

A person is holding a smartphone in their hand, looking at the screen. The background is blurred, showing other people in a meeting or office setting. In the foreground, a laptop is open on a wooden table.

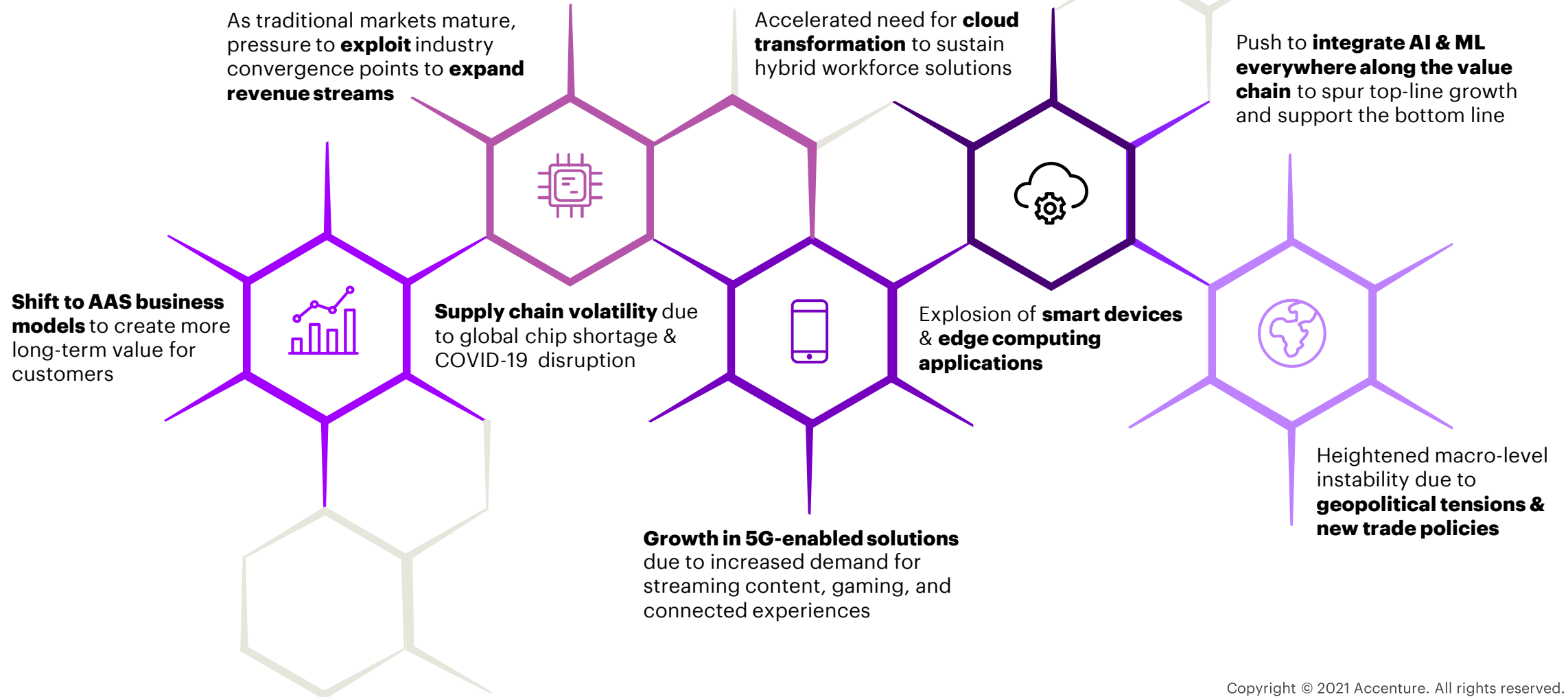
Transforming the industry that transformed the world

High Tech industry narrative


accenture

Eight trends are triggering a new Industry Paradigm for High Tech

Revealed in the 2021 Accenture High Tech industry study



Evolving customer needs and macro-level shifts spur the need for technological evolution and operating model re-invention

	Technological evolution				Op model re-invention		Macro-transformation	
	Cloud-powered innovation	Rise in smart devices	Embedding AI & ML	5G & edge solutions	Shift to as-a-service	Flexible & resilient supply chain	Industry convergence	Geopolitics & trade policies
Impetus	Major migration to cloud, accelerated by COVID-19, creating opportunity for new types of innovation	Proliferation of smart devices and platforms that are connected to IOT and AIOT	AI/ML solutions accelerating and enabling both top and bottom line opportunities	Expedited 5G rollout and edge computing enables new solutions needing high speed and low latency	Growing shift to –AAS models to both deliver value to customers and improve profitability and sustainability	Increase risk and variability in supply requires more dynamic capabilities	Technology blurring historic lines and shifting focus to cross-industry experiences	US-China tensions, as well as the rise in politicization of data and technology
High Tech client impact	Sales of new cloud semis & solutions + internal efficiency and innovation opportunities	Reinventing the core product offering and creating new types of devices	Sales of new types of AI/ML semis & solutions + internal use of AI/ML to increase operational efficiency	Direct sales of 5G and edge semis & devices, plus new types of 5G-enabled solutions	Major business transformation needed to shift from legacy process, systems and culture	Digitalization of supply chain planning, sourcing, mfg, and service required	Growth opportunities in new markets and customer segments	Creation of segmented supply chains and need for new regulatory and planning capabilities

Triggers for a New Industry Paradigm

High Tech CXOs are tasked with five key imperatives

01 Shift to as-a-service

Adoption of new **recurring revenue subscription models** to sustain top-line growth & meet customer demand

02 Expand industry boundaries

Acceleration of **tech-driven industry convergence & blurred industry lines** to unlock new growth potential

03 Reinvent the portfolio

Investment in **connected ecosystems** & cutting-edge technologies to deliver **hyper-customized experiences**

High Tech companies must modernize their core...



... to modernize the world through new business models, new products, and new markets

04 Modernize the enterprise

Enablement of new business models, processes, and technologies to **support strategic vision** and **reduce operational cost and complexity**

05 Build resilient supply chains

Repurposing of **supply chain resiliency** (as a result of global chip shortage and COVID-19 pandemic) to **mitigate risk and protect revenue**

01

Shift to as-a-service

As-a-service (AAS)

Departure from traditional product-only business model to subscription-oriented, bundled **product + service + platform-based business model**

High Tech relevance

Existing hardware-centric business models fail to enable customer preferences for **dynamic, integrated, seamless experiences**

High Tech companies can mobilize their deep footprint and install base to leverage **AAS as an avenue for differentiation in a hyper-competitive High Tech landscape**

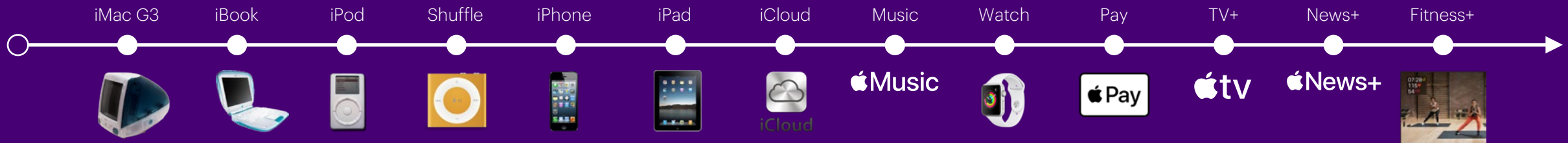
High Tech as-a-service trailblazer



Snapshot into Apple's evolution

Apple is the quintessential boundary pusher. Over the past decade, Apple has cultivated obsessive brand loyalty through **sustained breakthroughs in both hardware and subscription-based software offerings**. No other company better exemplifies adoption of AAS as a vehicle for **profitability** and **revolutionary customer experience**.

