클라우드를 중심으로 살펴본
2022년 주요 기술 트렌드 예측과 이해

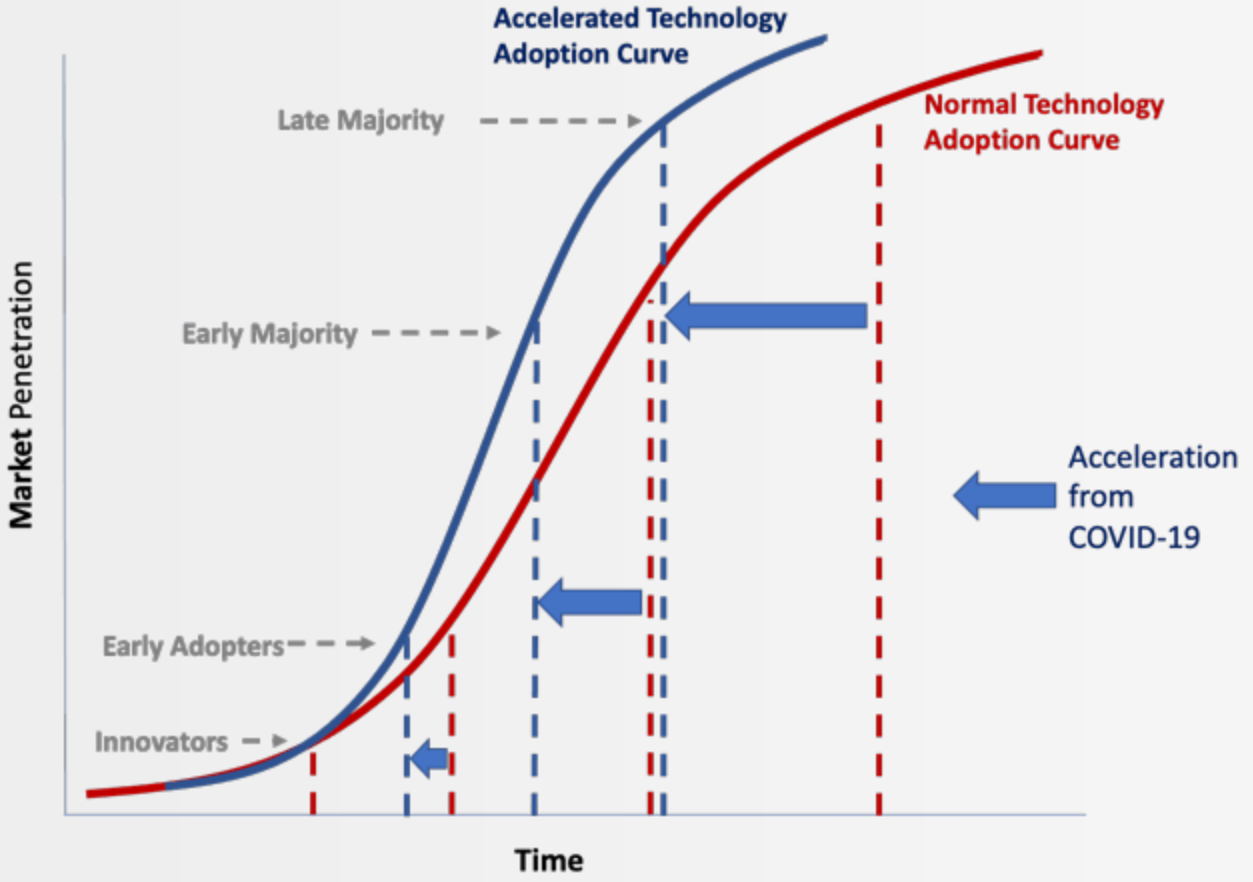
Microsoft
Commercial Software Engineering
최윤석

팬데믹 시대, 사회 변화의 가속화

2022년 주요 기술 트렌드 예측과 이해

The Pandemic is forcing everyone to face the Digital Divide

COVID-19 May Trigger A Technology Revolution

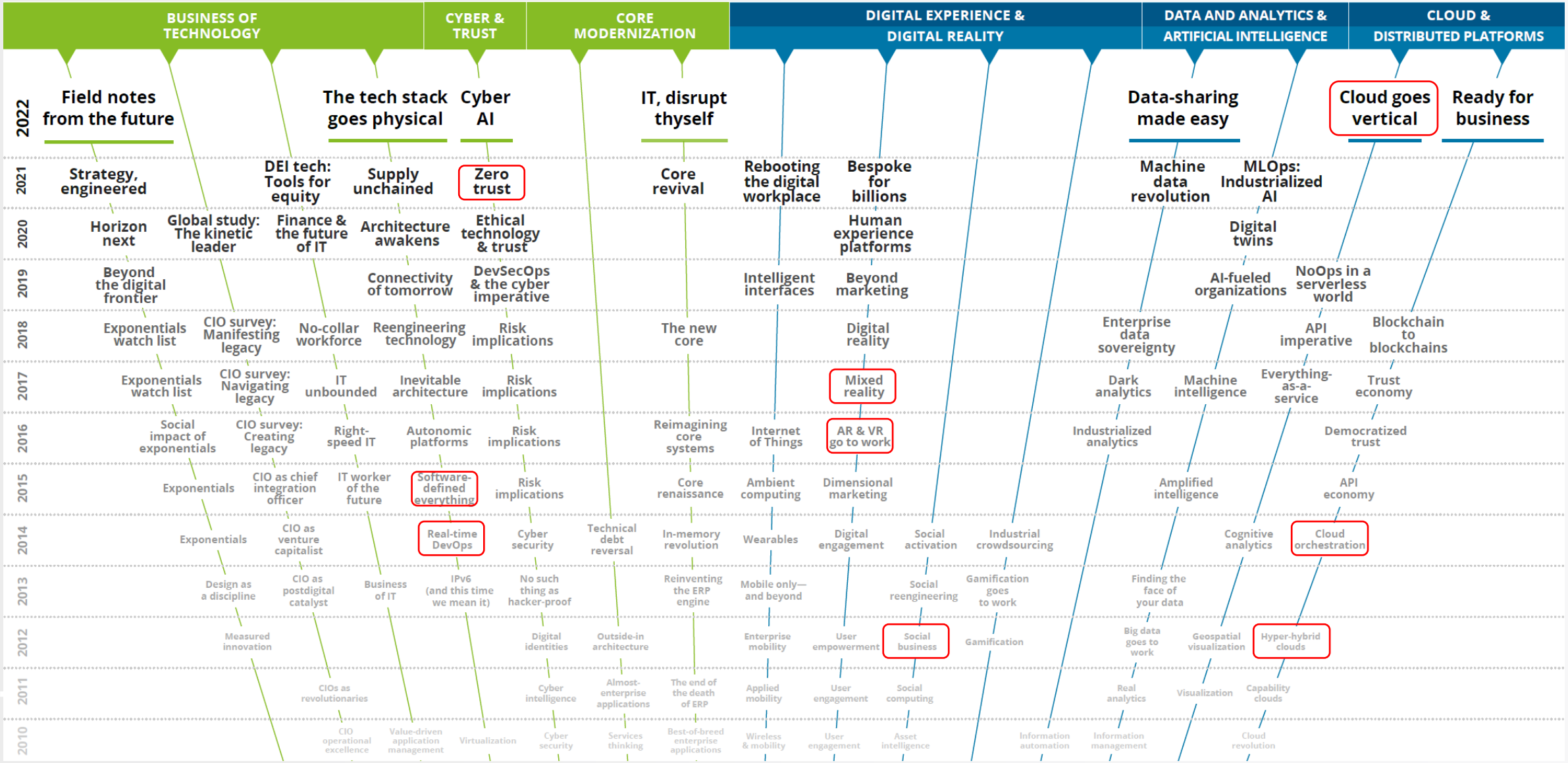


2022년 주요 기술 트렌드 예측과 이해

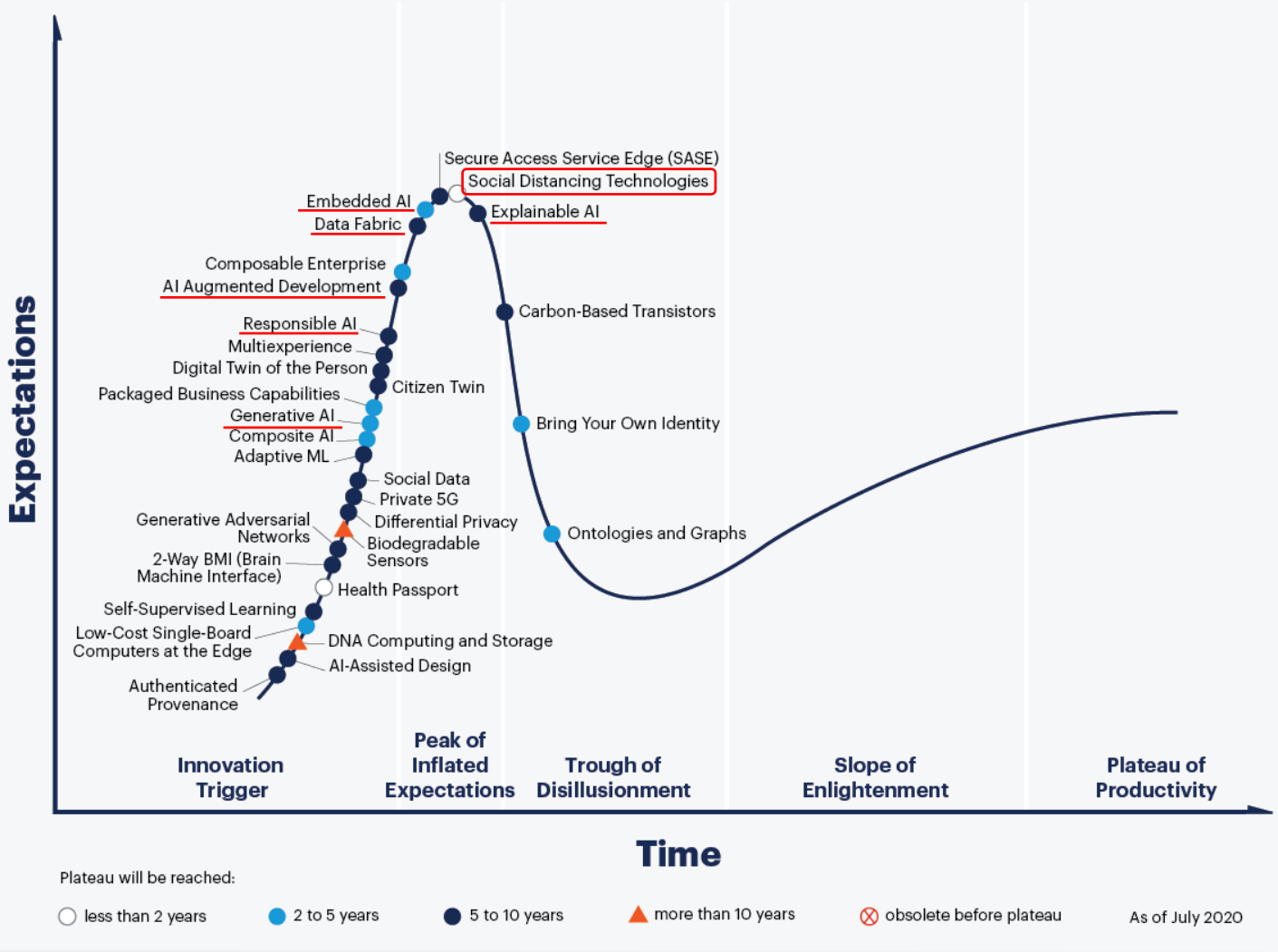
Source: Seeking Alpha (2020/05/04)

그렇다면, 기술 트렌드 변화는?

13 years of research for Trends by Deloitte



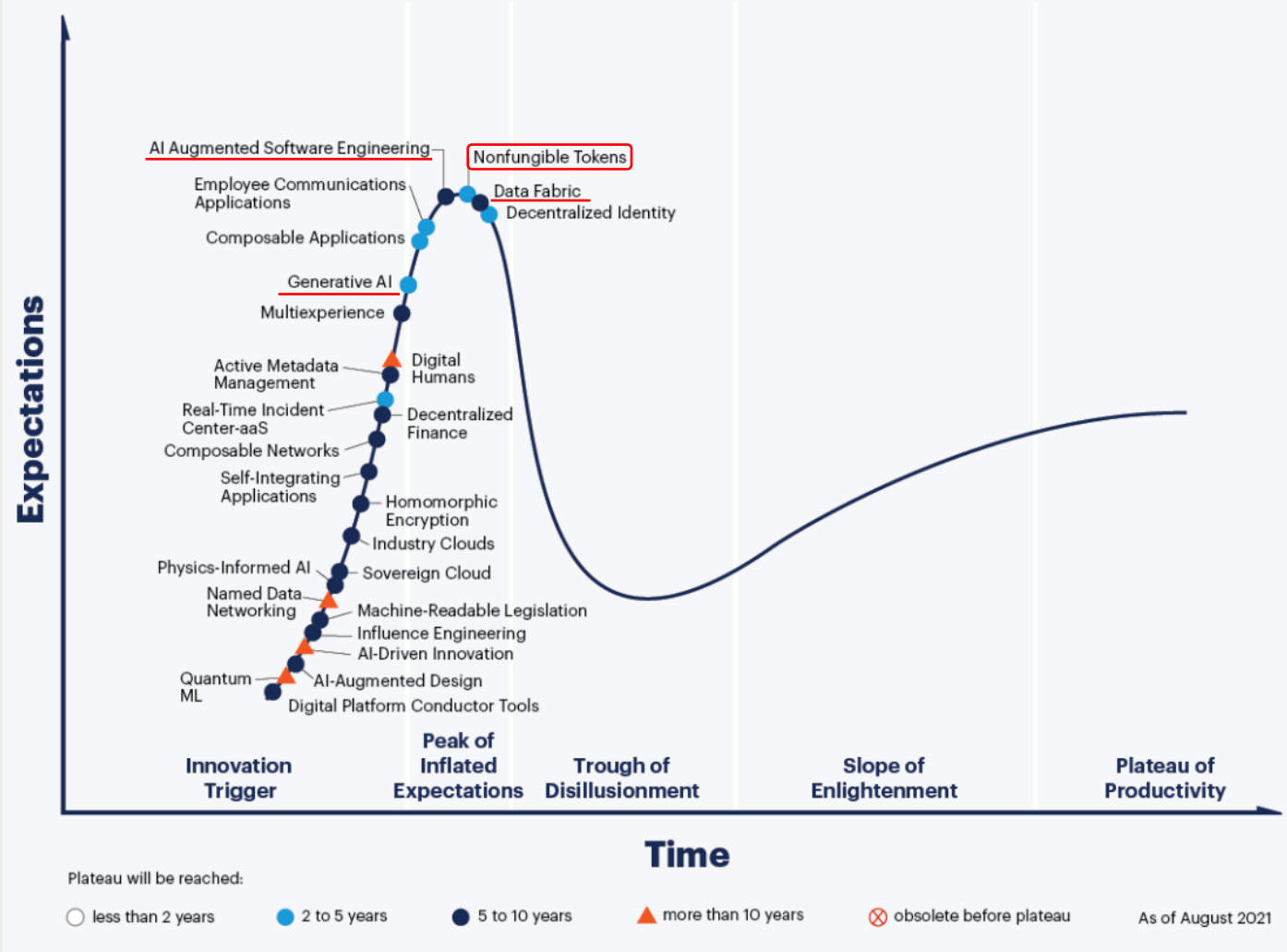
Hype Cycle for Emerging Technologies, 2020



2022년 주요 기술 트렌드 예측과 이해

Source: Gartner (2020/08/18)

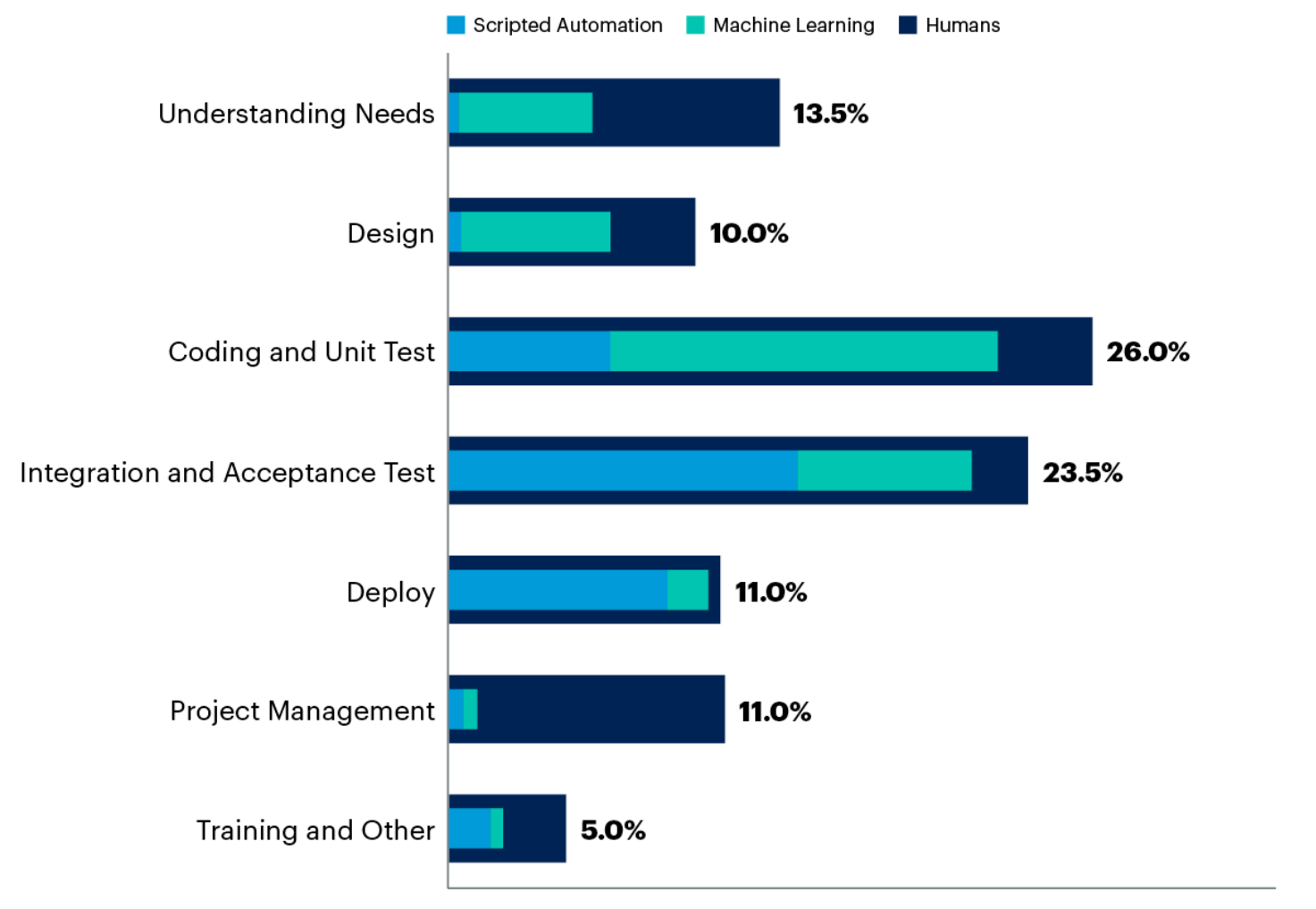
Hype Cycle for Emerging Technologies, 2021



