



Executive  
Perspectives

# The CEO's Dilemma

Leveraging Tech and Digital to Build Resilience

*May 2023*





# Introduction

The current crisis is unprecedented. Companies are exposed to a combination of substantial challenges—climate change, disruption of supply chains, inflation, the rise of generative AI—which together are leading to massive economic pressure and investment needs.

Companies need to respond to such disruptions with a well-thought-out action plan. Tech and digital are important levers to mitigate these challenges and build resilience, both from within the tech function and as an enabler of business growth.

Some business leaders might be skeptical about investing in tech and digital during a downturn. And indeed, we have seen 70% of digital transformations fall short of their objectives. But our research also shows that well-selected investments in next-generation technologies such as AI are paying off—with 20% higher value generated for tech and digital leaders.

The levers described here go far beyond tech and digital cost reduction. Still, cost takeout is an "evergreen" lever to pull, rewarding companies with 15% to 40% savings on tech and digital costs (even after several reduction rounds) and thus helping to fund the journey to resilience.

In this edition of BCG Executive Perspectives, we look at how to leverage tech and digital to build resilience within the tech function and across the business.

# Executive Summary | Leveraging Tech and Digital to Build Resilience

## Why tech and digital matter for resilience

The **current crisis is unprecedented** and requires new approaches to turn ambiguity into opportunity. The **acceleration of digital adoption** is putting **tech and digital at the core** of resilience enablement. It is imperative for organizations to rapidly deploy and adapt their tech and digital capabilities—not only by **increasing efficiency within the tech function** but by **enabling growth across the entire business**.

## How organizations have turned ambiguity into opportunity

Organizations need to **select, prioritize, and sequence the right tech and digital levers** to successfully master resilience challenges and thrive in altered circumstances. They have to find the **right balance** between:

- Generating **funding supported by cost reduction in tech and digital by 15%-40%** (e.g. by consequently pulling tech cost levers and by refocusing the portfolio on value-creating initiatives)
- Ensuring **digital and geopolitical risk management** (e.g. by increasing cyber maturity and applying a "local for local" approach where required)
- Enabling **business resilience** and growth through tech and digital (e.g. by building new digital products and focusing on a few value-generating digital/AI lighthouses)

## How to get started

**Follow a three-step approach** to leverage tech and digital to build resilience:

1. Understand the starting point based on market and financial stability
2. Act by finding the right balance between the levers and determine the optimal implementation sequence
3. Plan the transformation based on a comprehensive tech and digital resilience roadmap

**BCG has broad and deep capabilities to help define the most suitable resilience approach and jointly turn it into action. The time to act is now.**

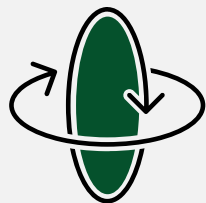


# BCG Executive Perspectives

## AGENDA

- ✓ **Why tech and digital matter for resilience**
- ✓ How organizations have turned ambiguity into opportunity
- ✓ How to get started

# Tech and digital are key to building resilience within the function — and to enabling business resilience



Turn ambiguity into opportunity by rapidly deploying and adapting tech and digital to withstand, recover, and thrive in altered circumstances

Effectively manage digital and operational risks, such as cyber attacks, while complying with relevant standards and regulations



Release financial pressure by leveraging tech cost/investment optimization to withstand uncertainty and reorient toward opportunities arising from instability

Effectively withstand and recover from shifts in global and local digital/data laws, trade blocks, and geopolitical friction