<i>Market cap</i>	2001 \$7B	▶	2011 \$377B	▶	2016 \$609B	▶	Jan 21 \$2.2T
<i>Services as % of net sales</i>	2001 N/A	▶	2011 5.8%	▶	2016 11.3%	▶	2020 19.5%



Source: Accenture Research, Yahoo Finance, Apple 10-K



Subscription-based revenue streams are key to meeting customer demand & sustaining top-line growth

Proven success of AAS in Software & Platforms has unlocked Pandora's box for High Tech to do the same

5x

Companies that have adopted subscription-based models have created **5x more enterprise value per dollar of revenue earned**

+24%

Global AAS market is **skyrocketing**, with a projected CAGR of 24% or **\$344.3B by 2024**

\$50B

Apple's **Services** (incl. Fitness+, News+, iCloud) **business** expected to top **\$50B** in profit by 2025



Where are we today?

High Tech players recognize that adopting an as-a-service business model is not a matter of if, but when. Amid growing customer demand for curated Product + Service + Platform solutions, High Tech firms are quickly reaching the limits of value that can be captured through existing business models. Nevertheless, they struggle to adopt the financial models, supply chains, and sales organizations required to enable AAS.

What should we do tomorrow?



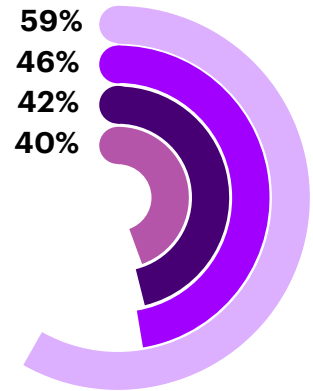
Reinvent the **relationship** between the **company** and the **customer** to establish a more predictable, recurring revenue stream and create **customers for life**



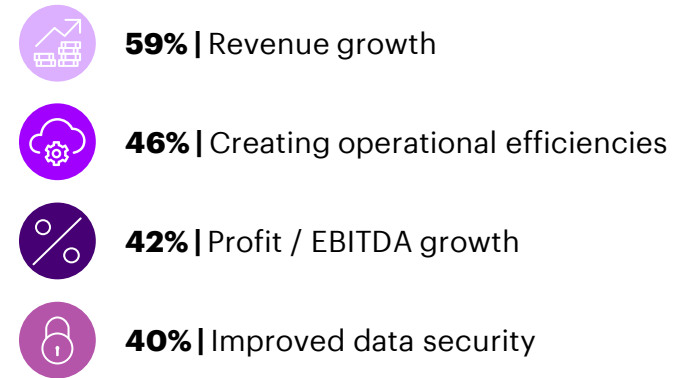
Assess potential for **vertical integration across the stack** by exploring **Product + Platform + Service + Experience bundling** to differentiate in an increasingly saturated market

Leaders are betting on as-a-service to deliver

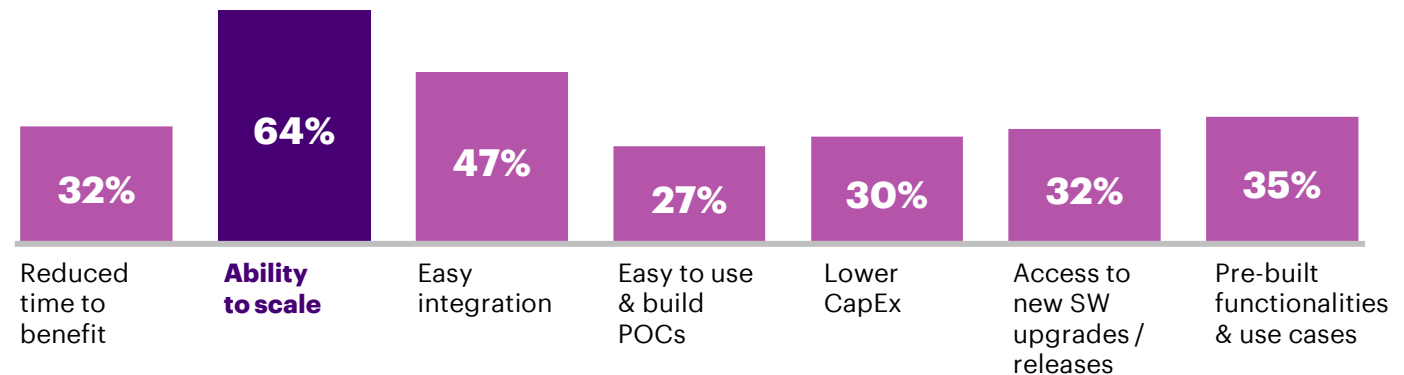
High Tech leaders are laser-focused on **revenue growth** as their #1 priority¹...



Top C-Suite goals for the next 2-3 years



...and are placing strategic bets on **as-a-service** as fuel for long-term scale²



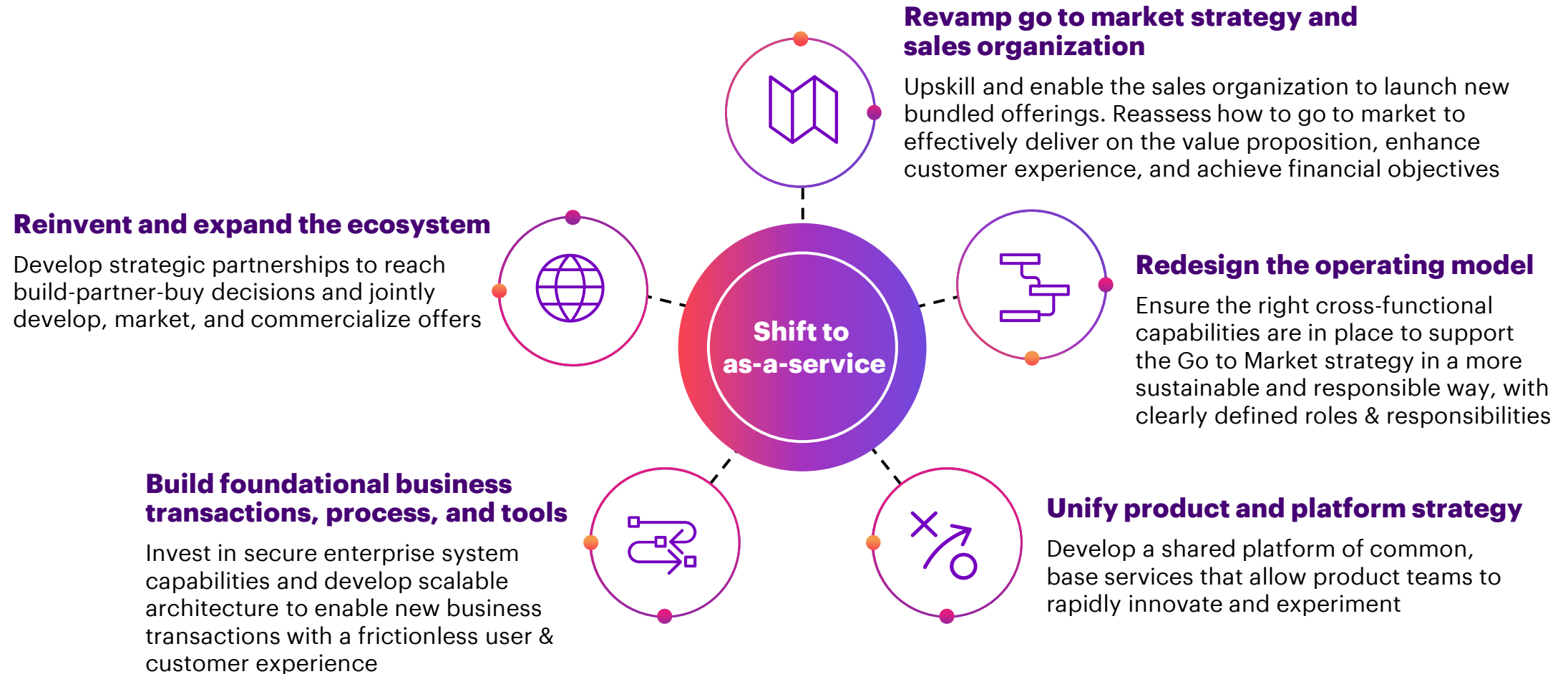
Source: Accenture 2021 High Tech C-Suite Survey