2022년 주요 기술 트렌드 예측과 이해

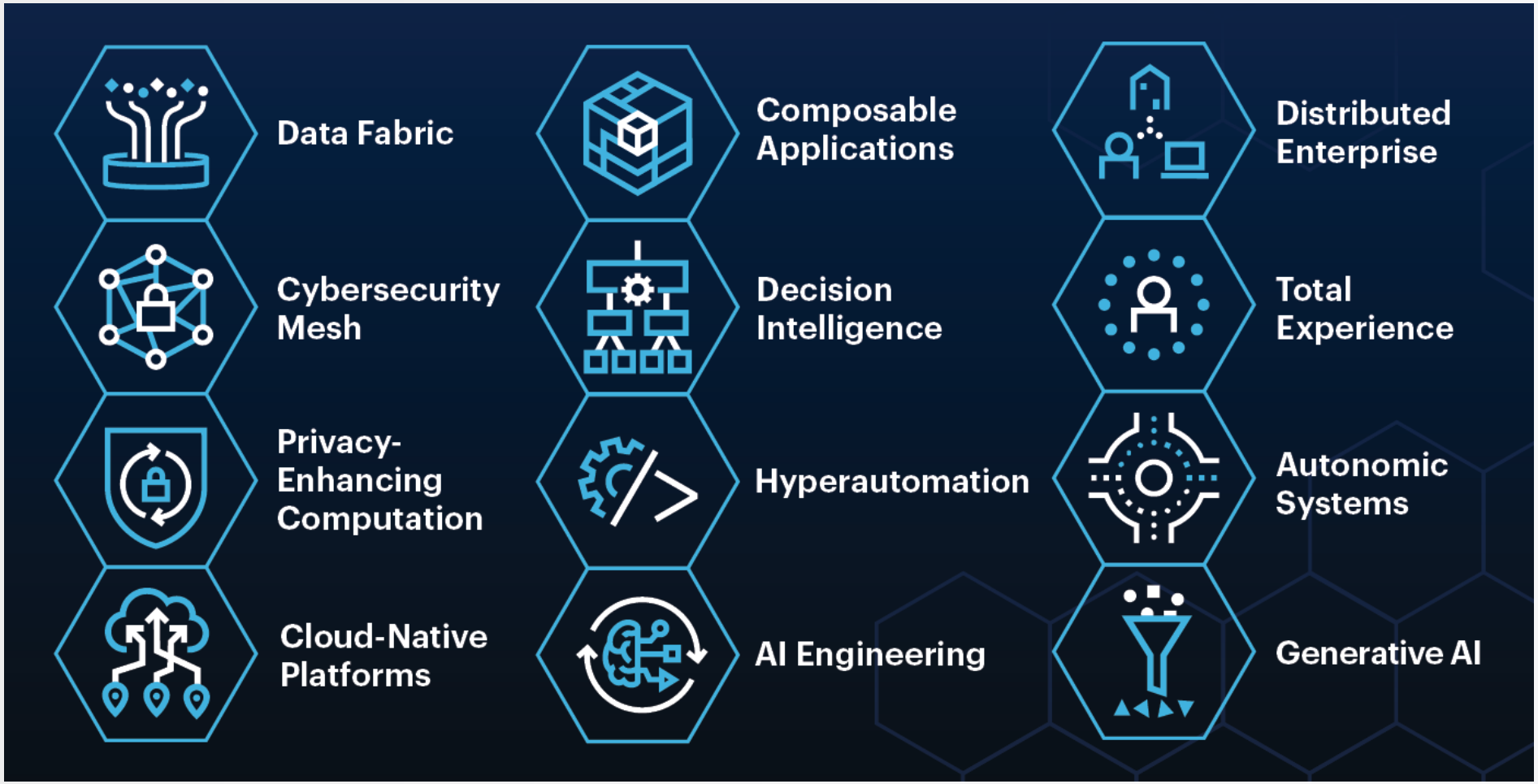
Source: Gartner (2021/08/23)

Potential for Automation across SW Development Life Cycle



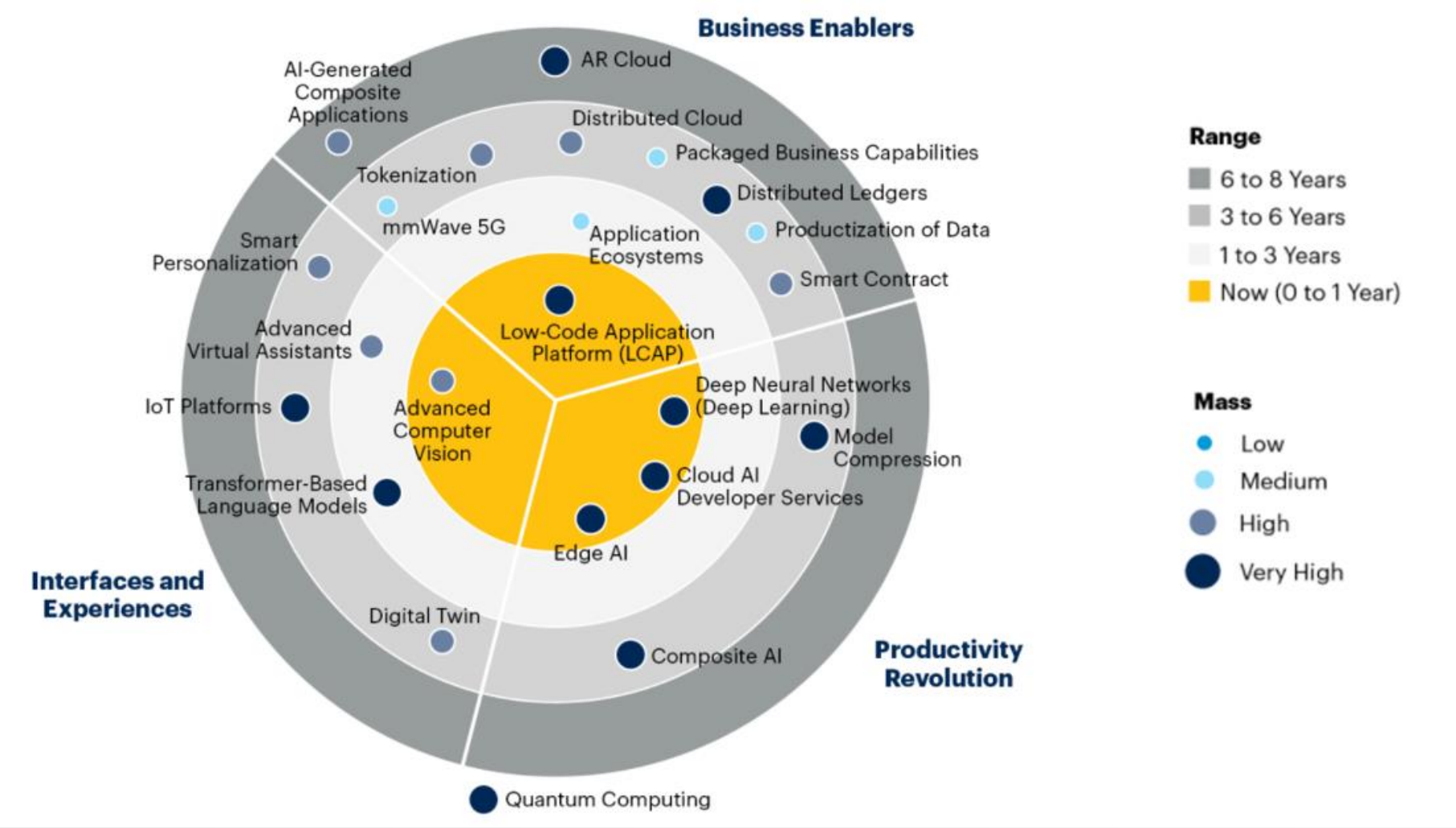
Source: Gartner (2020/12)

Gartner's Top Strategic Technology Trends for 2022



2022년 주요 기술 트렌드 예측과 이해

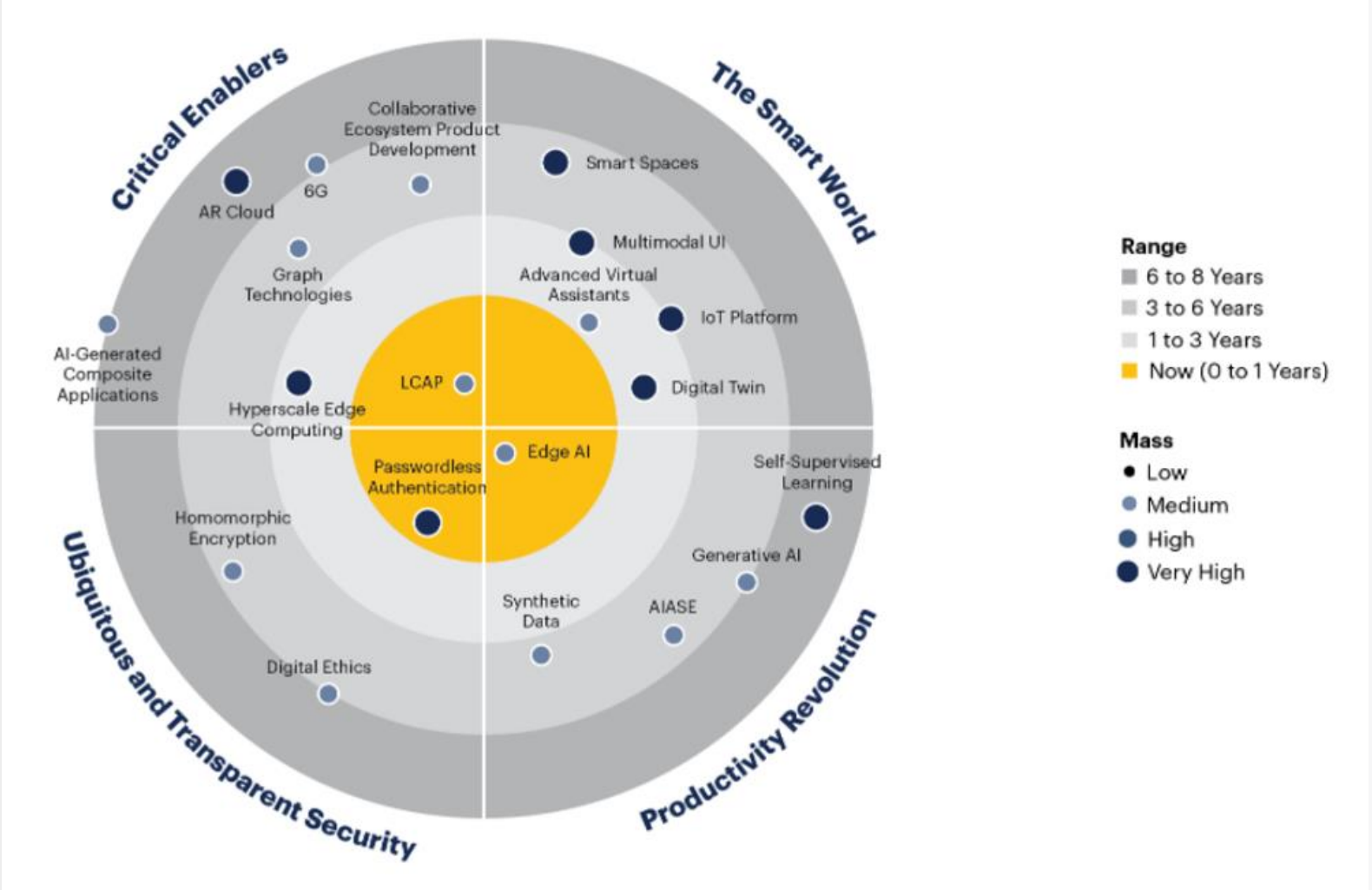
Emerging Technologies and Trends Impact Rader for 2021



2022년 주요 기술 트렌드 예측과 이해

Source: Gartner (2021/01/18)

Emerging Technologies and Trends Impact Rader for 2022



2022년 주요 기술 트렌드 예측과 이해

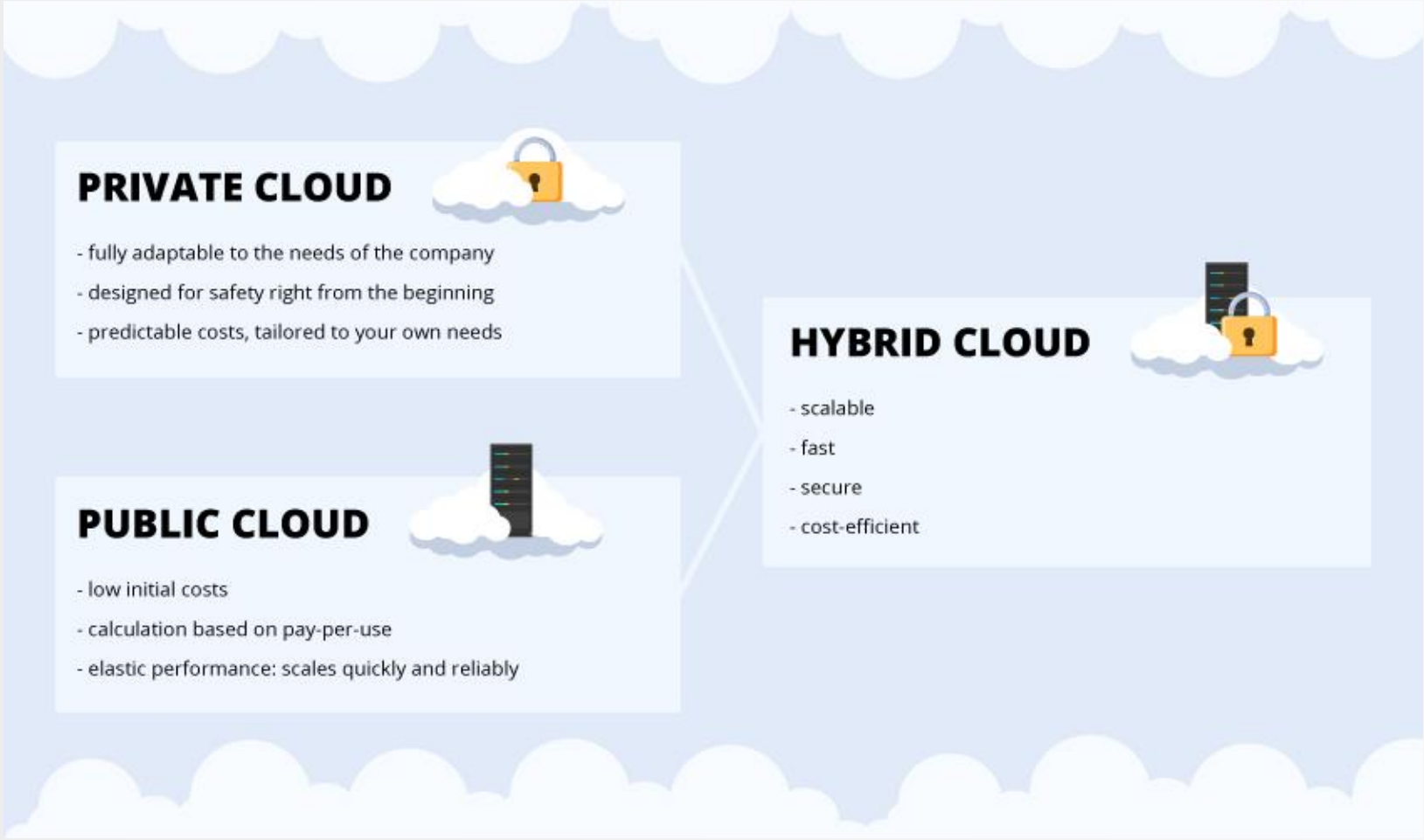
Source: Gartner (2022)

IoT Technology Trends for 2022

1. IoT is developing into a crucial technology for sustainability
2. The platform hype is moving from cloud to the edge
3. IIoT initiatives are transforming manufacturing
4. Cloud-Native applications are on the rise
5. Hyperautomation is transforming operations
6. AI is increasingly found at the (Thin) Edge
7. "Invisible AI" adoption is happening right under our noses
8. Immersive realities (VR/AR) are entering the enterprise environment
9. 5G is becoming "IoT ready"
10. Secure remote access of assets is growing in importance

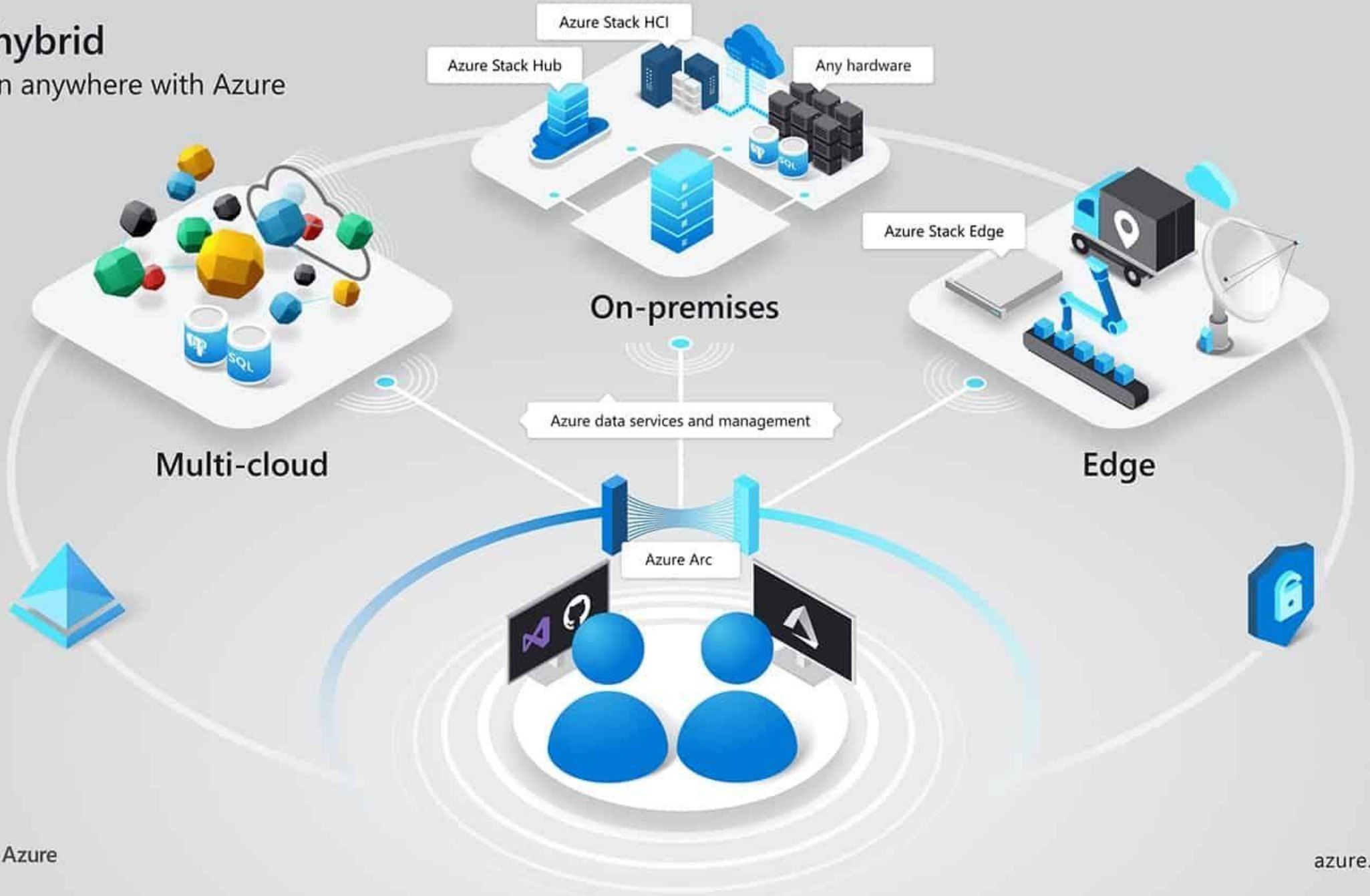
클라우드로 올인?

