Everest Group®

Tomorrow's Healthcare Innovations Wheel

October 2024

SMARTDATA SOLUTIONS
MAKING HEALTHCARE EFFICIENT WITH AUTOMATION

Everest Group's research coverage

Our services coverage

30 years
of experience advising clients on strategic IT, business services, engineering services, and sourcing

5,000+
research engagements in the past 5 years, serving the Global 2000

Year-round
tracking all major IT service providers

400+
analysts focused on services industry

Large repository
of existing research in services outsourcing

Executive-level relationships
with buyers, providers, technology providers, and industry associations

Our industry focus

Healthcare

Life sciences

Banking & Financials

Insurance

Retail and consumer goods

Our healthcare clientele (illustrative only)

Enterprises — HIGHMARK®, CVS aetna

Service providers — accenture, cognizant, Optum

Technology providers — ORACLE, salesforce, SAP

Ecosystem enablers — KPMG, McKinsey&Company, pwc
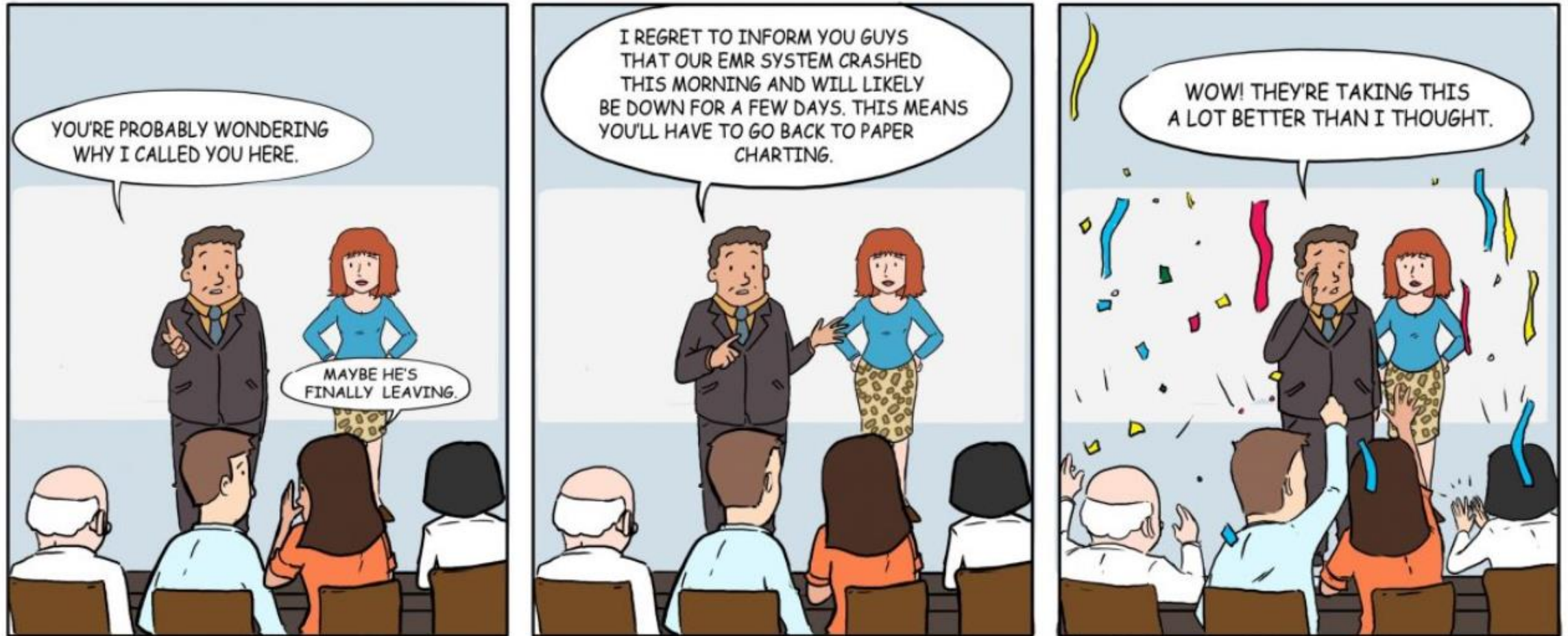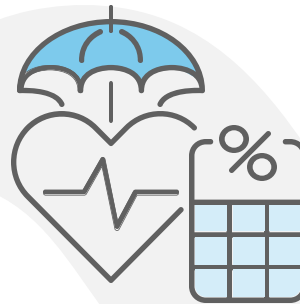
Let's start with what happens when an epic ("not the EMR") mishap happens!

Key business trends in healthcare

Security

Medicare Advantage

Customer experience

Key business trends in healthcare | security
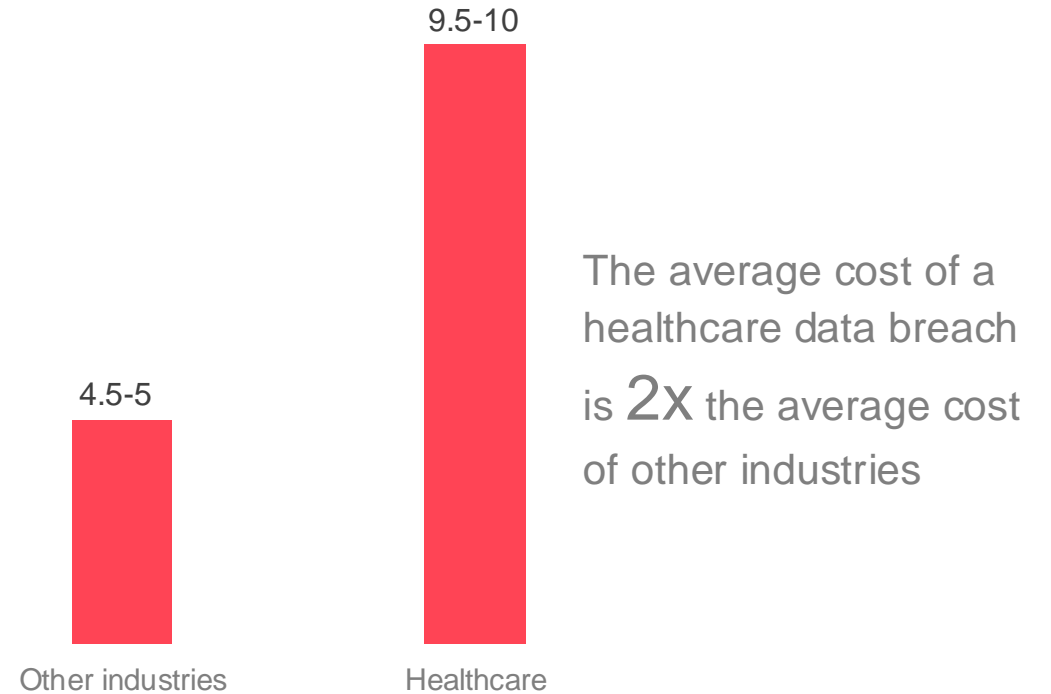
Security

