BCG

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.

Source: BCG global DSR and DAI studies.

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.**

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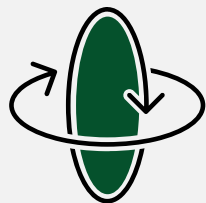
Turn ambiguity into opportunity by **rapidly deploying and adapting tech and digital** to withstand, recover, and thrive in altered circumstances

Future-proof tech and digital capabilities and tech stack as the foundation and leverage tech and digital to enable growth and increase resilience

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

Enable business growth and resilience

Reduce digital risk

Increase tech and digital efficiency and ROI

Disentangle technology

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

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

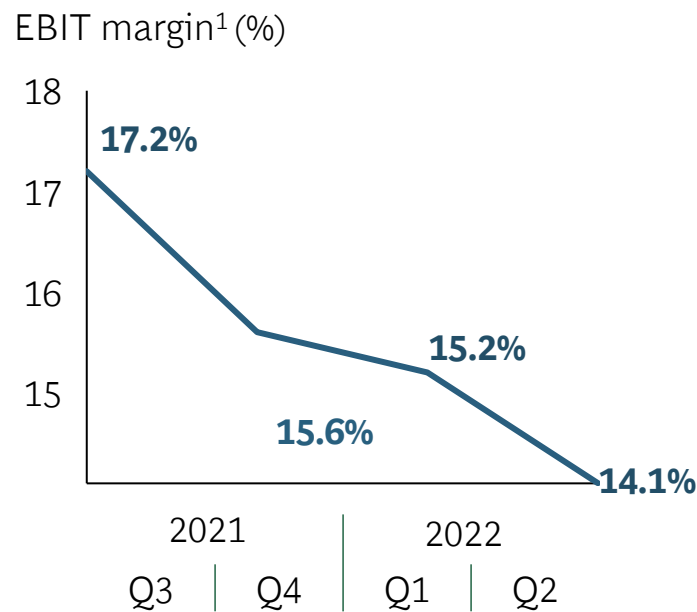● Resilience of tech and digital   ● Tech and digital enabling business growth and resilience

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

EBIT margin[1] (%)

17.2%
15.6%
15.2%
14.1%

18
17
16
15

2021		2022	
Q3	Q4	Q1	Q2

72% plan cost reduction/efficiency efforts[2] to navigate uncertainties in 2023

Tech and digital is a major SG&A cost component

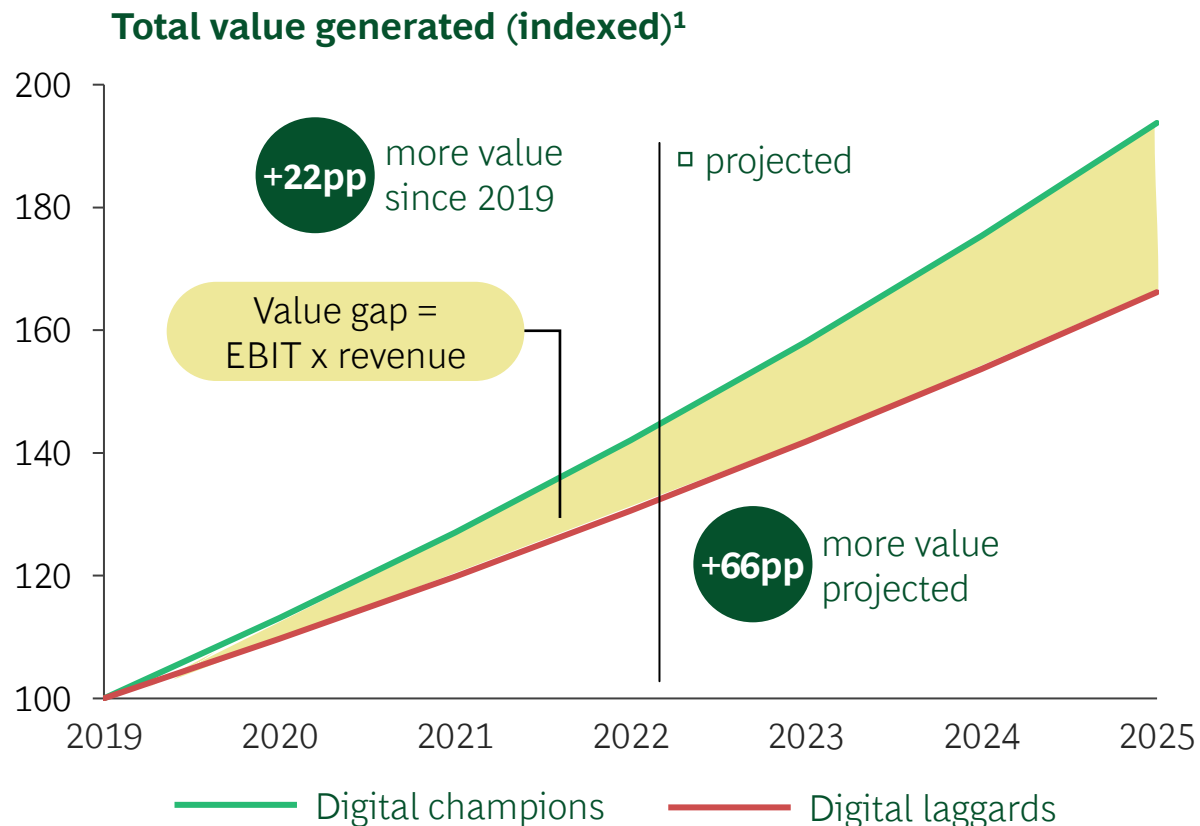| Industries (example)	Tech spend as % of revenue
Financial institutions[3]	**10%–20%**
Pharmaceuticals	**3%–6%**
Industrial goods	**1.5%–3%**
Retail and consumer goods	**1.5%–3.5%**
Telecommunications	**5%–12%**