Private, Public or Hybrid Cloud



Azure hybrid

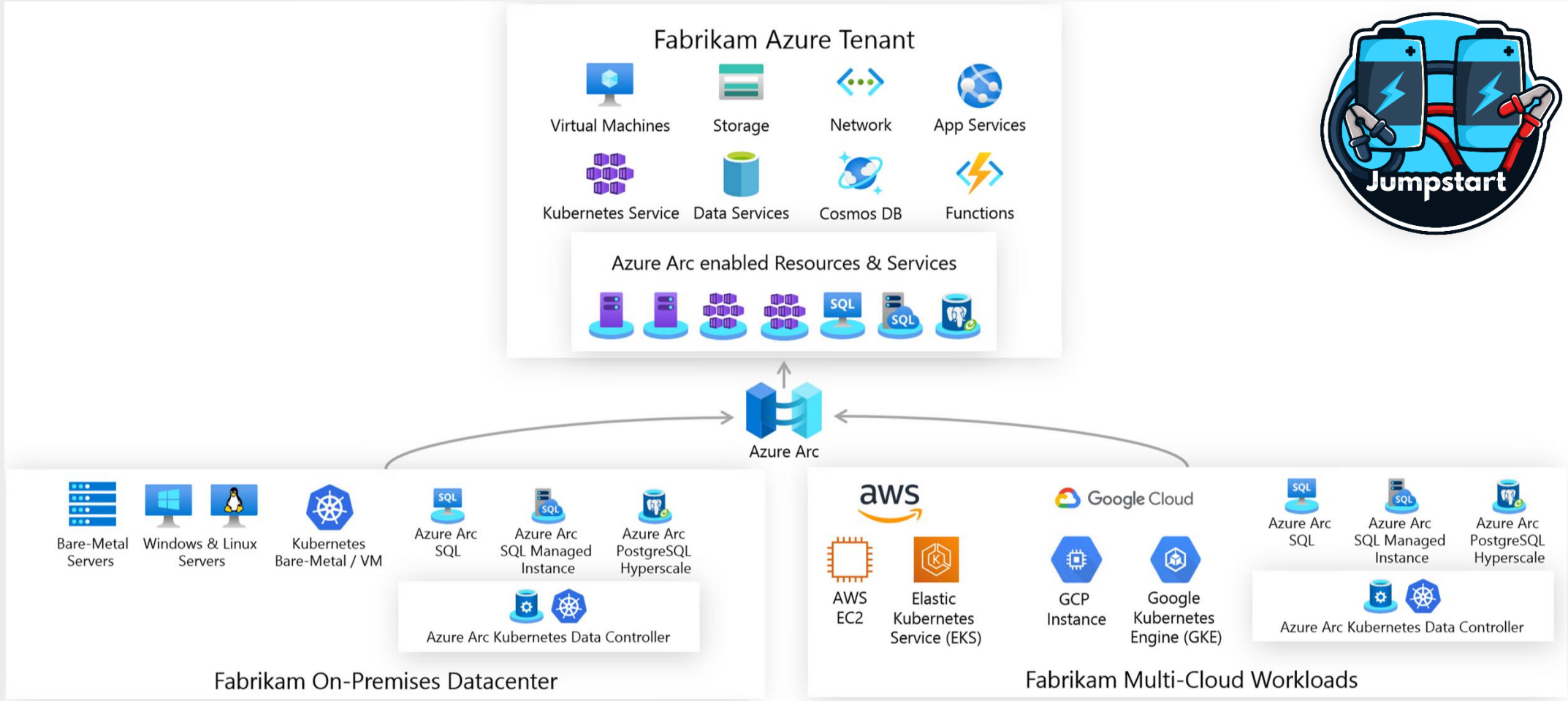
Innovation anywhere with Azure



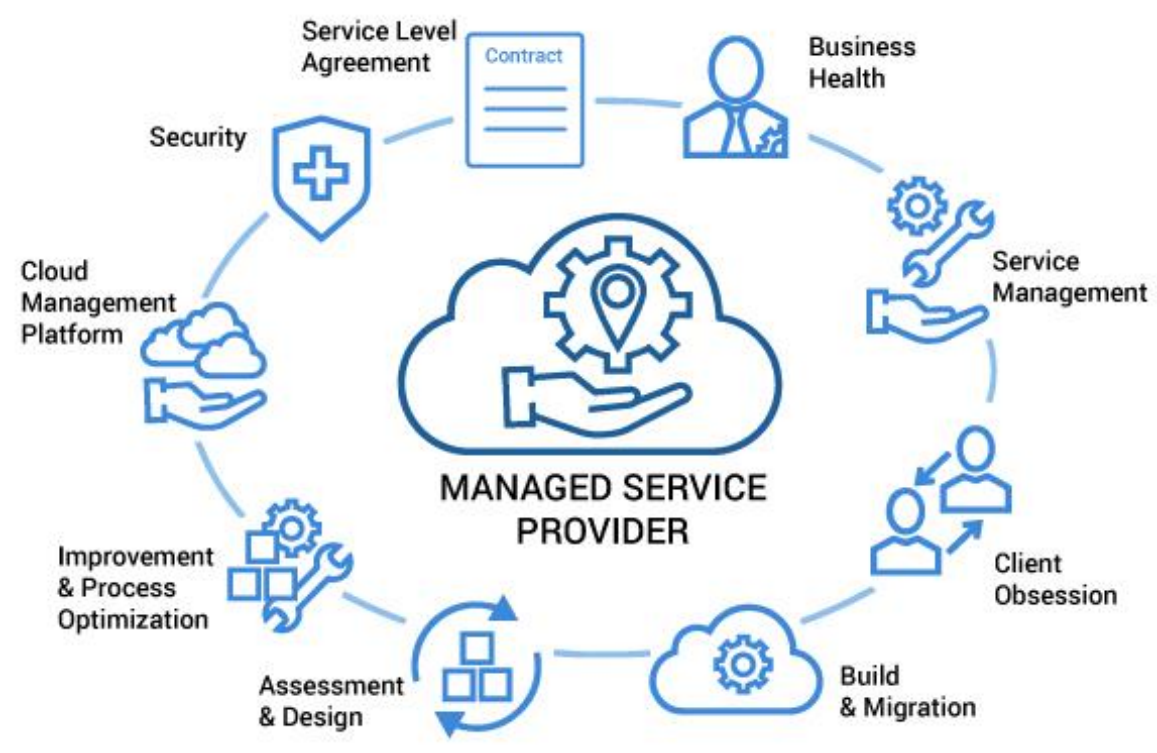
Microsoft Azure

azure.com/hybrid

Azure Arc Jumpstart Project



Continuous growth of MSP



클라우드 상에
AI workload의 지속적인 증가

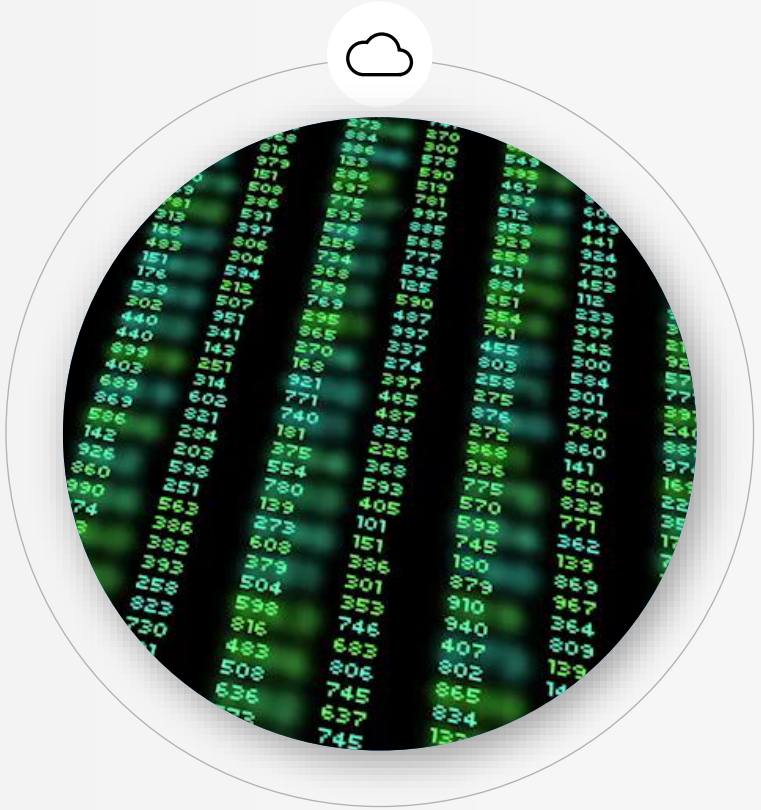
AI in Cloud Computing

2022년 주요 기술 트렌드 예측과 이해

Continuous growth of AI workload on the Cloud

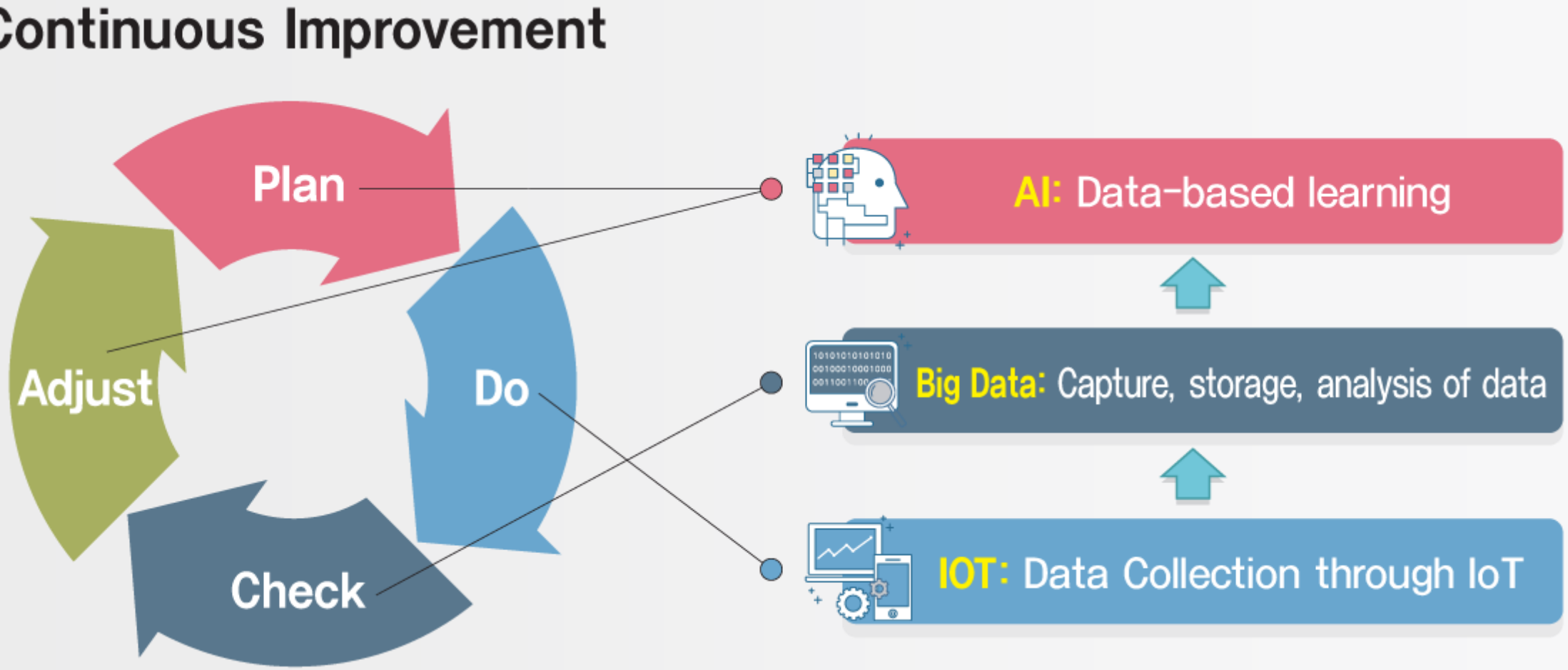
Vast amounts of data

Huge computational power

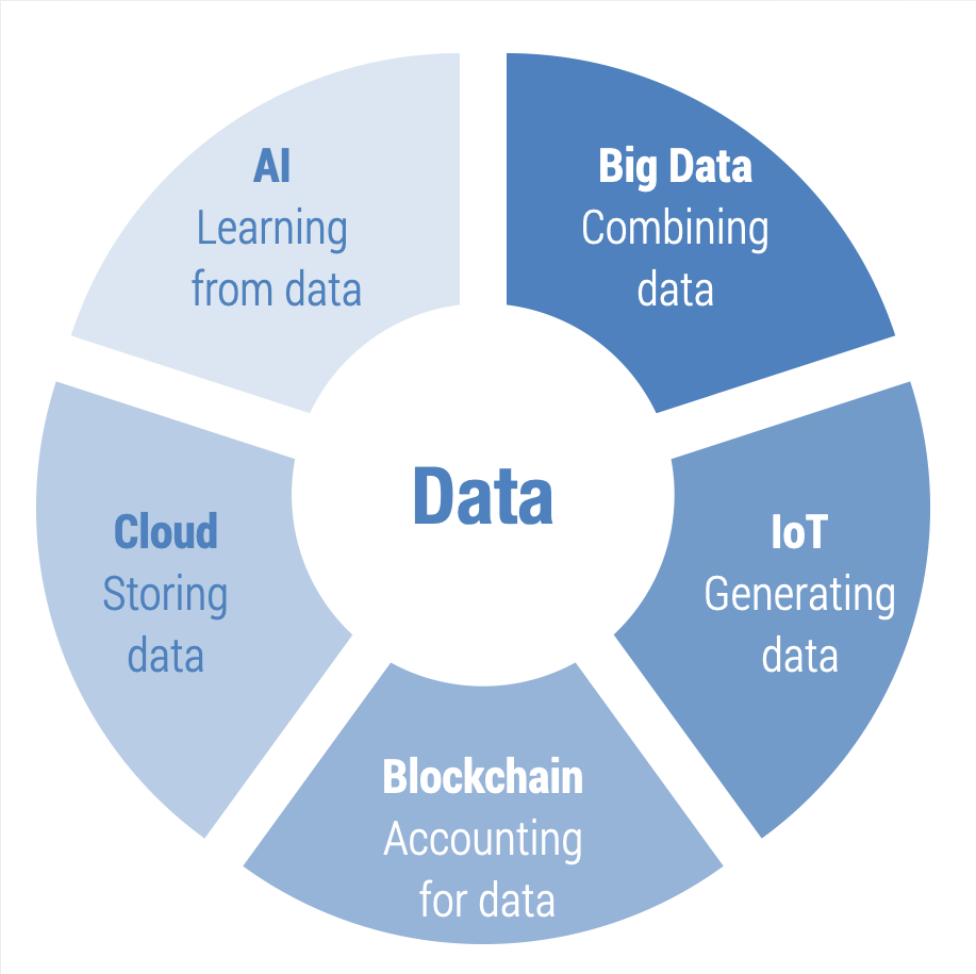


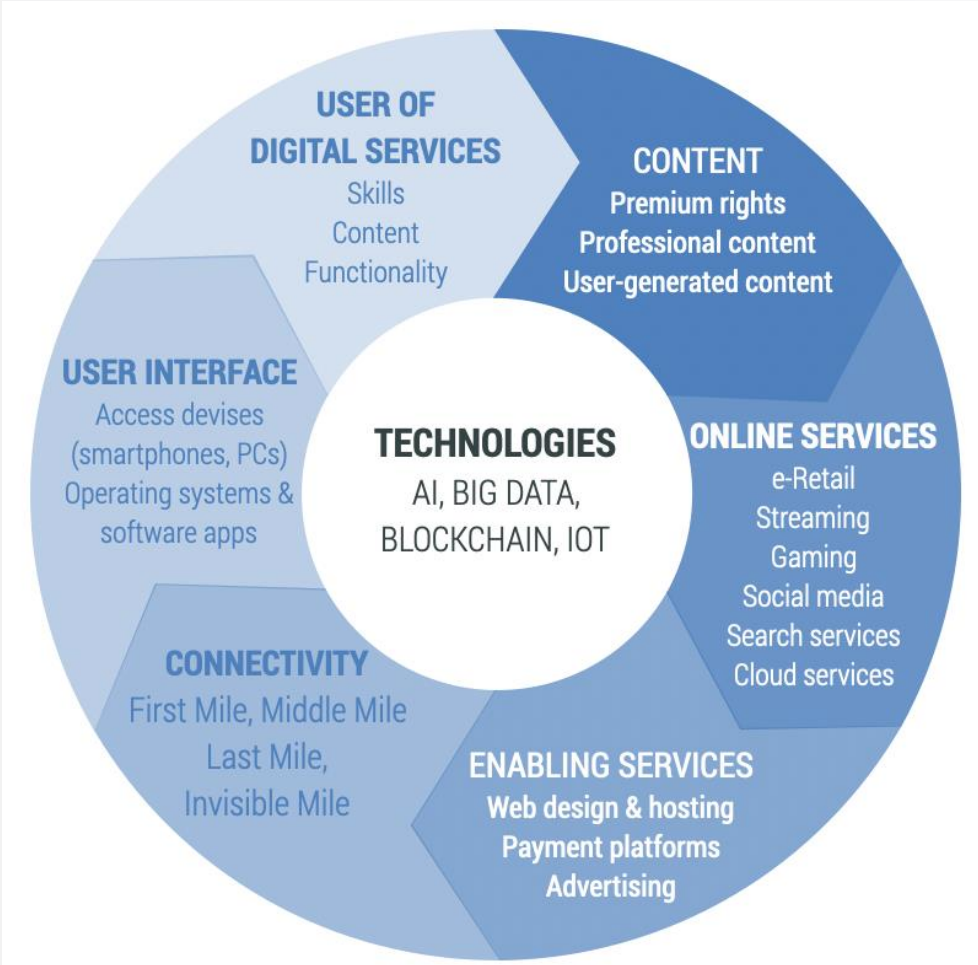
2022년 주요 기술 트렌드 예측과 이해

Infinite Circle for Evolution



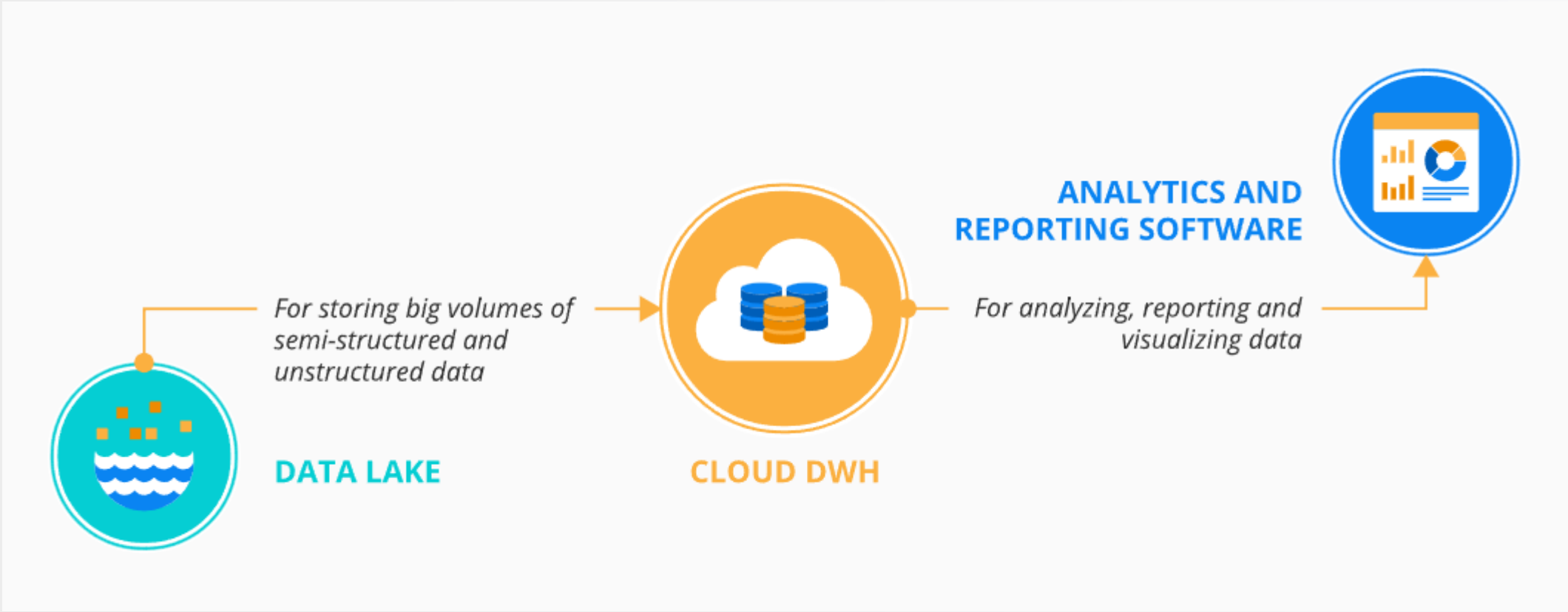
The Evolving Internet Value Chain on Cloud Computing