Globally, healthcare average cost of data breach[1] in 2023 is around

15%

of the overall industry cost

Global average cost of a data breach
US$ millions, 2023

| | 9.5-10 |
| Other industries | Healthcare |

4.5-5

The average cost of a healthcare data breach is **2x** the average cost of other industries

1 Cost of Data Breach Report 2024 by IBM
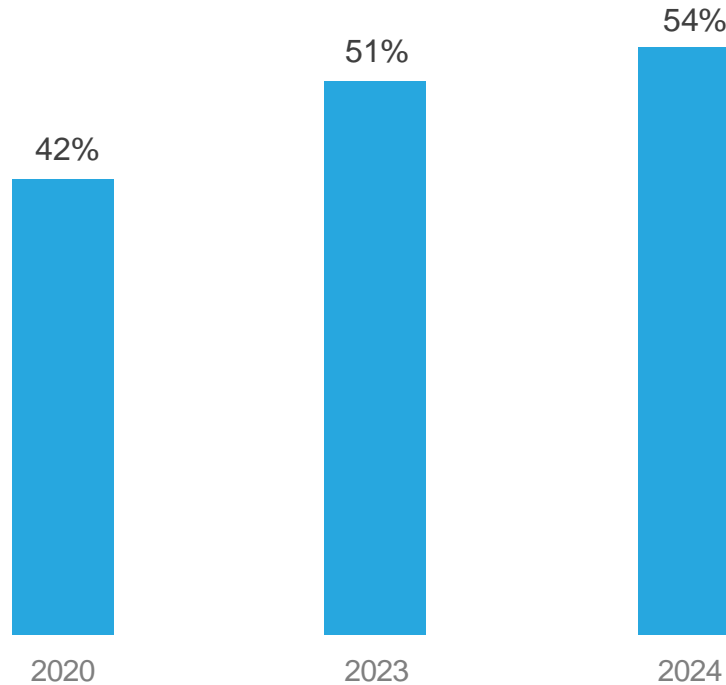
Key business trends in healthcare | Medicare Advantage
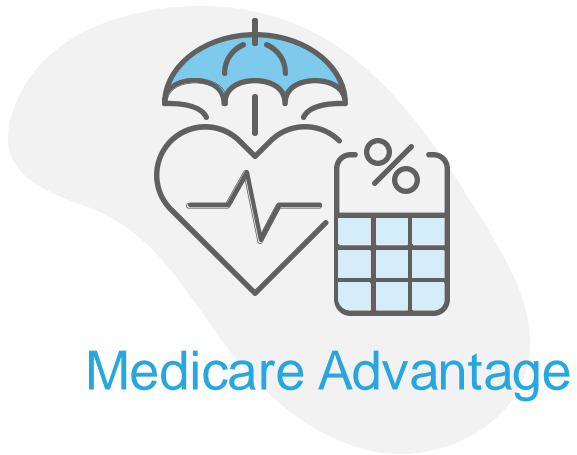
Medicare Advantage Penetration[1]
Percentage of eligible population enrolled, 2024

42%
51%
54%

2020
2023
2024

The rise in MA enrollment is driven by factors like personalized support and availability of flexible plans (e.g., no premium plans)

Medicare Advantage

1 KFF report, Medicare Advantage Enrollment 2024

Key business trends in healthcare | customer experience

Customer experience

Health insurance executives survey on key priorities
Percentage of responses
N= ~200 health insurance executives[1]

Priority	Percentage
Increase member satisfaction	19.4%
Improve provider relationships	18.9%
Increase memberships	18.0%
Grow the business	14.4%
Lower costs	12.6%
Shift to value-based models	9.0%
Regulatory compliance	7.7%

Member satisfaction was the top goal
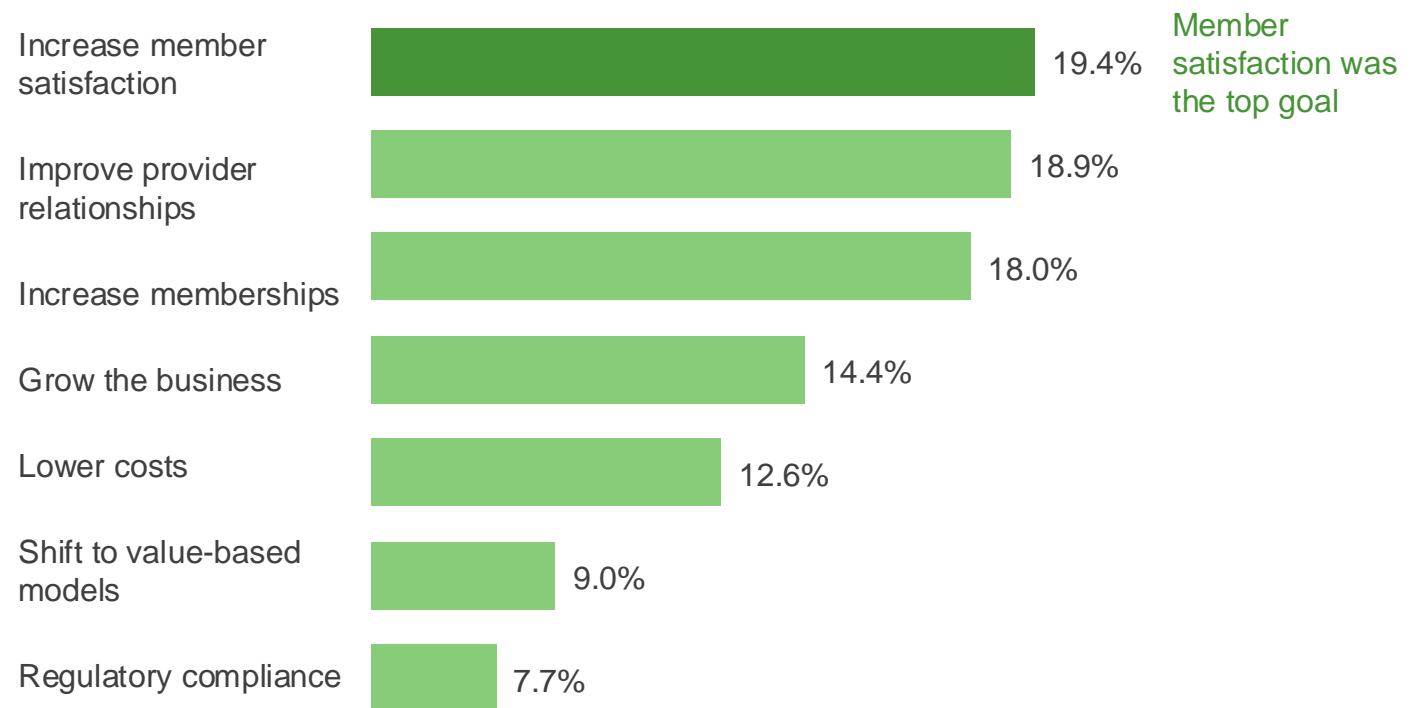
1 HealthEdge survey