1. Over the next 2-3 years, what are the top goals for your company?

2. What are the top benefits of transitioning to an -AAS model for externally sourced capabilities / solutions?



To effectively adopt as-a-service, High Tech companies should take five fundamental actions



02

Expand industry boundaries

Industry convergence

Pivot from core competency area (e.g., hardware component) to creation of **high-value, cross-industry experiences** (e.g., hardware-powered solution that includes software and services)

High Tech relevance

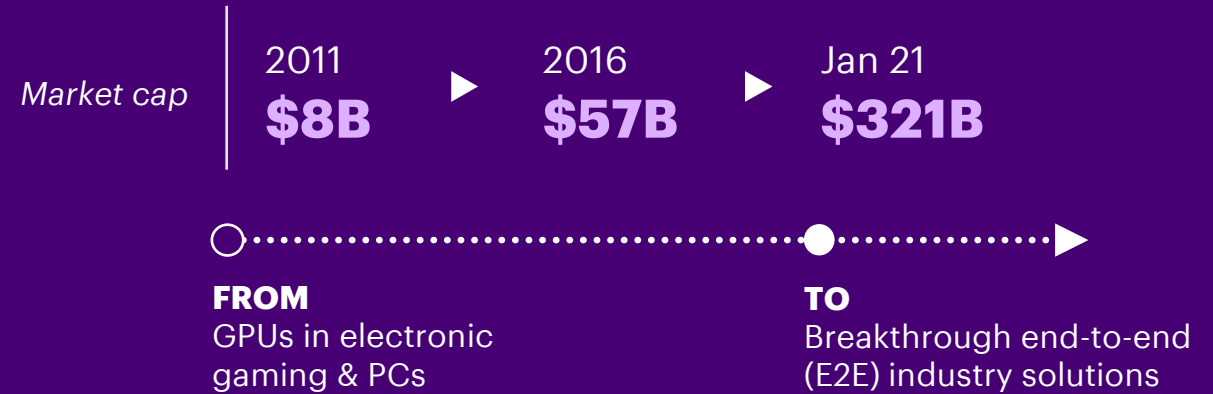
High Tech players are today's leaders in **ecosystem carryover**, leveraging their existing foothold, loyal customer base, and distribution channels to **secure a competitive position in new industries**. From Automotive to Health, High Tech firms are quickly becoming **respected rivals in adjacent industries**.

High Tech industry boundary trailblazer



Snapshot into NVIDIA's evolution

From graphic chip startup to **end-to-end industry solution activator**, NVIDIA is **redefining** what it means to be a High Tech player. NVIDIA capitalizes on its full-stack expertise to **rewrite industry borders** and **co-design the smart-X ecosystem**.



E2E hardware, software, and service industry solutions



Autonomous vehicles

- Self-driving cars and virtual simulations
- Next gen last-mile delivery robots



Smart city metropolis

- Incident detection
- Humanitarian & disaster relief
- Traffic management



Intelligent stores

- Asset protection
- Personalized in-store experience
- Autonomous shopping



Smart hospitals

- AI patient assistant
- Automated PPE & hospital inventory checks
- Smart devices

Source: Accenture Research, Yahoo Finance, NVIDIA



The Company + Customer paradigm continues to shift as High Tech players face inward and outward convergence

High Tech companies who orchestrate strategic industry collisions are better positioned to meet growing customer expectations for on-demand, curated hardware + software + service solutions.

73%

of health consumers reinforce the market opportunity for wearables, stating **wearables** that monitor glucose, heart rate, physical activity, and sleep as **beneficial to understanding their health**

\$78B

Global automotive software (e.g., ADAS, infotainment) **market** is projected to reach **\$78B** by **2030**

\$2T

Consumer Tech companies (e.g. Samsung, Apple, Google) will continue to expand into **Global Payments**, as revenue will reach **\$2T** by 2025



Where are we today?

High Tech companies are spearheading a historic wave of tech-driven convergence, investing outside of their core industries to unlock new growth. As industry boundaries blur, new competitive forces emerge, as well as ambiguity on where to strategically play.

What should we do tomorrow?

Examine how industry convergence poses a **threat to existing market share** & impacts the **competitive landscape**

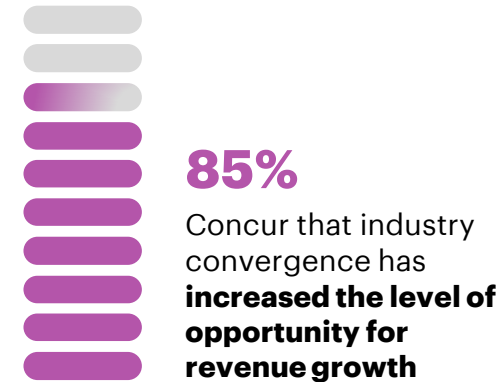
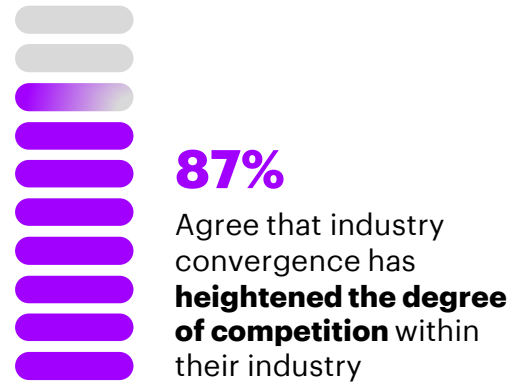
Explore cross-industry expansion opportunities to heighten economies of scale, optimize efficiency, **expedite R&D productivity / discovery**, and **stimulate revenue growth**

Source: Accenture Research, P&S Intelligence




87% of execs agree: convergence is a growth enabler

Majority of C-suite Executives believe that industry convergence is a core enabler for long-term growth.^{1,2}



Illustrative examples of High Tech industry convergence opportunities

 Smart mobility ×	 Connected infrastructure ×	 Digital health
Autonomous boats, cars, trucks, drones, public transportation, military vehicles	Edge- and 5G-enabled smart buildings, smart grid, energy/ utilities management	AI-powered smart hospitals, fitness wearables, COVID-19 contact tracing & wallet apps

Source: Accenture 2021 High Tech C-Suite Survey

How strongly do you agree with the following statements:

1. "Industry convergence has increased the level of competition within my industry"?