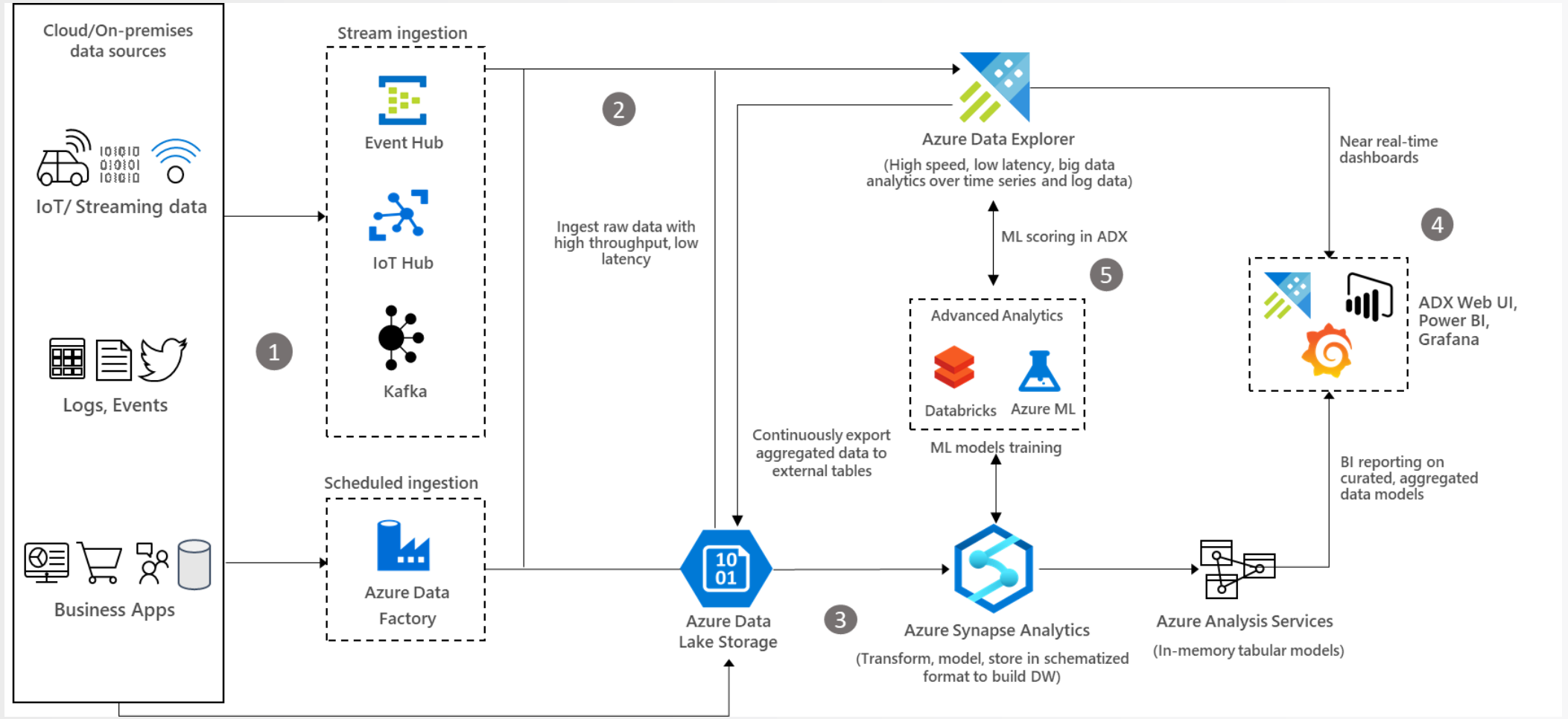


2022년 주요 기술 트렌드 예측과 이해

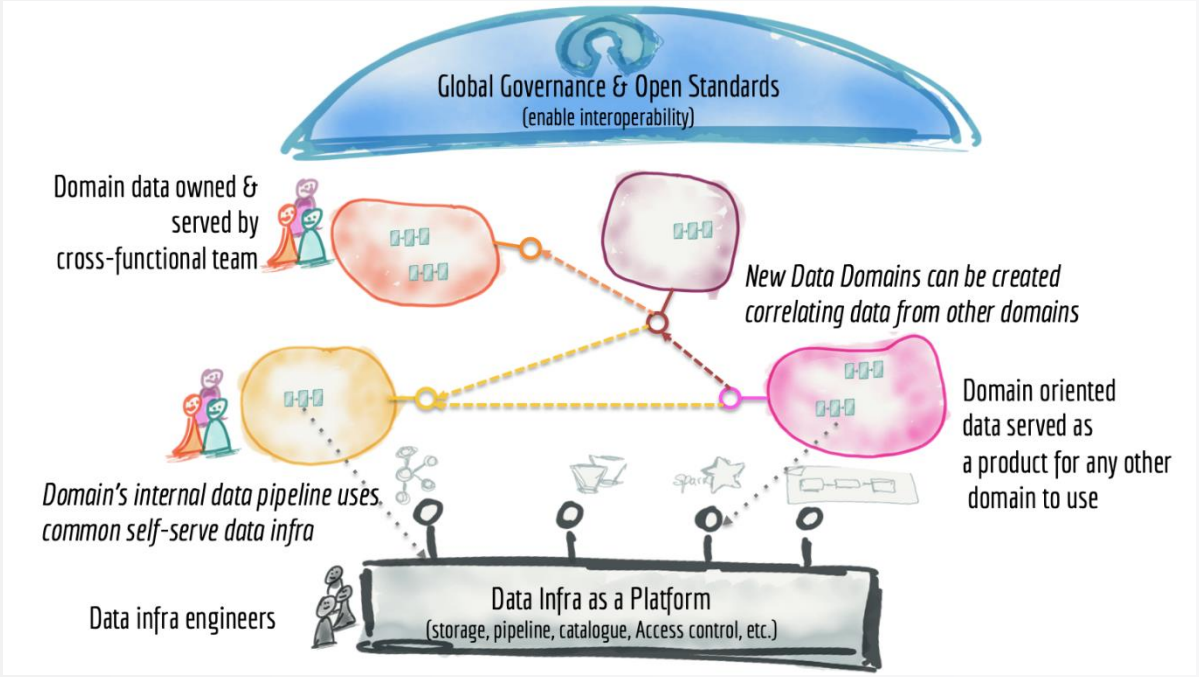
Data Lake & Cloud Data Warehouse



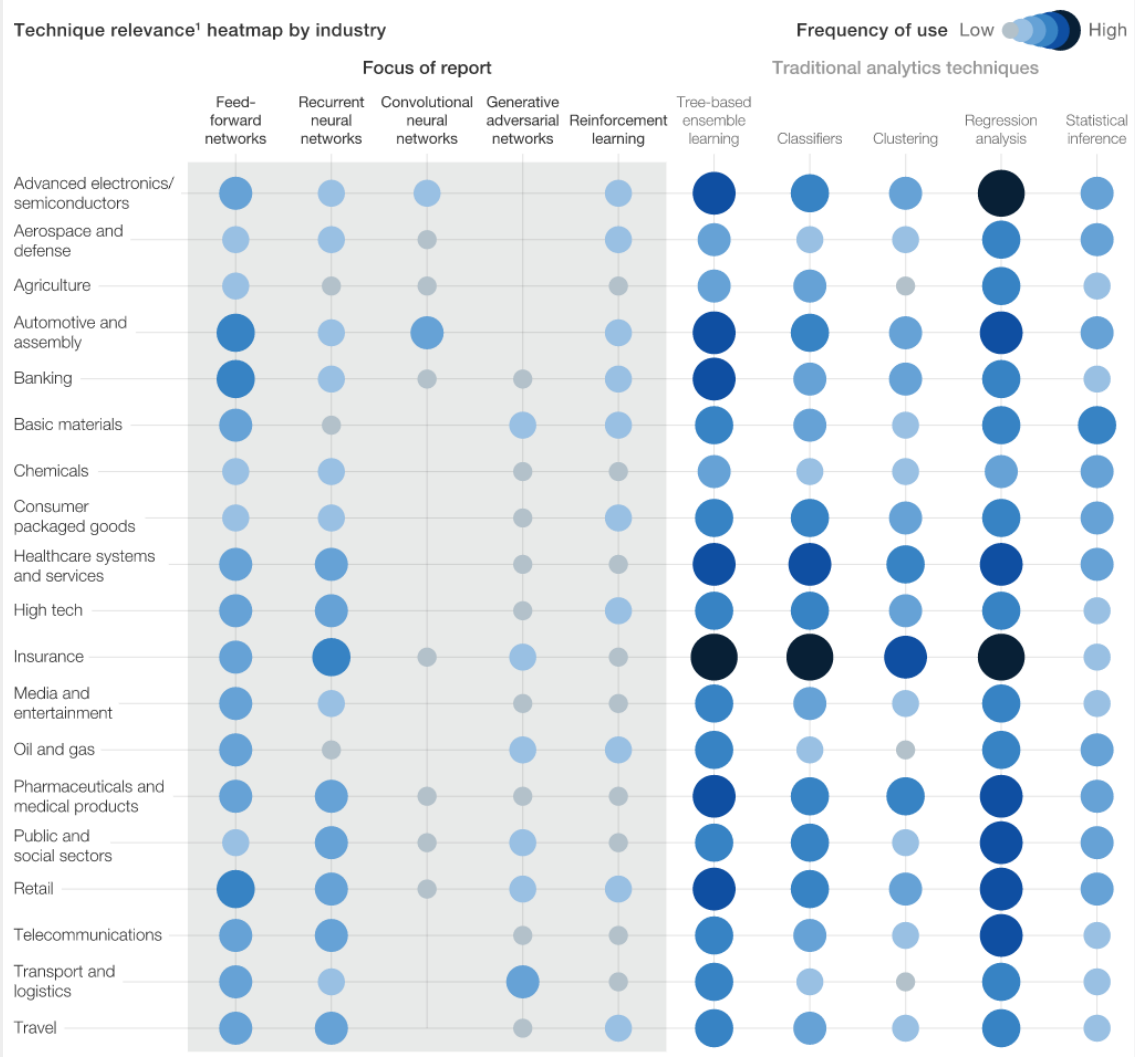
Big Data Analytics on Azure



Data Lake vs. Data Mesh



Insight from use cases



2022년 주요 기술 트렌드 예측과 이해

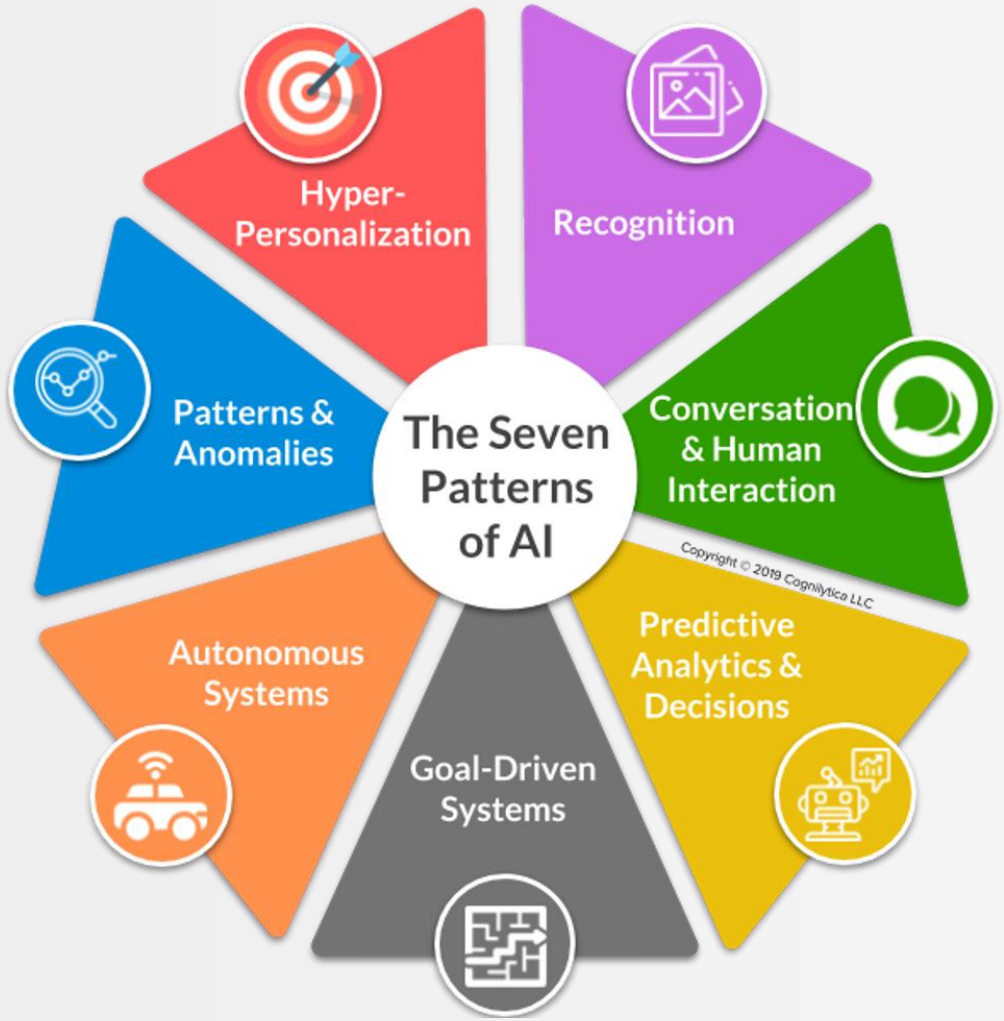
Source: McKinsey & Company

AI can improve performance over existing analytics techniques

2022년 주요 기술 트렌드 예측과 이해

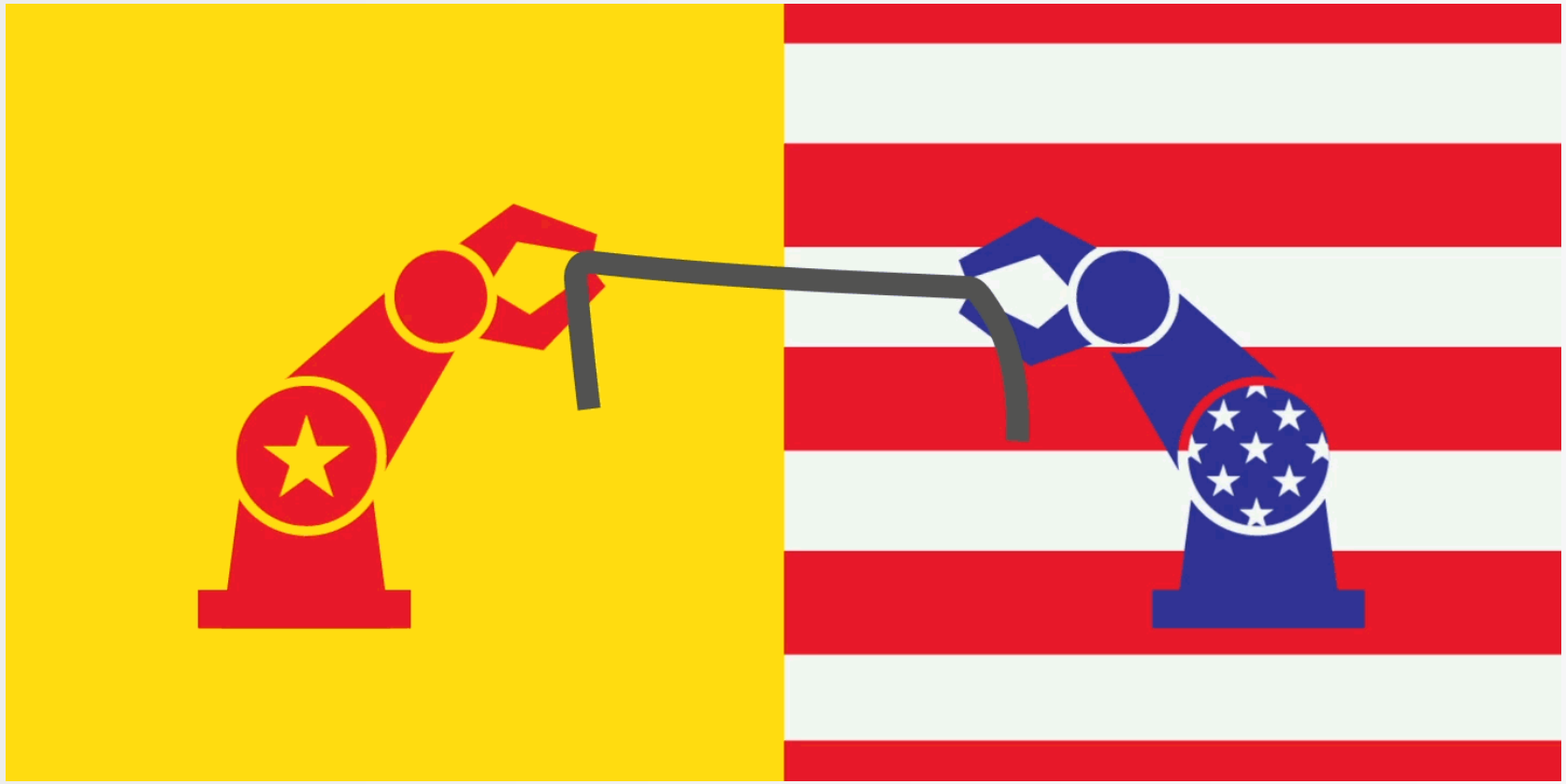
Source: McKinsey & Company

The 7 Patterns of AI



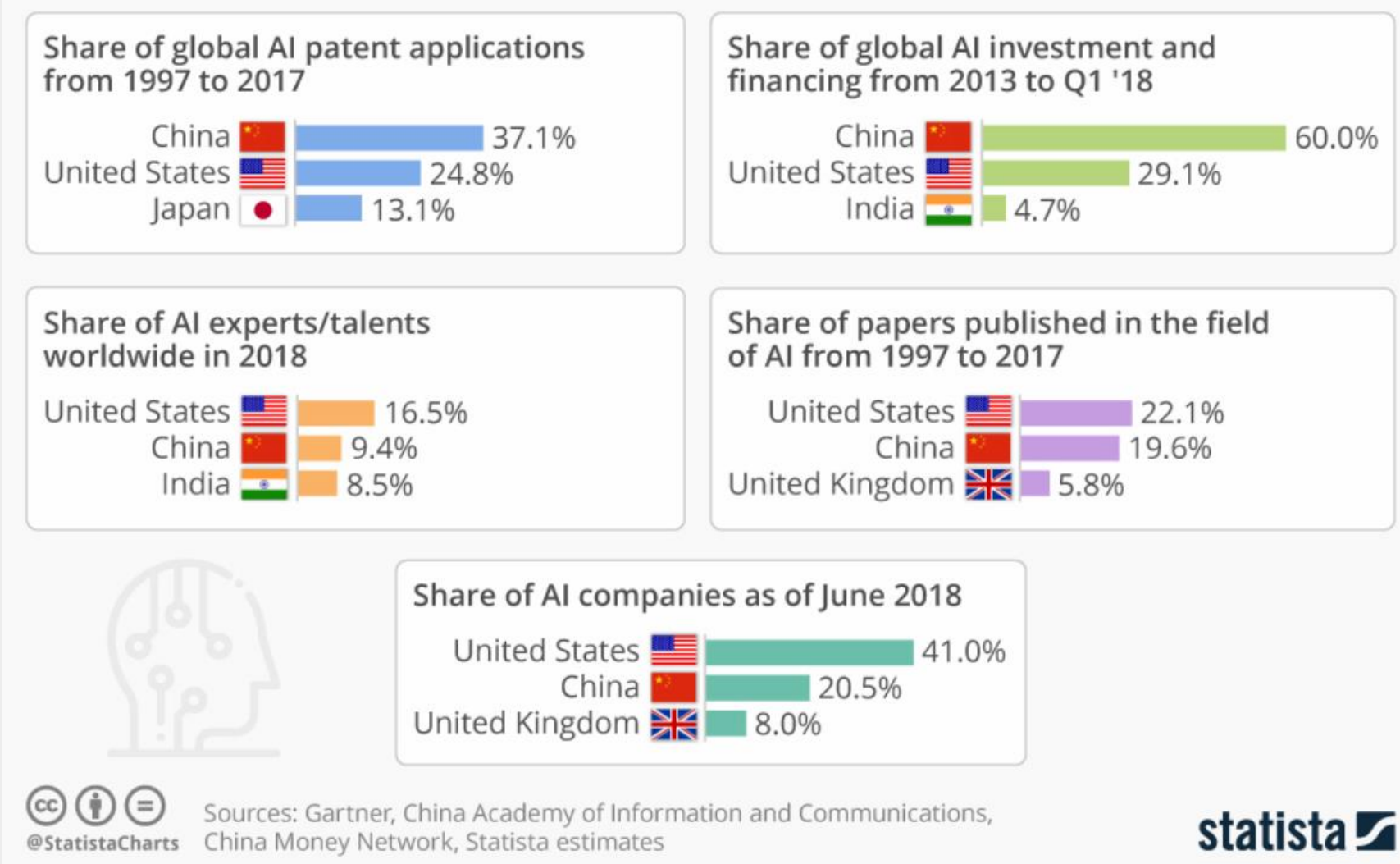
2022년 주요 기술 트렌드 예측과 이해

