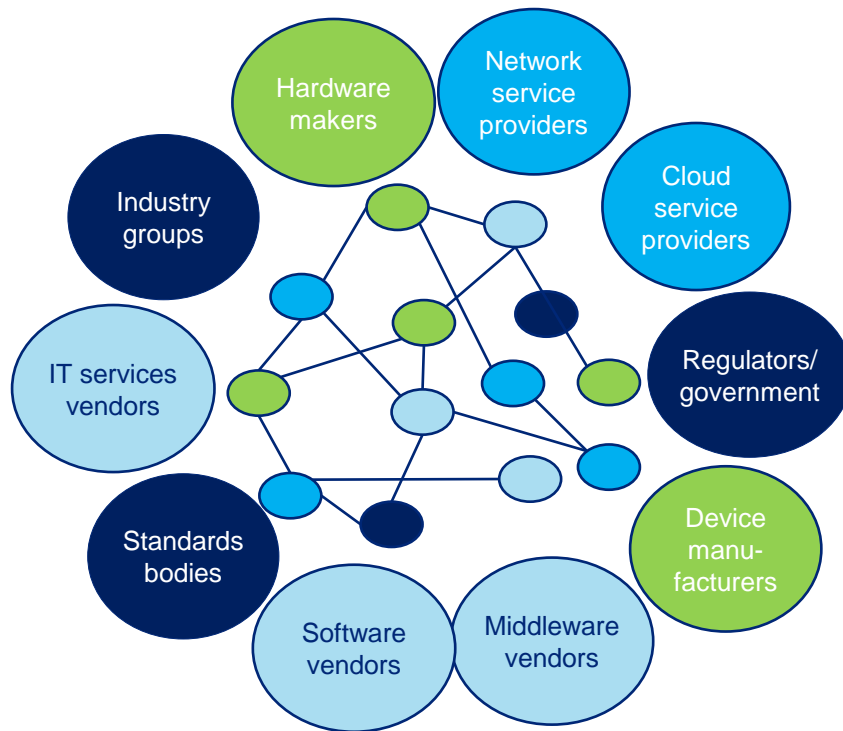


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# However, the industry is now seeing trends toward consolidation and clearer roles and standards.

## IoT provider ecosystem



**The desired outcome is an ecosystem where everyone benefits**

- Standards
- Security
- Interoperability
- Breakdown of silos
- Horizontal layers
- Data commons with open access

## IoT ecosystem trends:

- **New entrants:** The IoT space is attracting a variety of new entrants offering vertical-specific solutions.
- **Incumbents:** Growing dominance and influence of large existing players in this space. Most efforts are dedicated to developing an underlying IoT platform.
- **Venture capital investments:** VC is piling into IoT, leading to strong valuations.
- **Acquisitions:** Sizeable acquisitions are taking place, especially in the home automation and telematics space.
- **Go-to-market partnerships:** Major players are forming partnerships to develop a strong go-to-market value proposition.
- **Alliances for standards:** Companies are forming alliances to develop standards for inter-device communications and data management.

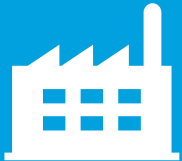
**The speed of adoption of IoT technologies and solutions will largely depend on executives finding ways to monetize on the investments.**

### **Business Value Framework**



**Focus on  
financial metrics**

- Increase in revenues
- Decrease in cost/expenses
- Reduction and improvement in asset utilization



**Focus on  
operating metrics**

- Improvements in:
  - Facilities/asset life cycle
  - Product life cycle
  - Customer life cycle

