

Digital Business in Manufacturing – Trends and Technologies

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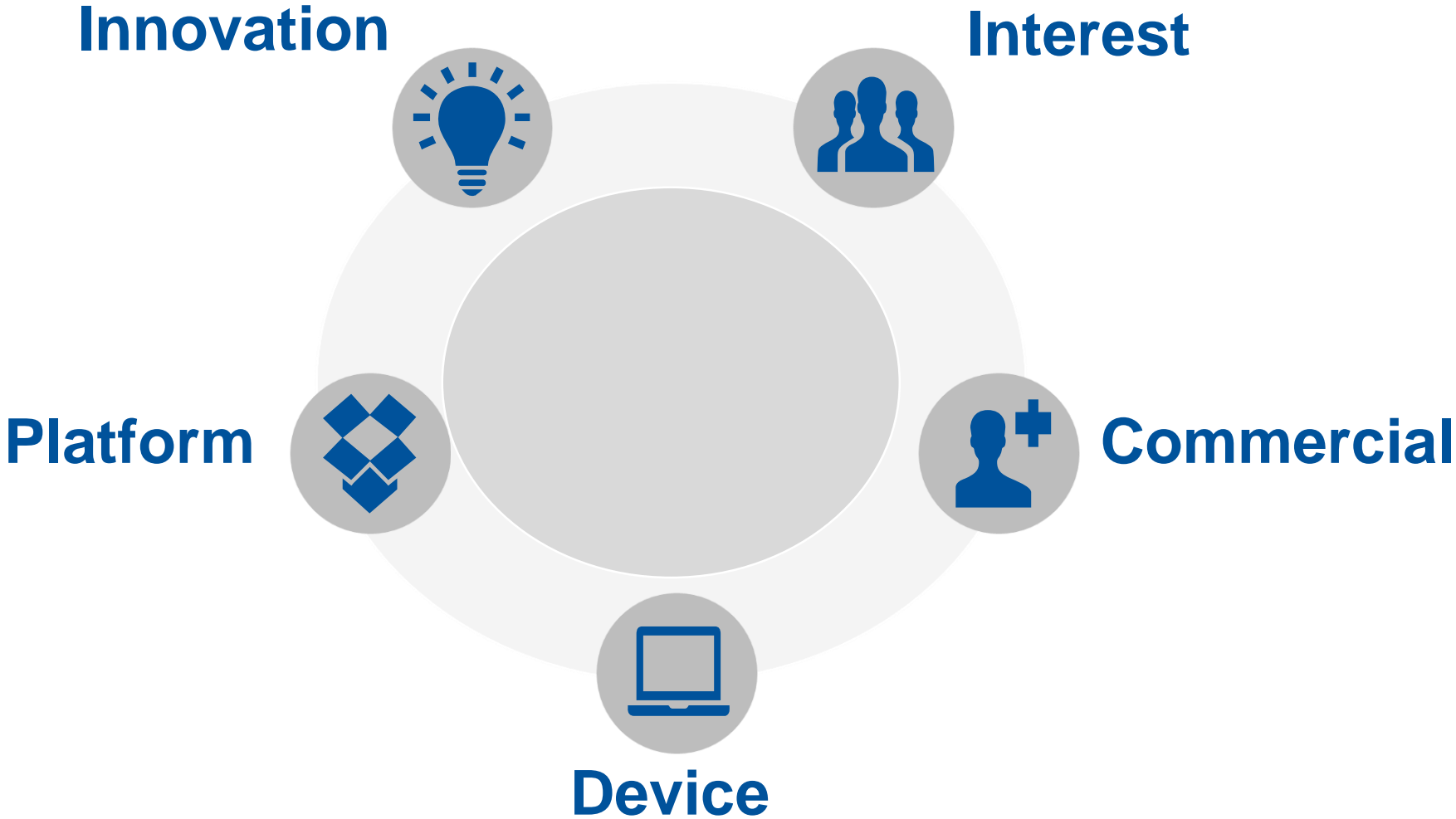
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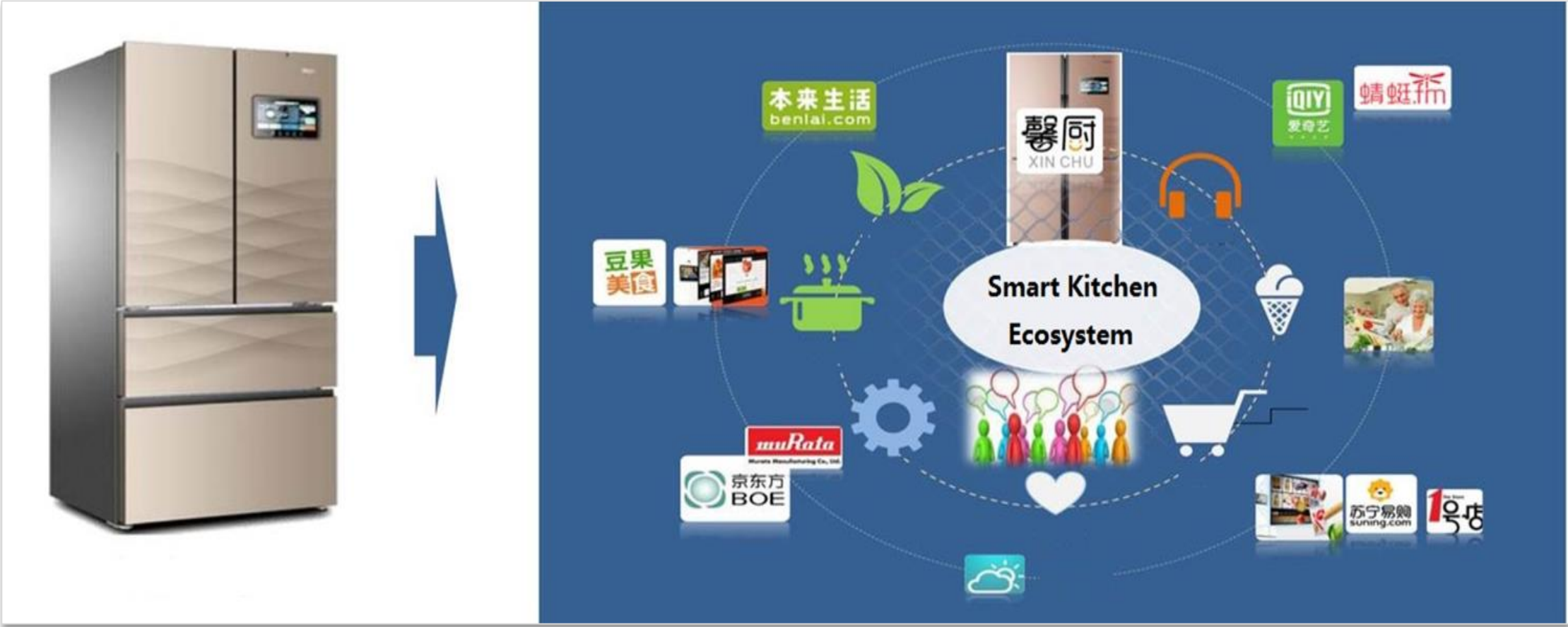
Agenda