2. "My company is well-prepared to meet the new challenges and opportunities that come with industry convergence."?



High Tech players have four pathways to unlock value into new industry ecosystems

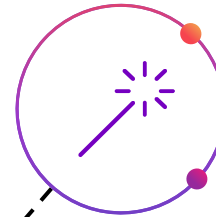
Leapfrog through mergers & acquisitions

Acquire new capability sets (e.g., intellectual property, talent, distressed tuck-in, strategic bets in growth markets) to reinvigorate existing portfolio and accelerate entry into new spaces



Build based on demand sensors

Pivot from a “sell what you build” mindset to building what customers actually need. Approach R&D and product development from a customer-centric lens to build bespoke solutions



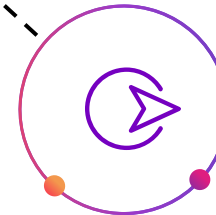
Forge strategic alliances

Design and operationalize an Alliance Innovation Hub to fuel experimentation and commercialize market-relevant joint offerings at scale, without cannibalizing existing offerings



Capitalize on installed base to expand into adjacent areas

Leverage deep device footprint and expansive product capabilities to explore new territories that align with demand sensors (e.g., digital health, sustainability-focused technologies)



Expand industry boundaries

03

Reinvent the portfolio

Portfolio reinvention

With the proliferation of **cloud, 5G, edge, IoT, and AI/ML**, High Tech companies can derive faster insights and develop **hyper-connected customer experiences** catered to limitations in different environments. Product portfolio reinvention is needed to capture growing market opportunity and deliver on evolving customer demands

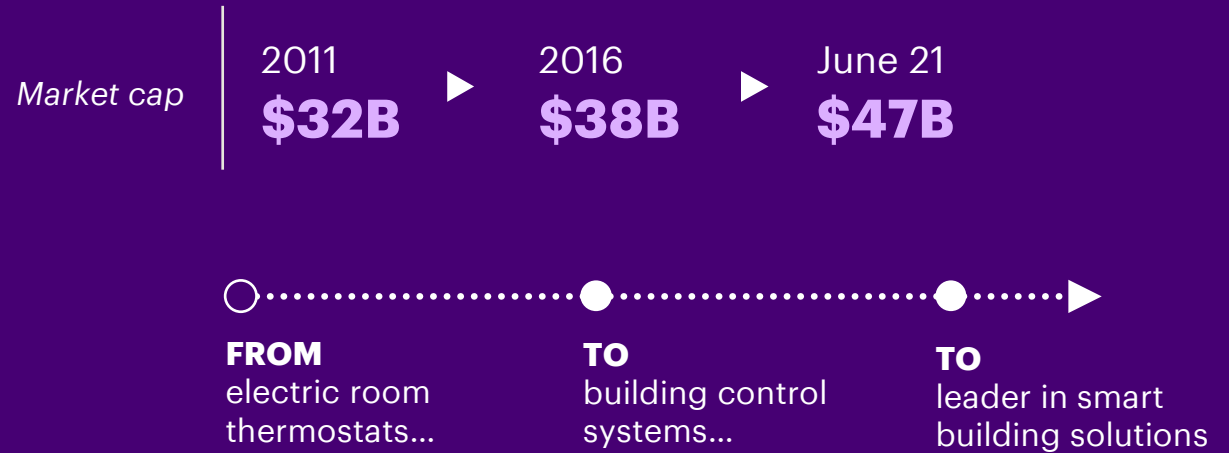
High Tech relevance

Given the explosive growth in these technologies, High Tech companies are forced to **redefine what to build, reassess what assets** (e.g., data) can be monetized, and **reconfigure how to go to market**

High Tech connected portfolio trailblazer

Snapshot into JCI's evolution

JCI's growing investments in emerging technologies have made the company a **pioneer in smart building solutions**. From thermostat titan to **sustainability leader**, JCI's **competitive position** in smart, secure, and sustainable buildings is **continuously enabled** by **edge computing, advanced analytics**, and the **connected ecosystem**.



COVID-19 flexible infrastructure



Fire and security services



Touchless buildings



Sustainability predictive analytics



OpenBlue digital platform



PKI cybersecurity

Source: Accenture Research, Yahoo Finance, JCI



The High Tech company of the future will harness digital enablers to reengineer its market positioning

High Tech organizations are well-positioned to capitalize on the growing market opportunity for digital disruptors if they are willing to reimagine their product offerings

\$13T

5G will yield approximately **\$13.2T** in global economic value by 2035

\$251B

Global edge computing market is projected to reach \$251B by 2024, with a CAGR of 12.5% from 2019–2024

56B

By 2025, there will be roughly **56B** connected devices worldwide, 75% of which will be connected to an IoT platform



Where are we today?

High Tech companies have begun to acquire startups, develop alliances, and integrate IoT/edge capabilities within their portfolios, but many have yet to commercialize at scale. Only few have leveraged these cutting-edge capabilities to enable top-line growth.

What should we do tomorrow?



Refresh **product** and **technology roadmap** to encompass strategic digital enablers



Integrate connected ecosystem into value chain



Assess **market opportunities** and potential to pilot **cutting-edge technologies** through **strategic partnerships**

Leaders see these digital enablers as the future

High Tech firms are in a race to meet **growing customer demand** for **custom solutions...**

Illustrative example of customer-centric solutions



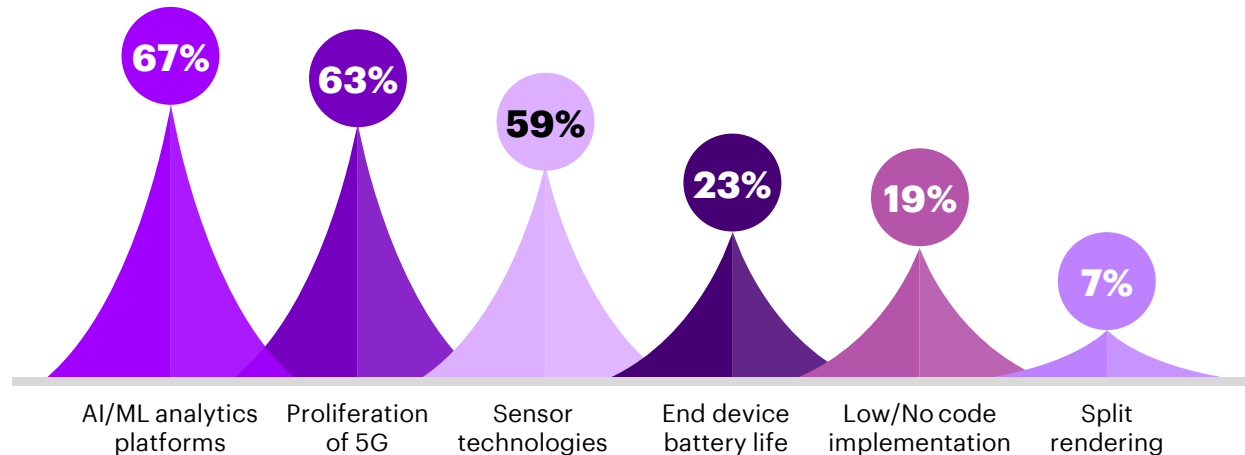
Choose your own stadium adventure
Powered by 5G