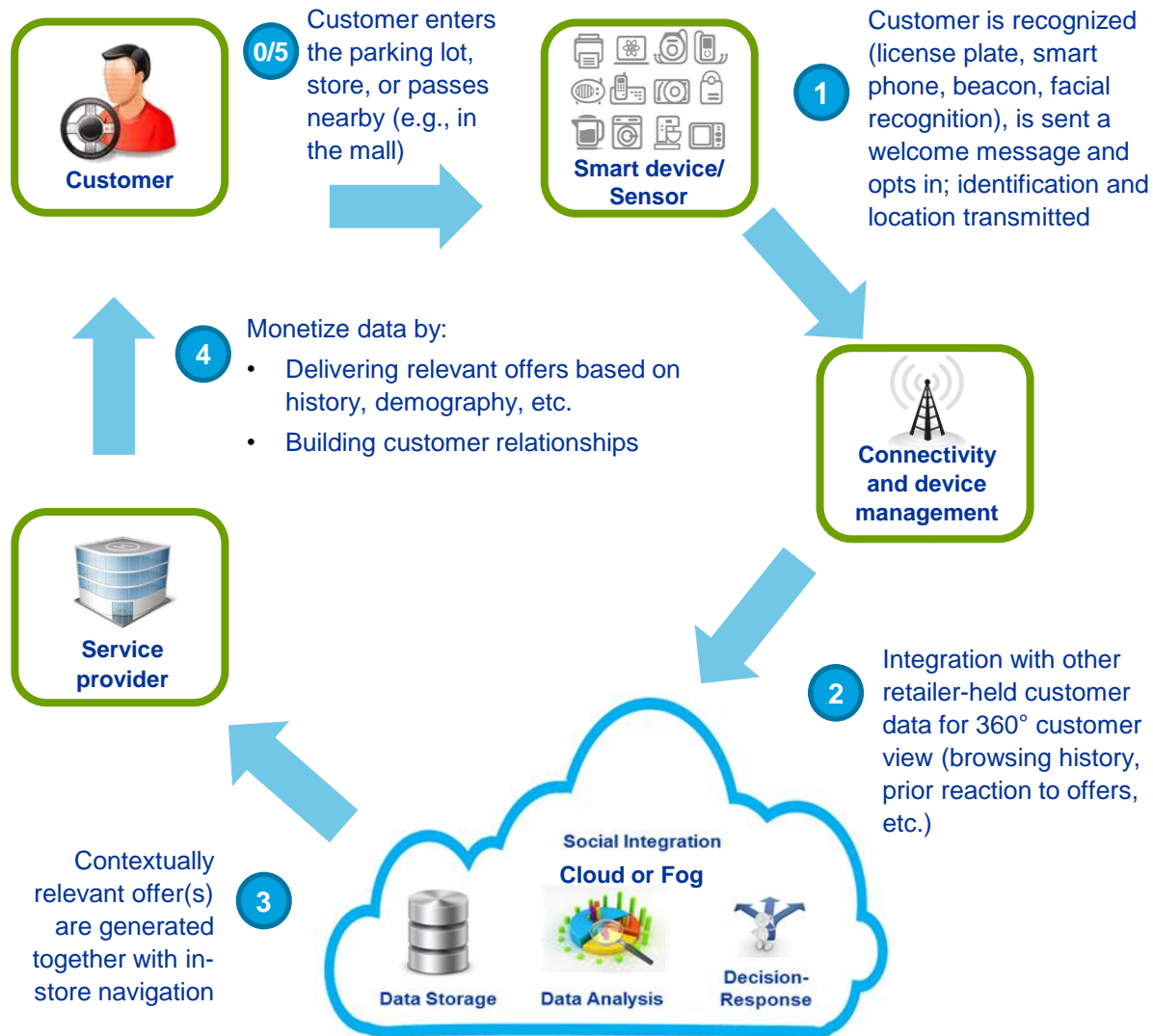


**Transition from  
“transaction”  
to “relationship”**

- Holistic approach to past and future transactions with an entity, with a focus on the relationship

# Use case examples: Revenue generation in retail

Customers entering stores can be detected and pitched relevant offers to enhance their in-store experience and increase basket size.