- Digital trends in manufacturing industry
 - Digital Ecosystem
 - From Selling Product to Selling Service
 - Customized Product
- Emerging technologies in manufacturing industry
 - AI
 - Digital Twin
 - IoT Platform
 - AR/VR
 - ...

Determine the Right Kind of Ecosystem to Pursue



Shift From Producing Products to Producing Ecosystems

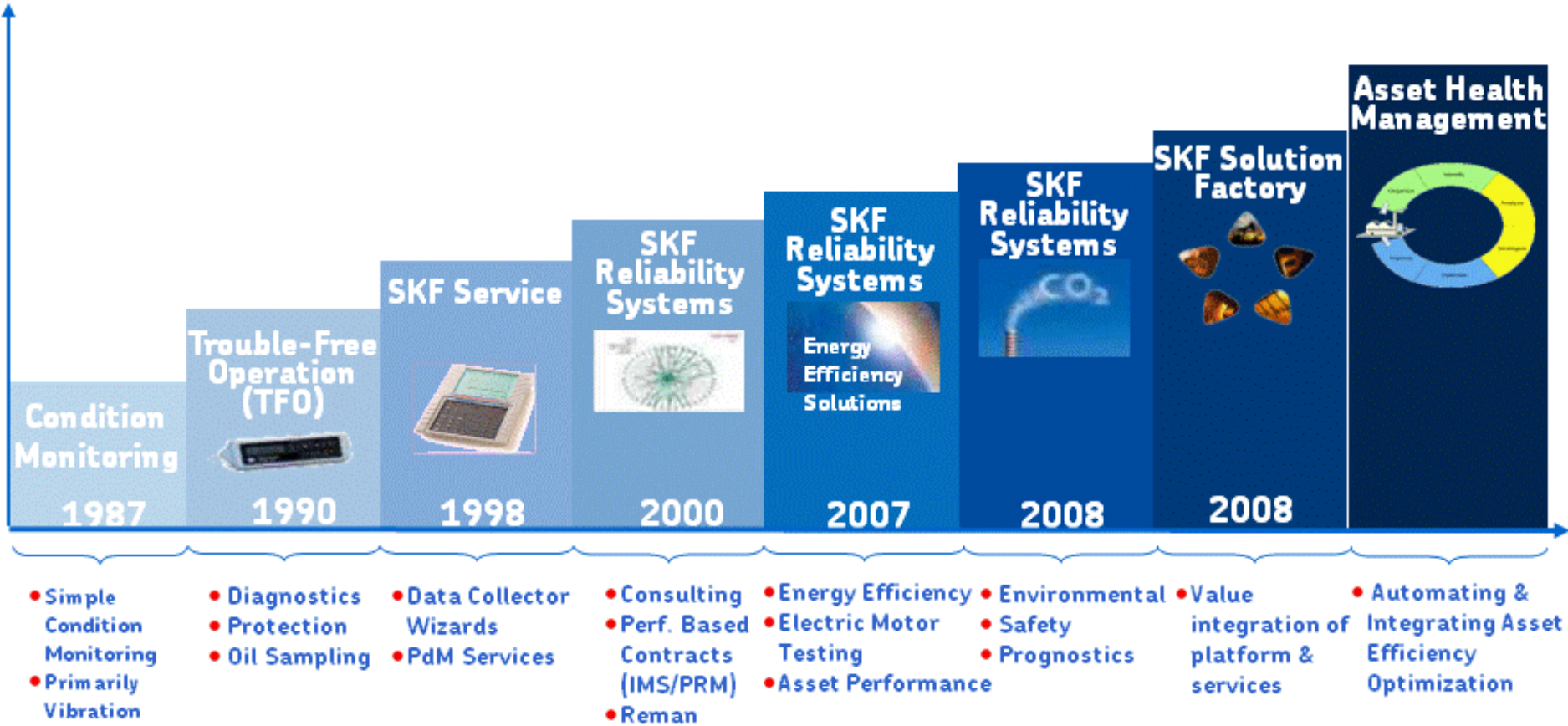


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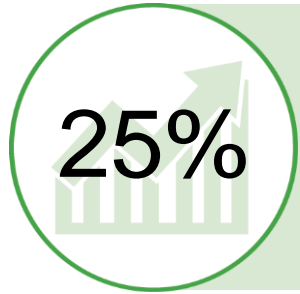
From Selling Product to Selling Service



Case Study: SKF's Shift From Component Producer to Knowledge Engineering Partner



While You've Been Thinking About Customization ...