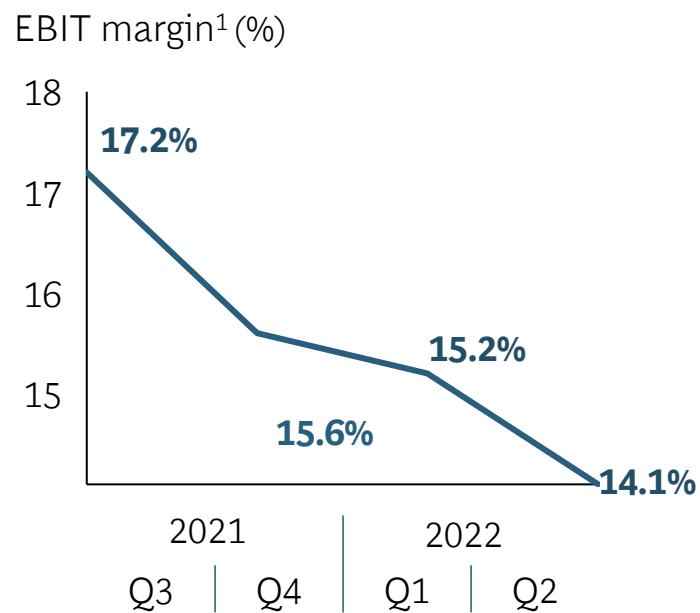
Resilience of tech and digital



Tech and digital enabling business growth and resilience






# Increase tech and digital efficiency and ROI | Realizing tech and digital cost-reduction potential is key as SG&A costs rise and margins shrink

## Recently, much higher margin pressure observed in the market



72% **plan cost reduction/efficiency efforts**<sup>2</sup> to navigate uncertainties in 2023

## Tech and digital is a major SG&A cost component

Industries (example)	Tech spend as % of revenue
 Financial institutions <sup>3</sup>	10%–20%
 Pharmaceuticals	3%–6%
 Industrial goods	1.5%–3%
 Retail and consumer goods	1.5%–3.5%
 Telecommunications	5%–12%

## Key tech and digital levers to reduce cost and increase margins

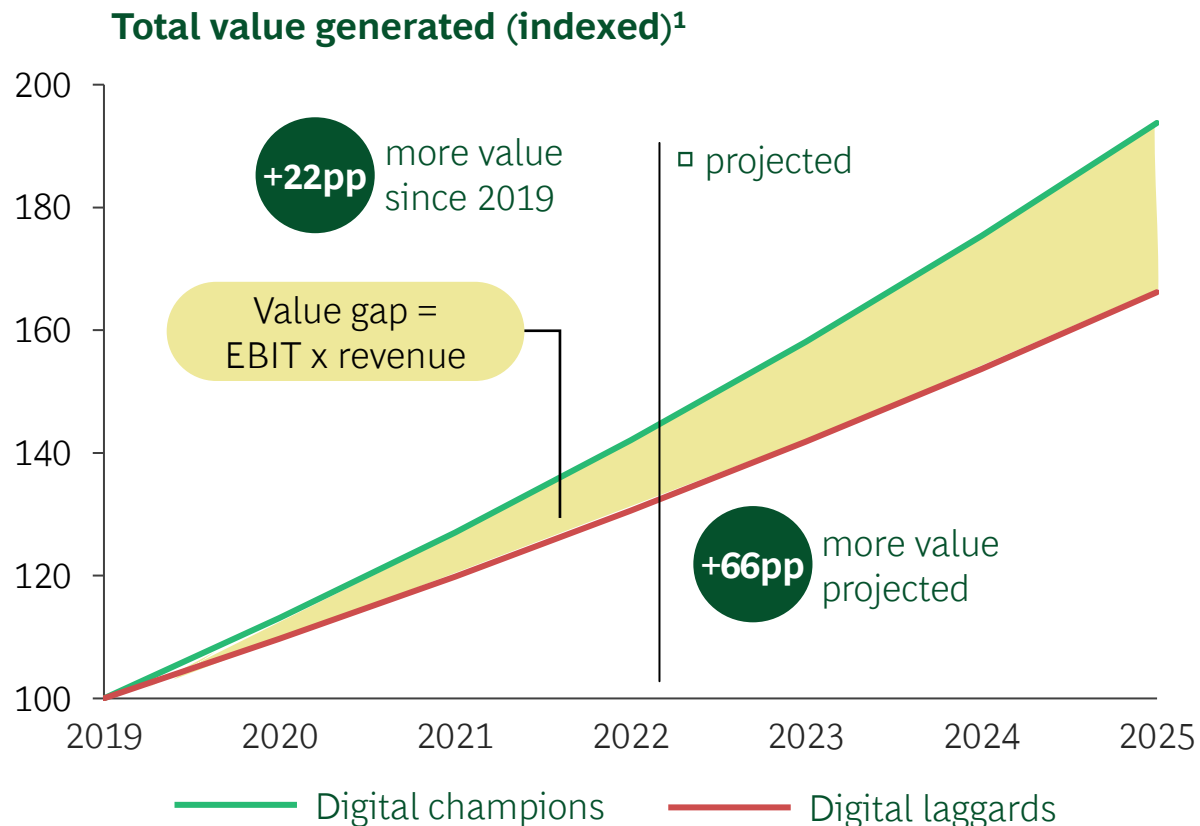
<b>Sourcing optimization</b>	
Contract renegotiation, effective supplier management, external FTE optimization	2%–5%
<b>Apps. and infrastructure simplification</b>	
Optimization of cloud, applications, licenses, EUC <sup>4</sup> , network, help desk	3%–15%
<b>Operating model optimization</b>	
Tech org. and process optimization <sup>5</sup> , DevOps and agile ways of working	8%–12%
<b>Value-based portfolio reprioritization</b>	
Shift from less value-creating initiatives to more value-creating ones	2%–8%
Cost reduction	