Key technology trends in healthcare

Analytics

While patient/member data is growing constantly, wherein healthcare data comprises **30% of the global data volume**, why are enterprises struggling to unlock the full potential of data and analytics?

Cybersecurity
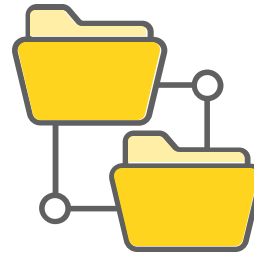
With the average healthcare cybersecurity breach cost crossing **US$ 10 million** – the highest among industries – what steps can organizations take to better protect against these escalating threats?

Data interoperability

With multiple data standards in place, such as **HL7** and **FHIR**, why are healthcare organizations struggling to achieve seamless data exchange across systems?
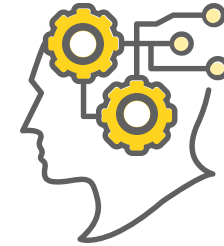
Generative AI

While there's significant buzz around generative AI, why have **over 85% of GenAI PoCs failed** to move from pilot to production?

We will leverage the 5Ps to anchor the discussion today

01

Pre-requisite of interoperability

Productivity through AI / automation

02

Personalize member engagement

03

Privacy and security

04

Promote next-gen tech

05
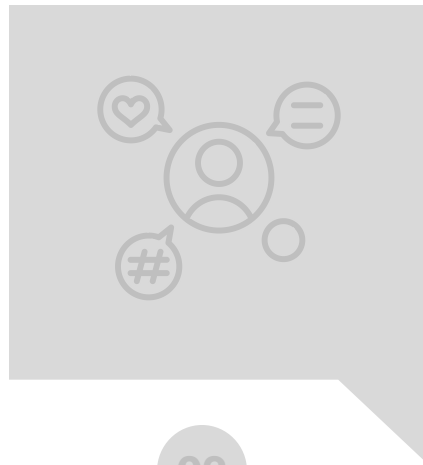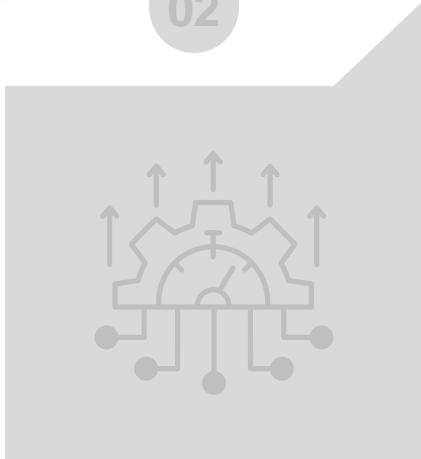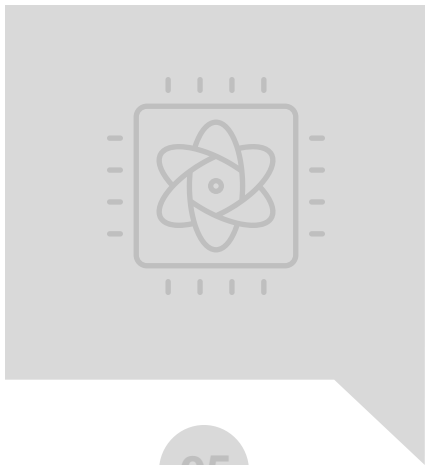
Which is the most-pressing interoperability challenge currently?

- Data integration

- Phasing out legacy systems

- Data standardization

- Data quality (missing or incomplete information)

Enterprises are leaning on technology to streamline data interoperability. While some of the technology investments have been discretionary spends, the CMS mandates have further necessitated and accelerated these investments

API-fication, automation, and cloud are having a huge impact on facilitating seamless data exchange

Application Programming Interface (API)
APIs to streamline data exchange (Prior-authorization API, Patient access API, Provider access API, Payer-to-payer API)

Automation
FHIR data conversion, automated data sharing (EOBs, ERAs)

Cloud
Centralized data repositories for single source of truth, real-time data access and sharing for members / enterprises

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AI and automation are improving efficiency across mid- and back-office functions by reducing manual work and enhancing decision making

Low | Medium | High

Functions	Adoption of AI and automation	Current technology-led use cases	Forward-looking technology-led use cases
Network management		Tools for analyzing provider performance	AI-driven network contract negotiations
Care management		Predictive analytics for at-risk patient identification	AI-enabled personalized care pathways
Prior Authorization (PA)		AI to determine if PA is required	Real-time prior authorization approvals (through APIs)
Provider data management		OCR to extract information and identify gaps	Automated provider credentialing
Claims management		Automated claims review and adjudication	AI-driven fraud, waste, and abuse detection

Mid-office functions (Network management, Care management, Prior Authorization, Provider data management)

Back-office function (Claims management)

Enterprises must have a robust implementation strategy to navigate challenges and realize efficiencies through AI and automation

Key challenges faced by healthcare enterprises during AI / automation adoption

| Quality of data | Quantification of RoI | Deployment time | Identifying use-cases |