Profitability — NPD Study

Customers are willing to pay up to 25% more for customized products



Branding

Increase in Facebook traffic for customized product



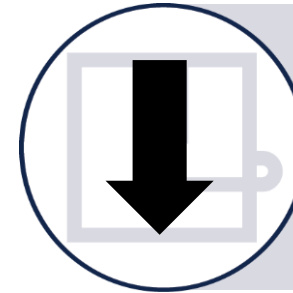
Reinvent

Change business model to reinvent
From \$50m to \$57b



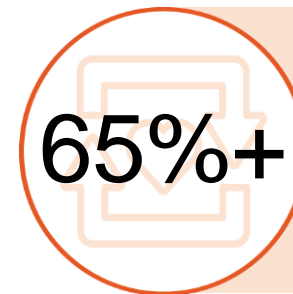
Trends

Mine customization data to create new mass production product successes



Fewer Returns

Reduce returns with customers investing in personalized products



Customer Retention

Customized product companies see much higher customer retention rates

Pioneer: Dell's Configurable Product Line

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Intel® Core™ Processors

New XPS 13 2-in-1

Beauty without borders. Video: Dell XPS 13 2-in-1 (2017) Product Overview 1:03

The world's smallest* 13-inch 2-in-1 InfinityEdge display for virtually borderless viewing and gorgeous detail with the latest Intel® processors and optional UltraSharp QHD+.

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Tech Specs & Customization New XPS 13 2-in-1 [View all configurations](#)

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Components

Memory More Info

8GB LPDDR3 1866MHz

Processor More Info

7th Generation Intel® Core™ i7-7Y75 Processor (4M cache, up to 3.6 GHz)

Operating System Help Me Choose

Windows 10 Home 64-bit English **Included in price**
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BI/Analytics is Ranked as the Most Important Differentiating Technology

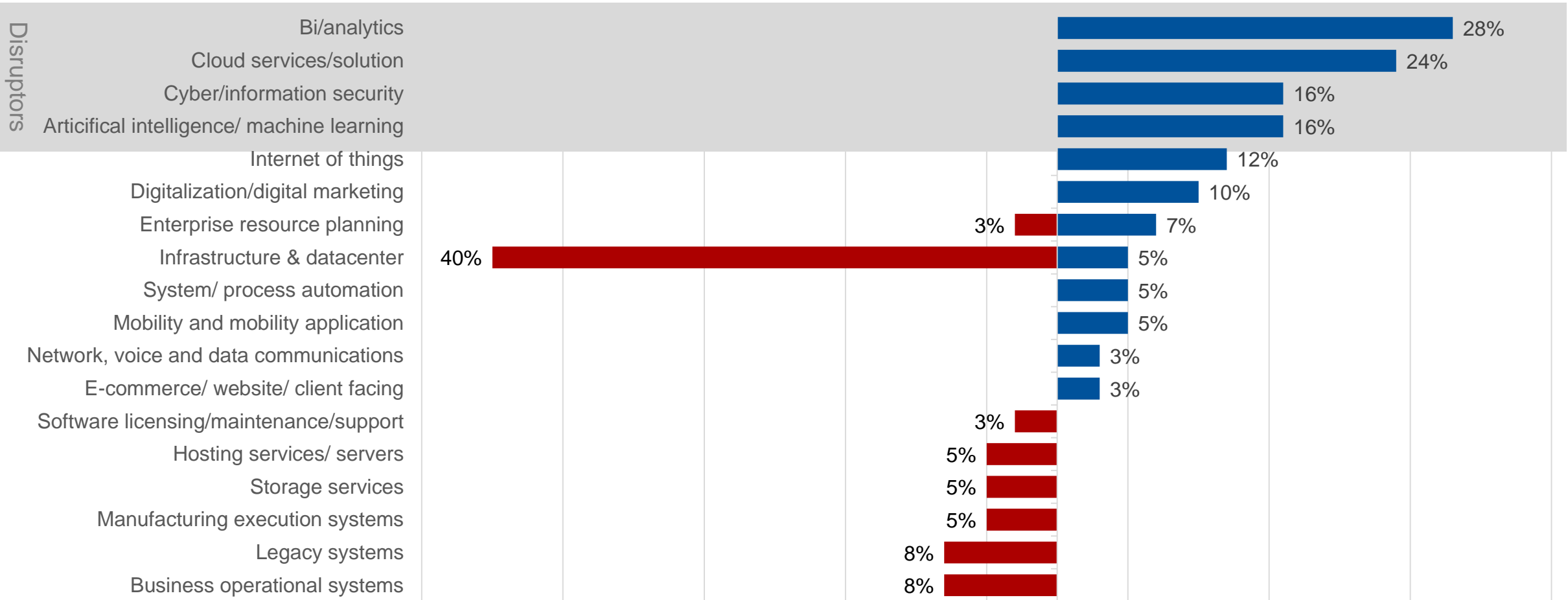
Most Important Technology That Will Differentiate Business/Are Most Crucial to Achieving Organization's Mission