Sources: S&P Capital IQ; Federal Reserve Bank of Minneapolis; Social Security Administration; BCG analysis.  
<sup>1</sup> S&P 500 companies <sup>2</sup> Not limited to tech and digital; BCG analysis based on a global C-suite survey with n = 759 respondents.  
<sup>3</sup> For small- to mid-sized financial institutions: 7% to 15%. <sup>4</sup> EUC = end-user computing. <sup>5</sup> Incl. use of (generative) AI to automate process steps.



# Enable business growth and resilience | Tech and digital is the key driver to future-proofing the business

## Value gap will triple by 2025 for those who do not leverage tech and digital innovation

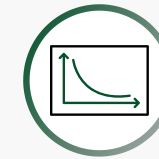


## Key areas where tech and digital can increase business value

54% of C-levels expect **digital and AI to be the investment priorities** in medium to long term to seize opportunities<sup>2</sup>



**Improve forecasting and planning precision**  
by building data and analytics advantage



**Optimize prices and contribution margin**  
by leveraging artificial intelligence



**Optimize conversion rates** with generative AI through on-model image generation



**Increase supply-chain transparency**  
by establishing an AI-based cockpit

Sources: BCG Digital Acceleration Index (DAI) - Global Study 2022 (n = 2,700); BCG research; IoT Analytics Research 2022; BCG analysis and experience.

<sup>1</sup> Total incremental margin, calculated by factoring indexed annual revenue with EBIT per year.

<sup>2</sup> BCG analysis based on a global C-suite survey with n = 759 respondents.

# Reduce digital risk | Cybersecurity threats are increasing globally; enhancing cyber resilience is nonnegotiable

## Cyber threats with dramatic impact

**\$2T**

... is the predicted **global cost of cyber crime for 2023**

**82%**

...of **breaches** are caused by organizational and **people failure**

**3.5M**

...unfilled **cybersecurity roles**, a number not expected to decrease within five years

## Cyber resilience requires organizations develop the capabilities to...



### Anticipate cyber events

Deeply understand how tech supports the business value chain and evolve cyber resilience programs



### Absorb and withstand initial shock of a cyber event

Defend against majority of day-to-day cyber attacks, and contain successful attacks with minimal business impact



### Adapt and recover business services swiftly

Take value-chain-centric approach to recovery prioritization; quickly reestablish critical business processes



### Shape and transform business based on learnings

Adopt culture of continuous improvement (free from blame) and transform tech and cyber architectures

- Cyber crisis operating model and planning
- Cyber simulations and exercises
- Business process and tech mapping
- Cyber threat intelligence

