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Navigating the readiness paradox

The Kyndryl Readiness Report 2024

Industry focus: Energy and Utilities





Introduction

The Kyndryl Readiness Report — a global survey of business and technology leaders combined with exclusive data from Kyndryl Bridge, the company’s AI-driven digital business platform — sheds light on how business leaders turn to their IT and talent to address business challenges and gain a competitive edge.

The study reveals a **tech readiness paradox** among business and IT leaders, who express confidence in their current technology posture while expressing concern about its readiness to address future challenges.

WHILE

87%

of Energy and Utilities leaders are confident their IT infrastructure is best-in-class (vs. 90% across all industries)

ONLY

32%

of those leaders say their IT infrastructure is ready to manage future risks (vs. 39% across all industries)

Energy and Utilities: Industry readiness snapshot

Today's Energy and Utilities leaders face rising power demands driven by economic growth and technological advancements, with global electricity consumption increasing annually by the equivalent of Japan's national demand. Companies are diversifying energy sources and leveraging technology for secure, sustainable systems. AI can enable proactive problem-solving through distributed energy resources, predictive maintenance, and load optimization. Leaders need to balance new technology investments with system updates, and remove barriers to efficient, secure, and reliable power delivery.

Talent in focus as the industry evolves

Leaders report that they are less ready to navigate talent gaps and their IT skills are less ready to navigate future risks, compared to other industries.

Skills gaps stem from the multitude of technology advancements in the past five to 10 years, the introduction of cloud platforms and services, the rapid evolution of applications used for customer care, operations, and shared services. They're further compounded by exponential growth in data storage and data processing, as well as using analytics, including AI, to drive business decisions.

Heightened pressure for sustainable modernization

Compared to those in other industries, Energy and Utilities leaders report lower readiness across key IT elements, including IT infrastructure, skills, and emerging tech.

As companies prepare to meet growing power demand, they will apply technology to accelerate innovation around distributed energy resources (DER). These smaller-scale energy storage and generation devices and technology— like battery storage and solar panels — that are situated closer to where electricity is used to improve reliability, resilience and efficiency.

AI will increase power demand while providing new tools to manage it

With investments in AI and demand for AI datacenters on the rise, energy and utility companies will prepare to meet these increasing power needs while also using AI to increase their own efficiency. Companies continue to explore how smart grid technologies and AI can help them use real-time data to optimize energy flow, forecast energy generation, assess climate risks and more.

Implementing these technologies can improve overall grid resiliency and help ensure grid stability as AI's power consumption grows.

Prioritizing security as IT/OT convergence opens new attack vectors

Proactive companies will prioritize cybersecurity and resilience as attacks targeting critical infrastructure increase. Their efforts will expand to protect IT and operational technology, which includes industrial systems.

Although IT/OT convergence enables energy and utility companies to monitor conditions in real-time and make better use of their data, it also creates more entry points for an attack. Companies will also aim to strengthen their supply chain resiliency as geopolitics and cyber threats converge.

Six learnings

01 **Leaders don't feel risk ready**, struggling with diverse disruptions and the pace of change

02 **The tech readiness paradox:** Leaders are confident in their tech, yet concerned about its readiness — **and end-of-life tech is a looming challenge**

03 **IT is the best line of defense to mitigate risk**, yet most are in **earlier stages of their tech modernization journey**

04 Keeping tech modernized is **hindered by complexity and prioritization paralysis**

05 Despite **significant AI investments** to drive modernization, leaders **struggle to see positive ROI**

06 Leaders in tech modernization report better business-tech alignment, higher ROI and **greater readiness for the future**

Being tech ready is being people ready: Readiness is a continual process that involves every part of an organization—and relies on people just as much as it does on technology.

01. Leaders don't feel risk ready, struggling with diverse disruptions and the pace of change

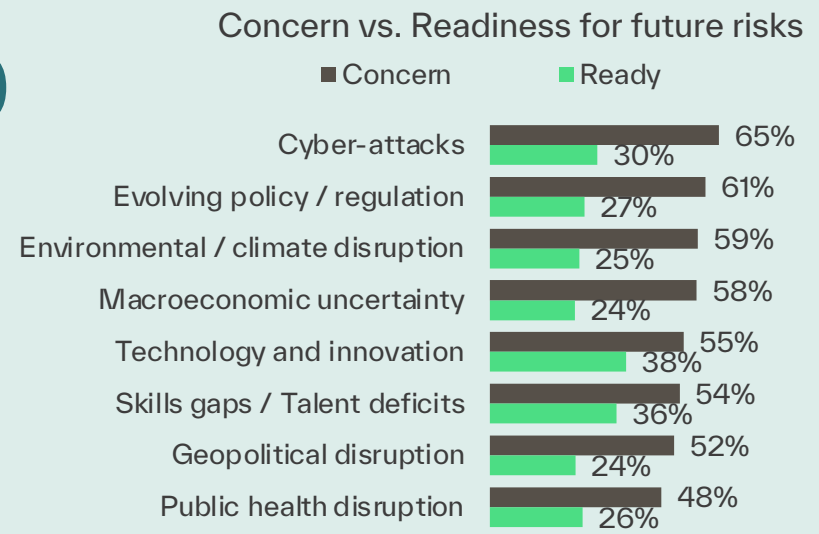
Multiple risks keep CEOs, CIOs and CTOs up at night, such as cyber attacks, evolving regulations, climate disruptions, economic uncertainty and keeping up with technological advances.