Rank	China (n = 56)	Top Performers (n = 165)	Typical Performers (n = 2,476)	Trailing Performers (n = 193)
1	BI/analytics 36%	BI/analytics 28%	BI/analytics 26%	BI/analytics 20%
2	Artificial intelligence 14%	Digitalization/digital marketing 17%	Digitalization/digital marketing 14%	Digitalization/digital marketing 12%
3	Digitalization/digital marketing 9%	Cloud services/solutions 15%	Cloud services/solutions 9%	Enterprise resource planning 9%
4	Internet of Things 7%	Mobility/mobile applications 7%	Mobility/mobile applications 6%	Cloud services/solutions 8%
5	Financial apps 7%	Artificial intelligence 7%	Internet of Things 6%	Customer relationship management 6%
6	Cloud services/solutions 5%	Internet of Things 6%	Customer relationship management 5%	Internet of Things 6%
7	Mobility/mobile applications 5%	Integration/interoperability 4%	Artificial intelligence 5%	Mobility/mobile applications 5%
8	Customer relationship management 4%	Application programming interface 4%	Infrastructure/data center 5%	Infrastructure/data center 4%
9	Infrastructure/data center 4%	Infrastructure/data center 3%	Enterprise resource planning 5%	Legacy modernization 3%
10	Enterprise architecture 4%	Security and risk 3%	Automation 4%	Integration/interoperability 3%

Percentage of Respondents

Base: All answering, excludes DK, n varies by segment
 Showing the 10 most common answers per segment, coded open-text responses
 Which technology area do you think is most important to helping your business differentiate and win?/is most crucial to achieving your organization's mission?
 ID: 346746

Relentlessly Rebalance Your Technology Portfolio



Base: All answering, excludes DK, n varies by segment

Showing the 10 most common answers per segment. coded open-text responses

- What are the technology areas where your organization will be spending the highest amount of new or additional funding in 2018?
- What are the technology areas where your organization will be reducing funding by the highest amount in 2018 compared to 2017?