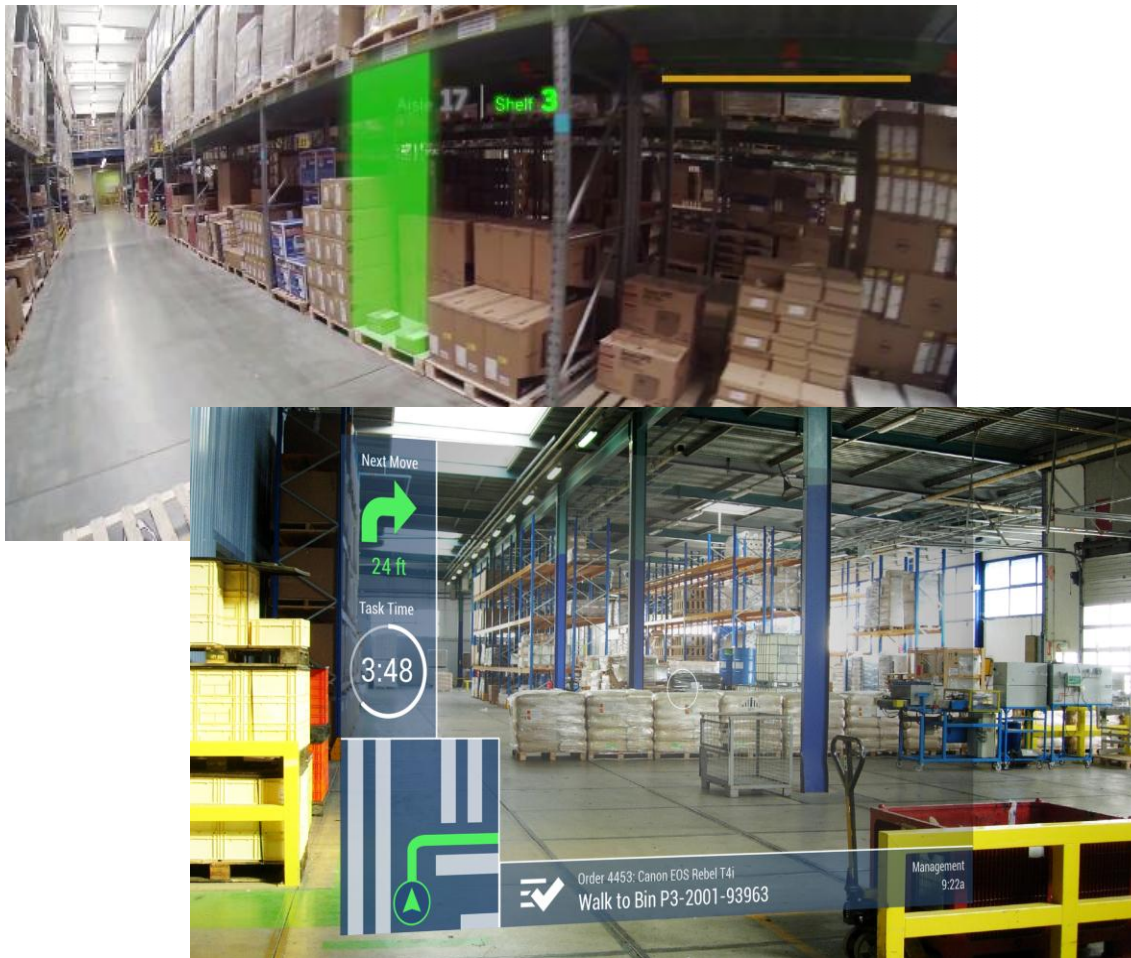


## Key benefits to retailers

- Improves conversion of digital campaigns by tailoring offers to customer behavior and transaction history
- Increases in-store sales
  - The right offer at the right time in the right place
  - Enables improved in-store product placement
- Reduces cost to serve by investing in customer behavior analysis across multiple channels: Web, online, in-store, mobile, etc.

# Use case examples: Cost decrease in the manufacturing supply chain

Integrate all assembly tools, “pick bins,” work instructions, and other assembly-line technology with augmented reality to increase build quality and operator efficiency.



## Key benefits to manufacturers

- Reduce labor cost by decreasing the training and skill level needed for assembly-line operators
- Increase build quality by implementing detailed error-proofing systems that prevent future errors on the assembly line
- Increase labor efficiency by eliminating wasted time and telling operators “what to do” via the system

## There are six strategies executives can use to unlock value in IoT.

- 1 Explore revenue and innovation potential.
- 2 Focus on product and/or customer life cycles.
- 3 Target early deployment to maximize impact.
- 4 Use data (data mash-ups) to build relationships.
- 5 Maximize transparency to enhance human trust.
- 6 Develop security that is both preventative and responsive.



# Revenue and innovation focus

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Elevate the conversation and include a broad range of stakeholders and the CFO.



- How can you deploy IoT to enable your existing customers to better achieve their goals and demand new products?
- Which of your assets, enabled by IoT, could provide value to an existing and/or new customer base and generate new revenues and drive innovation?
- What are the pain points in your current value chain that prevent you earning more revenue?