Cyber-attacks are a top concern for both CEOs and CIOs/CTOs. However, CEOs are more concerned about external headwinds (e.g., economy, climate, geopolitics) than CIOs/CTOs.

“Readiness” is a moving goalpost as leaders struggle to keep up with the speed of technological innovation. The pace of new regulations also presents a challenge for most, especially in Luxembourg, France, the Netherlands, India and Australia.

ONLY 29%

of business leaders **feel ready** across external risks



3 in 5

business leaders **struggle to keep up** with the speed of technological advancements

1 in 2

say **policy and regulatory changes are moving too fast** in their country

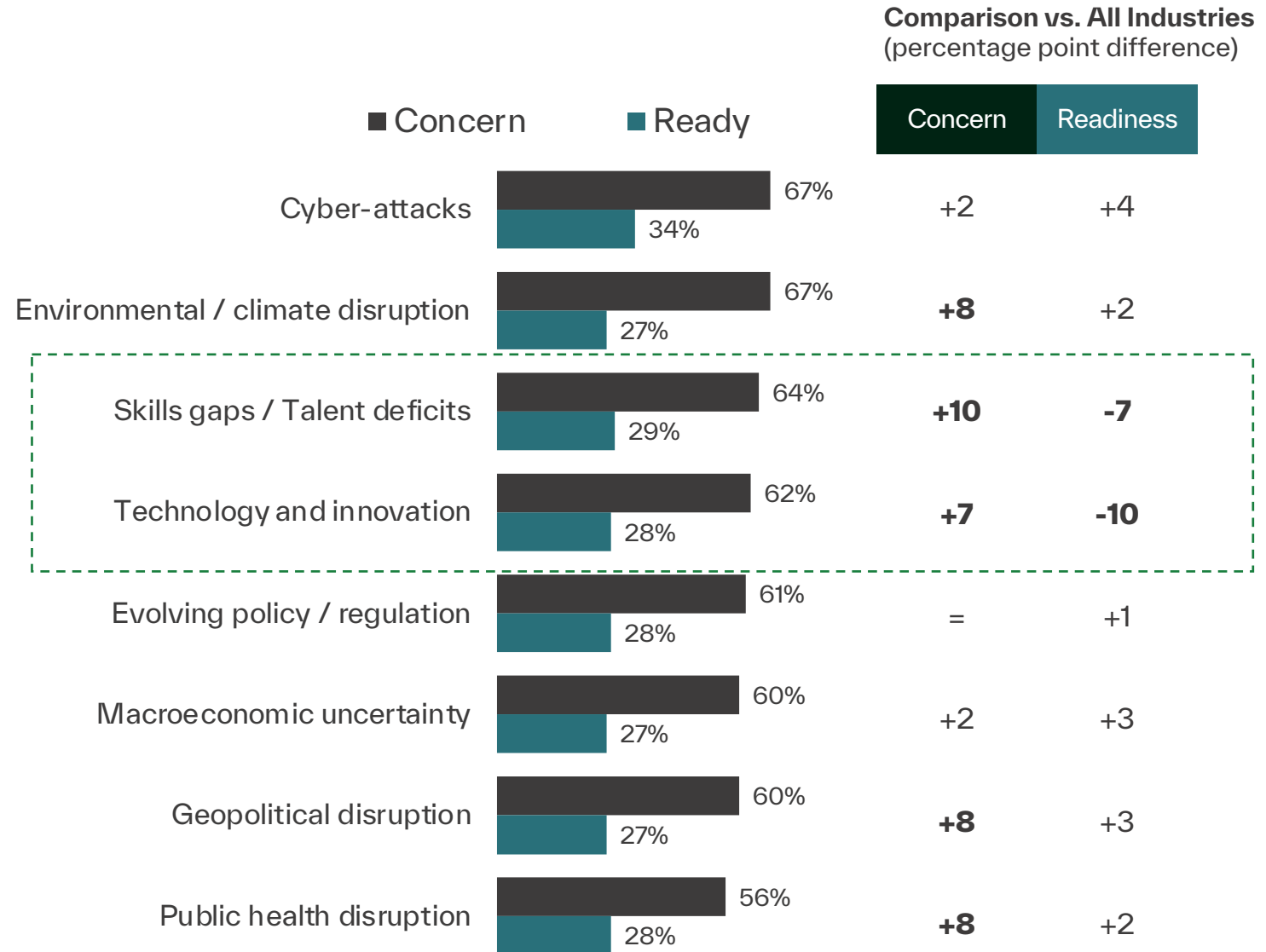
01. Energy and Utilities leaders show higher concern for skills and innovation

29%

of Energy and Utilities
leaders **feel ready** across
external risks (*vs. 29% all
industries*)

