



Executive
Perspectives

07

Managing Risks and Accelerating the AI Transformation

Risk & Compliance

November 2024

Introduction

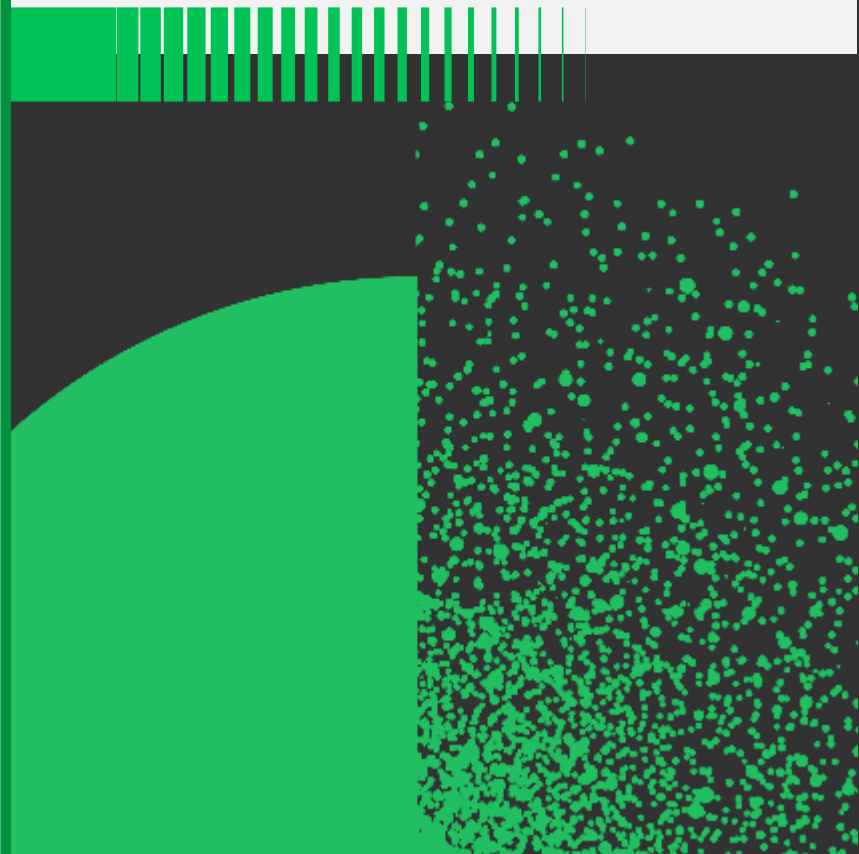
We meet often with CEOs to discuss AI—a captivating *and* rapidly changing topic. After working with over 1,000 clients in the past year, we are **sharing our most recent learning in a new series designed to help CEOs and the C-suite navigate AI**. With AI at an inflection point, the focus is on turning AI's potential into *real* profit.

In this edition, we discuss how risk and compliance can accelerate the AI transformation of any business. We take an end-to-end risk management view of the problem, defining implications for R&C functions. Key questions to guide a company towards success in an uncertain future business environment:

- Which risks are generated by AI and how can they be managed effectively?
- How can I leverage the power of AI to better manage the risks of my business?
- How do my R&C capabilities need to evolve?
- How do I get started...and how do I get this right?

This document is a guide for CEOs, chief risk officers, chief compliance officers, and business leaders facing risks, to cut through the hype around AI and understand what creates value now and in the future.

**In this BCG
Executive Perspective,
we articulate the vision
and value of risk and
compliance in the
context of the AI
revolution**



Executive summary | Managing risks and accelerating the AI transformation

Risk management at the core of AI revolution

In an uncertain world, **managing business requires proactively managing related risks**

AI and GenAI bring vast benefits to risk management as well as unprecedented new risks that need to be managed – but with proper guardrails, the AI transformation can be accelerated

In support functions, R&C has the highest adoption rate of AI/GenAI, with health care and financial institutions the most advanced sectors

Managing risks in the organization to unlock AI value along 3 critical dimensions

Managing risks of these technologies while adopting and embedding AI and GenAI within the organization can unlock the potential for AI transformation:

- **Manage AI risks** related to proficiency, reputation, security, and regulatory compliance to ensure ethical and accountable use, increasing the AI benefits up to 3x
- **Improving efficiency and effectiveness of risk processes**, reducing human errors, synthesizing unstructured information, and enabling advanced analysis – up to 40-50% gains
- **Enable risk-based decision making** by balancing business with risk considerations, enabling operational resilience and risk-based planning – up to 30pp on total shareholder return (TSR) during crises

R&C function to get ready for a radical change in the role

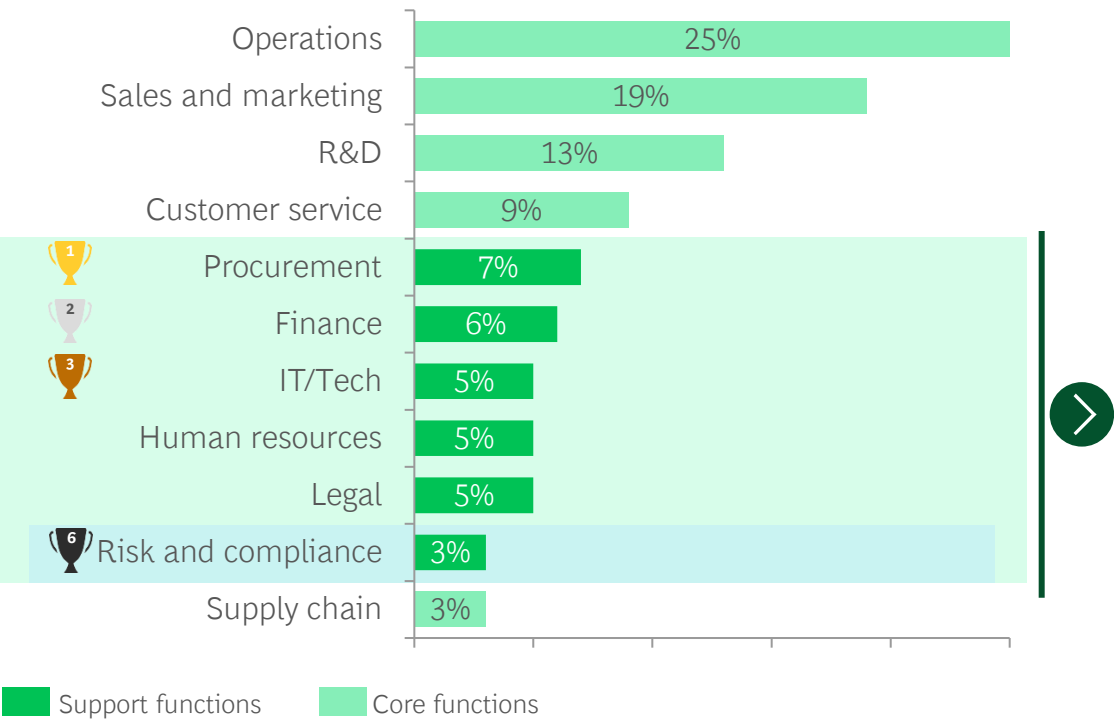
R&C functions must prepare to support the transformation:

- **Elevating R&C positioning within the AI program**
- **Upskilling resources** on data, technology, and associated risks through training with AI and GenAI
- **Moving to scalable risk technology platforms** that facilitate seamless integration of AI and third-party data/solutions
- **Promoting an organizational mindset shift** from low- to high-value-added activities, learning "with the machine" to generate key insights and redefine risk management approaches

Risk and compliance emerges as the top support function in AI/GenAI adoption, driving innovation across the organization

Risk and compliance is expected to generate 6th most value from AI/GenAI among support functions...

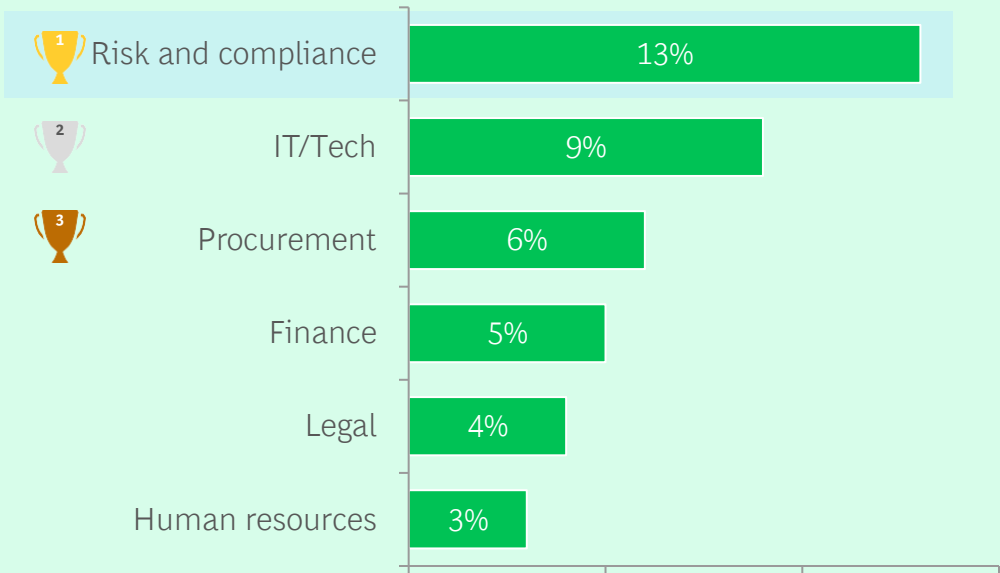
Share of GenAI value capture across all functions¹



... yet ranks as the top support function in terms of AI/GenAI opportunity adoption

Adoption rate of GenAI across support functions²

Support functions

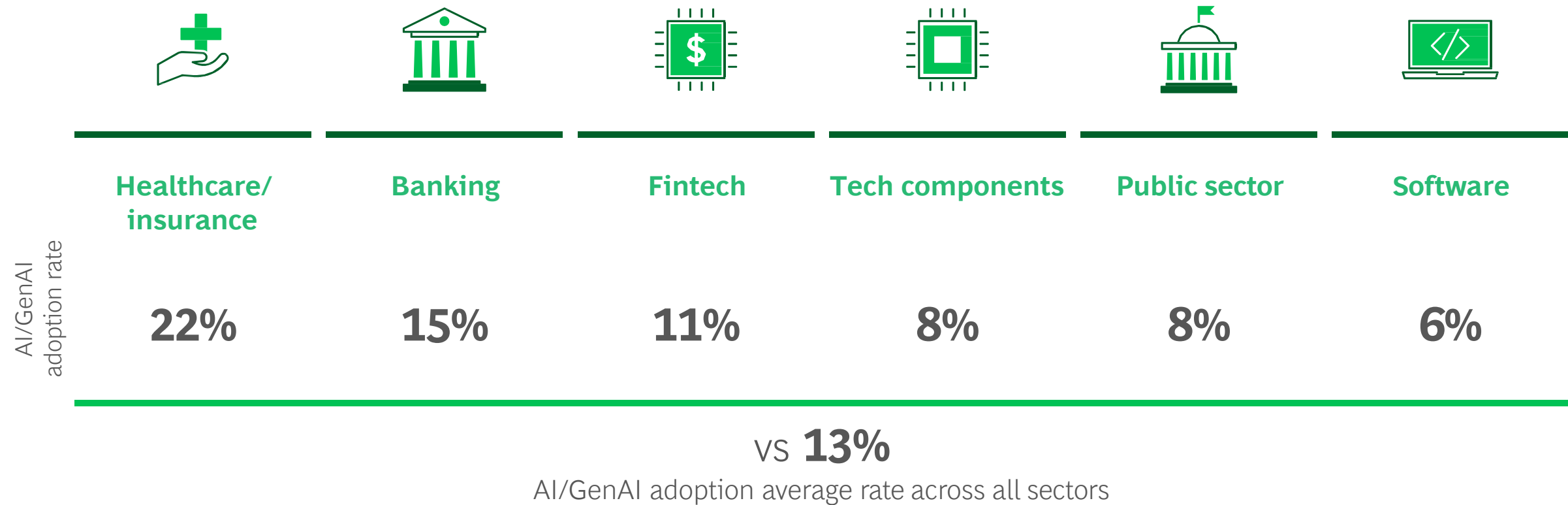


Source: BCG Build for the Future 2024 Global Study (merged with Digital Acceleration Index (DAI)), n=1,000