AI Race between the U.S. and China



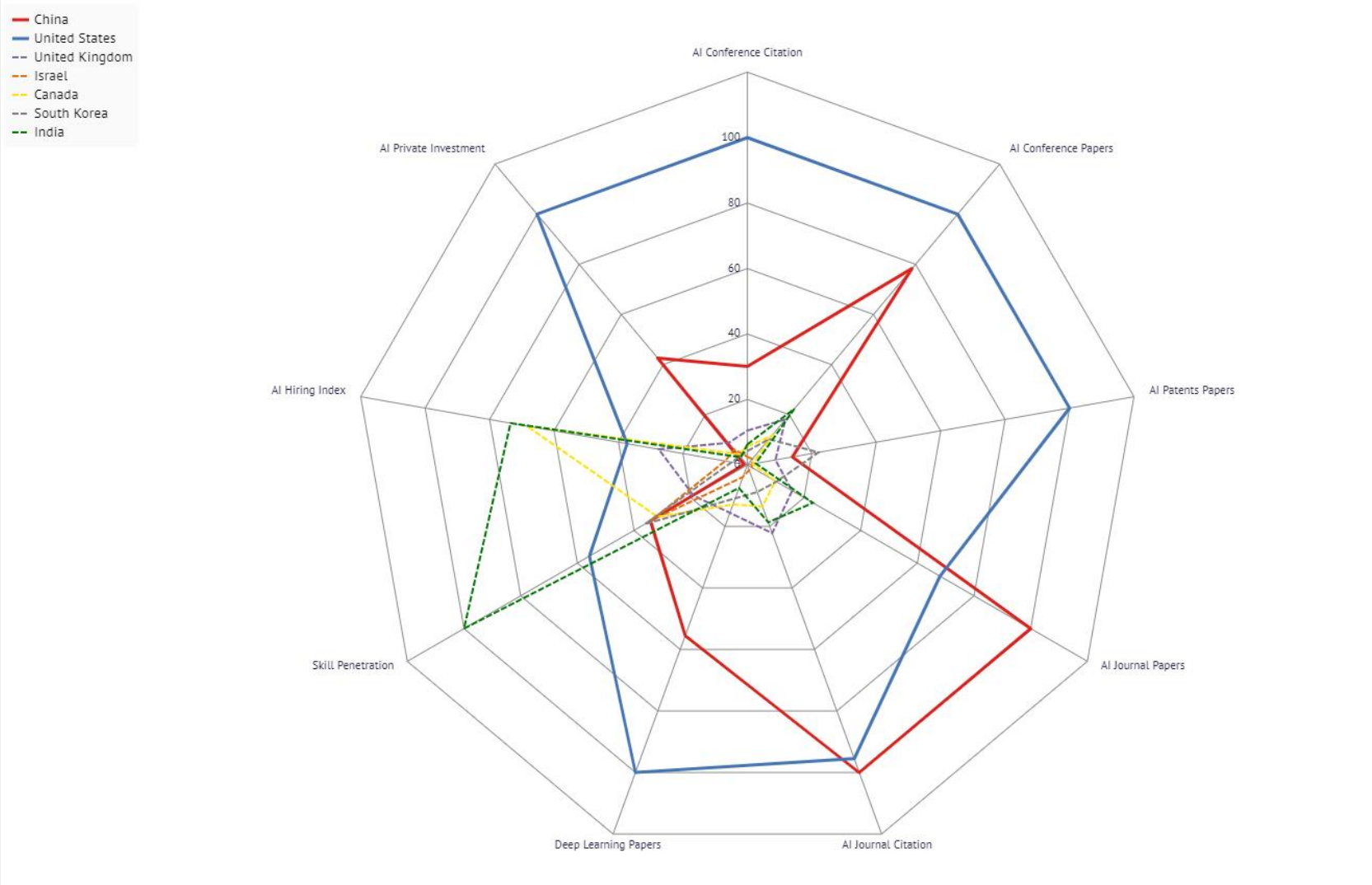
AI: A Two Horse Race for Global Dominance

Countries with the highest shares in the following areas of artificial intelligence



Source: statista (2018/12/03)

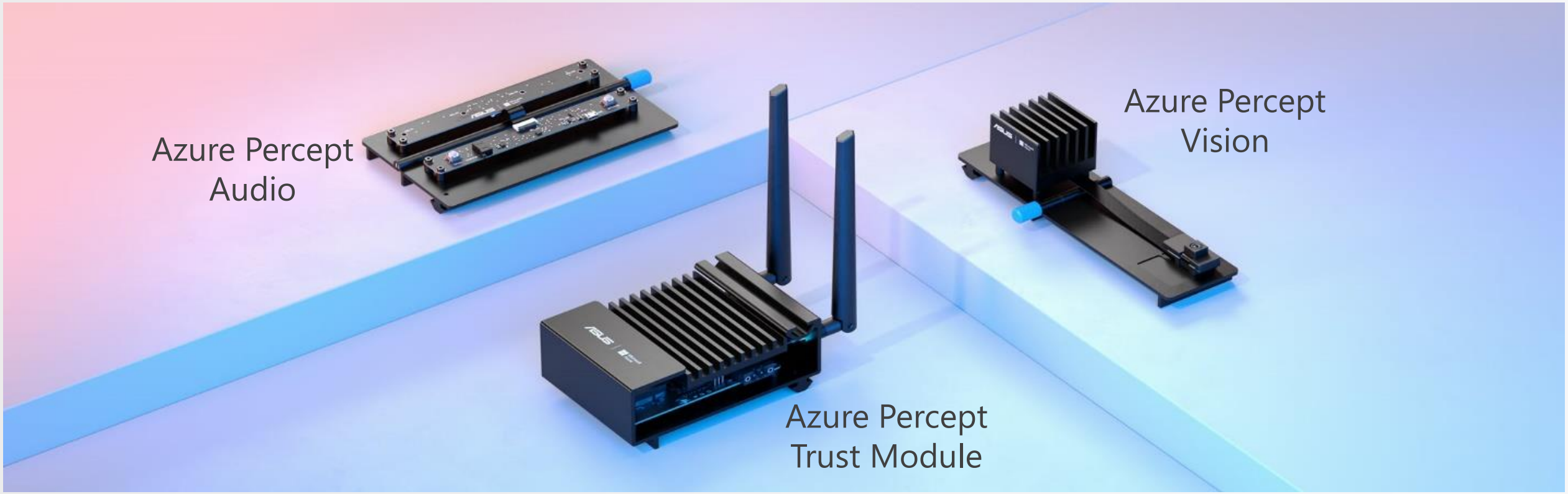
US vs. China AI Scoreboard: Key Indicators from R&D and Economy Pillars



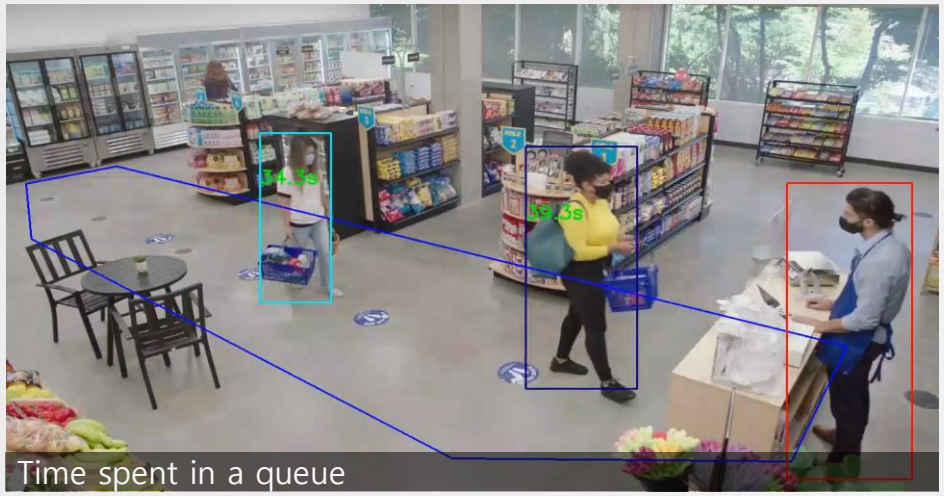
2022년 주요 기술 트렌드 예측과 이해

Source: Stanford Institute for Human-Centered AI (2021/05/05)

Enabling Edge AI through Ready-to-use Kit



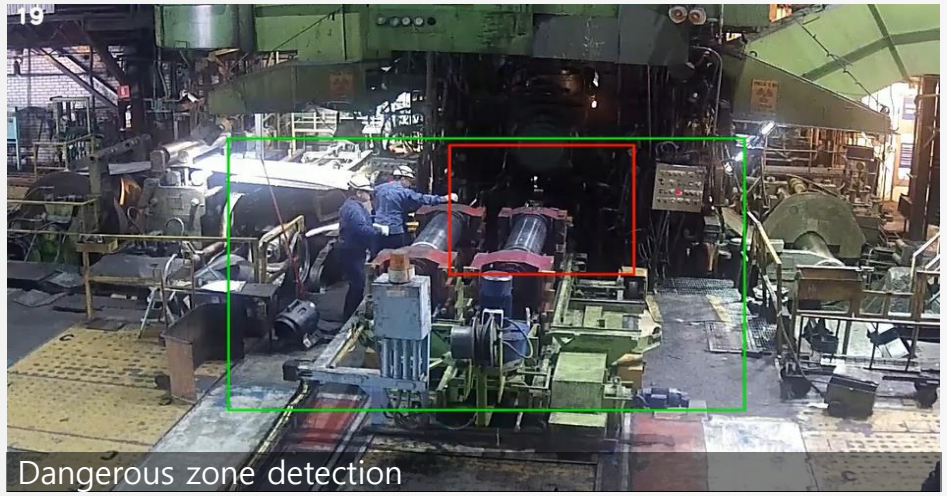
Ready-to-use Computer Vision Spatial Analysis