- Security and resilience by design
- Zero-trust architecture
- Cyber incident response team
- Containment technology

- Operational workarounds
- Burst capacity
- Value-chain-led recovery
- Recovery plans and procedures

- Posting of incident reviews, corrective actions, and feedback loops
- Rearchitecting of tech and cyber



# Disentangle technology | Geopolitical dynamics keep shifting; ensure regulatory compliance and mitigate risks via tech decoupling

## New regulatory, geopolitical, and business-driven dynamics shaping the next decade

Regulatory compliance

Compliance to data-security laws<sup>1</sup> will be a top priority; limitations to cross-border data transfer will require local tech

Risk mitigation

Increasing geopolitical trade frictions and sensitivity in using foreign tech will cause a shift to local providers

Business and user expectations

Higher user expectations of digital experiences will drive further integration with local tech and digital ecosystems

## Tech decoupling is already a priority for executives across the globe

Tech stack	+	Decoupling driver	=
Social media		Regional-dominant social media platforms	
Applications		Different applications across different markets	
Data platform		Local data residency, demarcation, encryption	
Infrastructure		Separated infrastructure stack across markets	
Network		Network segmentation, zero-trust approach	
Vendors		Local vendors vs. global vendors	

Evaluate decoupling scenarios in terms of regulatory compliance, costs, and risk-mitigation impact

Source: BCG analysis.  
<sup>1</sup> For example, the EU's General Data Protection Regulation (2016); China's Cybersecurity Law (2017), Data Security Law (2021), and Personal Information Protection Law (2021); American Data Privacy and Protection Act (not yet law, in US legislative process).

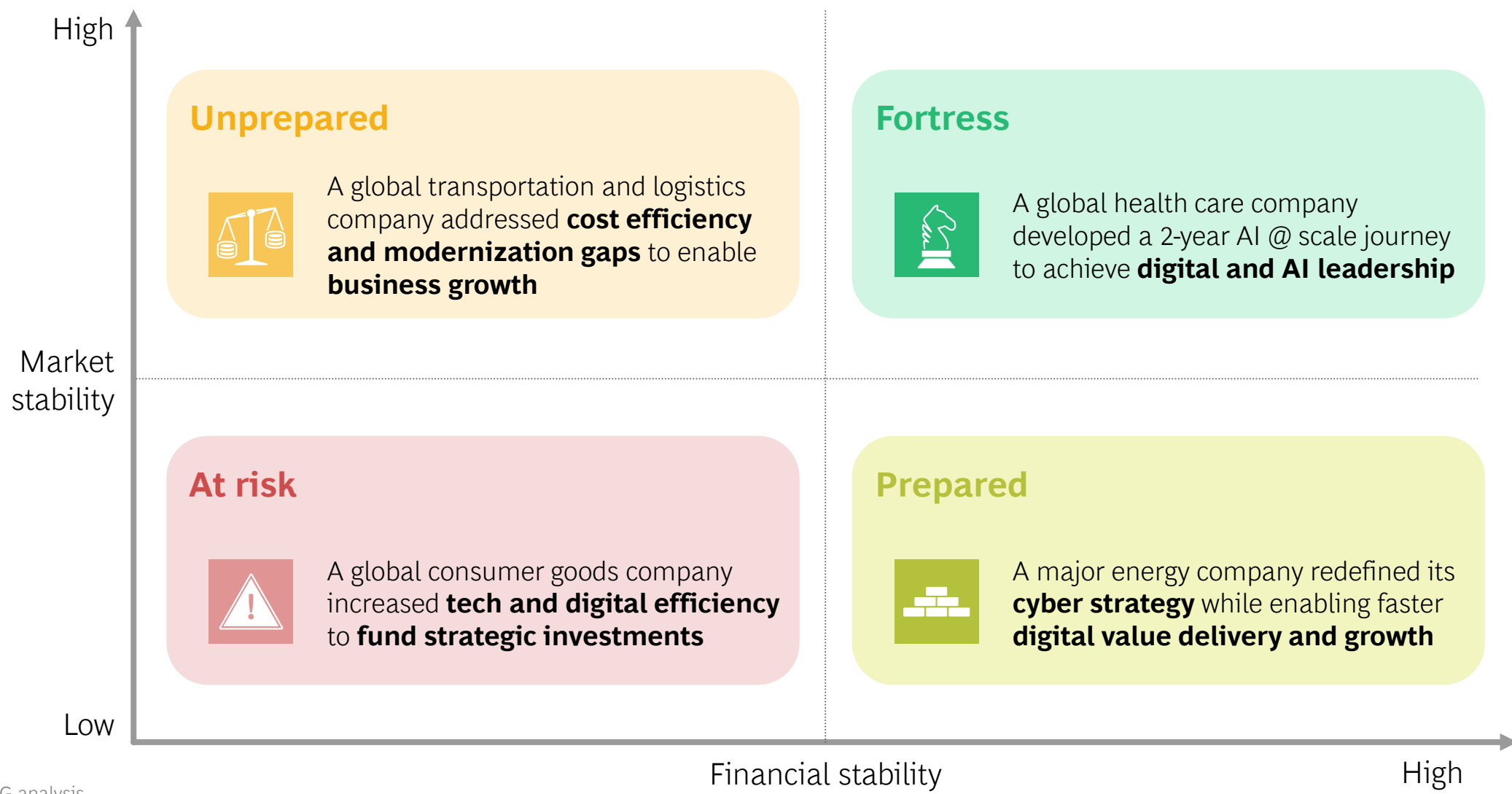
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# Four examples of how organizations have leveraged tech and digital to turn ambiguity into opportunity and become more resilient