# Customer and product life cycle focus

Move beyond facility life cycle management to product and customer life cycle management

## Inputs

- Customer visits
- Buying behavior
- Payment modes
- Inventory



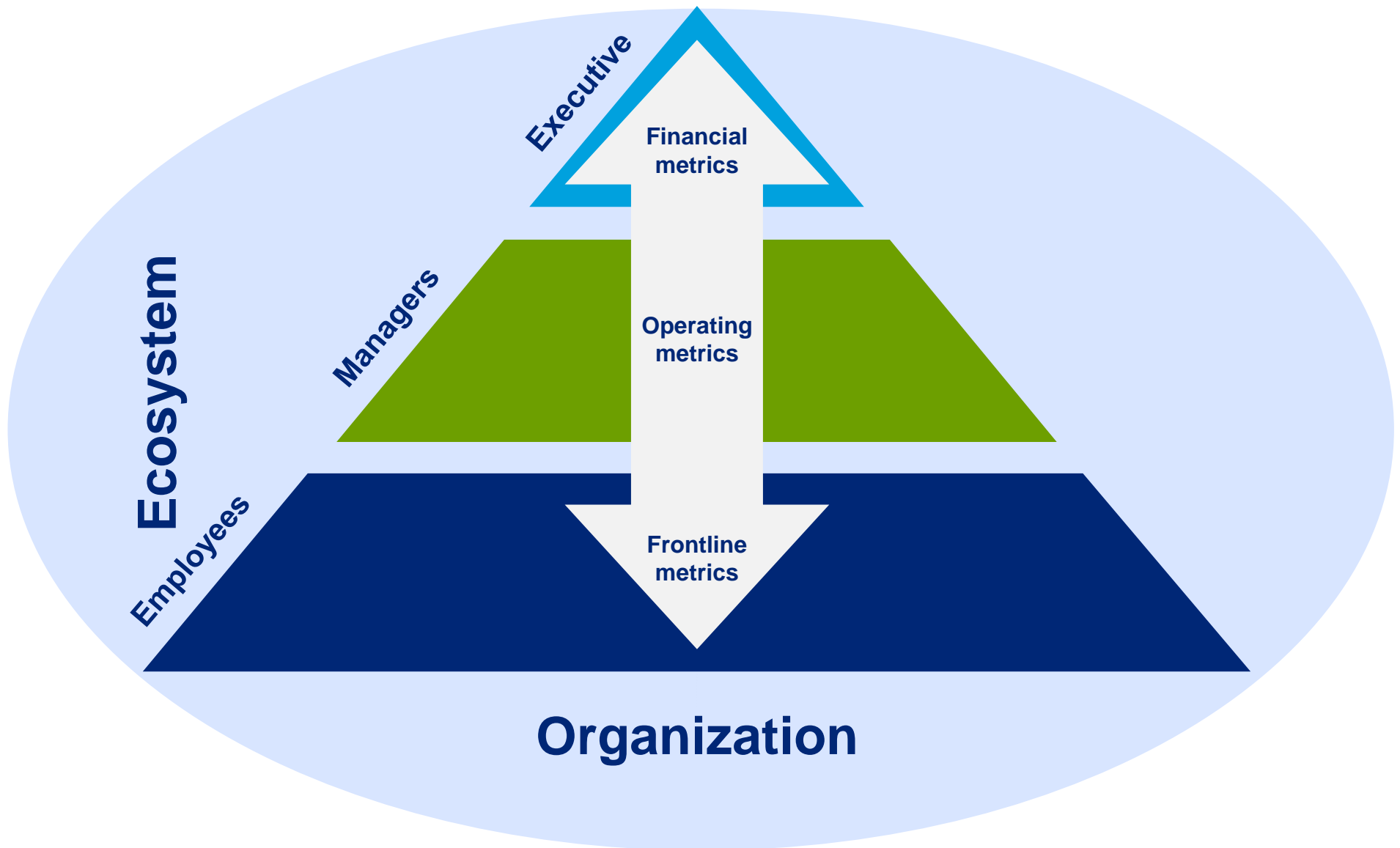
## Outputs

- Increased sales
- Improved customer loyalty
- Improved merchandise and inventory management



# Target early deployments

Focus on “metrics that matter.”