1. On left-hand side to estimate value, survey questions cover both cost and revenue growth dimensions. Questions are (A): What % cost reduction do you expect to achieve through AI/GenAI efficiency gains (in % of total operational expenses) in your company? (B): How much revenue growth do you expect from AI/GenAI (in % of annual revenues) in your company? (C): Thinking of AI/GenAI's contribution to revenues and costs, please specify the contribution of each of the domains below so that they sum to 100%

2. On right-hand side to calculate adoption, the number of respondents who reported adopting the opportunity is divided by the total number of respondents within each support function

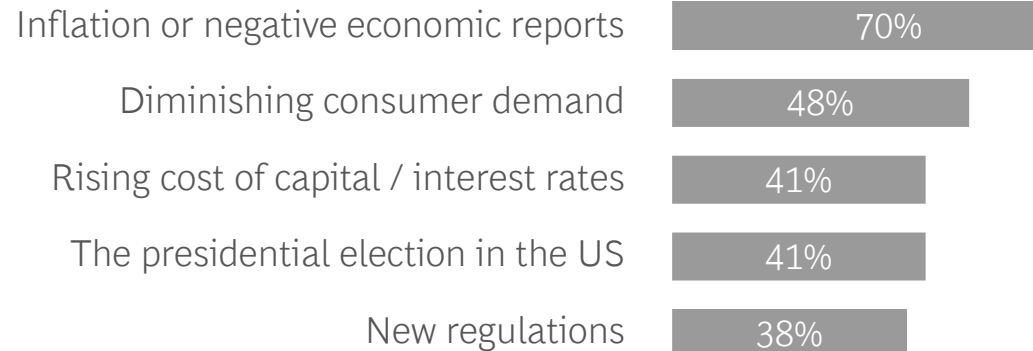
Health care and financial institutions are the leading sectors in adoption of R&C AI/GenAI



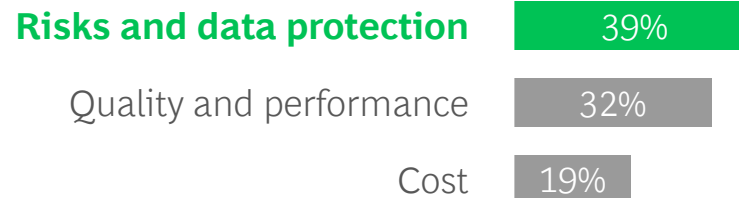
Source: BCG Build for the Future 2024 Global Study (merged with DAI), n=1,000.
Note: Financial institutions include insurance, banking, and fintech. Adoption is calculated as the number of respondents who reported adopting AI/GenAI divided by the total number of respondents within each sector

AI can help **manage uncertainty**, yet exposes organizations to **new risks**

Uncertain outlook and regulatory pressure are at the top of CEO challenges¹...



...and risk management is top priority² **when choosing an AI or GenAI solution**



- In times of uncertainty, managing risks has become a key differentiating factor to win in the market
- AI can be a key success enabler in managing risks...
- ...however, it also introduces new risks, requiring proactive management
- CEOs should look at how to accelerate the AI transformation by creating the right "guardrails" – **risk management should be seen as an enabler to unlock value, not as a “brake” on innovation**

¹ Source: CEO Confidence Index Jun. 2024, Chief Executive Group

² Source: BCG AI RADAR, Jan 2024; n = 1,406 in 50 markets. Survey question: What are the most important considerations when choosing an AI and GenAI solution?

R&C can unlock AI's full potential across 3 critical dimensions



Manage AI risks

Strong focus on mitigating AI-related risks by establishing a responsible AI (RAI) framework

- Leaders in RAI also excel in business performance: realizing 3x benefits from AI



Transform risk processes

Enhancing efficiency and effectiveness of risk processes through AI and GenAI applications

- 40-60% cost efficiency from a faster know your customer (KYC) process in banking
- Up to 50% time saved from automated risk report generation



Enable risk-based decision making

Application to strategic decisions, dynamically adapting to evolving risks, ensuring maximized economic value

- Design of operations based on "resilience" logic
- Risk-based scenario planning and leading risk indicators identification



Manage AI risks



Adopting **AI brings new risks**, but R&C ensures effective management for successful implementation



Proficiency

Systems consistently generate the intended value for users

Inaccurate information and predictions

System produces incorrect, irrelevant, or incomplete responses, framed as comprehensive

Poor content quality

System produces responses that are incoherent or lacking diversity, creativity, or rationale

Poor interactivity

Rigid constraints lead to unclear, emotionally mismatched, and scope-inappropriate responses

Misaligned responses

System misrepresents the brand or mission of the organization and drastically alters responses based on user inputs



Reputational shield

Systems promote fairness and do not produce harm or offense

Unintended bias

Systems may inadvertently cater to the needs of some groups more than others

Harmful stereotypes

Outputs reinforce historical or current harmful stereotypes

Malicious use

System enables bad actors, such as trolling, criminal activity, or social engineering

Offensive content

Users may trigger offensive outputs due to input error or system failure to handle idiosyncrasies of language



Security

Systems and sensitive data are safeguarded against bad actors

Private data leakage

Systems may leak sensitive private or proprietary data

Disclosing system information

Systems may share sensitive system details, which enable cyberattacks

System manipulation

Interactions or code injections alter the behavior of the system or increase its vulnerability

System disruption

System is vulnerable to attacks that disrupt its normal functioning

Key risks



Compliance

Systems must adhere to relevant legal, policy, regulatory, and ethical standards for the region, industry, and company

- Compliance considerations span the other responsible GenAI goals of security, safety, equitability, and proficiency
- Additional key regulatory considerations for GenAI systems include sustainability, transparency, and IP protection



Best-in-class GenAI test and evaluation (T&E) solutions can ensure quality and risk resilience of AI systems



Systematic risk landscaping

Identify relevant risks and define KPIs to track progress

A **holistic overview** is required to ensure all aspects of the system's proficiency, safety, and security are thoroughly evaluated



Expertise in test design

Craft representative test data to challenge the system

GenAI testing is much more complex than that of classic AI, requiring deep GenAI and domain expertise to craft **comprehensive test data**