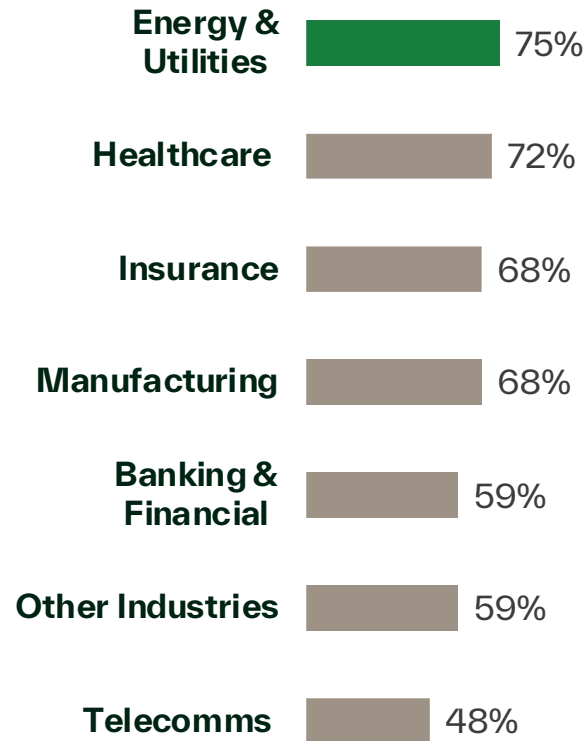
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Concern vs. Readiness for Future Risks

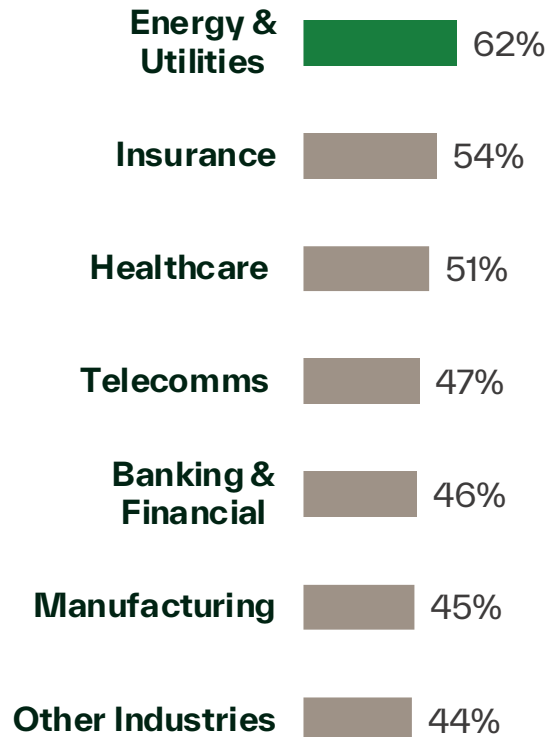


01. Energy and Utilities leaders are more likely to struggle with the pace of innovation and regulatory changes

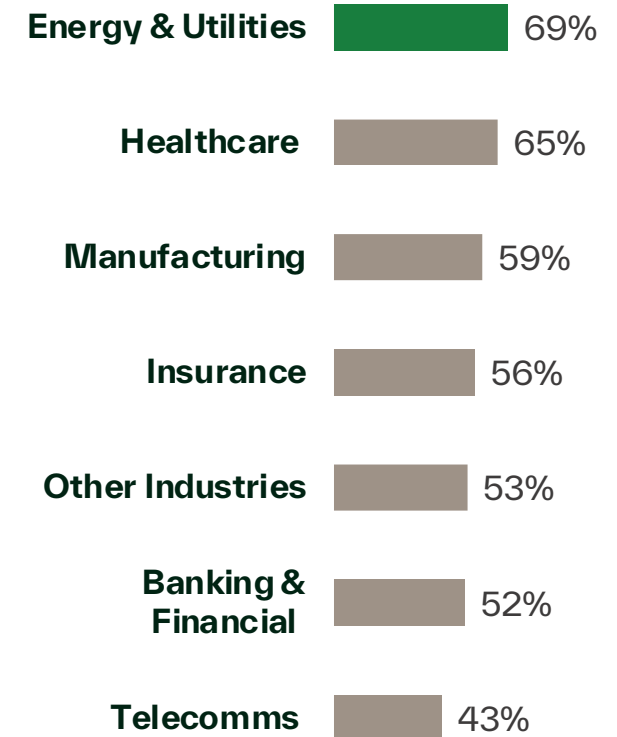
Struggle to keep up with the **pace of technological advancements**
Agree %



Policy and **regulatory changes** are **moving too fast** in their country
Selected %



Navigating the **frequency and speed of policy / regulatory changes** is a challenge for their modernization efforts
Selected %



02.

The tech readiness paradox: Leaders are confident in their tech, yet concerned about its readiness – and end-of-life tech is a looming challenge

Executives have high confidence in the current state of their IT: 9 in 10 leaders say their company’s IT is best in class. Dig deeper, and uncertainties emerge: Six in 10 do not feel it is ready to manage future risks. That gap deepens when it comes to newer technologies, such as AI: Seven in 10 don’t feel their IT is completely ready to navigate future disruptions with the technology.

An end-of-life and end-of-service challenge is looming. Nearly two-thirds of CEOs are concerned that their IT is outdated or close to end-of-life, bringing vulnerabilities, skills gaps and challenges for modernization.