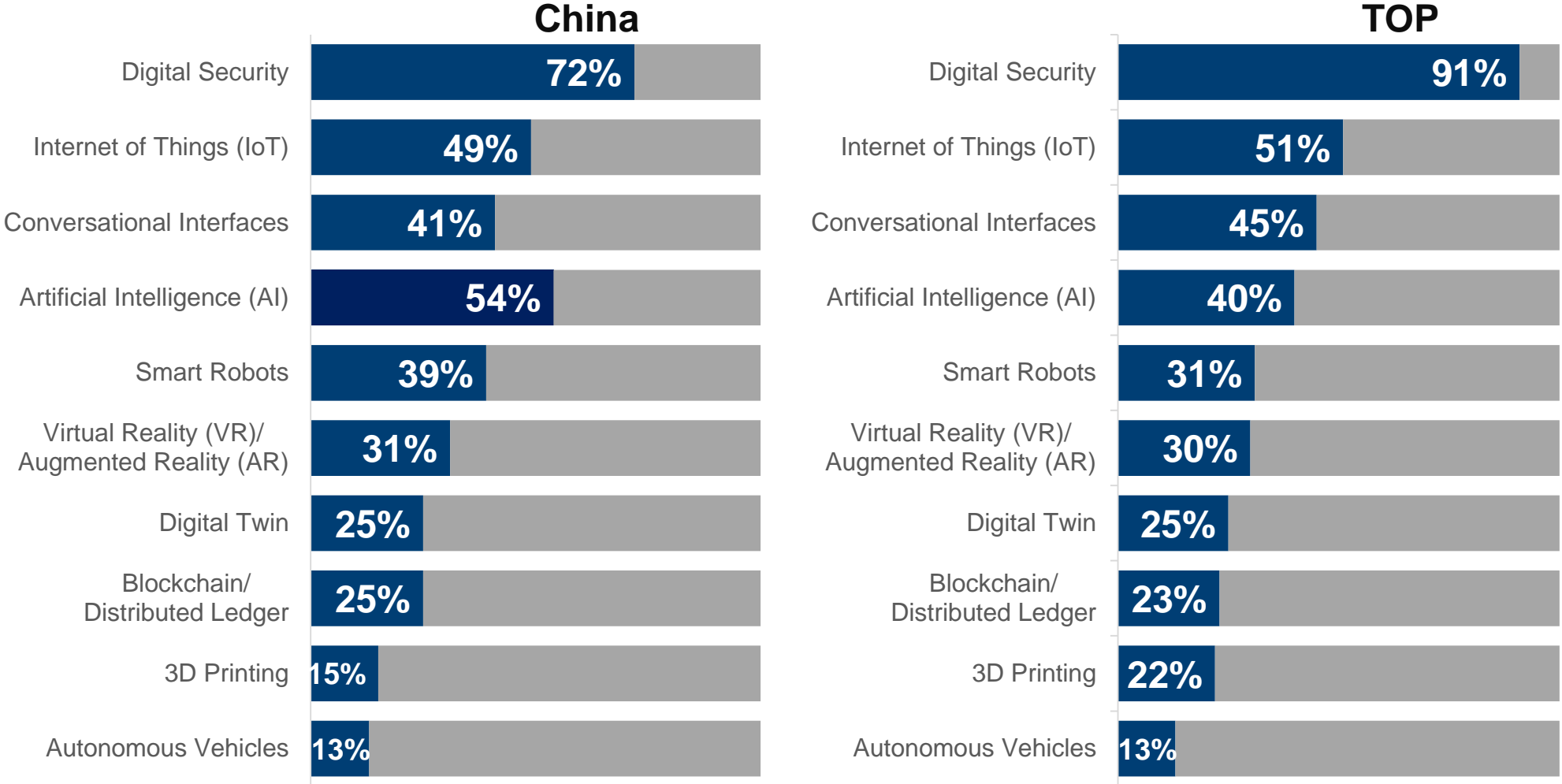
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Disruptive Technologies Approaching a Tipping Point

Percentage of respondents that have deployed a technology or are in short-term planning for deployment

■ Have already invested and deployed/ in short-term planning ■ All other responses



What are your organization's plans in terms of the following digital technologies and trends? n = 3,138, Top performer segment, excludes DK, n = 183

Augmented Data Discovery and Analysis



- Citizen data scientist explores autogenerated models
- End user or application-augmented
- Autogenerated models and insights
- NLP/NLQ exploration
- NLG narration

Augmented Data Science and Machine Learning



- Specialist data scientist builds and customizes models
- Embedded
- Assisted model building and customization, tuning, life cycle management

**Collaboration Is Key;
Convergence Will Increase Over Time**

Opportunity

- Move from manual to automated inspection of burger bun production to ensure and improve quality

Data and Analytics

- Photo-analyze over 1,000 buns per minute for color, shape and seed distribution
- Continually adjust ovens and process automatically

Result

- Eliminate thousands of pounds of wasted product per year
- Speed production; save energy
- Reduce manual labor costs