Scale through automation

Scale up by using automatic tests to enhance and validate

Manual testing doesn't scale. Using GenAI to **automatically create and evaluate test variations** boosts efficiency and scalability



Building T&E capability

Make informed decisions on acceptable risks and quality

Embed manual and automated T&E and **unify insights across GenAI build teams** to address key risks and inform key stakeholders

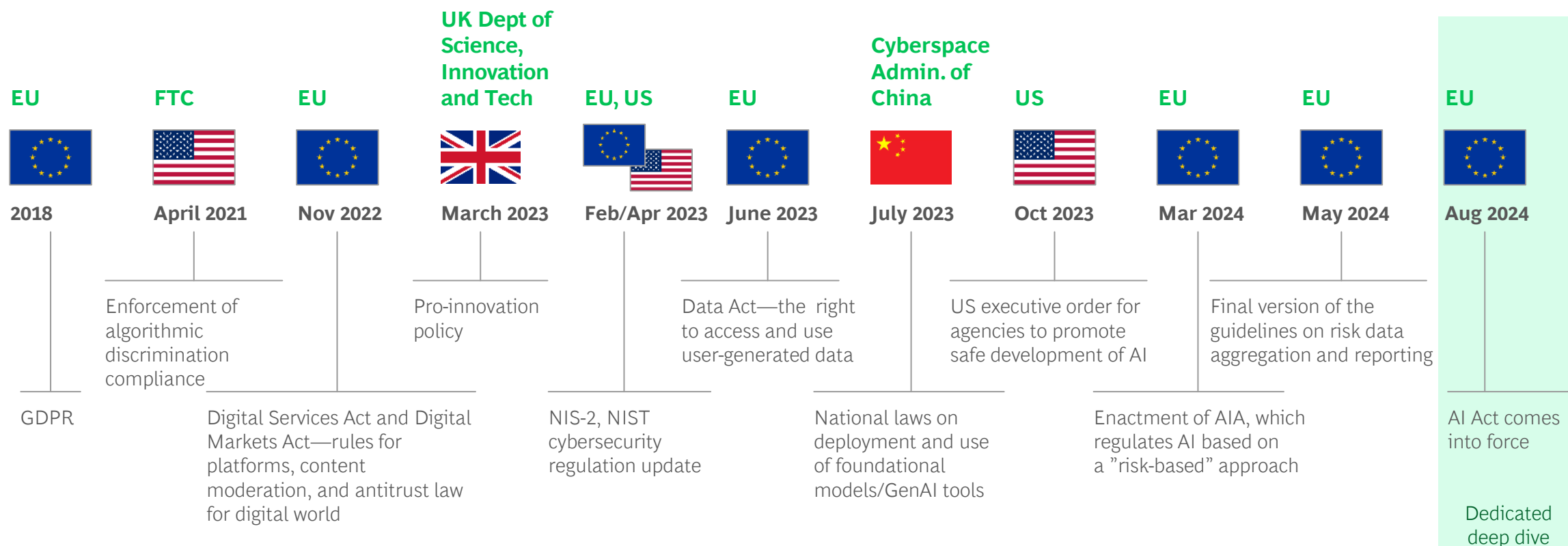
Rationale

Addressing these key pillars helps organizations develop a best-in-class T&E process, ensuring proficient, safe, and compliant GenAI



Global authorities **increase regulatory pressure on AI**, introducing comprehensive guidelines and AI-specific laws

Timeline of key regulator activity





Deep dive: EU AI Act sets new global standard for RAI



Definition of **three-tiered risk classification** (unacceptable risk, high-risk, minimal-risk) for AI systems



Comprehensive set of requirements for high-risk AI systems, including third-party audit and registration



Additional **transparency requirements** for all AI systems interacting with natural persons



Obligation to ensure compliance **dependent on role** (e.g., provider vs distributor)

Fines for noncompliance

4-7%

of annual
global turnover

Time for implementation

6-24

months



Deep dive: EU AI Act addresses both traditional and generative AI across the entire value chain, with special requirements for systemic risk models

1 Scope

"AI System"
(EU AI Act Art. 3.1)

- Machine-based system
- Varying levels of autonomy
- Maybe: adaptiveness after deployment
- Infers, from the input it receives, how to generate outputs that can influence physical or virtual environments

Fixed-purpose AI system
(Traditional AI)

General-purpose AI system
(Generative AI)

Conventional GPAI¹

Systemic risk GPAI¹

2 Regulatory regime

Preliminary

Unacceptable risk

Prohibited in the EU

High risk

Mitigation measures,
including conformity
assessment, registration

Minimal risk

Voluntary codes
of conduct

Transparency
obligations

- Notification of the EU
- External risk assessment
- Registration in EU database

3 Value chain

Provider

Deployer

Manufacturer

Importer

Distributor

Representative

1. Systemic risk GPAI models are classified as all GPAI models with more than 10^{25} floating point operations (FLOPs)

Note: BCG does not provide legal advice | Source: BCG, EU AI Act



Deep dive: Compliance with EU AI Act requires development of an AI inventory and (differentiated) risk mitigation measures

1 AI inventory

Registration and auditor-ready documentation of all AI systems in an organization

- 1a Comprehensive list of AI systems, acc. to **EU definition**
- 1b Assessment of **risk level** of each AI system
- 1c Assessment of **value chain position** for each AI system

2 Risk mitigation measures, differentiated by AI system risk level where applicable

Identification, mitigation, and management of AI system risks in accordance with regulatory provisions and industry standards (as far as developed)

- 2a Governance
- 2b Process guidelines (including templates, e.g., for documentation)
- 2c Technical standards (e.g., for data security, cybersecurity)
- 2d (Workflow) Tools
- 2e Trainings