Almost all modern businesses are dealing with an end-of-life tech challenge. According to Kyndryl Bridge data, 44% of mission-critical components such as servers, storage networks and operating systems are approaching or at end-of-life. Being aware of these end-of-life challenges can help organizations better plan for future investments, realizing higher readiness, efficiency and growth.



90%

of business leaders are confident their IT infrastructure is **best-in-class**

HOWEVER, ONLY

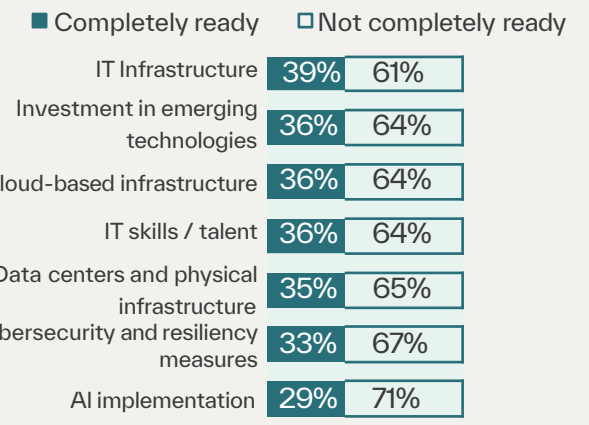
39%

of businesses report their **IT infrastructure is ready** to manage future risks

AND

64%

of **CEOs are concerned** their IT is outdated or close to end-of-life



44%

of **servers, storage, networks, and operating systems** are **approaching or at end of life**, according to Kyndryl Bridge

02.
Energy
and Utilities are
behind other
industries in
tech readiness,
yet feel
optimistic on AI

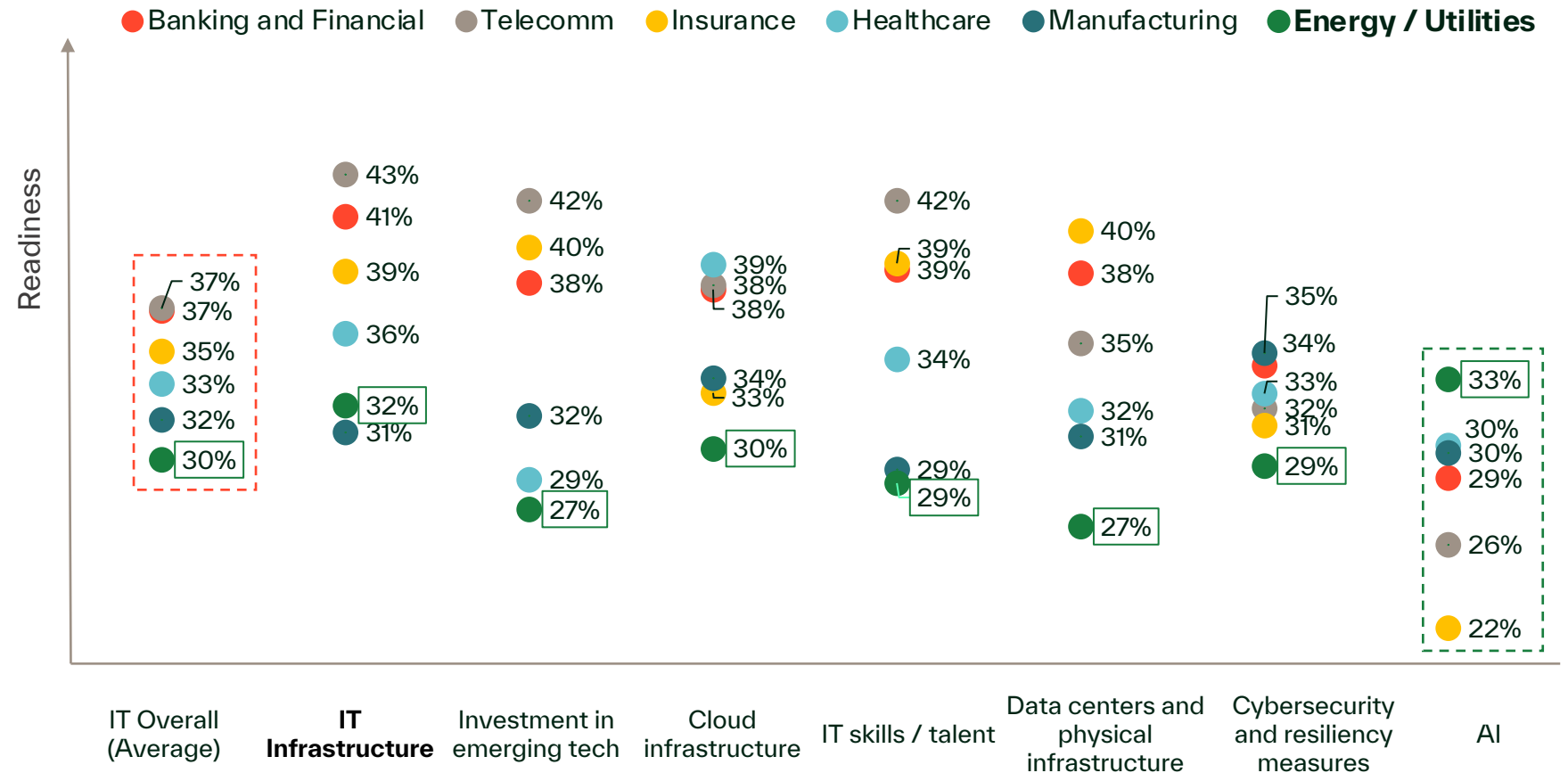
32%

of Energy and Utilities
leaders report their **IT
infrastructure is ready** to
manage future risks (vs.
39% all industries)