Dynamic smart home assistance
Powered by edge sensors

...and are investing in the following **digital enablers** to bring these solutions to life¹

High Tech C-Suite Executives prioritize AI/ML capabilities and 5G as most important

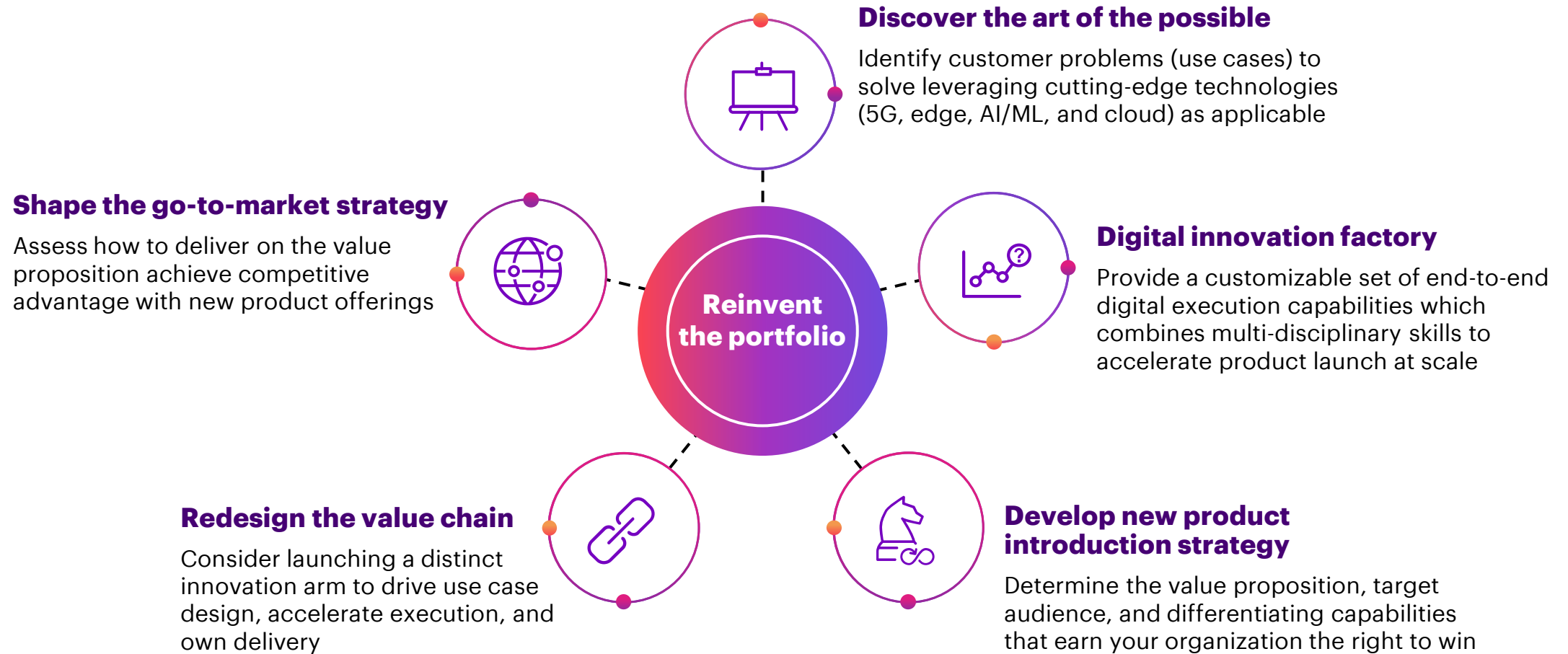


Source: Accenture 2021 High Tech C-Suite Survey

1. What will be the biggest technological tipping points that will unlock the full potential of smart devices and edge computing to maximize return on investment?



High Tech companies are five steps away from reimagining their portfolios and offering hyper-personalized customer experiences



04

Modernize the enterprise

Core modernization

Reinvention of **core technology systems, data architectures, operating models, and operational processes** to adapt to new business model

High Tech relevance

High Tech players power the modern economy, but many have yet to modernize their own enterprise. Cue the era of modernizing the core, wherein High Tech firms **rebuild their foundation to enable new business models, new market entry, and new product introduction**

High Tech core trailblazer

Lenovo

Snapshot into Lenovo's evolution

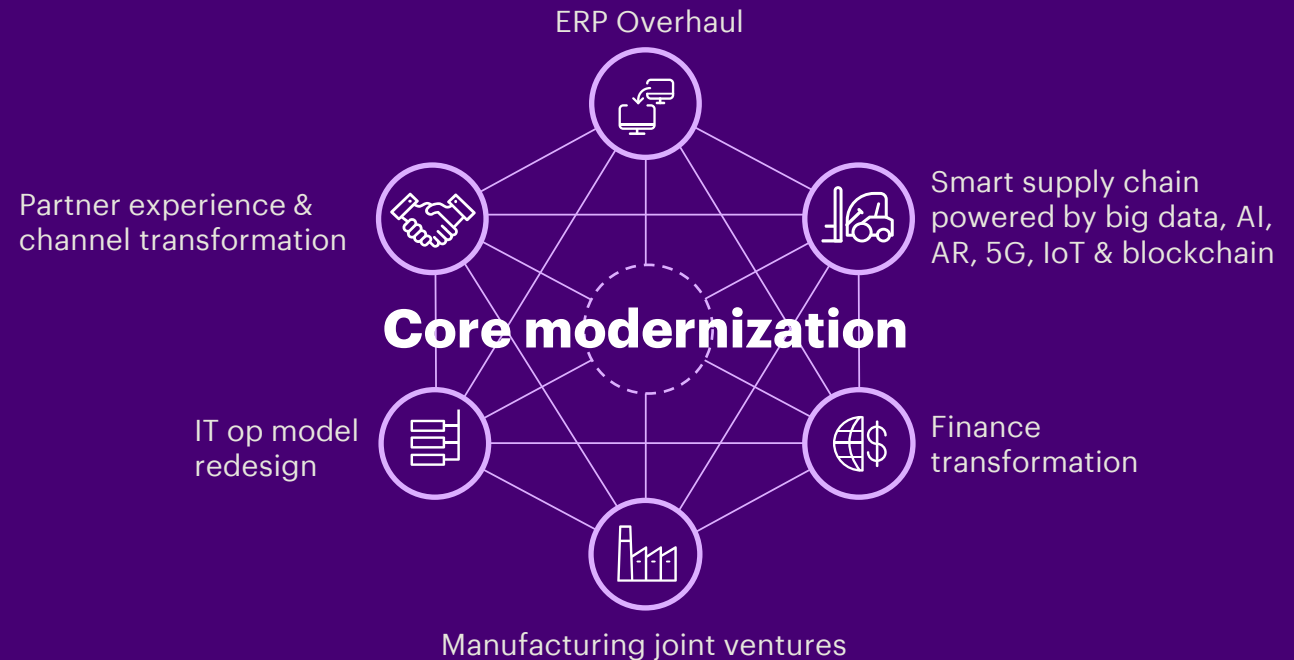
Lenovo's record of innovation is fueled by a history of continuous technology, process, and workforce transformation. Lenovo's multi-decade journey of **reinvestment in the enterprise** now affords the company the opportunity to penetrate new markets and **transition from a device+ to intelligent solutions company**.