Best practices for successful AI/automation adoption

Technology

Implement a robust data strategy

Evaluate and choose the right tools

Business case

Prioritize labor-intensive functions

Define strategic KPIs to measure impact

Implementation

Start with pilot programs

Continually track and improve the models

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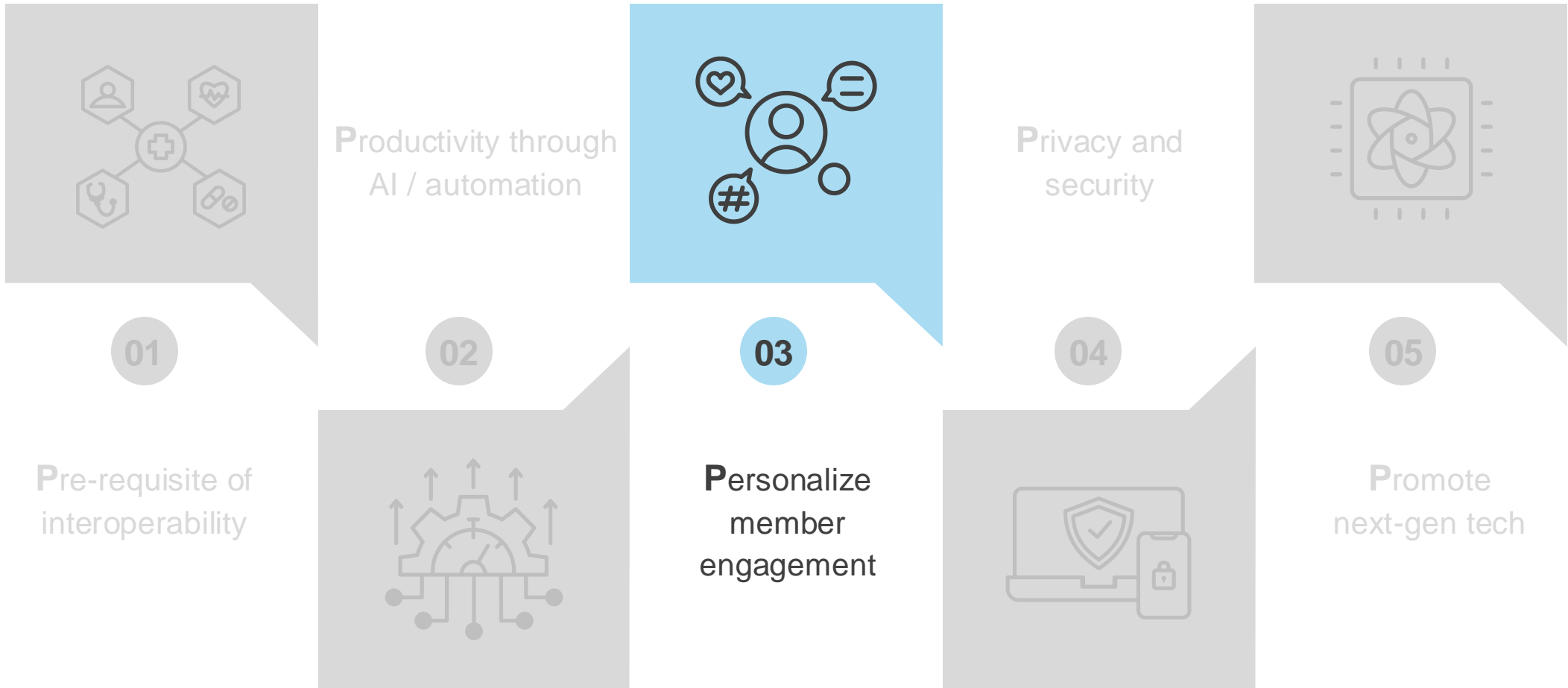
Enterprises are leveraging AI/automation across the engagement value-chain to streamline various member/patient touchpoints

Low   Medium   High

Member/patient engagement value chain	Patient/member administration	Care management	Services management	Billing and payments	Sales and marketing
Adoption of AI/automation					
Areas where enterprises use AI /automation	Eligibility verification, enrolment	Personalized treatment plans	Appeals and grievances	Payment reminders, bills / invoices	Lead Management
KPIs being impacted	Patient registration / enrolment time	Patent satisfaction rate, improvement in clinical outcome	Average handling time, no-show rate	Patient collections	Customer acquisition costs

While most enterprises are already leveraging core CX tenets, adopting value differentiators can be truly instrumental in engaging patients/members

Healthcare CX value chain areas : Sales and marketing   Services management   Care management   Member and patient administration   Billing and payment

Core CX tenets

Omni-channel engagement

Transparency & personalized communication

Digital Appointment scheduling

Cloud enabled contact-centers and AI-enabled chatbots

Value differentiators

Care coordination

Telehealth

Healthcare cost estimators

Digital payments

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Audience poll 2

What would be your preferred approach to balance your firms' security/functionality posture?

- High functionality (leverage third-party applications for productivity), but potentially vulnerable to threats

- Low vulnerability to threats (high control over data), but low functionality

In many ways, the UHG-Change Healthcare attack has been the key driver for enterprises to focus on cybersecurity