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Readiness across IT elements

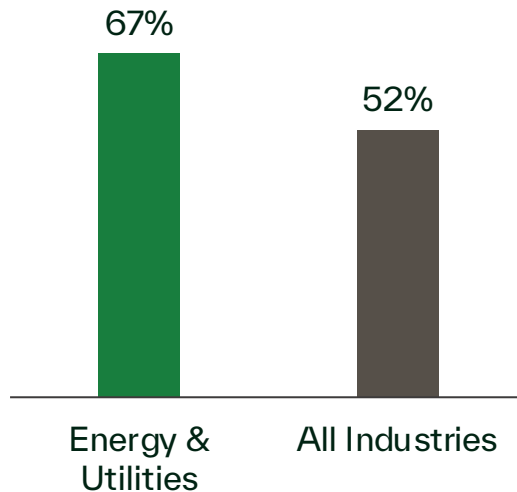
% Completely Ready



02. Energy and Utilities leaders struggle more than those in other industries with end-of-life tech challenges

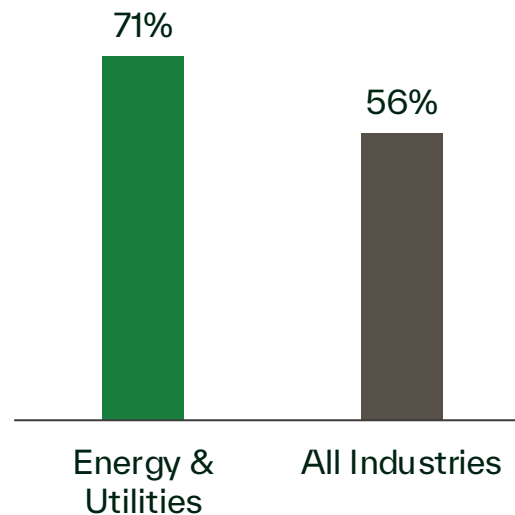
2 in 3

Energy and Utilities leaders **are concerned** their IT is **outdated or close to end-of-life**



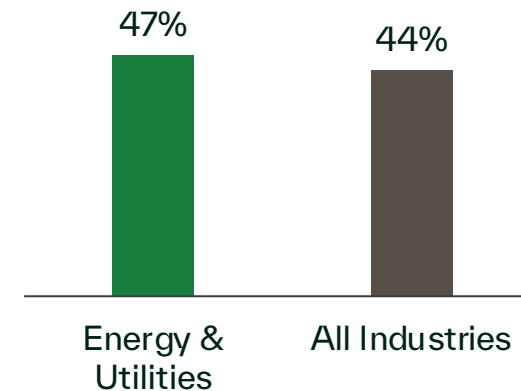
7 in 10

Energy and Utilities **are anxious about the potential risks** posed by **end-of-life IT systems** within their organization



47%

of **servers, storage, networks, and operating systems** among Energy and Utilities businesses are **approaching or at end-of-life**, according to Kyndryl Bridge



03.

IT is the best line of defense to mitigate risks, yet most are in earlier stages of their tech modernization journey

Almost all leaders — 94% — say modernizing their business is a high priority, and updating their IT is the top action to mitigate risk. Yet, only 3 in 10 feel their organization is leading when it comes to their tech modernization journey and utilizing innovative technologies to drive business outcomes.

Most leaders (71%) are somewhere in the earlier stages of modernization: 56% of leaders say they are in the process of adopting new digital technologies, and 15% say they're just starting out.

#1

Executives say **upgrading their IT** is the number one way to mitigate all of their business risks

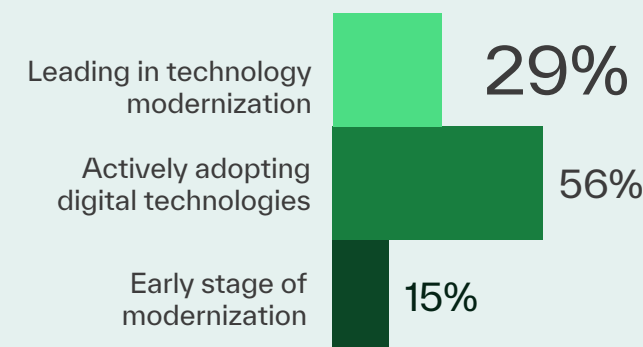
Top 5 risk mitigation actions:

1. Upgrading IT
2. Cybersecurity measures
3. Risk assessments
4. Employee training
5. Regulatory compliance

94%

Say tech modernization is a high priority

Only 3 in 10 feel they are leading when it comes to their **technology modernization journey**



03.