Source: BCG analysis.

# At risk | Release financial pressure by leveraging tech and digital levers to achieve cost efficiencies and fund strategic investments and growth

## Global consumer goods company

Due to revenue decline caused by COVID-19 and amid uncertainty going into 2023, the company addressed **tech and digital efficiency** to realize substantial cost takeout and enable **strategic investments and growth**

### Increase tech and digital efficiency and ROI

#### Identified and detailed saving measures to achieve a sustainable IT budget, for example:

- **Sourcing.** Consolidated, negotiated with, or terminated vendors and diligently reviewed license spend to decommission, profile, or renegotiate.
- **Operating model.** Optimized current operating model to ensure competitiveness in terms of location and external-to-internal ratio.
- **Cloud.** Optimized cloud setup based on benchmarking, analysis, and definition of cloud-cost baseline, hosting patterns, and cloud footprint.
- **Tech infrastructure.** Reduced backup frequency and storage tier; downgraded virtual machine disk tiers for noncritical apps.

#### Created IT cost transparency and cost governance:

- Created **first full overview of tech FTE-related spending**, allowing for effective monitoring of initiatives and strategic review of FTE-related cost.
- Ensured full **visibility on actual cost drivers**.
- **Prioritized the investment portfolio** allowing for data-driven decisions to support the company's growth.
- **Introduced suitable governance processes** to validate and approve tech and digital demand.

## Significant impact

Identified 25% cost savings across the full baseline for tech spending

Created transparent and sustainable tech budget to release financial pressure while enabling future growth via customer loyalty and personalization and store expansion





# Unprepared | Improve financial stability while maintaining a competitive position with a multilever approach

## Global transport and logistics company

While conducting **digital growth initiatives** and having **built basic cybersecurity capabilities**, this T&L company closed **cost efficiency and modernization gaps** that significantly contributed to **business growth**