FY20
revenue

\$51B

May 21
market
cap

\$15B



Source: Accenture Research, Lenovo Investor Day Reports, Yahoo Finance



Without investing in enterprise transformation, High Tech companies risk leaving billions on the table

High Tech firms will struggle to recover from disruptions and fail to meet changing customer needs unless they get serious about business and op model reinvention, core tech transformation, and provide new value to customers.

60%

of organizations **lack the capabilities & organizational model** to sustain a liquid, modular, and agile organization

40%

Companies can **reduce CapEx by 40%** by migrating to virtualized, cloud-based architectures

30%

of High Tech executives fear transitioning to the cloud due to nebulous strategic value



Where are we today?

High Tech players have begun to modernize their business as a reactive response to COVID-19. However, adapting their business models to enable more resilient operations, agile ways of working, and cutting-edge capabilities remains an operational challenge.

What should we do tomorrow?



Refresh **technology stack** and **next gen ERP** to optimize operating models supported by cloud to drive growth



Conduct **workforce skill gap analysis** and create talent development plans with **enterprise transformations**

AI & Cloud: clear benefits, unrealized potential

High Tech Executives are clear on the benefits of deploying AI & ML within their organizations¹



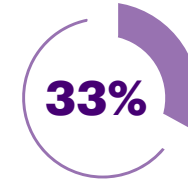
Ability to drive cost efficiencies



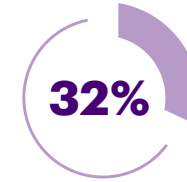
Ability to drive revenue growth



Maintain competitive edge in market



Free up labor for higher-value activities



Opportunity to upskill labor force



Stay in line with competitive pressures

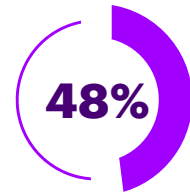
Cloud has been pivotal to sustaining a distributed workforce throughout the pandemic.

Yet, many High Tech companies have yet to fully unlock the potential of their cloud investments.

High-Tech Executives believe further investment in Cloud can achieve the following²...



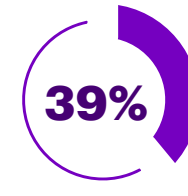
IT modernization



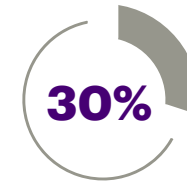
Improved efficiency



Increased agility & innovation



Improved productivity



Cost savings

...but they must first overcome two core challenges around cloud adoption³



Undeveloped cloud strategy



Lack of internal cloud expertise

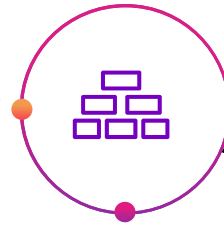
Source: Accenture 2021 High Tech C-Suite Survey
1. What are biggest benefits / reasons for deploying AI/ML solutions within your org?, 2. What are the top outcomes your organization is looking to achieve through investments in cloud solutions?, 3. What are some of the biggest internal roadblocks in the investment in & adoption of cloud infrastructure solutions?



High Tech players should take a five-pronged approach to modernize the core of their enterprise

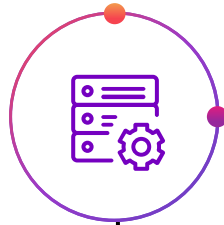
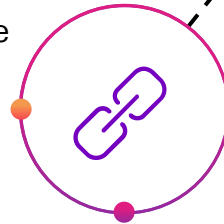
Redesign the operating model

Ensure the right, secure structures are in place to activate an intelligent, agile op model that enables fluidity across people, process, technology systems, and assets



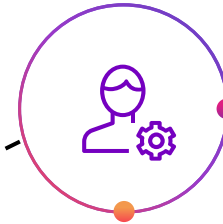
Unlock the potential of people

Activate the workforce of the digital future by equipping employees with in-demand skills. Facilitate cultural transformation through increased commitment to Inclusion & Diversity, optimized employee experience, and continuous learning



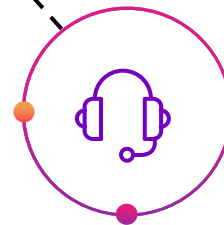
Create a digital foundation powered by next gen ERP & new data strategies

Leverage next gen ERP and automation to build a digital core that heightens agility, helps real-time decision making, and fuels robust omni-channel experiences. Build a data-powered enterprise through bold big data strategies and AI/ML solutions



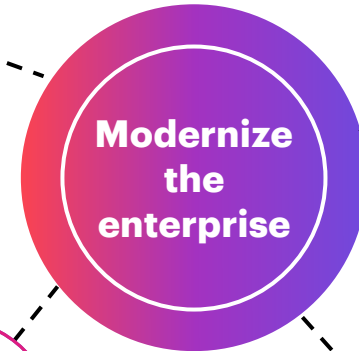
Industrialize operational agility

Free up human capital to focus on higher-value work through process efficiency, continuous improvement, and centralized data/analytics capabilities



Offer a differentiated & personalized customer experience

Deploy AI-powered customer care solutions to decrease service costs, optimize back-end sales motions, and meet customers where they want to be met



05

Build resilient supply chains

Supply chain resiliency

COVID-19 and **geopolitical tensions** have disrupted global supply chains, creating an urgent need to address the crisis while building greater supply chain resilience for the future

High Tech relevance

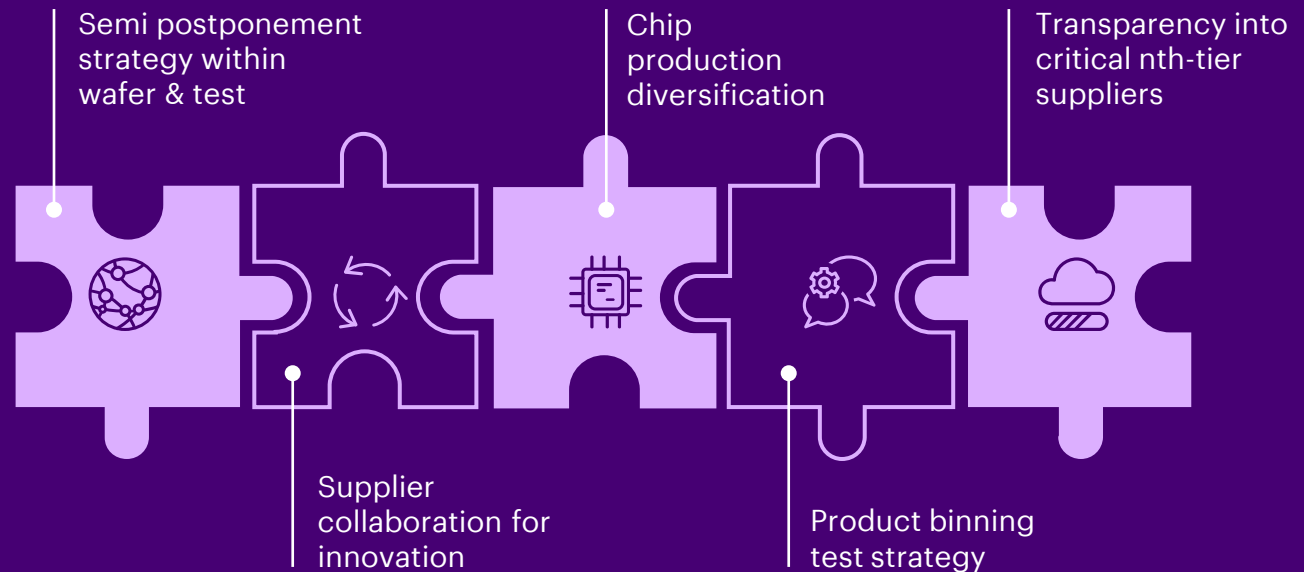
High Tech companies are searching for new ways to infuse **agility** and **intelligence** into supply chains to better withstand future crisis.