Investing in sustainability is a top risk management strategy for Energy and Utilities

- In line with other industries, updating IT infrastructure is the top risk mitigation strategy
- Yet, more so than those in other industries, Energy and Utilities leaders say they are also enhancing regulatory compliance and governance as well as investing in environmentally sustainable to mitigate risk

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Top 5 Risk Mitigation Actions

% Selected

Energy and Utilities

1. **Upgrading IT Infrastructure**
2. Enhancing regulatory compliance efforts
3. Implementing robust cybersecurity measures
4. **Strengthening internal controls and governance mechanisms**
(+7 pts vs. all-industry average)
5. **Investing in environmentally sustainable practices and infrastructure**
(+5 pts vs. all-industry average)

All Industries

1. **Upgrading IT Infrastructure**
2. Implementing robust cybersecurity measures
3. **Conducting regular risk assessments, mappings, and audits**
4. **Investing in employee training and development programs**
5. Enhancing regulatory compliance efforts

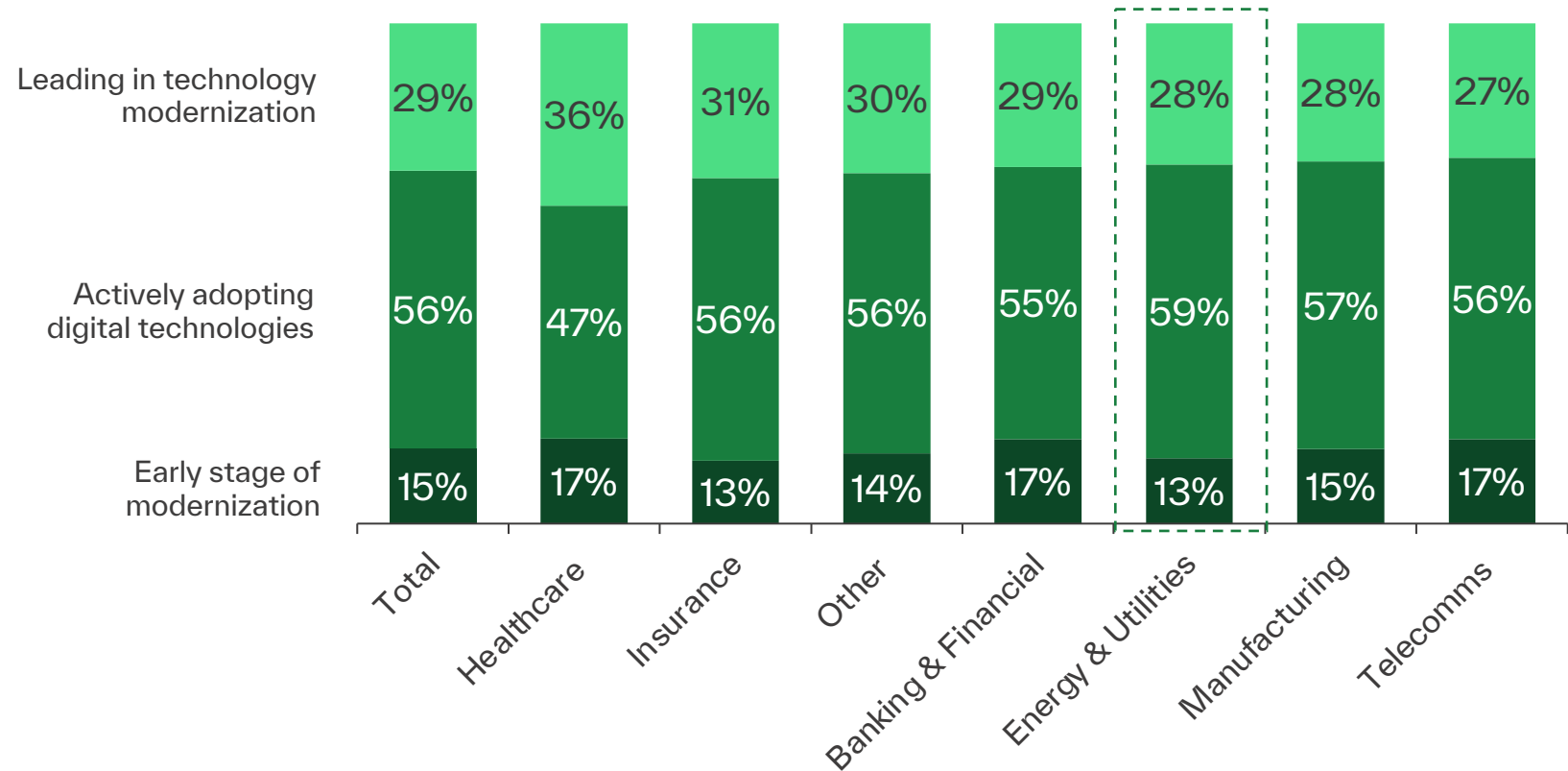
03.

Energy and Utilities leaders are on par with other industries in terms of tech modernization

- Similar to other industries, 72% of Energy and Utilities leaders say they are somewhere in the earlier stages of modernization: 59% of leaders say they are in the process of adopting new digital technologies, and 13% say they're just starting out.
- Only Healthcare leaders feel they are ahead on the tech modernization journey.