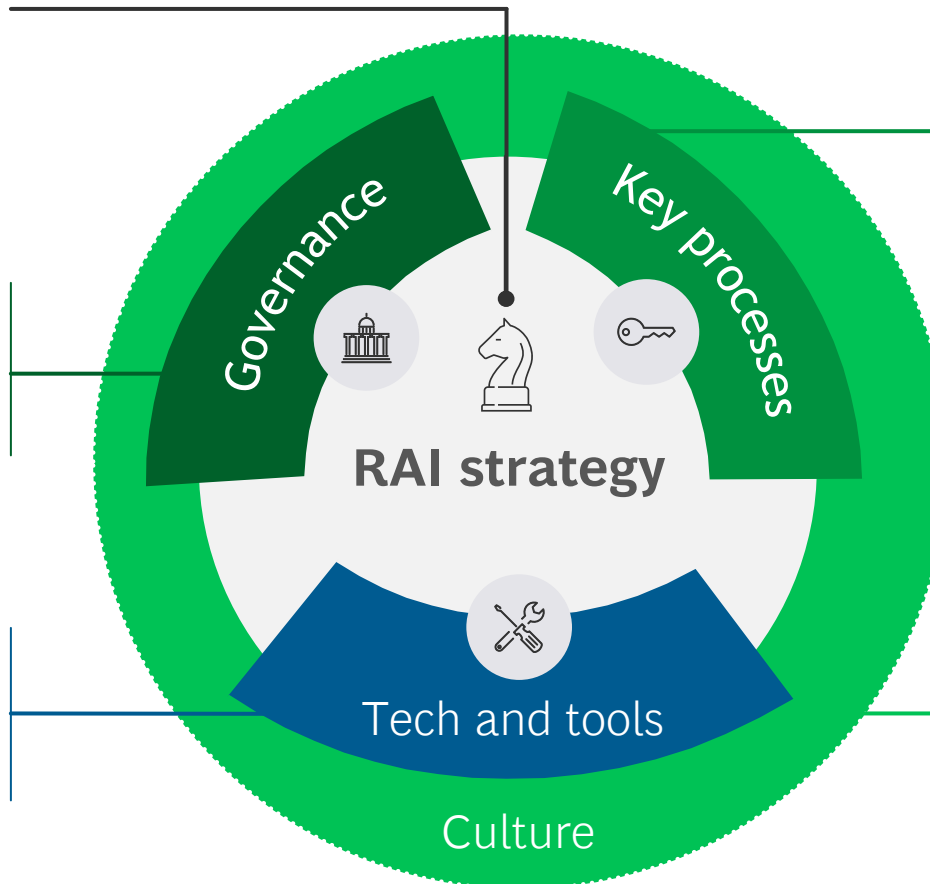


Managing these risks requires a holistic RAI program that is implemented across the enterprise

Comprehensive RAI strategy that connects risk approach, AI strategy, and purpose and values

Defined RAI leadership, oversight committee(s), and escalation pathways

Data and tech infrastructure, including RAI-specific tools and tech design patterns



Real-life application example in next slide

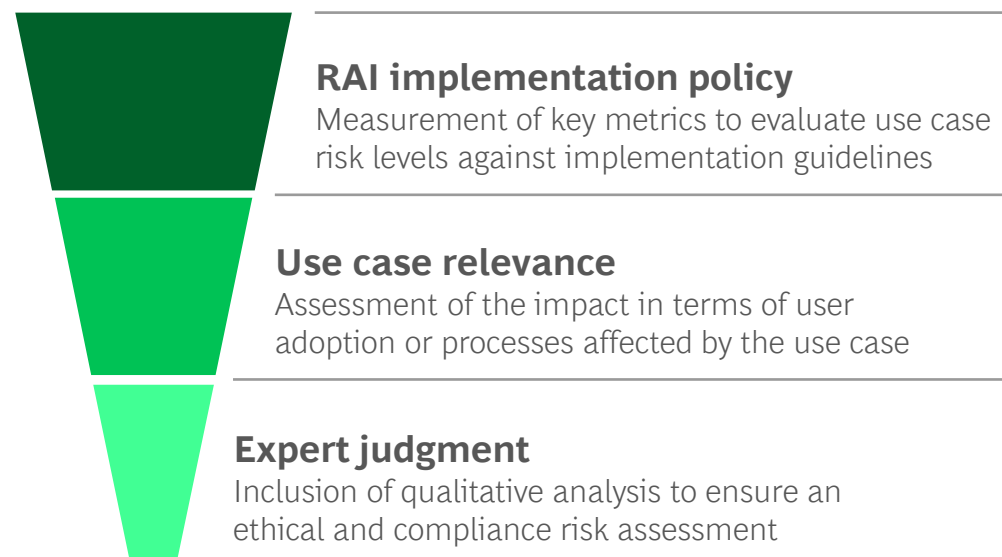
Rigorous processes to monitor and review products to ensure that RAI criteria are met

Strong understanding and adherence among all staff on their roles and responsibilities in upholding RAI



Implement a **dedicated KRI framework** to evaluate compliance of AI and GenAI use cases with internal RAI and assess associated risk levels

Design of an AI-specific inherent risk matrix based on operational Key Risk Indicators (KRIs) to determine the adherence of various systems to RAI principles



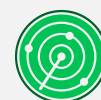
Real client applications

Processes defined for selected KRIs to trigger a heightened level of scrutiny and control proactively on AI systems:



High risk

- Approval by committee or board of directors
- Mandatory training
- Weekly monitoring
- Remediation plan/legal opinion



Minimal risk

split into 2 subcategories

Medium risk

- Committee notification
- Training required exclusively for new users
- Monthly monitoring with escalation if issues arise
- Corrective actions/compliance review as needed