Key tech and digital levers to reduce cost and increase margins

Sourcing optimization
Contract renegotiation, effective supplier management, external FTE optimization **2%–5%**

Apps. and infrastructure simplification
Optimization of cloud, applications, licenses, EUC[4], network, help desk **3%–15%**

Operating model optimization
Tech org. and process optimization[5], DevOps and agile ways of working **8%–12%**

Value-based portfolio reprioritization
Shift from less value-creating initiatives to more value-creating ones **2%–8%**

Cost reduction

6

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

Total value generated (indexed)[1]

+22pp more value since 2019

□ projected

Value gap = EBIT x revenue

+66pp more value projected

Chart y-axis: 100, 120, 140, 160, 180, 200
Chart x-axis: 2019, 2020, 2021, 2022, 2023, 2024, 2025
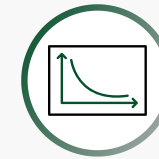
— Digital champions   — Digital laggards

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[2]

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.
[1] Total incremental margin, calculated by factoring indexed annual revenue with EBIT per year.
[2] 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

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

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

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

Adapt and recover business services swiftly
Take value-chain-centric approach to recovery prioritization; quickly reestablish critical business processes

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

Shape and transform business based on learnings
Adopt culture of continuous improvement (free from blame) and transform tech and cyber architectures

- 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[1] 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	

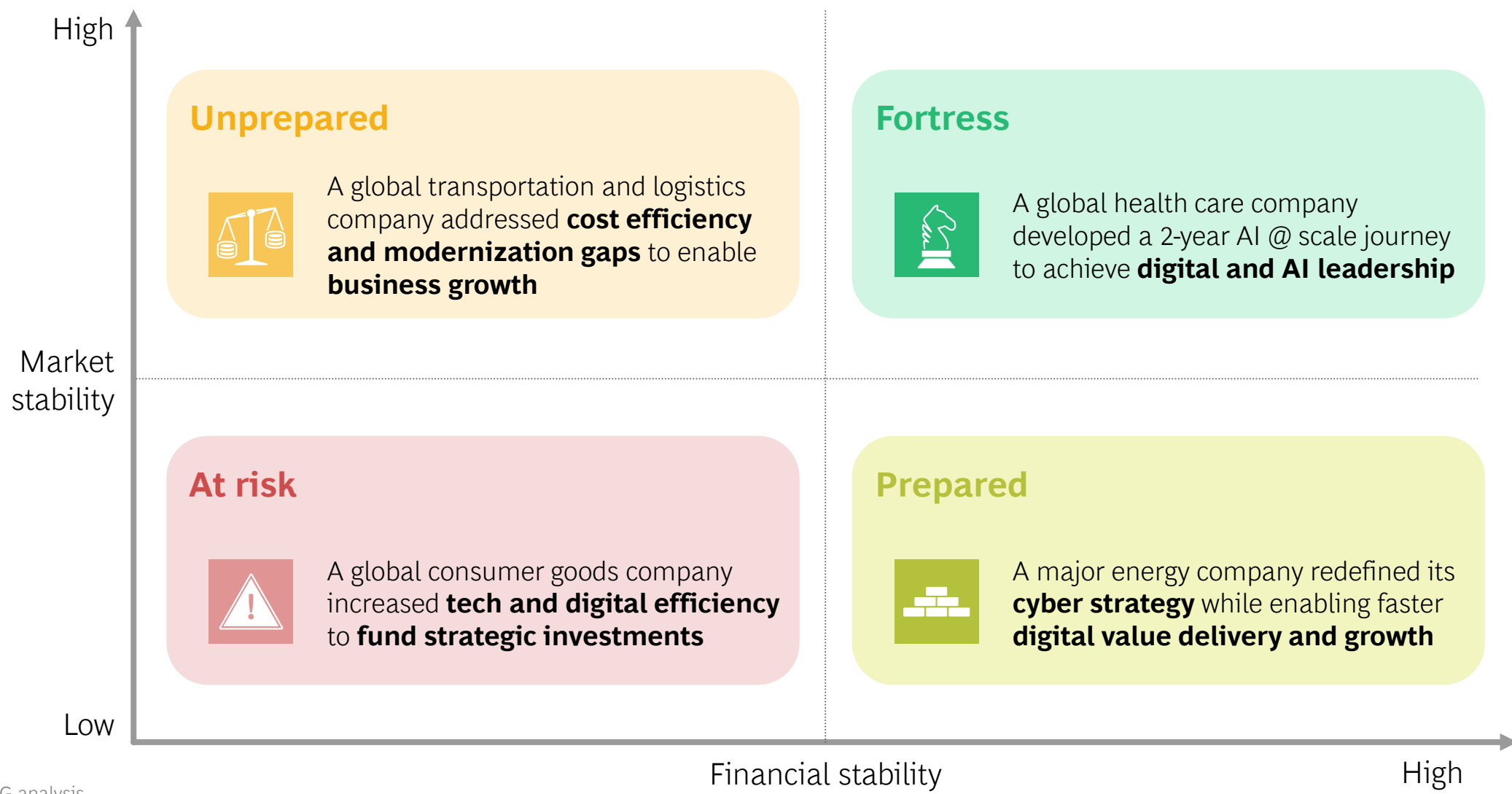Evaluate decoupling scenarios in terms of regulatory compliance, costs, and risk-mitigation impact