Tech Modernization Journey

% selected



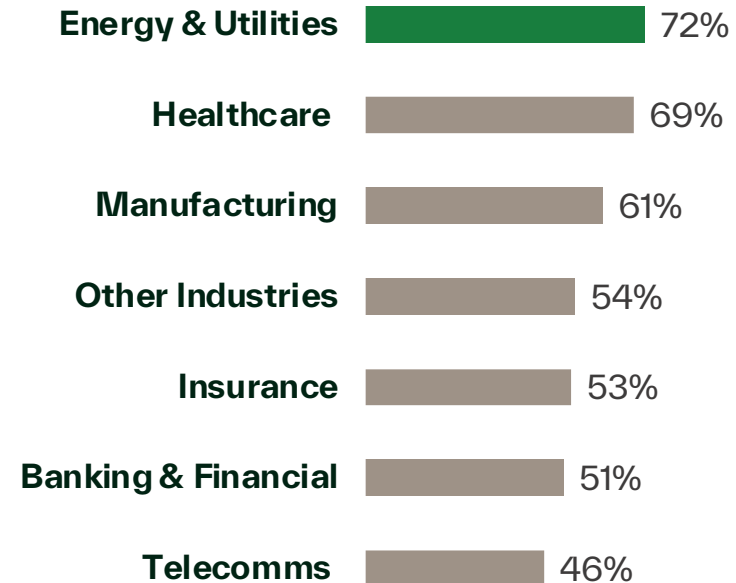
03. Energy and Utilities leaders are the most likely to struggle with balancing running and transforming

Organizational Challenges Related to Tech Modernization Efforts

% selected

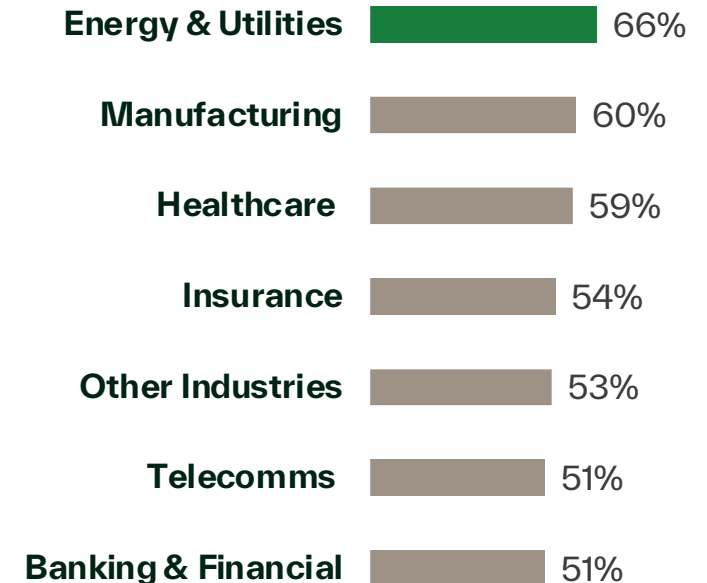
Cite balancing innovation with maintaining operational stability as a challenge

Selected %



Cite legacy system integration and modernization as a challenge

Selected %



03. Even businesses that have already adopted automation have room to run

8% vs. 30%+ target

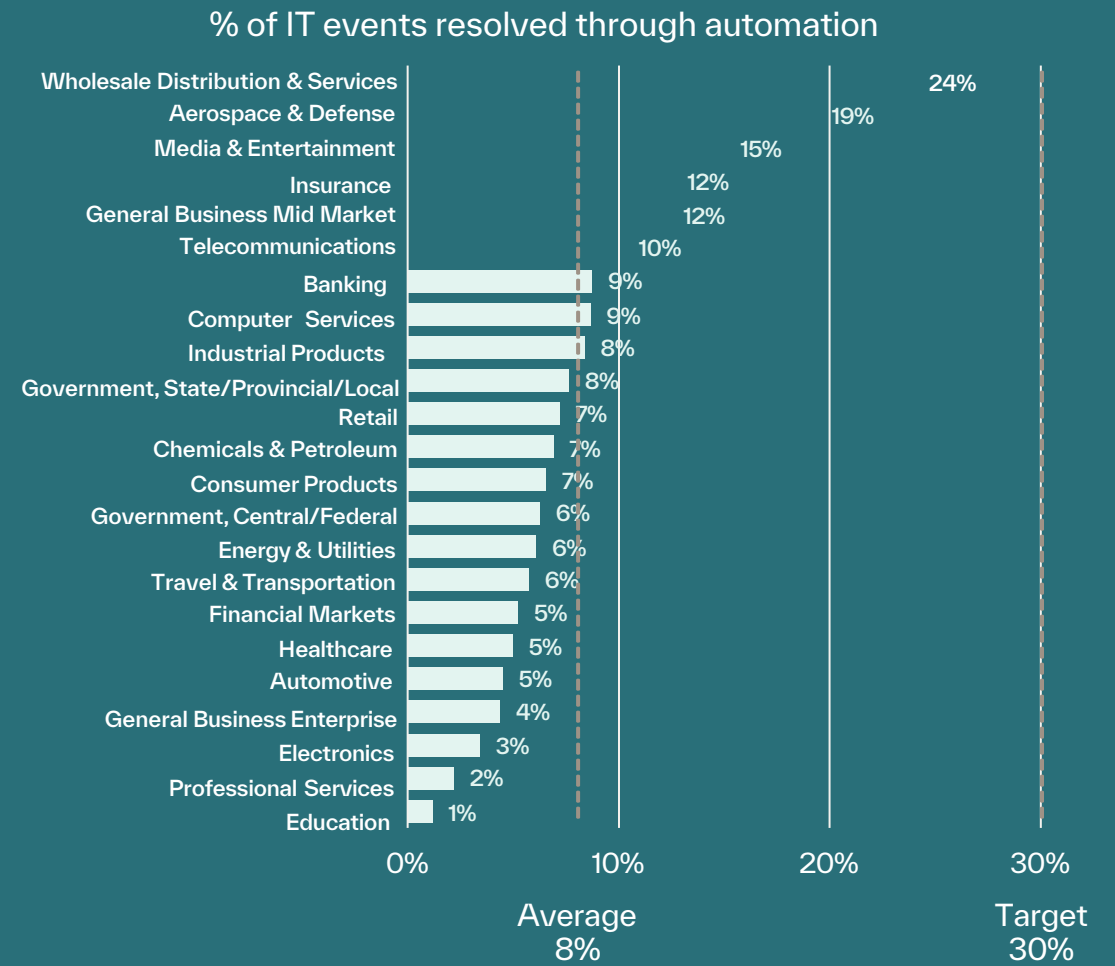
of IT incidents are being resolved through automation, according to Kyndryl Bridge data