Low risk

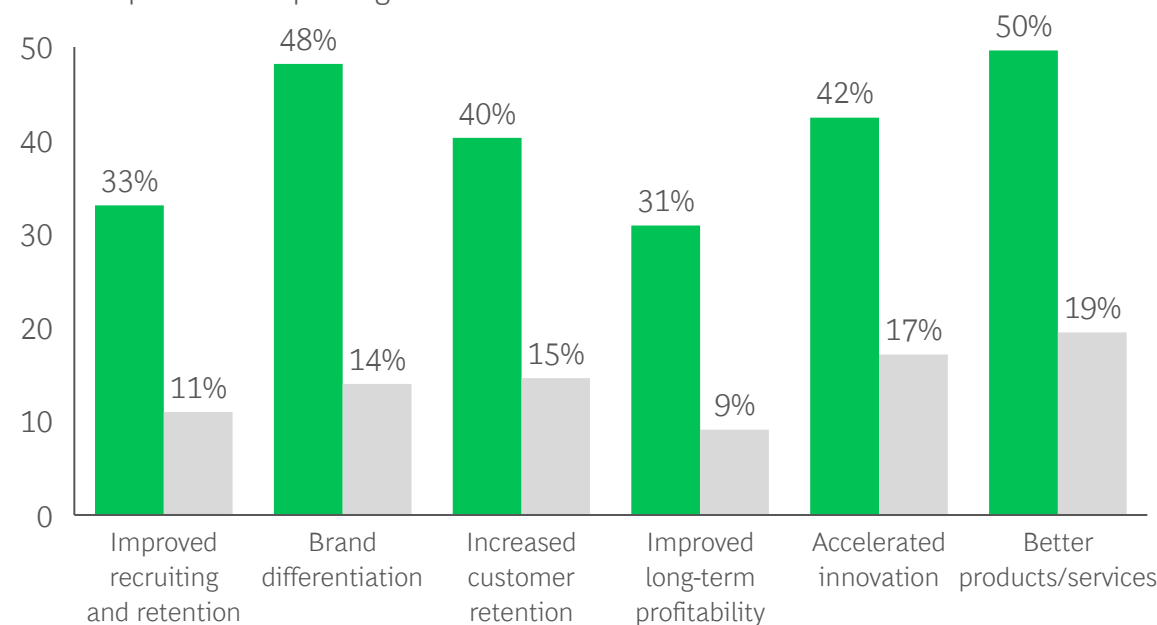
- Automatic approval
- Standard reporting and monitoring



RAI is a value enhancer and market differentiator in addition to mitigating risks

Organizations that integrate RAI practices into the AI product life cycle realize meaningful benefits

% of respondents reporting business benefit



3x

more likely to realize benefits from AI when adopting a RAI approach

Leaders in RAI Nonleaders

Source: Elizabeth M. Renieris, David Kiron, and Steven Mills, "To Be a Responsible AI Leader, Focus on Being Responsible," MIT Sloan Management Review and Boston Consulting Group, September 2022.



Transform risk processes



How to get it right | Our perspective on winning with AI in R&C processes



Reshaping to drive new value

Using AI to reshape R&C processes, enhancing efficiency and effectiveness

- Implementing AI-driven automation to streamline R&C processes, reducing manual tasks and increasing operational efficiency
- Utilizing advanced analytics to enable faster and more accurate risk assessments



Choosing high-impact use cases

Transforming the risk value chain to gain competitive advantage

- Identifying and prioritizing the best AI use cases to align with the company's strategic goals and specific risk needs
- Targeting critical areas in the risk value chain by integrating scalable AI solutions



Unlocking data and tech

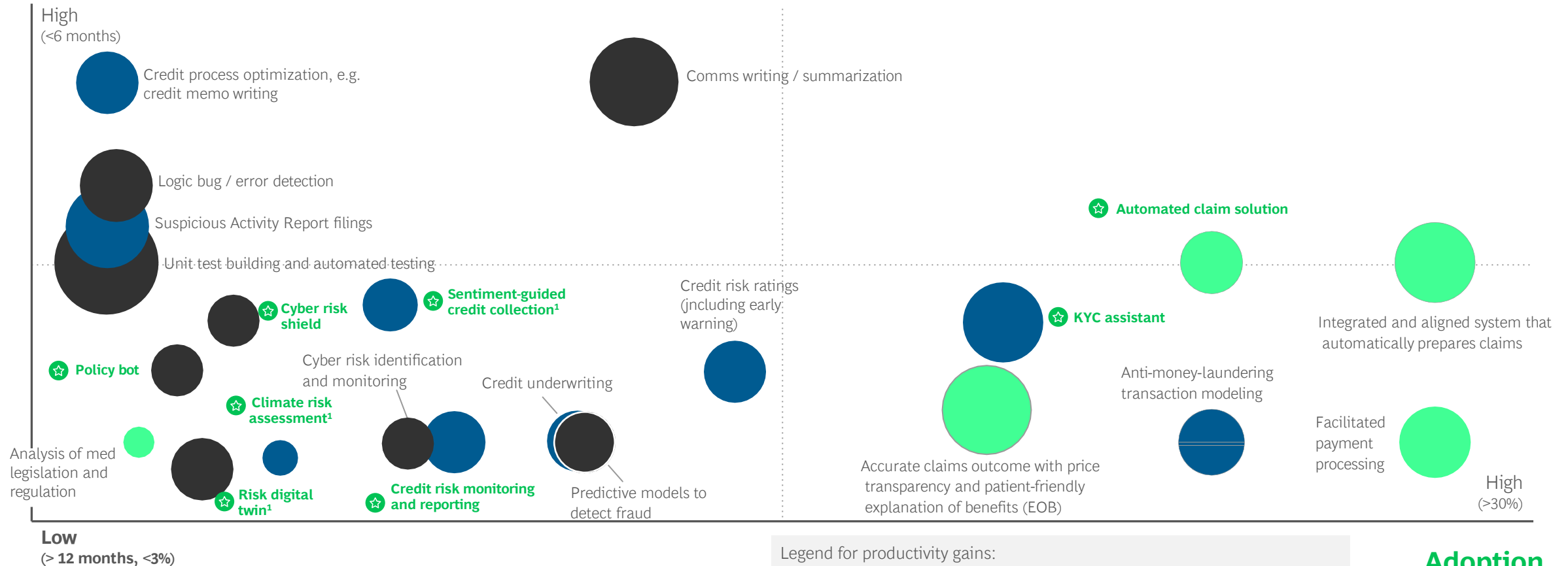
Combining AI and GenAI to maximize value creation

- Accelerating scalable solutions by designing the target architecture and leveraging the right ecosystem of partnerships
- Unlocking data value with GenAI as the “next layer” to drive risk-based decision making and forecasting



Wide range of opportunities to adopt AI/GenAI across the whole value chain, with untapped potential in risk processes

Ease of implementation



Low
(> 12 months, <3%)

Source: BCG Build for the Future 2024 Global Study (merged with DAI), n=1,000
Adoption ranges between 5-23%; deployment timelines between 5 -12 months. Bubble sizes are relative to each other but overall productivity gains range between 10%-38%
1. Use cases added to the Global Study based on BCG's market experience

Legend for productivity gains:



Adoption



Focus on boosting **efficiency** of risk processes: driving cost savings, with focus on automation of labor-intensive and repetitive tasks