Tech and digital efficiency and ROI	Enable business growth and resilience	
<p><b>Identified and detailed saving measures across different tech components:</b></p> <ul style="list-style-type: none"><li>• <b>Sourcing.</b> Rightsourced (managed demand, bundled, outsourced) and renegotiated contracts.</li><li>• <b>Operating model.</b> Reduced layers/span of control, shifted from "managing" to "doing," and introduced a new op. model between IT/tech and business.</li><li>• <b>Tech stack.</b> Optimized reserved instances, accelerated decommissioning of applications, and automated incident resolution through virtual assistants.</li></ul>	<p><b>Redesigned operating model and talent strategy to improve cost competitive positioning</b></p> <ul style="list-style-type: none"><li>• <b>New locations.</b> Established base in emerging tech hubs to leverage the growing tech talent pool, proximity to business, and labor cost.</li><li>• <b>Operating model.</b> Reduced local footprint, hired in central hubs, moved externals to nearshore, and insourced critical roles across value chain.</li></ul>	<p><b>Devised cloud-modernization measures to accelerate innovation</b></p> <ul style="list-style-type: none"><li>• <b>Flexibility.</b> rightsized IaaS<sup>1</sup> (e.g., virtual machines) and optimized infrastructure (e.g., SD-WAN) to increase performance.</li><li>• <b>Scalability.</b> modernized to PaaS<sup>2</sup> for limitless scalability, speed and security.</li></ul>

## Significant impact

- Achieved 15% cost savings on annual tech/digital budget
- Improved access to business-critical and rare tech talent by building a tech hub in South America
- Increased scalability of tech-based solutions through cloud modernization to support business growth



Source: BCG analysis.  
<sup>1</sup> IaaS = Infrastructure as a service.  
<sup>2</sup> PaaS = Platform as a service.

# Prepared | Capitalize on the opportunity to stay ahead by exploring high-growth tech and digital levers

## Major energy company

To overcome an inefficient **digital risk management** approach, which had posed security as an operational burden, this energy company redefined its **cybersecurity strategy** while enabling faster **digital value delivery**

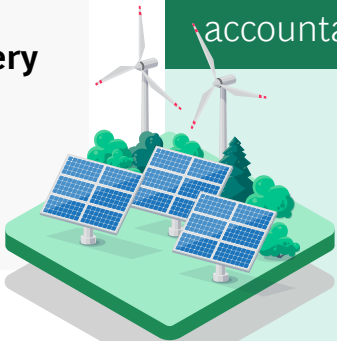
Reduce digital risk	Enable business growth and resilience	
<b>Redefined cyber strategy across five dimensions for risk-based approach</b> <ul style="list-style-type: none"><li>Identified <b>strategic tradeoff</b> decisions across cyber governance, risk and compliance, security by design, security tech, cyber operations and recovery</li><li>Detailed <b>four key levers</b>: org. and service optimization, strategic vendors and contracts, vendor/tech rationalization, and modernization</li></ul>	<b>Developed unified location/talent strategy and op. model to differentiate key capabilities</b> <ul style="list-style-type: none"><li><b>Rightsourcing</b> with critical capabilities insourced and commodity tasks outsourced</li><li>Redefined <b>talent processes</b> e.g., job architecture, branding, assessment</li><li>Recentered <b>location strategy</b> with hubs focused on targeted capability development, service centers on scale, and vendor resources on utilization</li></ul>	<b>Refocused modernization efforts to enable new digital capabilities</b> <ul style="list-style-type: none"><li>Designed <b>tech architecture</b> that allows platforms to build scalable products</li><li>Activated <b>bionic platform</b> and identified 1,500+ apps for modernization/retirement</li><li>Established central data and insights portfolio and specific data product lines to strengthen <b>digital delivery and data accessibility</b></li></ul>

## Significant impact

Shifted from a reactive, compliance-driven approach to a proactive, zero-trust risk-based approach to capitalize on scale and drive efficiency

Redesigned more than 6,000 IT roles and increased outsourcing with ~25% efficiencies and better capabilities

Faster digital delivery with platforms accountable for end-to-end delivery





# Fortress | Invest in future-proofing technology while maximizing current success

## Global healthcare company

Having **already built strong historical growth** and **overall financial stability**, this global health care company developed a holistic, two-year AI@scale journey to achieve digital and AI leadership and **future-proof its business**