United Healthcare

CHANGE HEALTHCARE

131 Mn
Patients are served by Change Healthcare

$2.3-2.45 Bn
Estimated total impact of the cyber breach as per UHG in 2024

94%
of hospitals experienced some adverse impact

Prominent cyber threats in healthcare sector

Data breach

Ransomware attacks

Phishing

Best practices for enterprises to navigate data and security issues

Redefining CIO's role in healthcare

Revamp security culture

Develop an incident response plan

Implement data encryption and tokenization

Leverage disruptive technology

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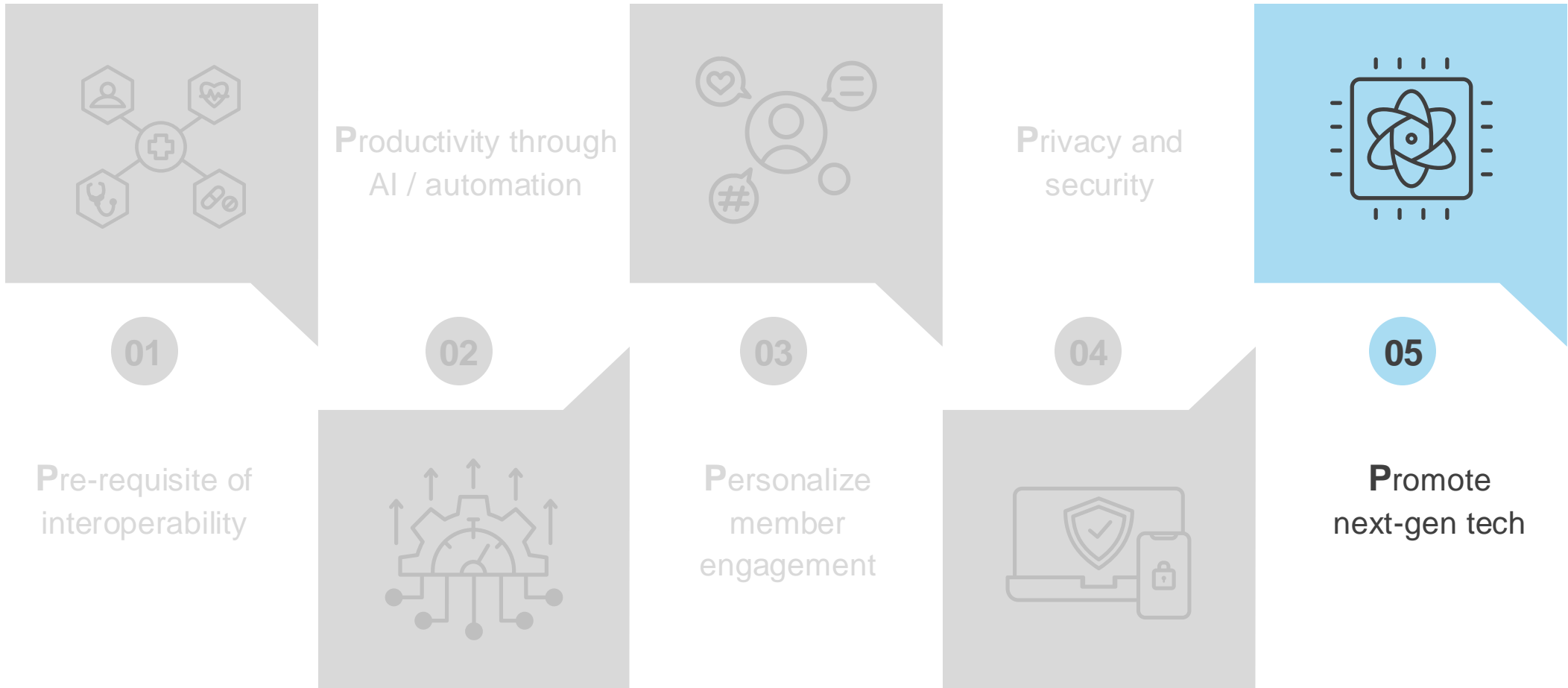
We see an exciting array of exponential technologies and their innovation potential as they make their way through the ideate to activate to scaled enterprise adoption stages

NOT EXHAUSTIVE

5G

High Performance Compute

Autonomous vehicles

Web 3.0

SDN/NFV

Low code / no code

Digital Twin

Blockchain

Cloud engineering

Extended Reality

Generative AI

Explainable AI

Edge Computing

Quantum computing

Exponential Innovation Ripple

Confidential computing

Streaming analytics

| Activate | Incubate | Ideate | | Ideate | Incubate | Activate |

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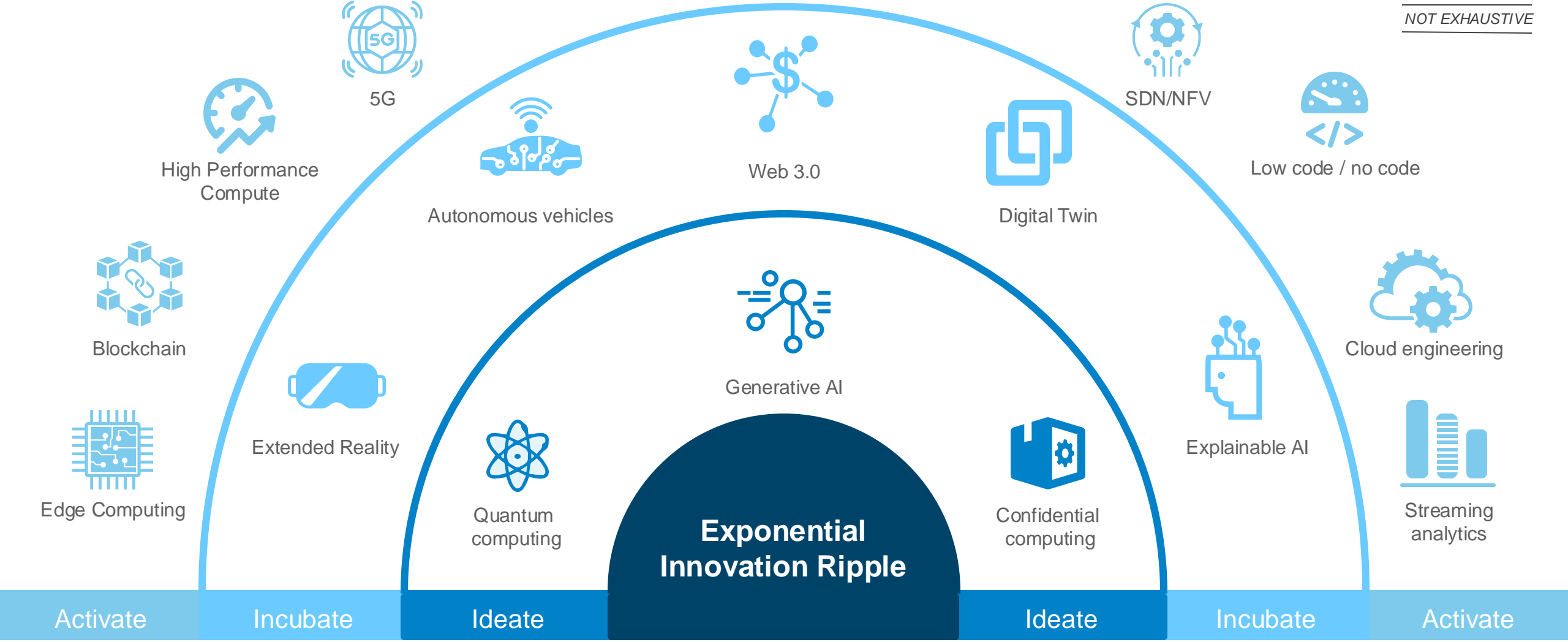
Gen AI has risen to prominence as a key focus, while the momentum in cybersecurity and big data is likely to persist