Real client applications

A

Policy bot

Dedicated deep dive

- Extract new regulatory obligations
- Evaluate impact on internal policies
- Provide real-time compliance support

30-40% time saved

via quicker identification of policies to update

B

KYC assistant

Dedicated deep dive

- Automate data collection, streamlining the process
- Automatically produce KYC risk assessment file
- Prioritize actions with a risk-based approach

40-60% cost efficiency

from faster KYC processing

C

Credit risk monitoring and reporting

- Use natural language for data query
- Instantly generate data visualizations and organize early-warning alerts
- Reduce effort with no code needed

Up to 50% time saved

from automated report generation

D

Cyber risk shield

- Automate code for vulnerability detection
- Speed risk identification with a virtual expert
- Simulate “red teaming¹” to model adversarial strategies and test scenarios

30-35% efficiency gains

from automated prevention²



Focus on boosting **effectiveness** of risk processes: enabling better decisions and quality of output to pave the way for business growth

Real client applications

E

Risk digital twin

Dedicated deep dive

- Create a digital replica of controls, processes, and IT systems
- Run "what-if" scenarios on the digital system
- Identify actions to reduce nonfinancial risks

~10x faster

time-to-response to urgent requests (including regulatory)

F

Sentiment-guided credit collection

- Conduct real-time analysis of sentiment behind the tone and words chosen in human interactions
- Provide suggestions on next-best actions to increase probability of recovery

6-8pp recovery

increase from next-best recovery strategy

G

Climate risk assessment

- Analyze exposure to physical and transition risks
- Identify options to mitigate climate threats
- Detect greenwashing risks in public disclosures

Greenwashing risk

reduced

H

Automated claim solution

- Automate claim verification and clustering
- Detect inconsistencies to flag potential fraud or errors
- Provide operational support for approval steps

+10-15% fraud detected

on claims processing



Policy bot | GenAI simplifies compliance by ensuring automated update of internal policies and enabling employees to become compliance-savvy

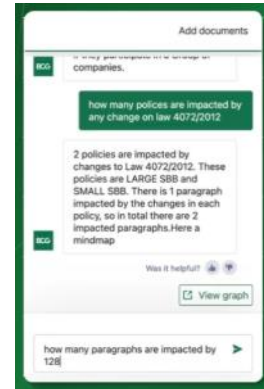
Efficiency:  Policy bot

Regulatory landscape update

New regulations automatically scanned to identify potential impacts on internal policies and procedures

- Highlight a set of tasks for the compliance officer to follow
- Suggest methods to handle the regulatory changes

Update internal policies and procedures automatically using GenAI



Ever-changing regulatory landscape automatically embedded in the organization

Compliance empowerment

Employees and clients can **search for policies and procedures using natural language** on an AI-powered bot integrated with current platforms

- Employee: Supported intelligent search and co-bot assistant
- Clients: AI-driven web search and virtual bot (Web, SMS, Voice)





KYC assistant | Enhance the onboarding process for new clients or suppliers by managing 5 end-to-end KYC activities with AI and GenAI

Efficiency:  **KYC assistant**



Real-time dashboard (portfolio view) and dispatching



Automated data collection (internal and external sources)



KYC files **tiering and anomaly detection**



Interaction with customer/Web (**chatbot**)



Automated generation of **KYC file report**

"KYC AI assistant" tool can be integrated into clients' existing workflow tools



40-60%

Cost efficiency from AI/GenAI solutions from 5 KYC activities



Risk digital twin | Digital twin is a cutting-edge technology to dramatically improve nonfinancial risk management (banking example)

Efficiency: **E** Risk digital twin

Complexity puzzle

Large international banks face high operational complexity

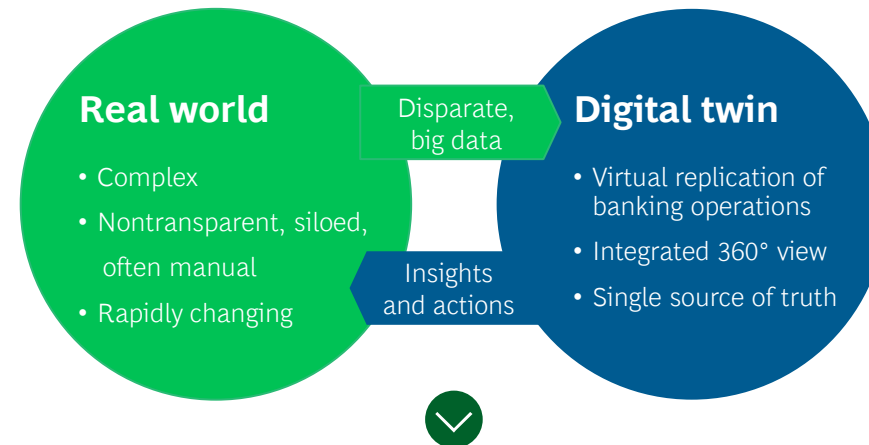


! Implications

- Back ops are a “black box”
- Challenges with controls effectiveness
- Increased regulatory scrutiny

> Digital twin simplifies and augments

Digital twin supports operational resilience and industrializing OpRisk management



Selected use cases

- ✓ **Transparency:** 360° visualization of operational landscape; near-real-time monitoring by AI
- ✓ **Optimization:** Automated documentation and oversight; controls effectiveness and automation; targeted remediation
- ✓ **Prediction:** Using GenAI to anticipate the impact of events

> Impact

Digital twin delivers substantial value while its build is lean, low-risk, and low-cost

Improve risk effectiveness and resilience

~2x

More efficient risk identification and remediation¹

Get ahead of regulator expectations

~10x

Faster time-to-response to urgent requests²

Generate capacity and productivity

~15%+

(\$200-350M)³

Productivity in addressable areas from industrialized OpRisk management

1. Drivers: Faster and less resource-intensive risk detection, problem discovery and remediation 2. Examples: Transparency on third-party risks or foreign data flows 3. Assuming ~5% of noninterest expense related to controls, compliance, and related tech spend; this approach can have ~10-15% reduction on that cost base; Source: BCG analysis and case experience



Enable risk-based decision making



The next frontier: enable truly **risk-based strategic decisions** with future AI applications