The **flexible, integrated** supply chains of the future will help sustain competitive advantage and accelerate growth

High Tech supply chain trailblazer

Snapshot into Samsung's evolution

Samsung has become a dominant player in the global semiconductor supply chain by securing a **competitive edge in cost, delivery, and technology**. Through supply chain network diversification and investments in intelligent supply chain capabilities, Samsung's **supply chain emerges as a core differentiator**



Source: Accenture Research, Samsung Investor Relations, Yahoo Finance, Forbes



In times of disruption, those with agile, intelligent, and resilient supply chains would have the competitive advantage

High Tech firms that can rapidly strengthen their supply chain resilience would be better prepared to adopt as-a-service business models, manage immediate crisis, and anticipate future disruption.

94%

of Fortune 1000 companies continue to experience **supply chain disruptions** due to **COVID-19**

10 of 12

Major companies in 10 of 12 global sectors state the need to **shift a portion of their supply chains** from current locations due to **tariffs, automation, and national security concerns**

#1

In a recent Allianz survey of global executives, **business interruption** was ranked the **#1 most important business risk factor**

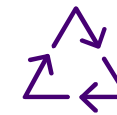
Source: Accenture Research



Where are we today?

COVID-19, natural disasters, and geopolitical tensions have accelerated supply chain disruption. Several manufacturing plants remain closed and shipping options remain limited. As the global chip supply crisis continues, every downstream emerging tech sector is focused on protecting their revenue and supply chain against risk.

What should we do tomorrow?



Invest in **intelligent supply chain analytics capabilities** to lower disruption response time and minimize costs



As part of **AAS adoption**, strengthen **quality of supply chain services** (e.g., same-day delivery of spares, hardware return logistics) to **deliver superb customer experience**



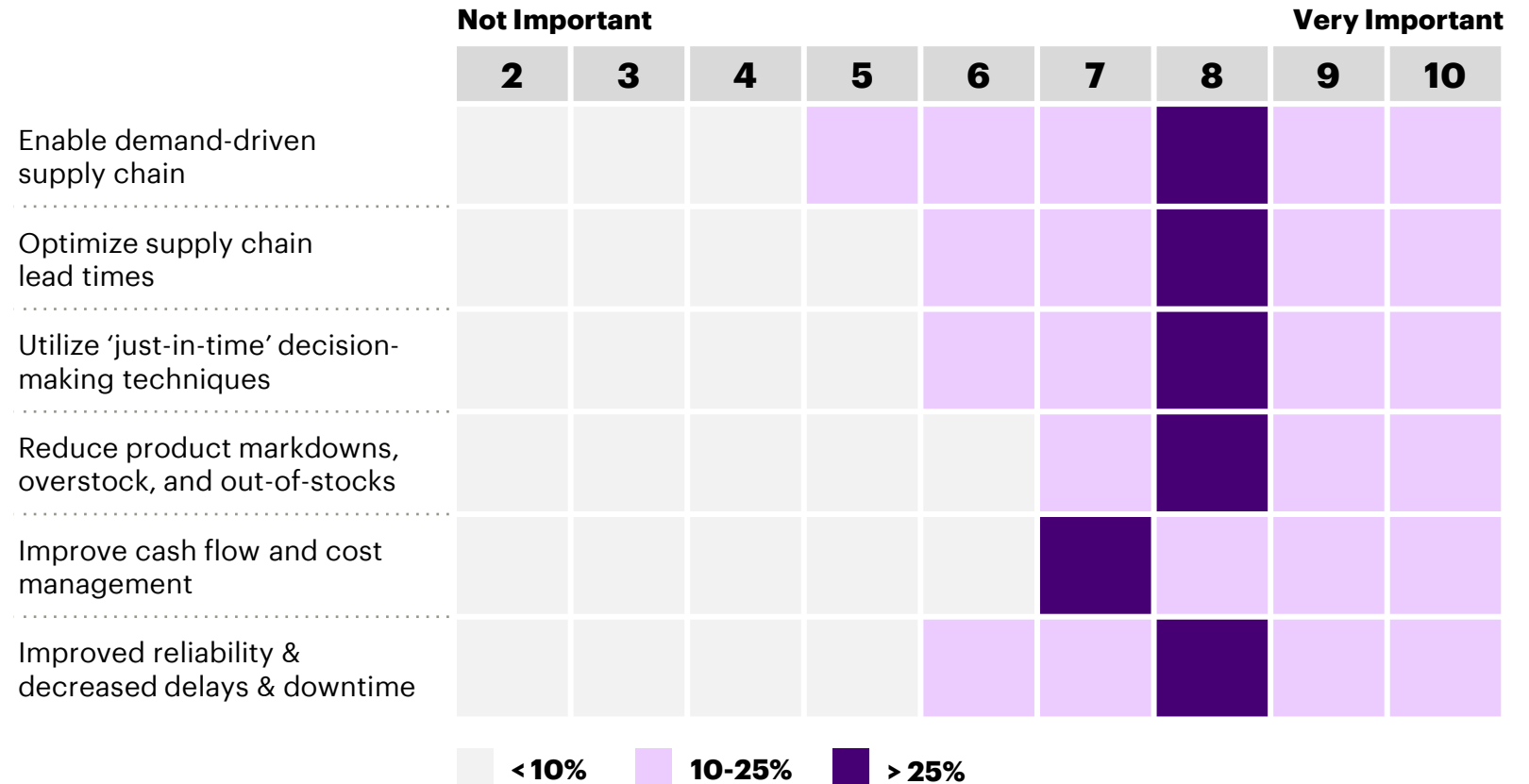
Infuse enhanced visibility and sustainability within supply chain reduce long-term risk

The C-Suite's top priority: Digitizing the supply chain

Companies are prioritizing **digitalization** of supply chain activities to transform their supply chain models



C-Suite Executives across the board are aligned on the **urgency** of developing **future-proofed** supply chains¹



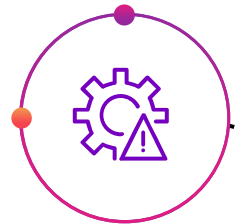
Source: Accenture 2021 High Tech C-Suite Survey
 1. How important are each of the following benefits your organization would hope to achieve through digitalization of supply chain activities?