# Use data to build relationships

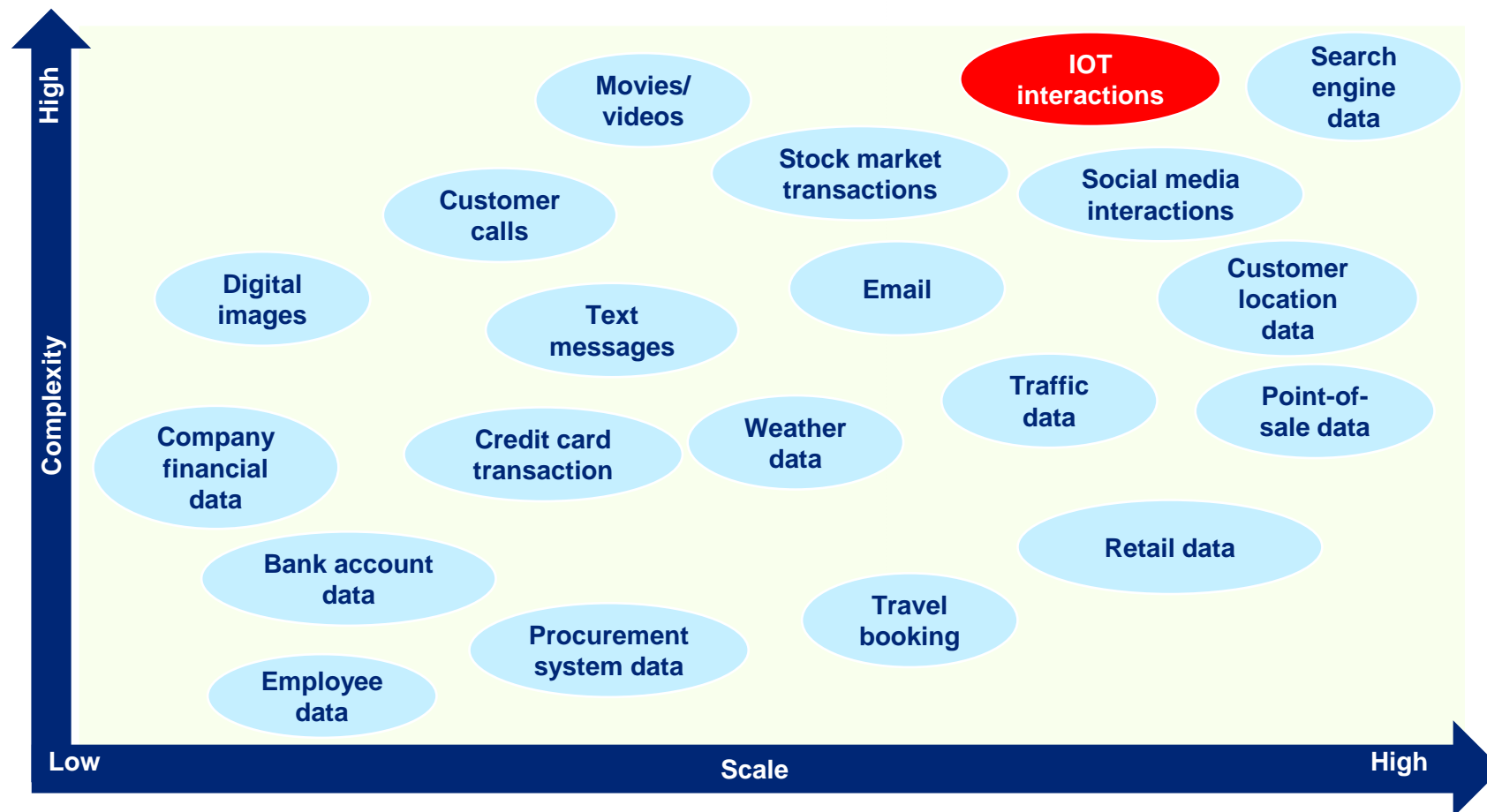
Use readily available sensor data to understand the context and build a relationship.

- Real-time data
- “Mash-ups” for context
- Predictive analytics
- Visualization



# Maximize data transparency and offer choices

- Define the data value for customers
- Give control to the customers
- Provide transparency into how data is being used





# Develop security that is both preventative and responsive

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***“With 26 billion devices expected to be connected to the IoT by 2020, imagine again what the lack of a robust security infrastructure would mean for that M2M-enabled car you might be driving.” — ZDNet, 2014***

- Complex ecosystem
- Device disparity
- Operating systems disparity
- Standards disparity
- Data types disparity
- Geographical disparity
- Intracompany vs. intercompany security
- Cyber vs. physical security
- Focus and awareness at all levels

# Considerations for the CFO

- Does your organization have a comprehensive IoT strategy?
- Who is involved in developing the strategy? Who drives it?
- What business value drivers influence decision making?
- How do you measure ROI?
- Is the focus on financial or operating metrics or both?
- Have you considered the tax implications of IoT?



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