Risk-based operational resilience

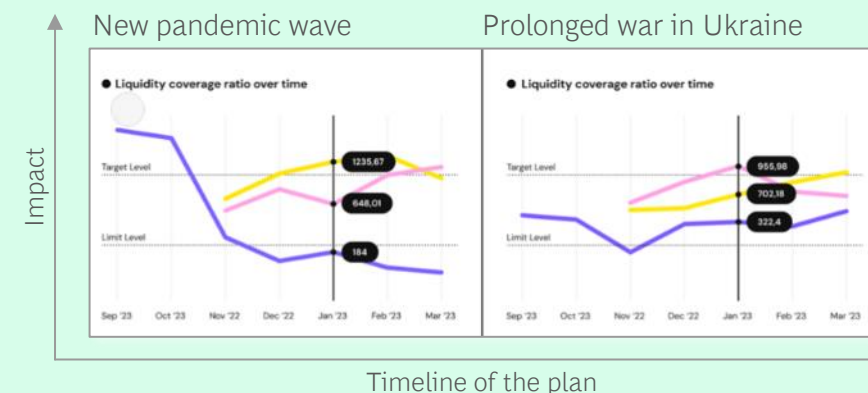
- 1 Simulate and assess multiple AI-based disruption scenarios to guide **resilient decision making according to the company's risk tolerance**
 - E.g., What is the cost of maintaining client service continuity during business disruptions?
- 2 Monitor each **scenario evolution to highlight potential deviation from company risk tolerance** and **identify mitigation actions**
 - E.g., AI suggests alternatives, evaluated within the company's risk boundaries using visual dashboards



Risk-based scenario planning

- 1 Current **scenario of uncertainty** highlighted the **limitations of medium- to long-term planning** (example for geopolitical risk management)
- 2 Organizations can develop through AI **multiple scenarios and calibrate dynamically each scenario's risks/opportunities** vs the plan ambition
- 3 Additionally, **leading risk indicators** can be defined to simulate impact on business portfolio in different scenarios and dynamically adapt strategies and scope with disruption

Scenario





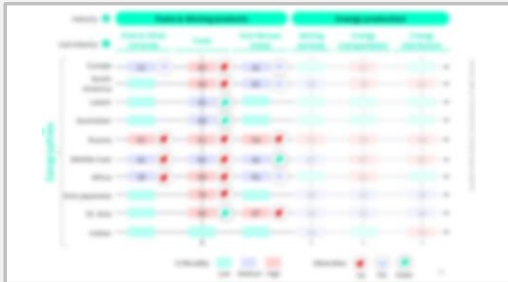
Example for geopolitical risk | Quantify risk in portfolios with a data-driven approach to inform strategic decisions for financial institutions

Risk-based scenario planning



1

Geopolitical scenario selection

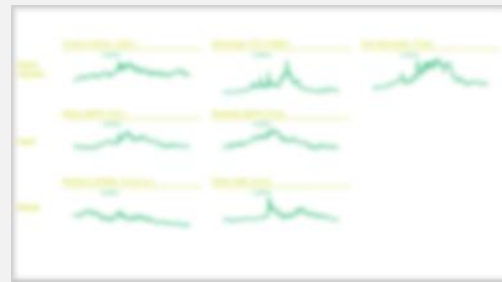


- Identification of relevant **geopolitical risk scenarios** (based on think tank content and AI-driven momentum tool)
- **Prioritization and selection of** scenarios to be tested, combining impact, acuteness, and **relevance** of scenario



2

Scenario impact on key indicators



- **Identification of set of key indicators** affected by the scenario (e.g., commodity prices) based on historical shocks
- **Estimate of quantitative impact of scenario/sub-scenario** on each indicator based on AI models



3

Transmission to macro/sector drivers



- **Assessment through macroeconomic models of impact on drivers of broader economy** (e.g., GDP, inflation) **and sectors** (e.g., sector gross value added), which typically drive financials and capital impact



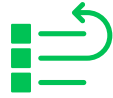
4

Impact quantification on key risks and actions



- Using the macro/sector drivers, **estimate of impact on financials and capital**, based on **credit, market, liquidity, and operational risk impact**
- **Definition of mitigating actions** (diversification, portfolio rebalancing, insurance, exit ...)

4 steps for R&C to begin the AI journey



Establish strong AI governance (e.g., appoint a head of AI ethics, create a dedicated committee) **that actively partners with business** units to strategically prevent risks and fully unlock AI and GenAI potential



Enhance the capabilities of the R&C team through training and upskilling, **in sync with tech platform** advancements, to promote innovation



Adapt scalable risk technology platforms for seamless integration of GenAI and AI, ready to incorporate third-party data/solutions



Manage the AI-driven mindset shift, transitioning from low-value activities like controls and data gathering to strategic risk analysis, "learning with the machine"

Dedicated deep dive

Risk management shifts to **focus on high-value-added activities** and **redefine the approach to risk management**

3 key impacts from AI and GenAI integration in the organization...



Automated operational tasks

Automation of repetitive/operational tasks, allowing employees to dedicate more time to strategic activities



Enhanced risk prediction and mitigation

Predictive analytics via AI to anticipate upcoming risk trends and regulator priorities



Holistic risk approach

Data aggregation across multiple functions to promote a holistic approach to risk management

... requiring relevant shift to fully benefit across the R&C function

Adoption of new *ways of working*

Transition from operational to high-value-added tasks, progressively evolving the risk management approach in alignment with AI developments (i.e., learning with the machine)

Proactive risk management

Anticipating and mitigating risks before they materialize, moving beyond the reactive approaches and enabling more robust and preemptive risk management

Evolution of risk mindset

Unlocking an entrepreneurial mindset, leveraging the cross-functional approach to act as a business enabler rather than just a control function

BCG experts | Key contacts for AI transformation

EMESA



Matteo
Coppola



Marianna
Leoni



Stiene
Riemer



Stefan
Bochtler



Anne
Kleppe



Giovanni
Lucini



Kirsten
Rulf



Jakob
Liss

NAMR



Steve
Mills



Jeanne
Bickford



Bernhard
Gehra



Paras
Malik



Vanessa
Lyon



Hanjo
Seibert

APAC



Abhinav
Bansal



Nisha
Bachani



Eric
Kuo

Note: EMESA: Europe, Middle East, and South America; NAMR: North America; APAC: Asia-Pacific

BCG