### Enable business growth and resilience

#### Built full data and digital platform (DDP) program to accelerate future builds

- Built an end-to-end data and infrastructure foundation and reference architecture to scale impact **analytics, marketing, and inside-sales** use cases
- Adopted a **minimum-viable-product approach** to keep complexity as low as possible and quickly test present and future value delivery
- Implemented new organizational and op. model and conducted **tailored learning journeys**

#### Leveraged tech and digital to enable business growth via use cases and digital venture

- Defined new full portfolio of adv. analytics and AI-enabled use cases and supported the **creation of a new digital venture** outside of the core
- Built **new business-value engine** within the core focused on **data and AI-driven B2B sales** (e.g., warm marketing leads, potential defectors, cross/upselling)
- Launched series of **"value-strikes outcomes"** to **rapidly prove out impact** in less than 24 weeks



## Significant impact

Achieved higher scalability and faster time to prototype thanks to a **flexible and modern data platform architecture**

Demonstrated **value at scale** and **achieved cash-positivity in under a year**

Achieved in ~12 months:

- **40% increase** in sales-representative productivity
- **x2 increase** in sales conversion rate
- **x4 decrease** in time to market for pilot campaigns

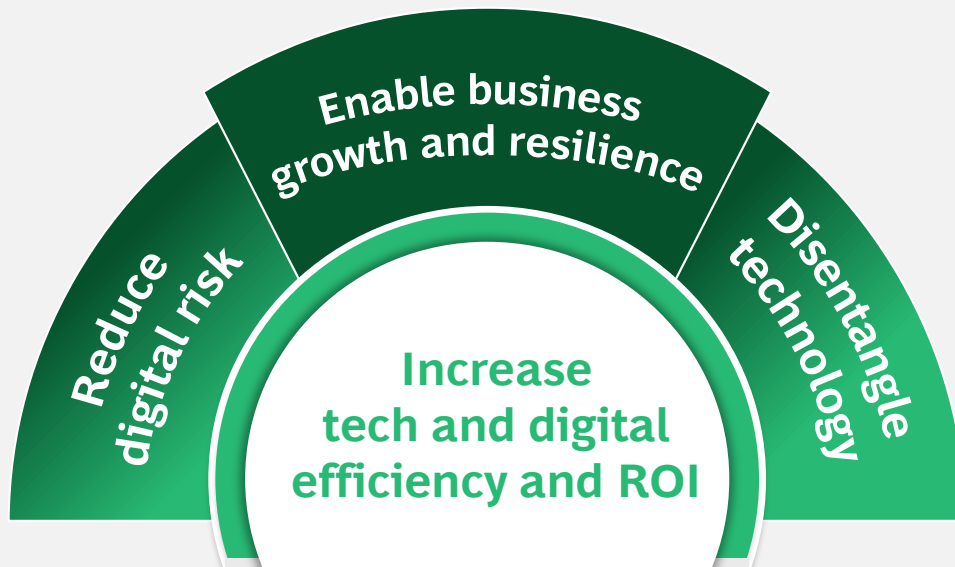
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# A key question for understanding how to leverage tech and digital to build resilience and maximize value impact



What is the most suitable **prioritization and timing** for pulling different resilience levers to **maximize value creation and resilience**, i.e. to invest in growth while strengthening financial stability?