Top digital/next-generation investments for the next 6-12 months
Ranking based on percentage of respondents selecting as high priority

Growth in spend   🟩 Significant (more than 6%)   🟨 Moderate (4 to 5%)   🟥 Low (2 to 3%)

	Cybersecurity	Cloud solutions	Advanced automation, cognitive	Big data analytics	Generative AI
2024 rank	**1**	**2**	**3**	**4**	**5**
2023 rank	2	1	4	3	*New addition in 2024*
Expected growth in spend	🟩🟨	🟨🟥	🟨	🟨	🟩
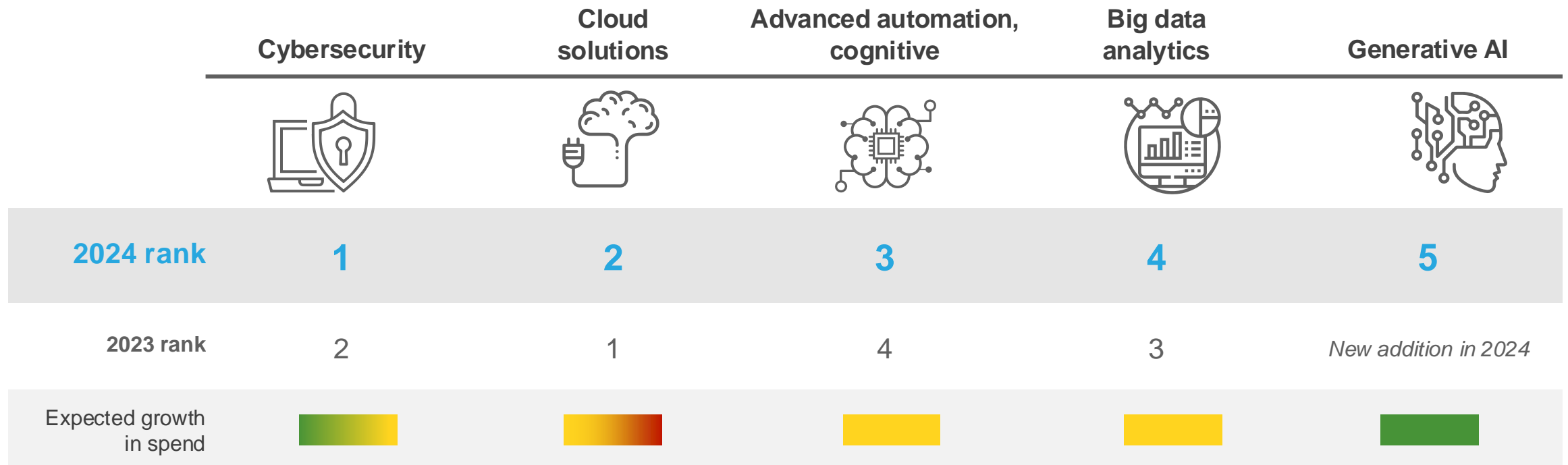
Source: Everest Group Key Issues Studies 2024 and 2023

Expectations are high for generative AI in healthcare

Key industries expecting gen AI to have high relevance
Rating on a scale of 1 to 10 from CXO survey[1]

Industry	Rating scale (4 to 8)
Banking, financial services, and insurance	~7
Healthcare and life sciences	~6
CPG and retail	~6
Media and entertainment	~5.5
Professional services	~5
Electronics, hi-tech, and technology	~5
Automotive	~4.3
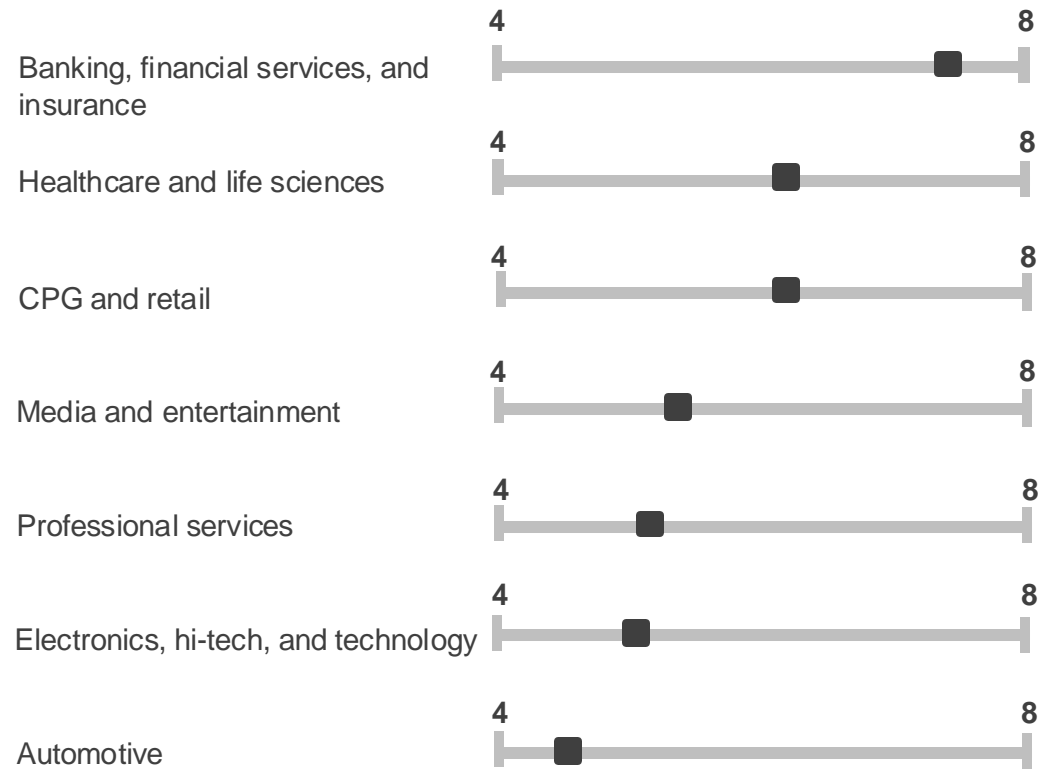
Business functions expecting gen AI to have high relevance
Rating on a scale of 1 to 10 from CXO survey[1]