Time spent in a queue

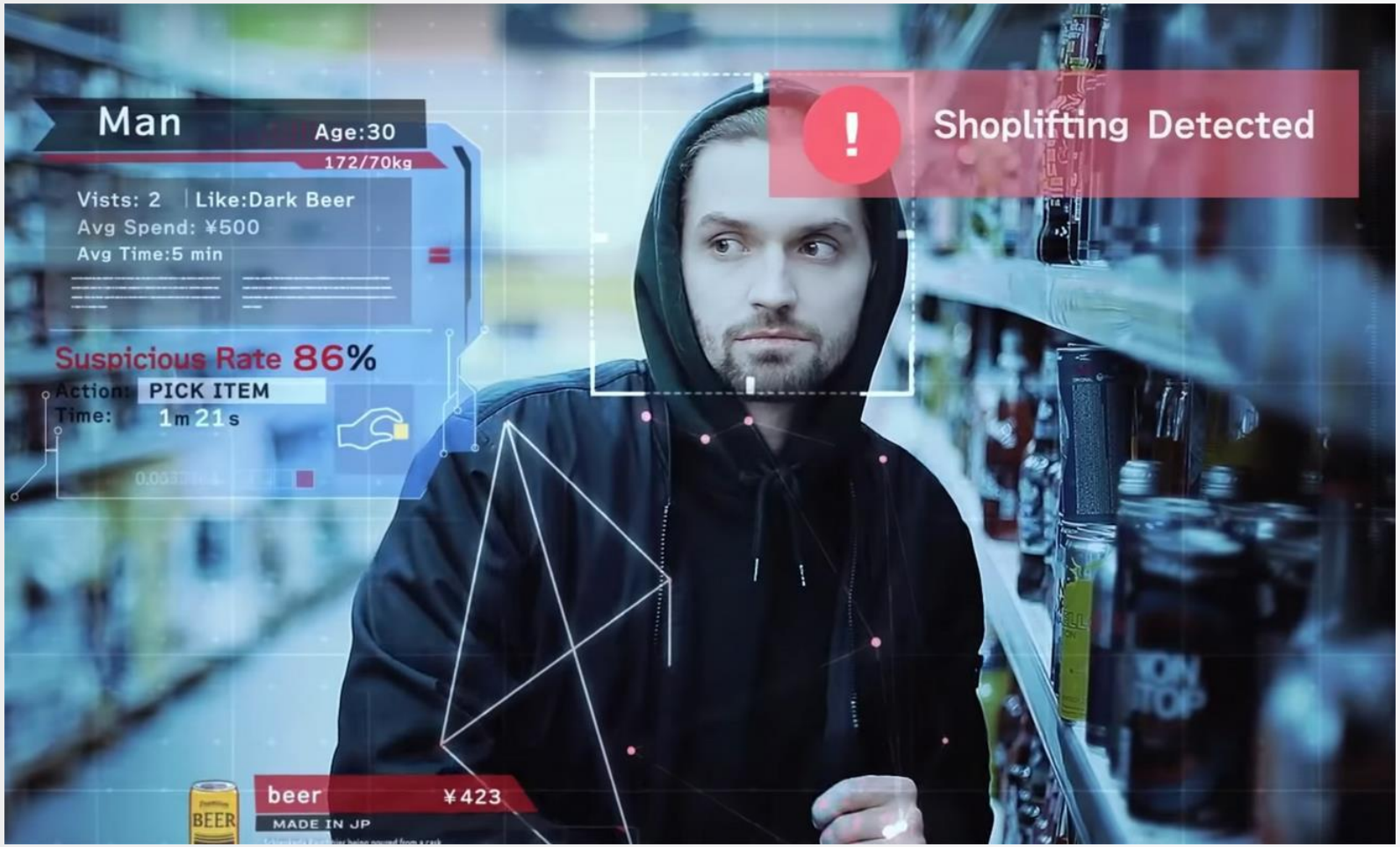

Vehicle detection with parking stall alerting


Trespass detection



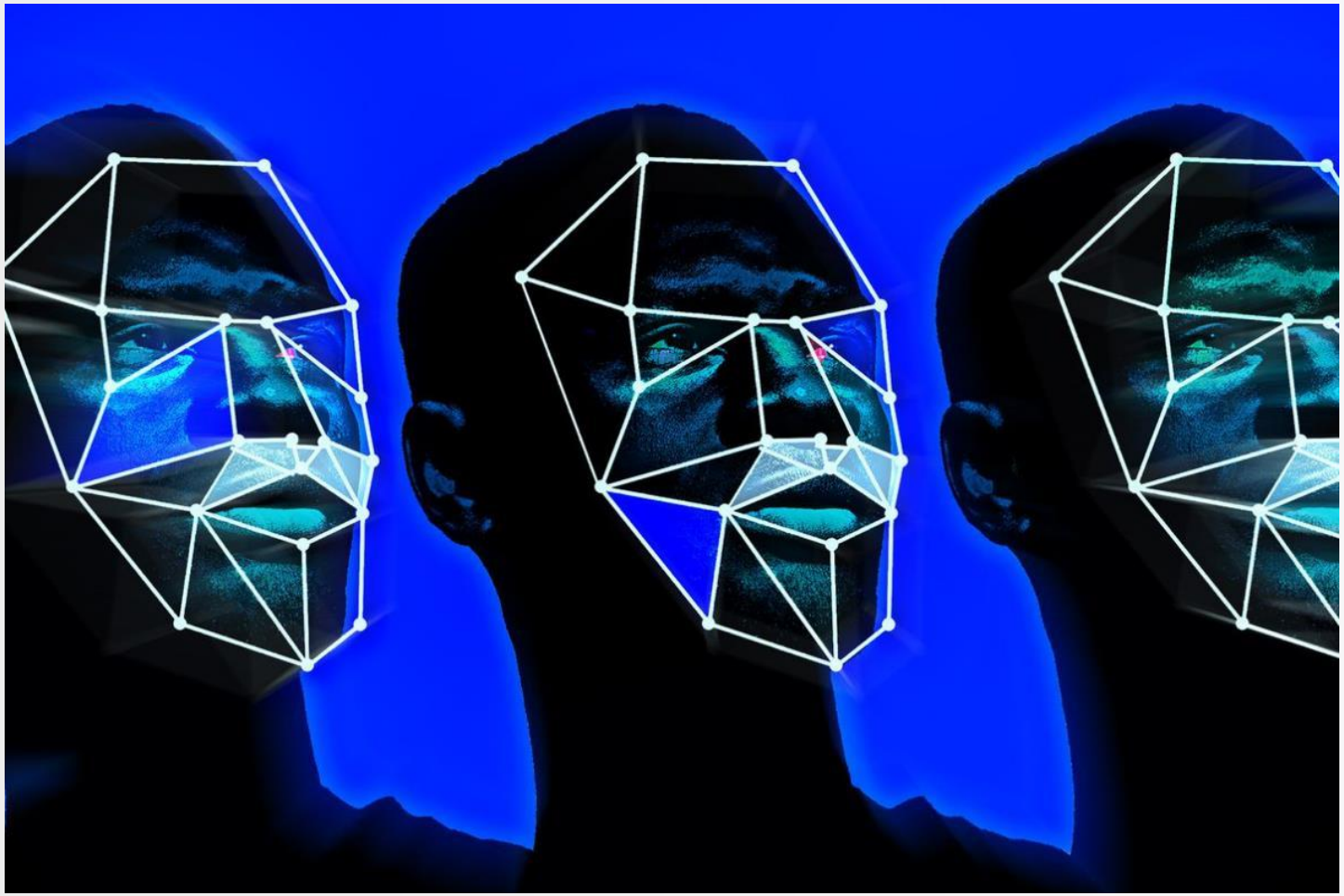
Dangerous zone detection

Vaak Eye is a Smart Store system that uses AI to catch shoplifters



Source: techeblog (2019/03/10)

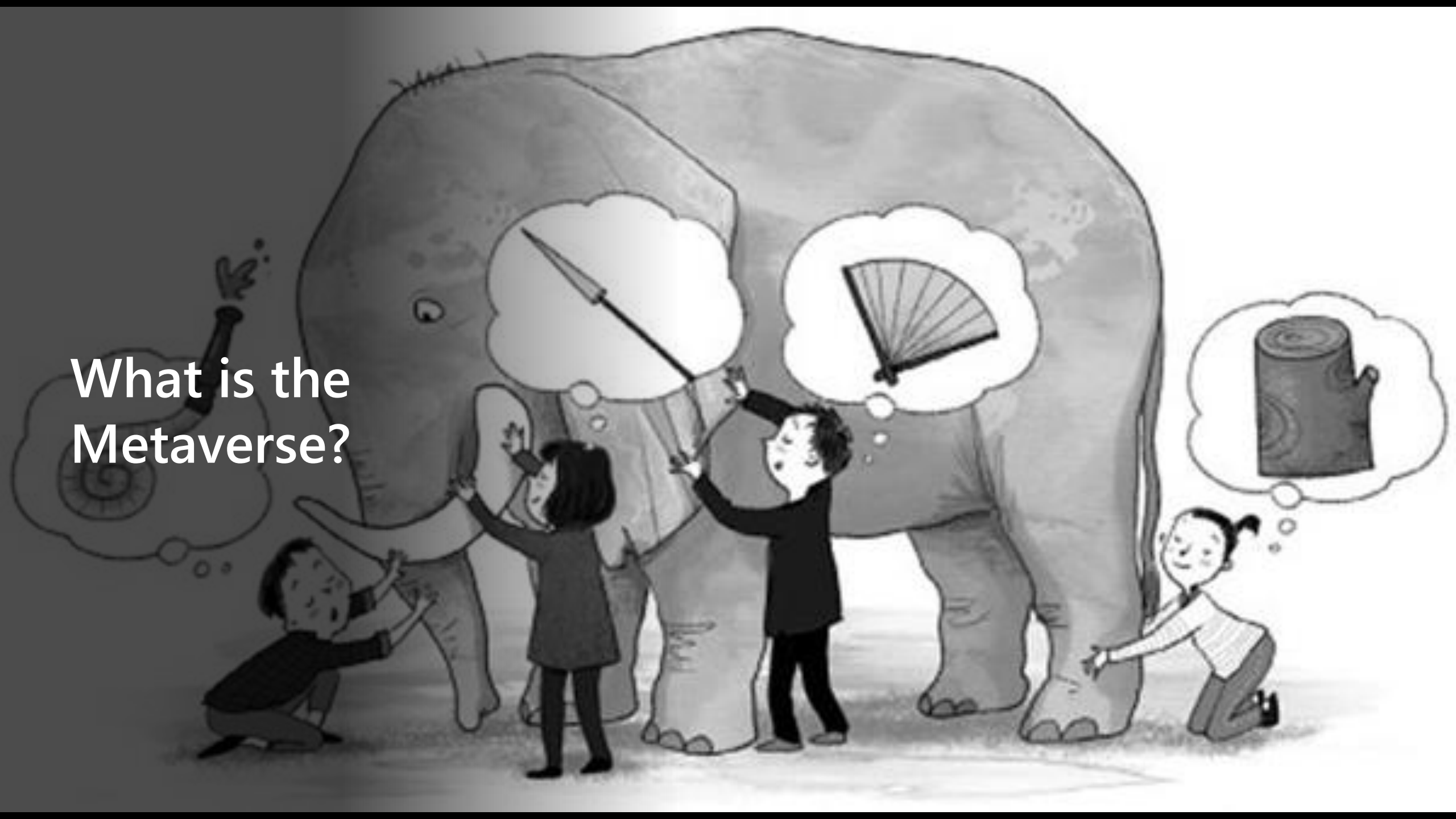
Civil rights organizations are demanding top US retailers cease using facial recognition



Source: The Verge (2021/07/14)

메타버스 붐은 지속될 것인가?

What is the Metaverse?




ZEPETO
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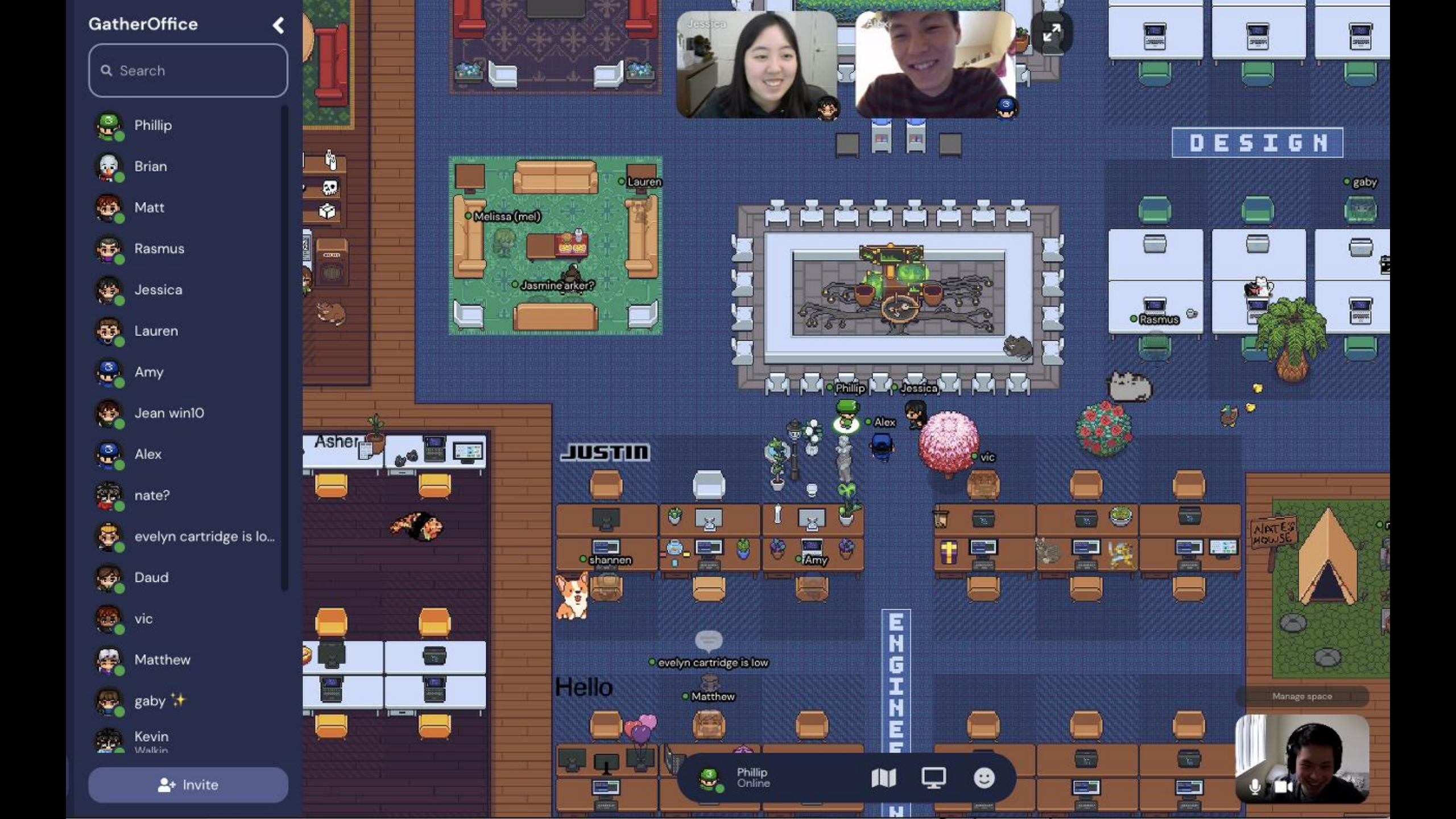
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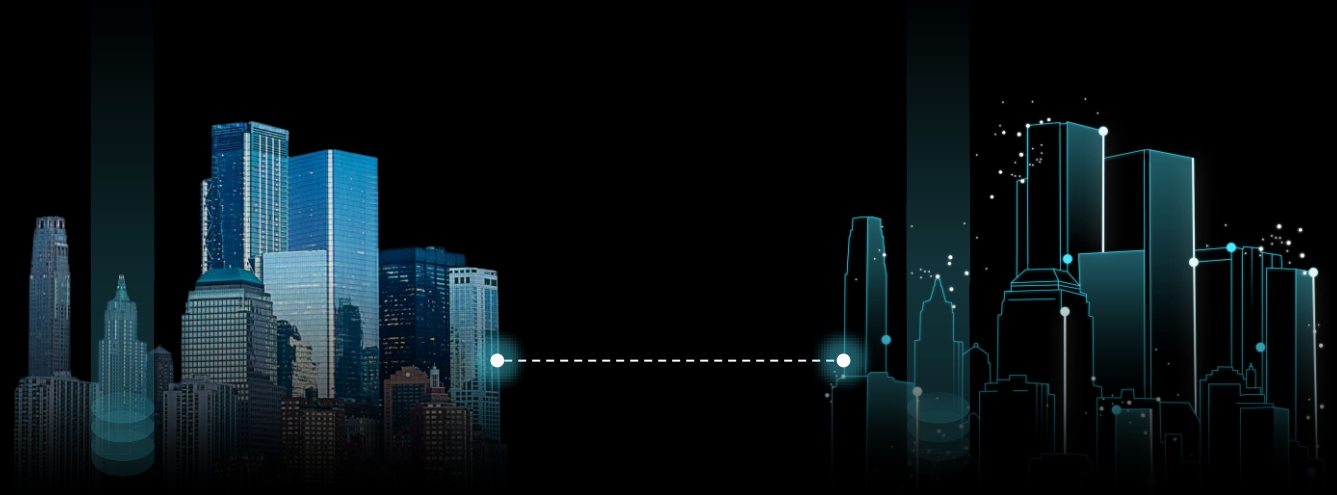
Manage space
Phillip
Online

Intelligent Edge

Intelligent Cloud

Digital Twins

Synchronize



Physical Environment

Digital Environment

Monitor

Physical Environment

Digital Environment

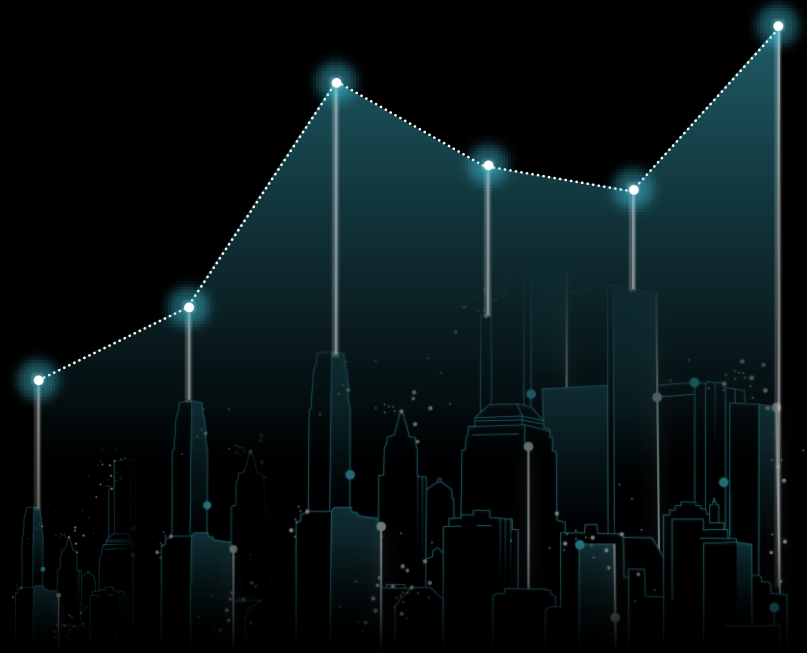
Track the past

Physical Environment

Digital Environment

Analyze

Physical Environment



Digital Environment

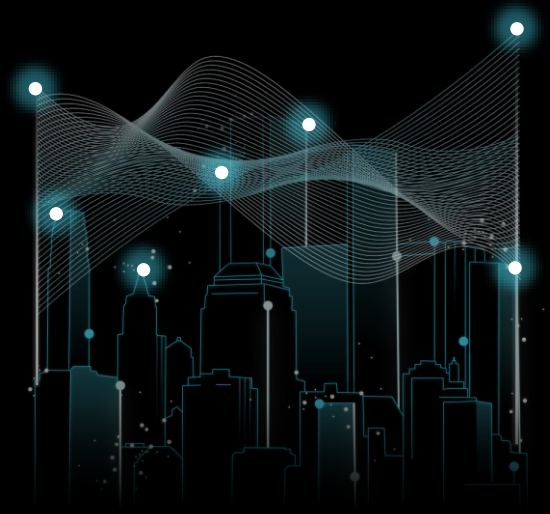
Predict

Physical Environment

Digital Environment

Simulate

Physical Environment



Digital Environment

Autonomous Control

Physical Environment

Digital Environment

Interact

Physical & Digital Environment


Metaverse

Metaverse capabilities

Interact

Predict, Simulate, Autonomous Control

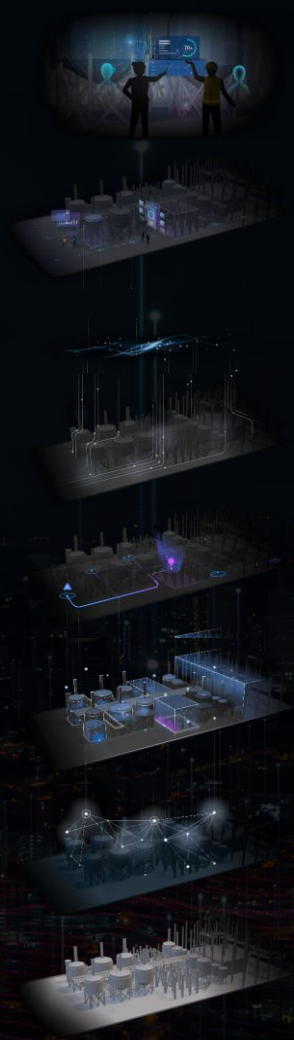
Track the Past, Analyze

Monitor

Model

Synchronize

Physical World



Metaverse technology stack

Microsoft Mesh & HoloLens

Microsoft Power Platform

Azure AI & Project Bonsai

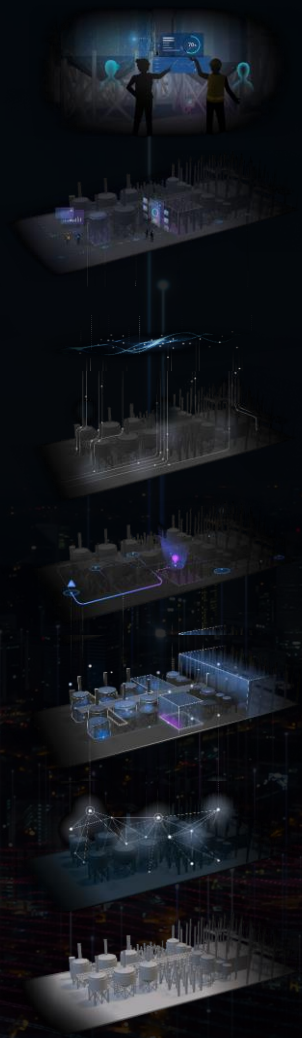
Azure Synapse Analytics

Azure Maps, Indoor

Azure Digital Twins

Azure IoT

Physical World



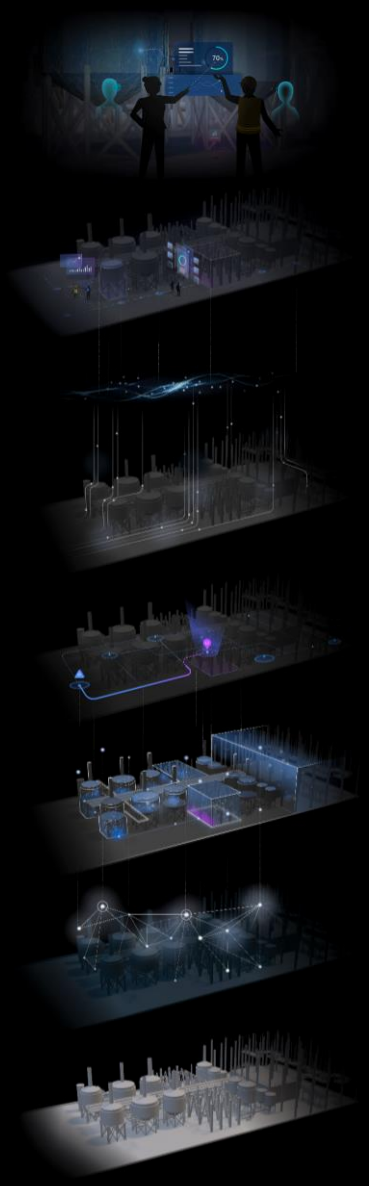
Metaverse solutions

Virtual Control Center

Connected Field Service

Guides

Remote Assist



Virtual Control Center

Connected Field Service

Guides


2
Offline
00
Power 0 W
Temp 0°
RPM 0
Pressure 0 psi
3
Online
510
Summary
50
25
0
T2

Remote Assist

개별 산업군에 특화된 클라우드 솔루션으로의 발전

Azure industry solutions

Financial services

Personalize customer experiences, modernize financial systems, and optimize risk management.