There is no "one size fits all" answer regarding the most suitable mix of levers

# Nine key tech and digital resilience levers to turn ambiguity into opportunity

Fund the journey		Protect the core		Be future-proof
Key tech and digital levers	<b>Increase tech and digital efficiency and ROI</b>	<b>Disentangle technology</b>	<b>Reduce digital risk</b>	<b>Enable business growth and resilience</b>
	<b>Cost optimization</b> Reduce tech and digital costs by optimizing sourcing, operating model, and tech stack	<b>Geopolitical tech decoupling</b> Adapt tech setup to cater for changing regulations and geopolitical dynamics	<b>Cyber risk</b> Adopt a zero-trust security approach for risk mitigation across cyber and data protection	<b>Tech-enabled business growth</b> Identify and scale a few high-value use cases by leveraging tech (e.g., generative AI, DDP <sup>1</sup> , green tech)
	<b>Value-based port. prioritization</b> Prioritize tech and digital initiative portfolio based on value plus current and expected future demand	<b>New tech partner ecosystems</b> Identify new tech-partnership opportunities to hedge geopolitical risk and safeguard business continuity	<b>System and infrastructure risk</b> Minimize tech obsolescence and disruption risk to ensure stability of business-critical systems	<b>Tech-enabled business resilience</b> Scale tech solutions that enable more resilient, transparent, and secure value chains (e.g., SRE <sup>2</sup> )
Impact				<b>Tech modernization</b> Become an agile org, insource talent at the right locations, modernize tech stack aligned with business target
	<b>15%-40% cost reduction (5%-15% in first 18 months)</b>	<b>Compliance with local regulations, asset protection</b>	<b>Risk-exposure reduction (including time to react/fix)</b>	<b>Substantial revenue and value uplift</b>

Source: BCG analysis.  
<sup>1</sup> DDP = data and digital platform.  
<sup>2</sup> SRE = site reliability engineering.

# BCG has broad and deep capabilities to help define the most suitable resilience approach and jointly turn it into action

BCG Offering (selection)			In the last three years
Increase tech and digital efficiency and ROI	 <b>World-class tech function</b>	Cut tech/digital cost and transform IT into a future-oriented tech function	<b>+3K</b> tech and digital cost-optimization projects
	 <b>Digital portfolio consolidation</b>	Create transparency on tech and digital initiatives and prioritize for value	
	 <b>Platform operating model</b>	Shift from vertical-siloed to transversal-oriented agile/platform organization	
Disentangle technology	 <b>Tech decoupling</b>	Effectively decouple tech stack based on geopolitical scenario assessment	<b>+600</b> decoupling/geo-political risk projects
	 <b>Tech ecosystem build</b>	Develop global joint ventures, alliances, and digital ecosystems	
	 <b>Geopolitical risk impact</b>	Assess geopolitical scenario-related risks and impacts on tech stack	
Reduce digital risk	 <b>Cyber-risk quantification</b>	Quantify cyber-risk probability and impact	<b>+600</b> cybersecurity projects
	 <b>Secure design and cloud</b>	Build zero-trust, cloud security, and secure tech stack	
	 <b>Cyber architect. acceleration</b>	Build security and resilience into initiatives from the start	
Enable business growth and resilience	 <b>Flywheel/build and scale</b>	Ideate and build new digital products and innovative experiences in the core	<b>+10K</b> tech and digital projects
	 <b>AI @ scale</b>	Inject AI into core of customer engagement, business ops, innovation	
	 <b>DDP-led transformation</b>	Establish a data-driven business architecture	

Powered by **7K** business, digital, and tech experts across





# The time to act is now

## A three-step approach to leverage tech and digital to build resilience and get the transformation started

1

**Understand** your resilience starting point based on four major archetypes while assessing and benchmarking your current level of tech and digital maturity and budget allocation

2

**Act** by selecting and prioritizing the right tech and digital levers based on your starting point, tech and digital maturity, and resilience ambition across all four key dimensions

3

**Plan** the transformation by developing a comprehensive tech-and-digital resilience roadmap and leverage no-regret and faster ROI-generating levers to fund the resilience journey

# Connect with our tech and digital resilience leadership team with any questions

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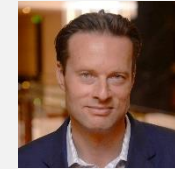
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Click here for our [latest publications in the CEO's Dilemma Executive Perspective series](#) and additional [resilience insights](#).



The image features the BCG logo in a bold, white, sans-serif font, centered horizontally. The background is a dark blue gradient, overlaid with a complex network of thin, golden-yellow lines connecting numerous small dots of varying sizes. Some dots are larger and more prominent, while others are smaller and more numerous, creating a sense of depth and connectivity. The overall aesthetic is modern and technological.

BCG