Business function	Rating scale (2 to 8)
Customer service	~7.8
Sales and marketing	~7
Software development	~6.8
IT operations	~6
Finance and accounting	~4.5
HR	~4.2
Sourcing and procurement	~3
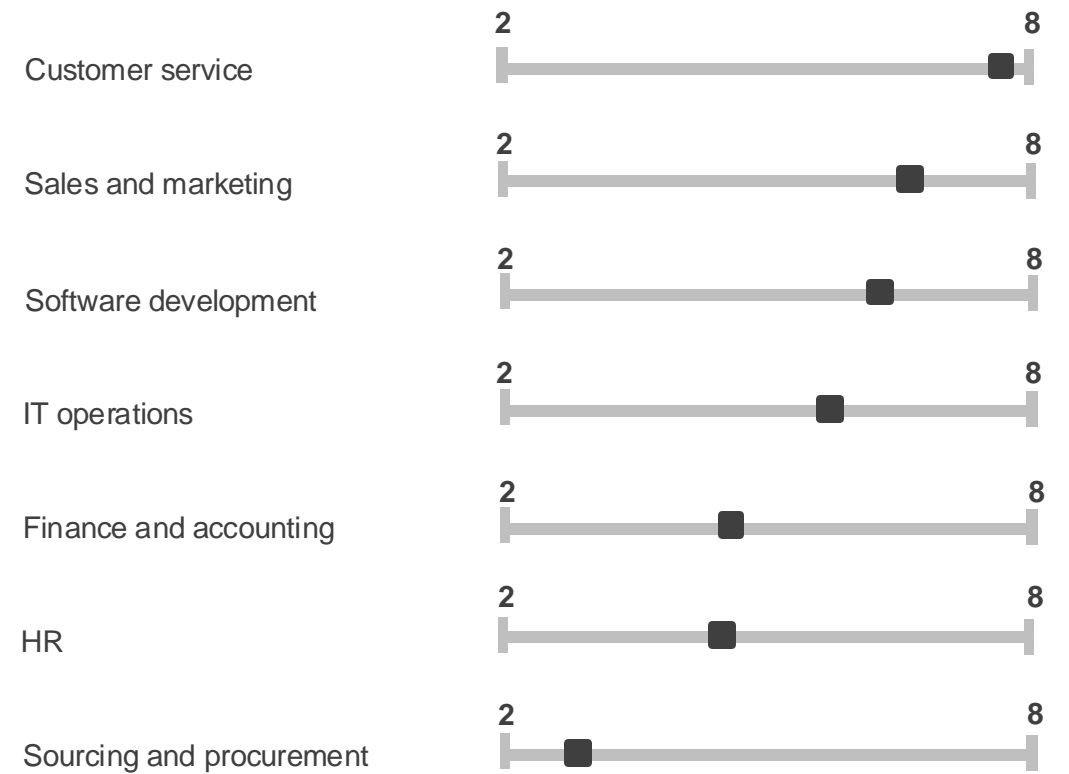
1 Conducted by Everest Group (2023)

What objectives is generative AI credibly impacting?

What business objectives can gen AI credibly impact?
On a scale of 1 to 7 (7 being highest)

Underlying motivation: ■ Velocity ■ Change

Objective	Value
Accelerating consumption of existing digital tools	"AI gets a UI" — 5.77
Reducing knowledge* latency	"The 'library card' effect" — 5.66
Decreasing the product development lifecycle	5.25
Accelerating citizen development	4.34
Creating better service delivery	5.57
Reimagining business operations	5.13
Generating revenue	4.74
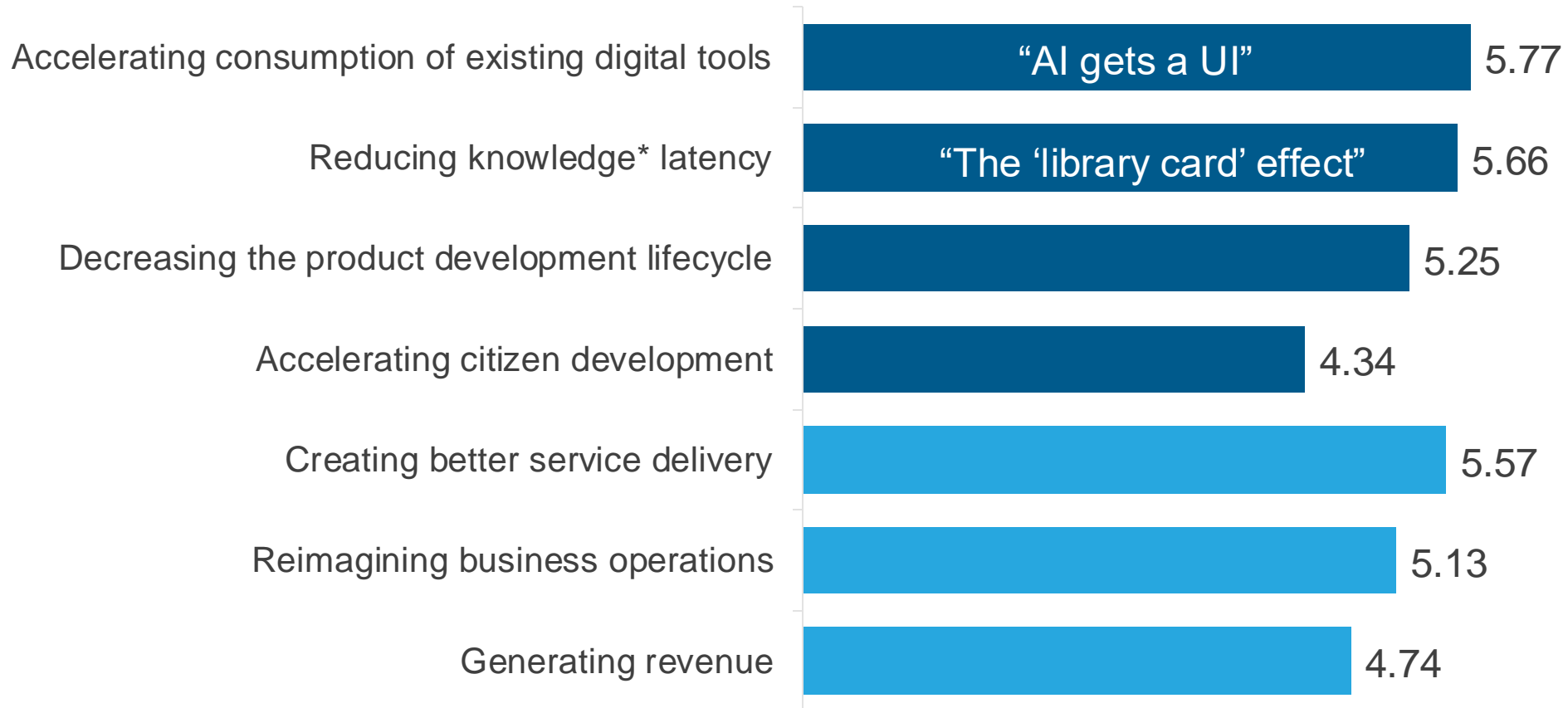
* Organizational knowledge management: executives, customers, employees, developers, functions

Source: Based on a CXO survey conducted by Everest Group (2023)

> "We are focusing on micro-utilities, use cases where empirical evidence suggests that increasing productivity adds business value."