Government

Implement remote government access, empower cross-agency collaboration, and deliver secure services.

Healthcare

Enhance patient engagement, empower provider collaboration, and improve operational insights.

Manufacturing

Uncover new operational efficiencies, reduce costs, and generate new revenue opportunities.

Retail

Personalize customer experiences, empower your employees, and optimize supply chains.

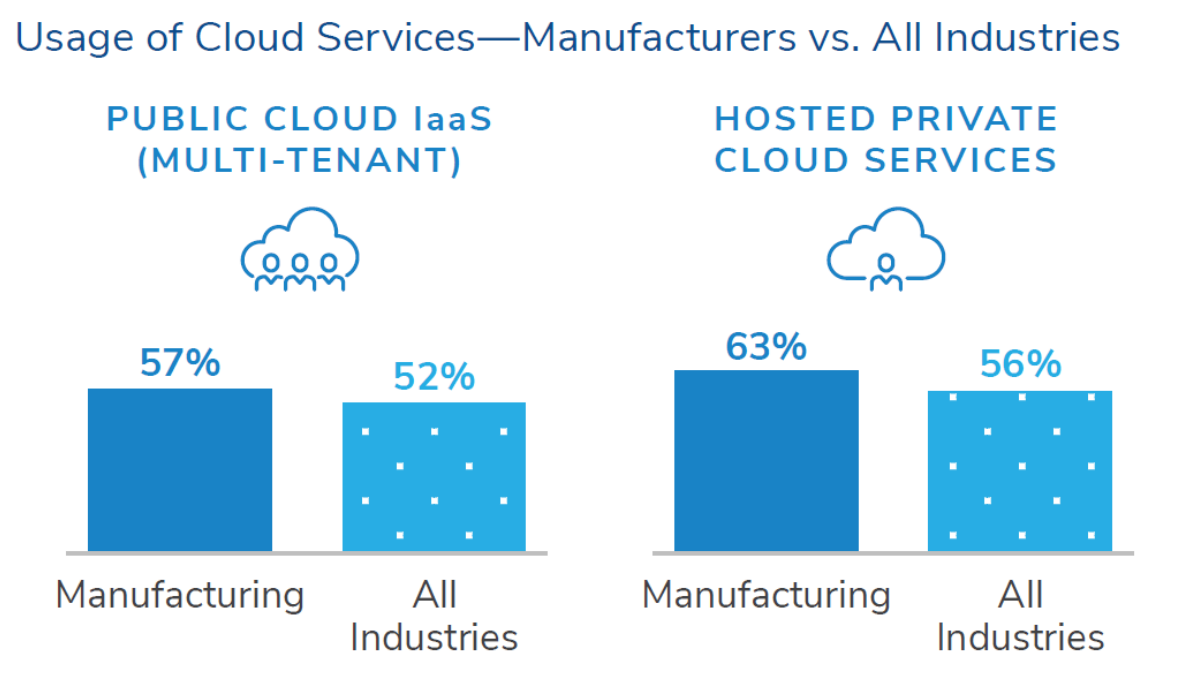
Energy

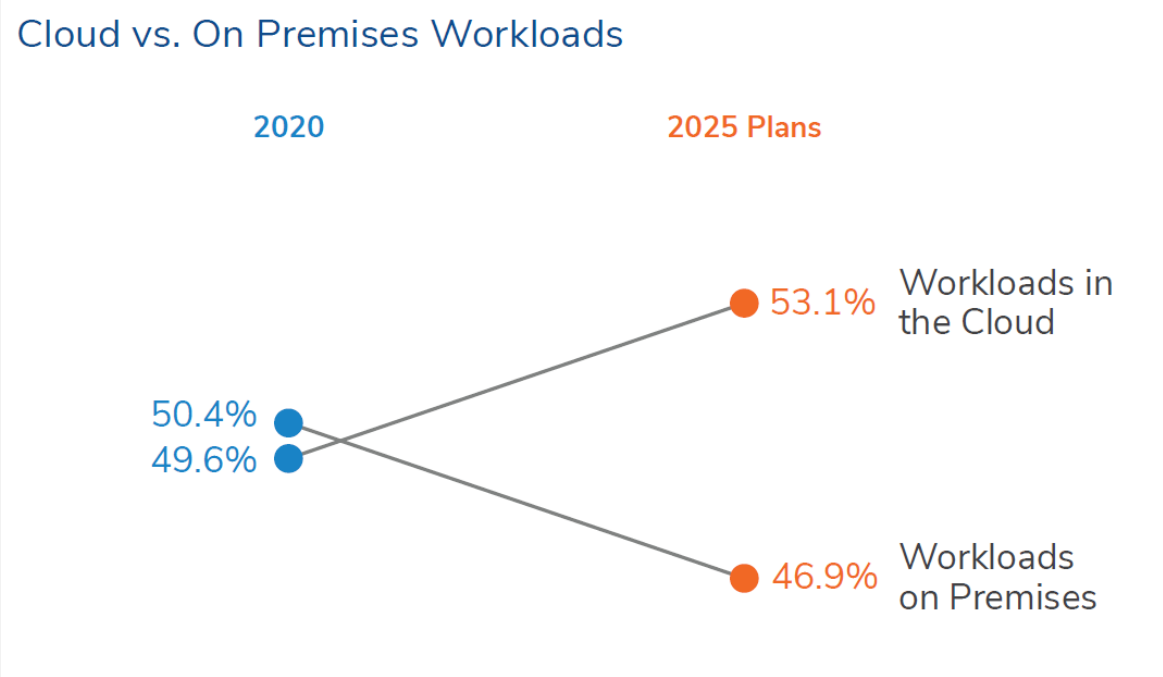
Optimize everything from field work to customer experiences to speed response rates and reduce costs.

Media and entertainment

Create content more quickly, collaborate from everywhere, and deliver seamless customer experiences.

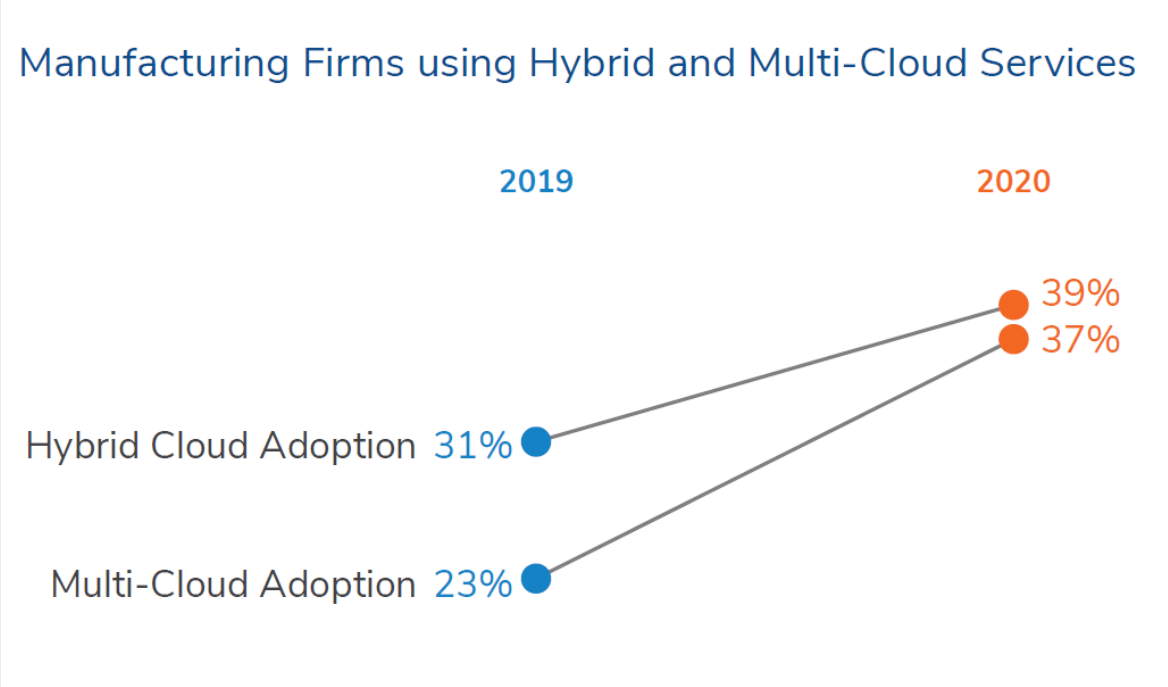
Manufacturing Firms Embrace Cloud

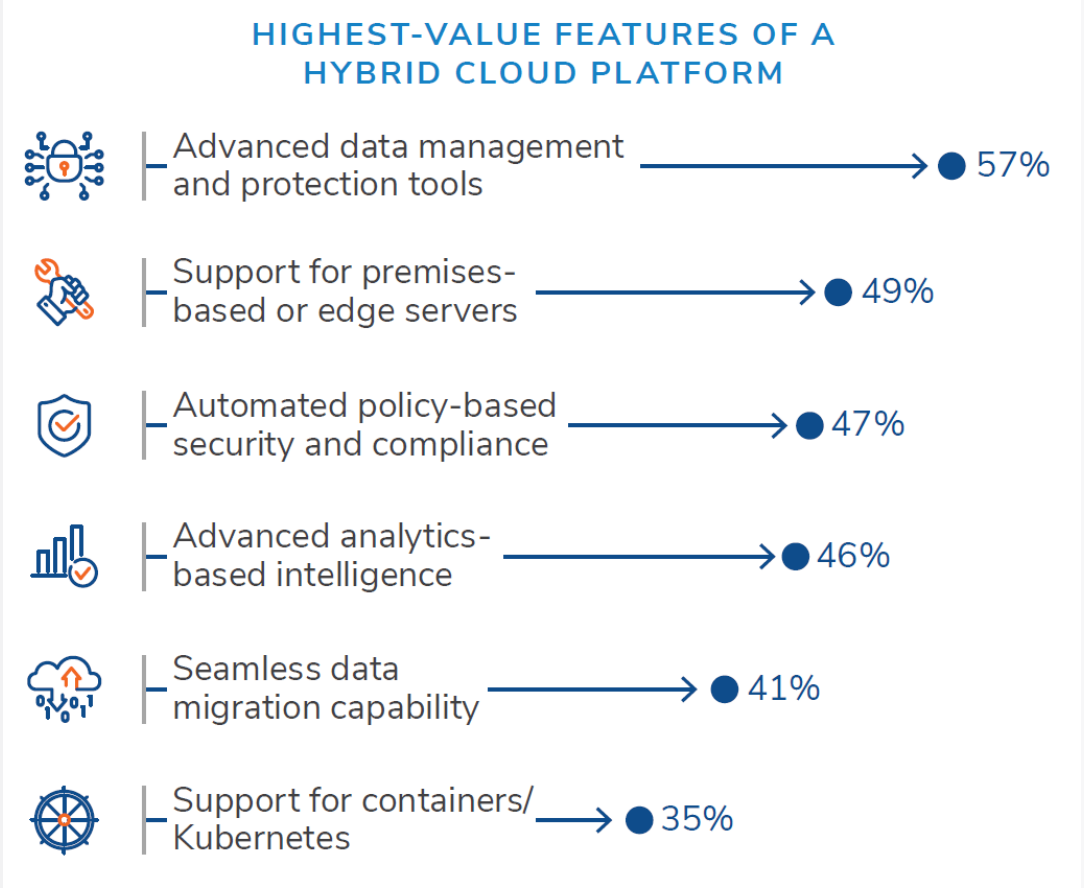




Source: Frost & Sullivan Global Cloud User Survey

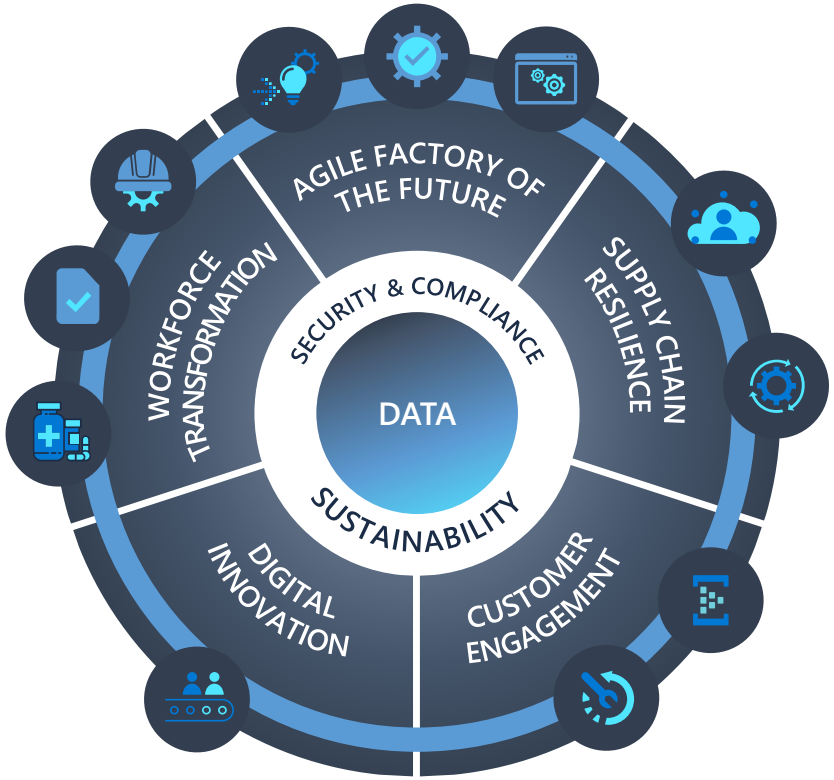
Hybrid and Multi-Cloud Adoption Grows





Source: Frost & Sullivan Global Cloud User Survey

Microsoft Cloud for Manufacturing



2022년 주요 기술 트렌드 예측과 이해

Microsoft Cloud for Manufacturing

Operational Visibility

Improve visibility across connected factory assets and processes to increase productivity of equipment and labor across sites

Asset Productivity

Improve visibility across connected factory assets and processes to increase productivity of equipment and labor across sites

Production Operations

Increase production efficiency and quality, by advising, assisting, and augmenting factory workers with AI and autonomous systems

Connected & Frontline Worker

Empower your workforce with digital tools and modern devices that offer the best experiences for collaboration and productivity

Planning & Optimization

Increase service levels and reduce cost, with the flexibility to run planning and execution in the cloud and at the edge

Learning & Knowledge Management

Identify skills gaps, improve how training is delivered, and accelerate access to knowledge across the organization

Supply Chain Visibility

Leverage demand and supply signals to minimize risk and capitalize on future opportunities

Health & Safety, Wellness

Improve visibility across connected factory assets and processes to increase productivity of equipment and labor across sites

Activate Digital Selling

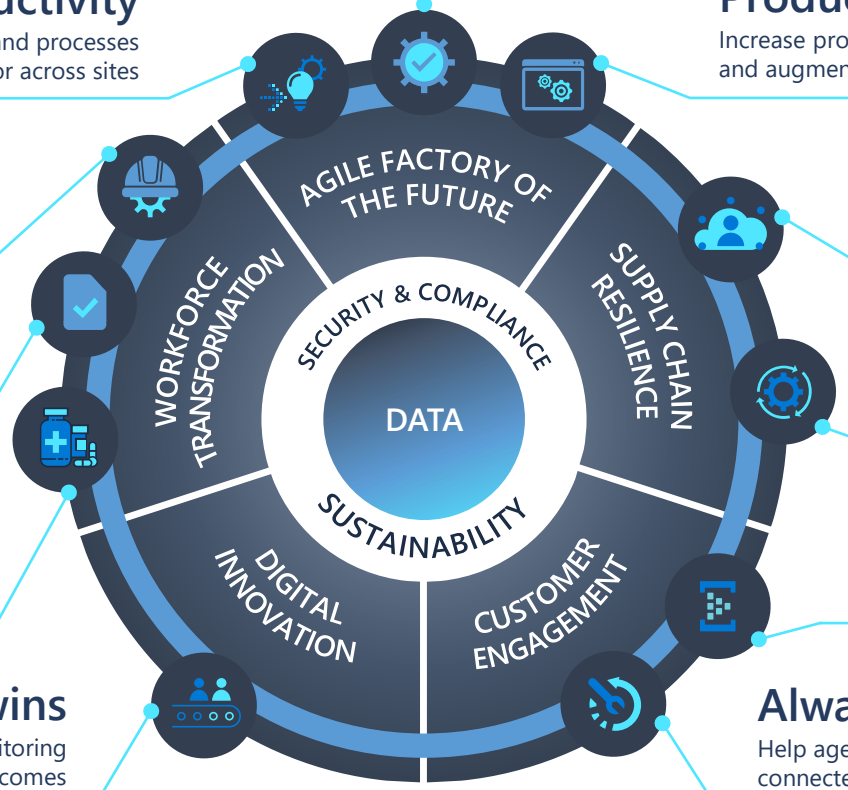
Increase margins with digital solutions for quote to cash, configure, price, quote, and contract lifecycle management