To build more resilient supply chains, High Tech organizations must shift their focus towards these five activities

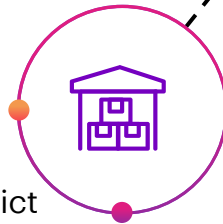
Assess and embrace failure mode

Segment root causes of supply chain failure by origin, type, and uncontrollable elements (e.g., shift in demand). Apply Failure Mode & Effects Analysis to pinpoint systemic issues



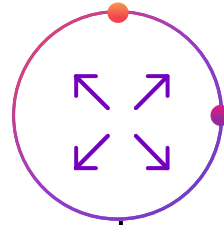
Strategically stage inventory

Use AI-based web crawlers to evaluate customer behavior/sentiment and predict demand shifts by channel/geography. Simulate where on-hand, in-transit, and on-order inventory is now vs. where it needs to be to meet demand



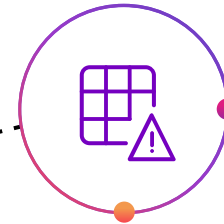
Secure and expand the supply base

Assess the potential for flexible production and co-manufacturing. Consider flexible storage, distribution, and fulfillment opportunities to strengthen network flexibility



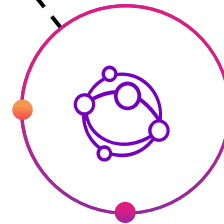
Expand the risk framework through digital twin

Mirror supply chain operations to analyze the robust supply chain for known and unknown risks to the supply base (e.g., InfoSec, regulatory, geopolitical, climate change)



Integrate the value chain through advanced analytics

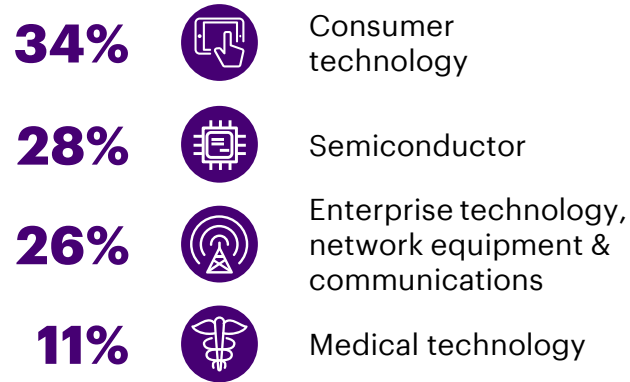
Leverage integrated network planning, disruption scenario modelling, and digital manufacturing analytics capabilities to enhance real-time visibility, reduce time-to-recovery, and drive sustainable manufacturing practices



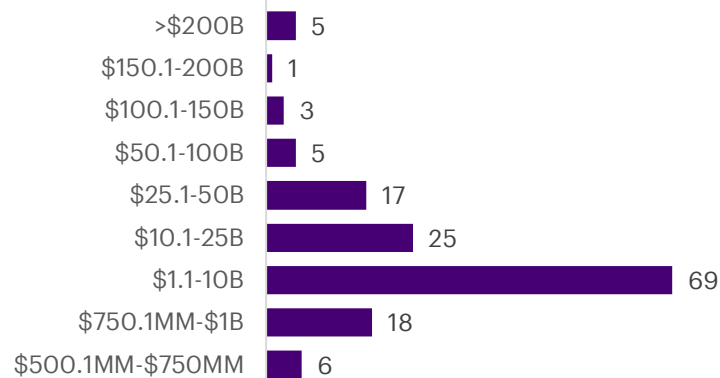
Survey demographics

Our 149 C-Suite survey participants span global High Tech companies

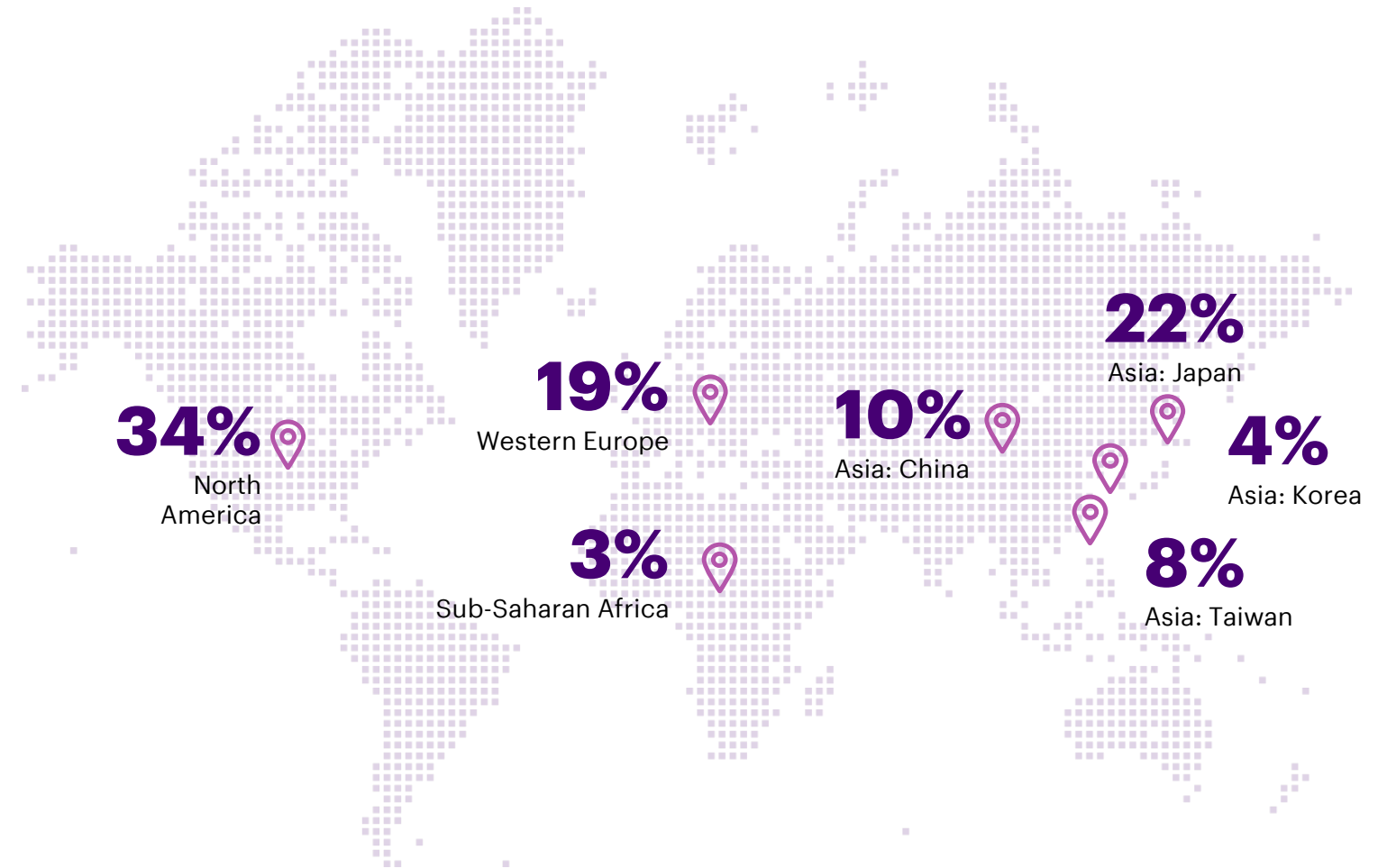
Industries represented



Company size



Geographic distribution



High Tech industry narrative team

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