Intelligent Things: Autonomous Vehicles in Specialized Environments



Digital Twins Blend the Real World and Digital World

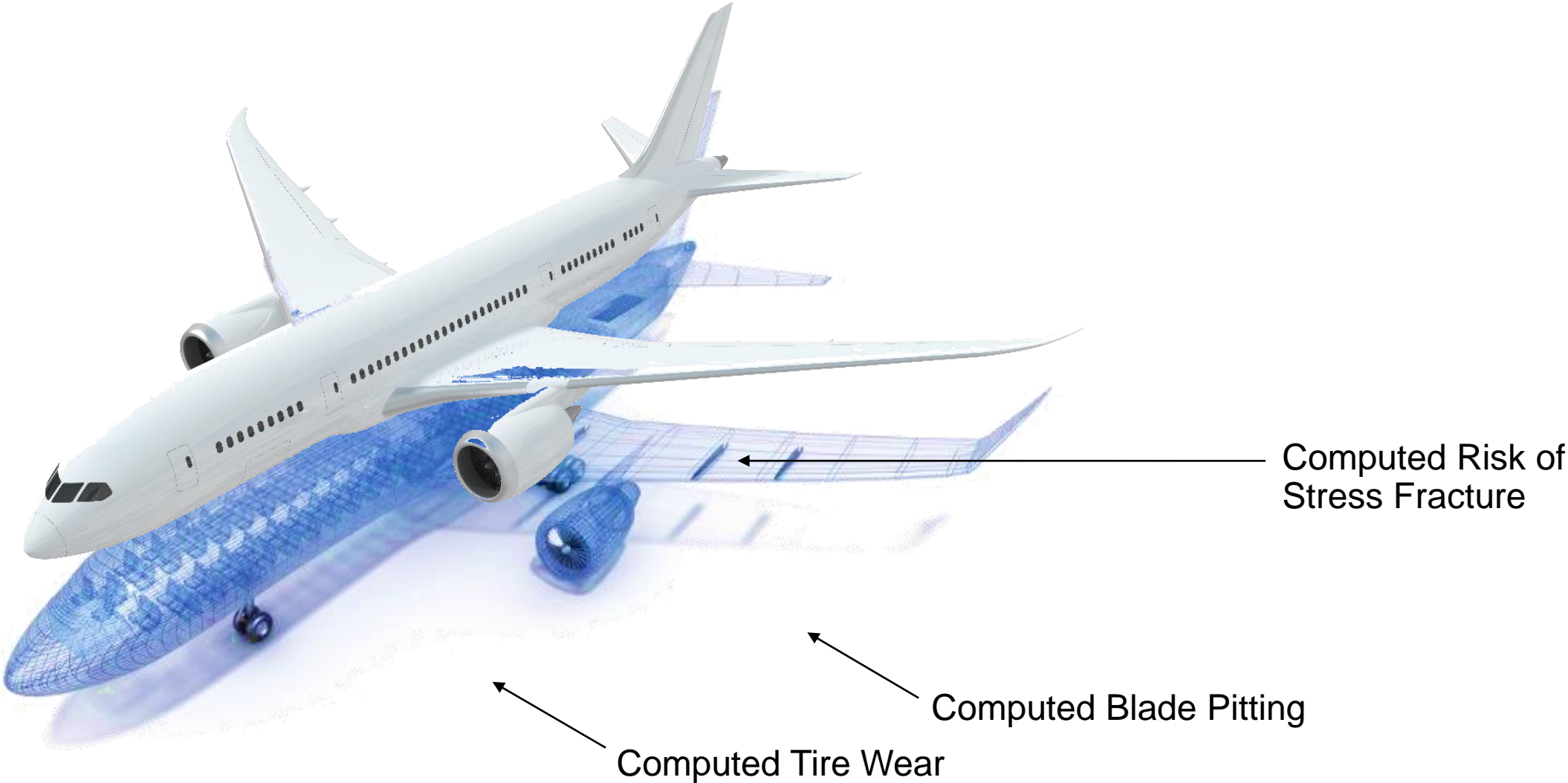
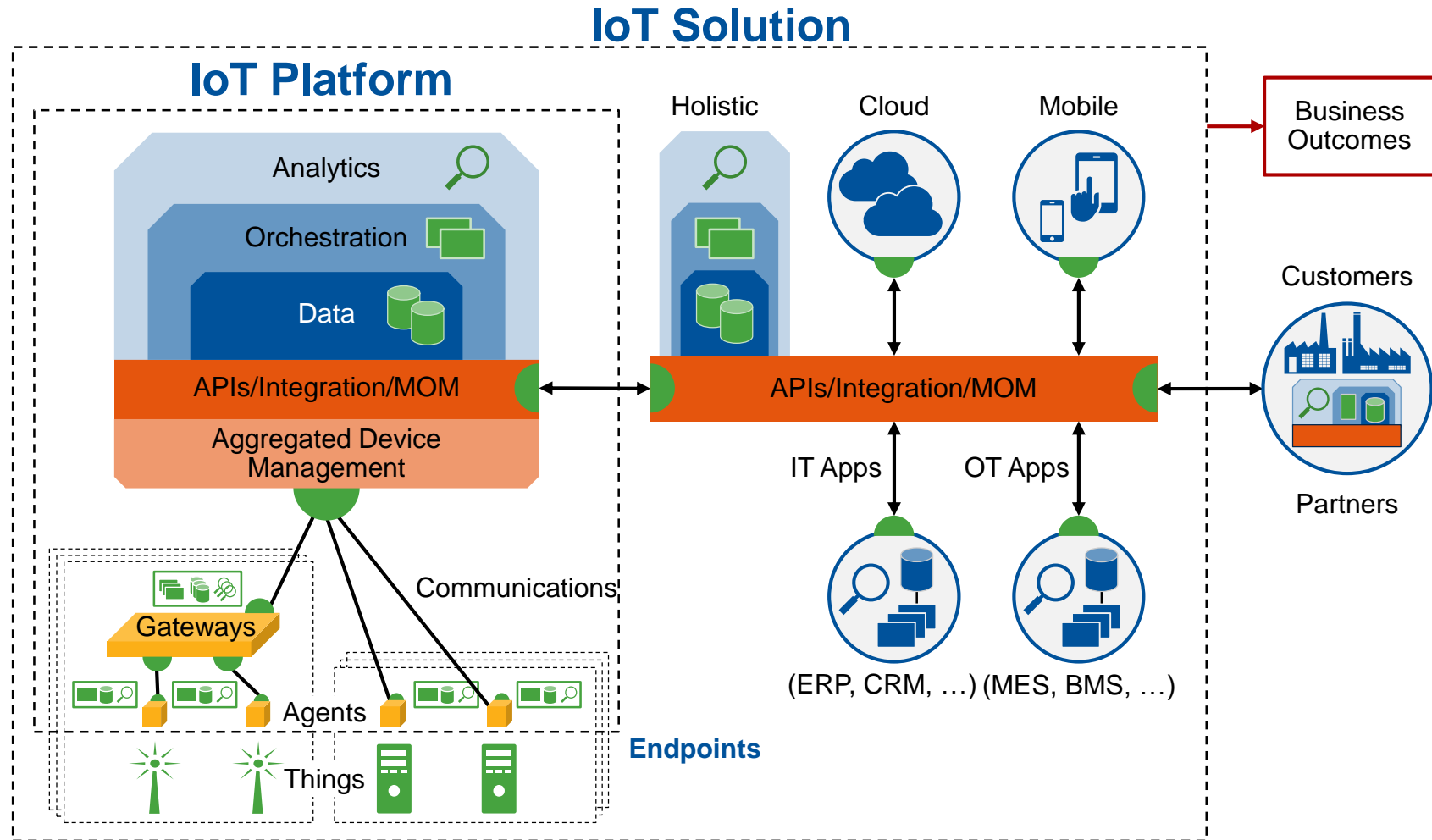