Product Twins

Accelerate evolution of connected products with remote monitoring through digital threads and feedback loops, and simulation of outcomes

Always on Service

Help agents, dispatched technicians, and virtual assistants monitor connected products, and engage remotely with customers and experts



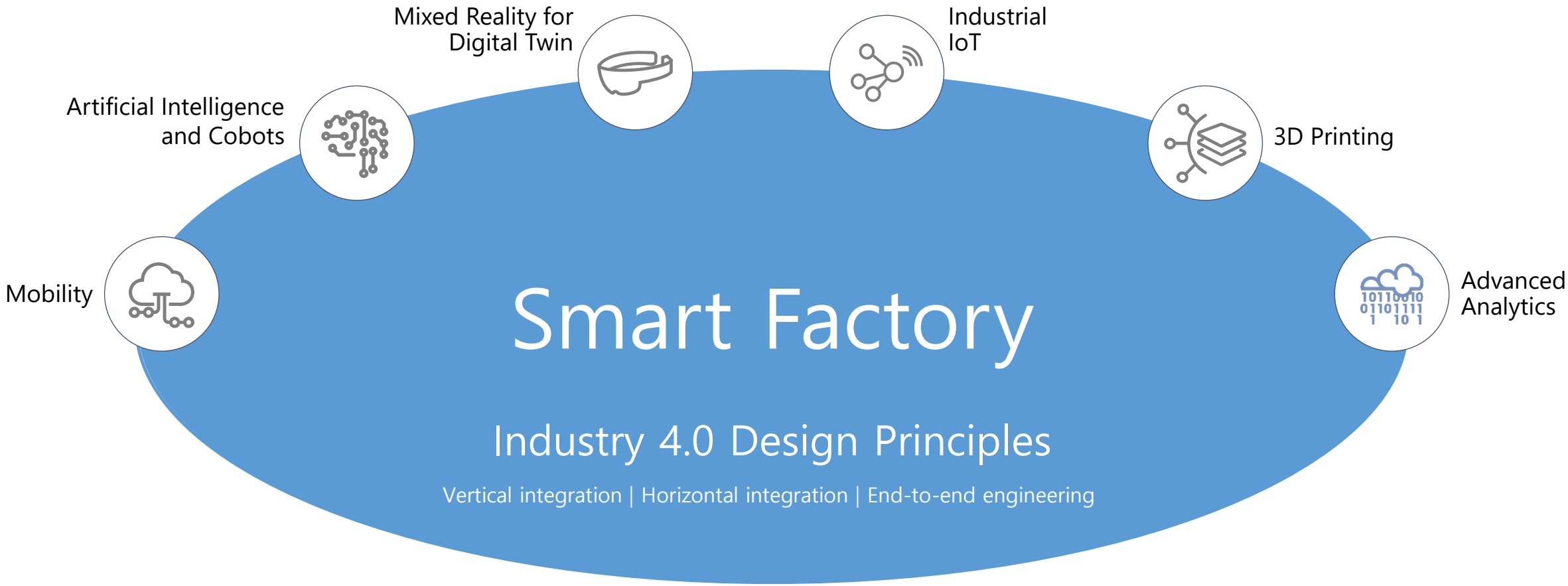
Industry Specific

Data Models – Connectors and APIs – Partner Ecosystems

2022년 스윙 기초 트레드 예조과 이해

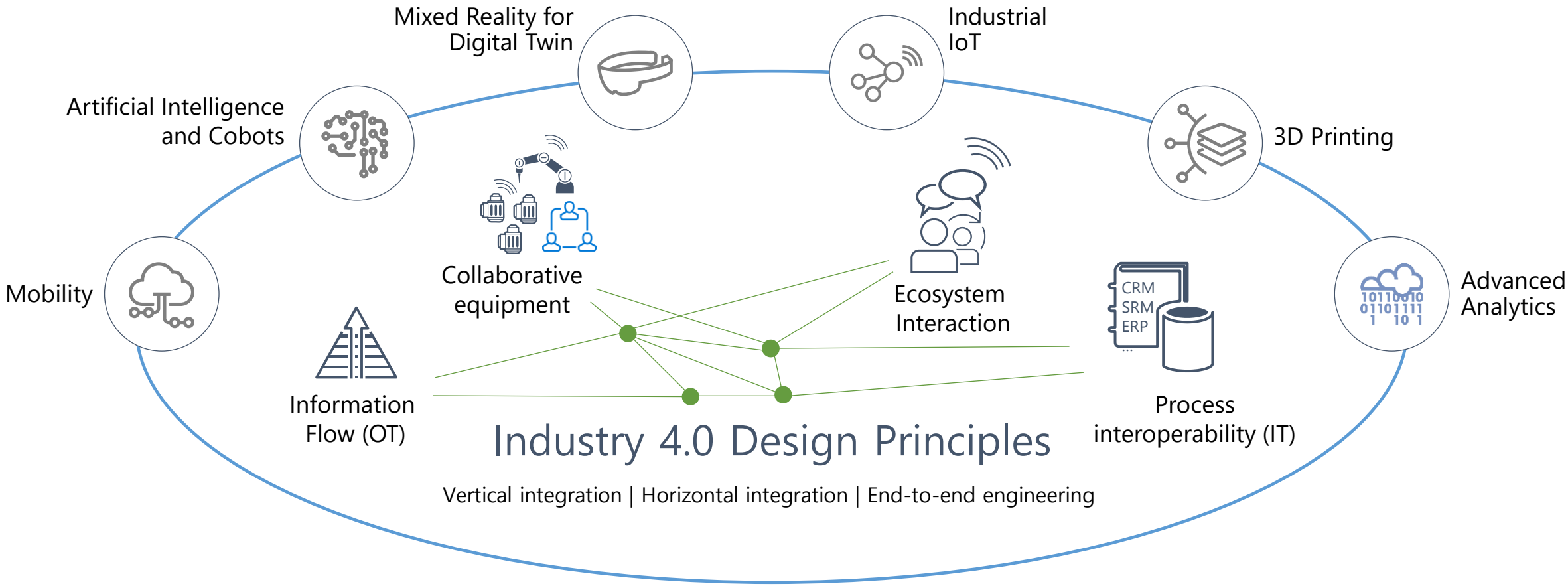
Microsoft Cloud

Delivering excellence in Digital Manufacturing



2022년 주요 기술 트렌드 예측과 이해

Delivering excellence in Digital Manufacturing



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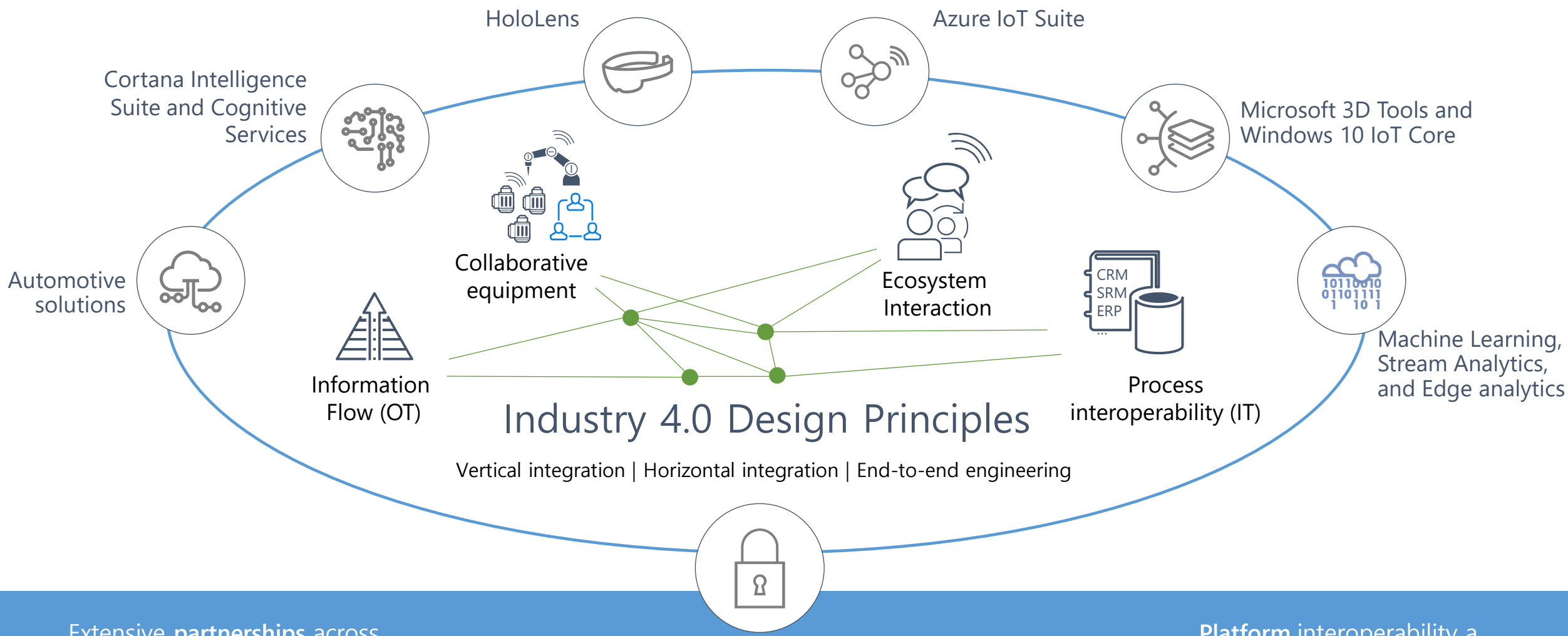


Extensive **partnerships** across digital ecosystem

Platform interoperability a cross the cloud continuum

미래를 위한 Sustainability

Sustainability definitions

Greenhouse Gas Emissions (GHG) measurement

Scope **1**

Direct emissions created by your activities, like exhaust from company vehicles or diesel generators

Scope **2**

Indirect emissions from the production of electricity or heat you use to power buildings or processes

Scope **3**

Indirect value chain emissions from all other activities in which you're engaged, including all parts of your supply chain, from materials in buildings, business travel, and product lifecycle to the electricity your customers consume

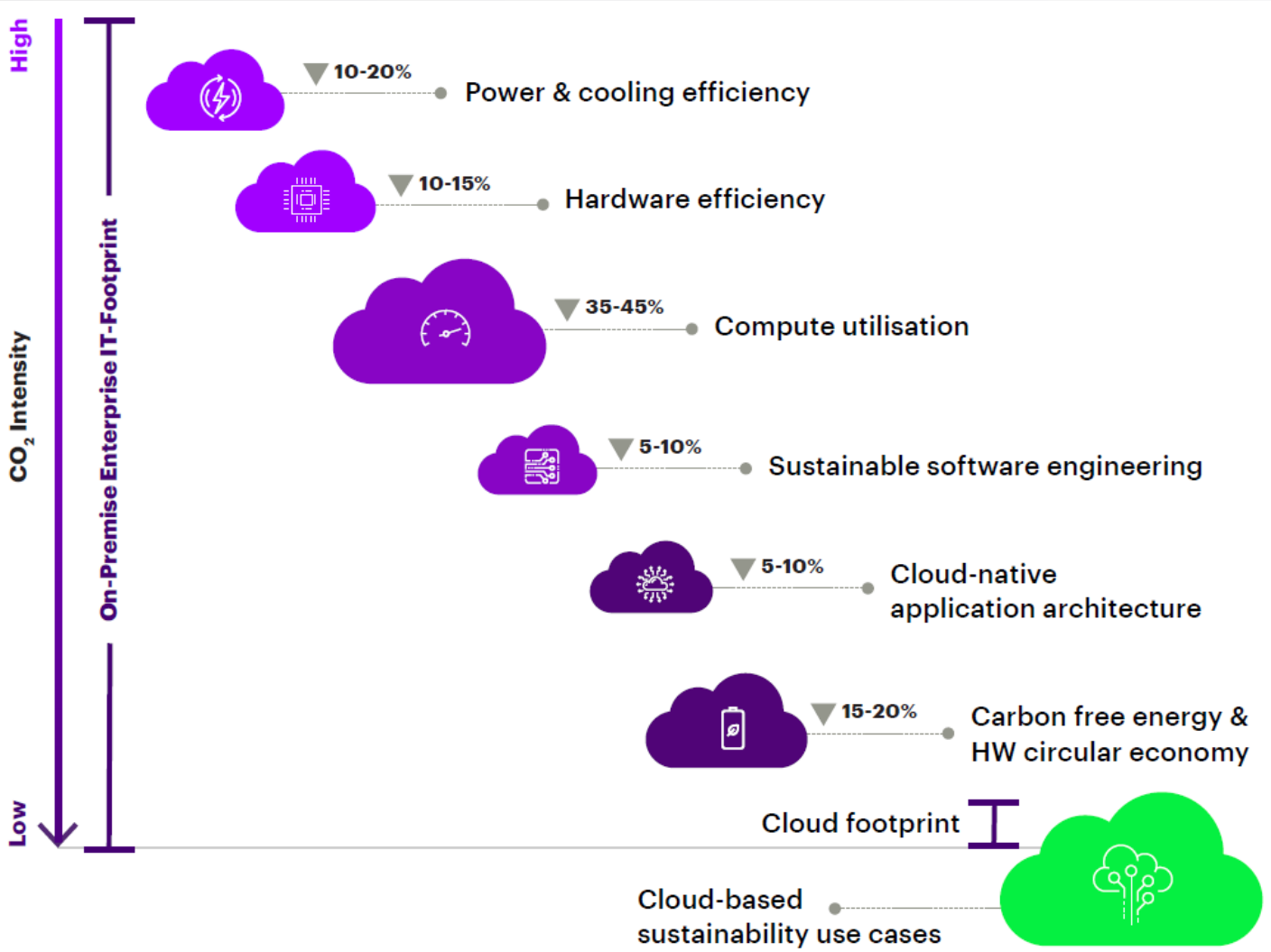
Carbon targets

Carbon neutral: A company becomes carbon neutral by reducing their emissions and/or paying others to not emit an equivalent to their remaining emissions.

Carbon net zero: An organization is considered net zero carbon when it removes as much carbon as it emits.

Carbon negative: A company is carbon negative when it removes more carbon than it emits each year.

Reducing Carbon Emissions



2022년 주요 기술 트렌드 예측과 이해

Source: Accenture

Microsoft Cloud for Sustainability

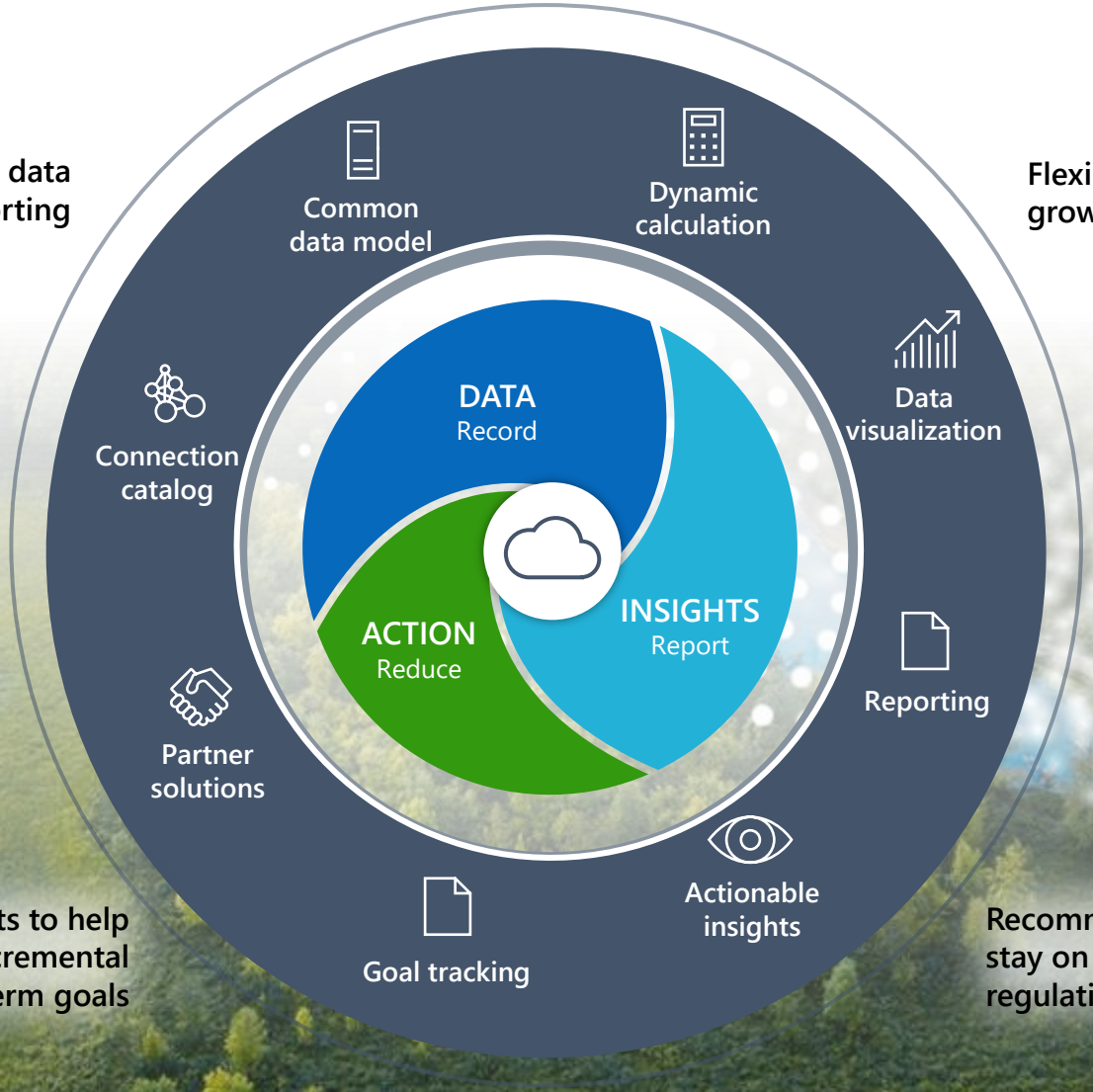
Coming: First half of 2022

Accelerated data integration & reporting

Comprehensive set of connectors to real-time data

Targeted solutions enabling specific reduction strategies and industry extensions

Scorecards and insights to help you set and track incremental and long-term goals



Flexible calculation models grow with your data

Dashboards and rich visuals highlighting emissions and operational patterns and trends

Streamlined, quantitative p ublic reporting

Recommendations to address problems and stay on track with commitments and regulations

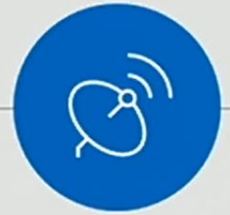
Disrupt or be disrupted

Industry vertical

Banking

Health

Retail



Telco

Manufacturing

Business process

Sales

Marketing

Customer support

HR

Recruiting

"The best way to predict the future is to invent it."

– Alan Kay