Very few healthcare-specific pilots are reaching proof-of-scale; most that do are IT or function-specific

Legend: Low (red), Medium (yellow), High (green)

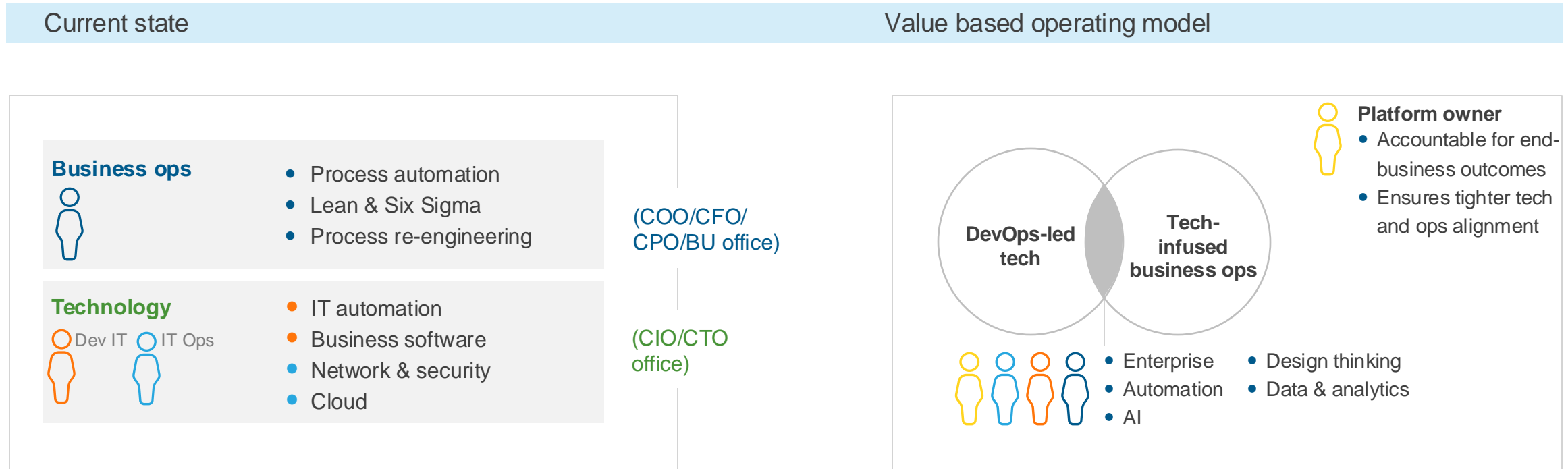|	Key areas	Use cases	Proof of concept	Proof of value	Proof of scale
Industry-specific	Clinical excellence	Personalized treatment plans	Medium	Low	Low
		Medical image reconstruction and noise reduction	Medium	Low	Low
		Precision diagnosis	Low–Medium	Low	Low
	Home health	Chronic disease management	Medium–High	Low	Low
		Virtual health assistants	Medium–High	Medium	Medium
		Personalized patient communication and education	Medium	Medium	Low
		Disease progression monitoring and forecasting	Medium–High	Low	Low
	Supporting workforce and eliminating waste	Personalized learning pathways for healthcare professionals	Low	Low	Low
		Automated referrals and consultation letters	Low–Medium	Low	Low
		Simulating scenarios (surgical procedures, medical images for training, agent coaching)	Medium–High	Medium	Low–Medium
	Prior authorization	Eligibility verification and initial screening	Medium	Low	Low
		Automated data extraction and submission	Medium–High	Low	Low
		Accelerated denial management	Medium	Low	Low
	Provider data	Provider credentialing and contract management	Low	Low	Low
		Patient risk stratification	Medium–High	Medium–High	Low
		Automated triage messages and routing to clinical staff	Low	Low	Low
Services & function specific	IT specific	Code generation and debugging	Medium–High	Medium–High	Medium
		Case generation and automated testing	Medium–High	Medium–High	Low
	Contact center	Chatbot assistance (health chatbots with multi-language support)	Medium–High	Medium–High	Medium
		Agent assistant (search, summarization, script generation)	High	Medium–High	Low
		Voice interface with contextual recommendations	Medium–High	Low	Low

What is the biggest challenge facing healthcare enterprises in adopting technology?

- Healthcare enterprises want to **increase the velocity of change** in their business to meet the evolving macro, consumer, employee, competitive, and regulatory themes

- **Friction between their tech and ops** further reduces the velocity and agility

- A lack of an operating model that integrates the varied technology investments adds to the **issue of value realization** on existing investments of technology

Healthcare enterprises can solve for these challenges by adopting a value-based operating model

This operating model intertwines tech and business ops to respond to changing market needs at speed

Current state	Value based operating model

Business ops
- Process automation
- Lean & Six Sigma
- Process re-engineering

(COO/CFO/CPO/BU office)

Technology
Dev IT   IT Ops
- IT automation
- Business software
- Network & security
- Cloud

(CIO/CTO office)

DevOps-led tech   **Tech-infused business ops**

Platform owner
- Accountable for end-business outcomes
- Ensures tighter tech and ops alignment

- Enterprise
- Automation
- AI
- Design thinking
- Data & analytics

- Siloed structure with focus on unit component optimization
- Different Objectives and Key Results (OKRs) for various teams
- Tech and operating model changes often out of sync
- Tech investment considered discretionary and centralized

- Intertwined teams with singular focus on business growth and outcomes
- Shared OKRs across the platform
- In-step and ongoing tech and operating model changes
- Tech investment essential and federated

Thank you

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