Image source: Gartner

Digital Technology Platforms: IoT Platforms Are Necessary for Solution Success



Microsoft Azure

ORACLE®

Google

SAP®

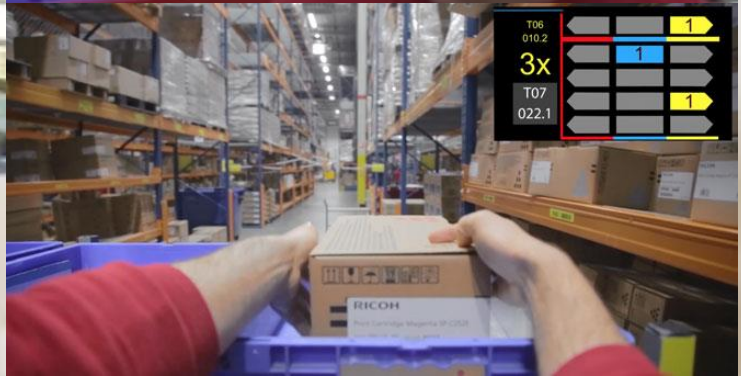


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Virtual and Augmented Reality: Enabling Digital Business Moments and Models



Healthcare Therapies



Simulated Experiences

Molecular Modeling

Thank you!



Great Presentation!

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