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✓ Why tech and digital matter for resilience

✓ **How organizations have turned ambiguity into opportunity**

✓ How to get started

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

High

Unprepared

A global transportation and logistics company addressed **cost efficiency and modernization gaps** to enable **business growth**

Fortress

A global health care company developed a 2-year AI @ scale journey to achieve **digital and AI leadership**

Market stability

At risk

A global consumer goods company increased **tech and digital efficiency** to **fund strategic investments**

Prepared

A major energy company redefined its **cyber strategy** while enabling faster **digital value delivery and growth**

Low

Financial stability

High

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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	
Identified and detailed saving measures across different tech components:	**Redesigned operating model and talent strategy to improve cost competitive positioning**	**Devised cloud-modernization measures to accelerate innovation**
• **Sourcing.** Rightsourced (managed demand, bundled, outsourced) and renegotiated contracts.	• **New locations.** Established base in emerging tech hubs to leverage the growing tech talent pool, proximity to business, and labor cost.	• **Flexibility.** rightsized IaaS[1] (e.g., virtual machines) and optimized infrastructure (e.g., SD-WAN) to increase performance.
• **Operating model.** Reduced layers/span of control, shifted from "managing" to "doing," and introduced a new op. model between IT/tech and business.	• **Operating model.** Reduced local footprint, hired in central hubs, moved externals to nearshore, and insourced critical roles across value chain.	• **Scalability.** modernized to PaaS[2] for limitless scalability, speed and security.
• **Tech stack.** Optimized reserved instances, accelerated decom-missioning of applications, and automated incident resolution through virtual assistants.		

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
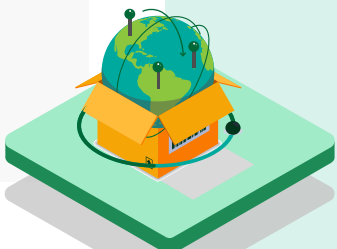
Source: BCG analysis.
[1] IaaS = Infrastructure as a service.
[2] PaaS = Platform as a service.

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	
Redefined cyber strategy across five dimensions for risk-based approach	**Developed unified location/talent strategy and op. model to differentiate key capabilities**	**Refocused modernization efforts to enable new digital capabilities**
• Identified **strategic tradeoff** decisions across cyber governance, risk and compliance, security by design, security tech, cyber operations and recovery	• **Rightsourcing** with critical capabilities insourced and commodity tasks outsourced	• Designed **tech architecture** that allows platforms to build scalable products
• Detailed **four key levers:** org. and service optimization, strategic vendors and contracts, vendor/tech rationalization, and modernization	• Redefined **talent processes** e.g., job architecture, branding, assessment	• Activated **bionic platform** and identified 1,500+ apps for modernization/retirement
	• Recentered **location strategy** with hubs focused on targeted capability development, service centers on scale, and vendor resources on utilization	• Established central data and insights portfolio and specific data product lines to strengthen **digital delivery and data accessibility**

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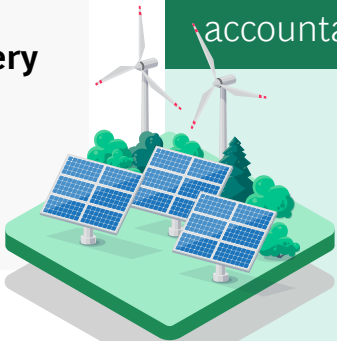
Fortress | Invest in future-proofing technology while maximizing current success

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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✓ Why tech and digital matter for resilience

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

Reduce digital risk

Enable business growth and resilience

Disentangle technology

Increase tech and digital efficiency and ROI

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

● Resilience of tech and digital   ● Tech and digital enabling business growth and resilience

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

BCG Offering (**selection**)

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

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

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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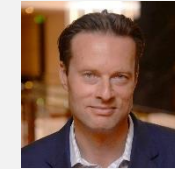kirchbach.kim@bcg.com
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Email TechDigitalResilience@bcg.com for any inquiry on BCG tech and digital resilience capabilities.
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