About this statistic: Automation can help companies automatically resolve issues in their environments without human intervention, avoiding major incidents and planned maintenance costs. The result is that organizations can improve their speed of execution and overall quality of services they provide to their own customers.

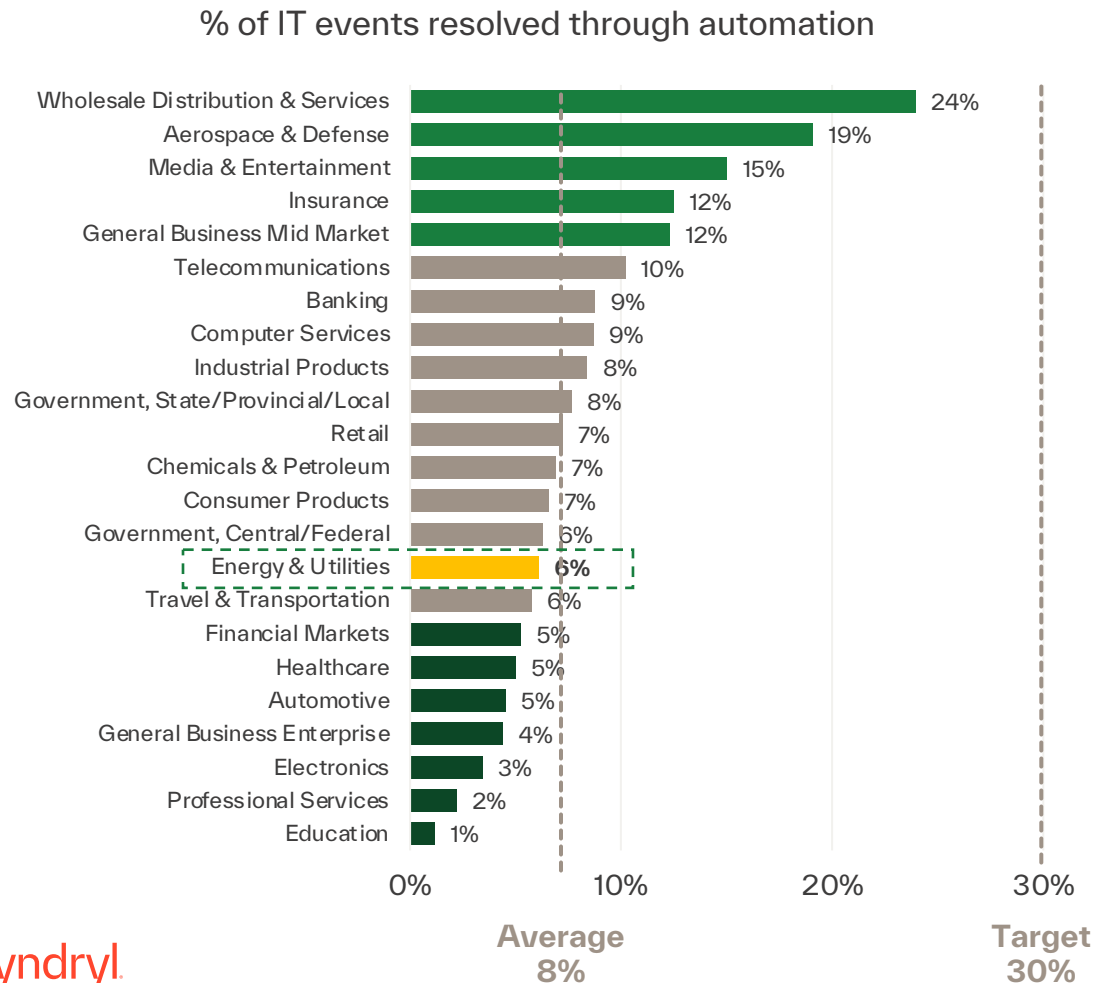
75% vs. 90%+ target

Average IT best practices adoption, according to Kyndryl Bridge data

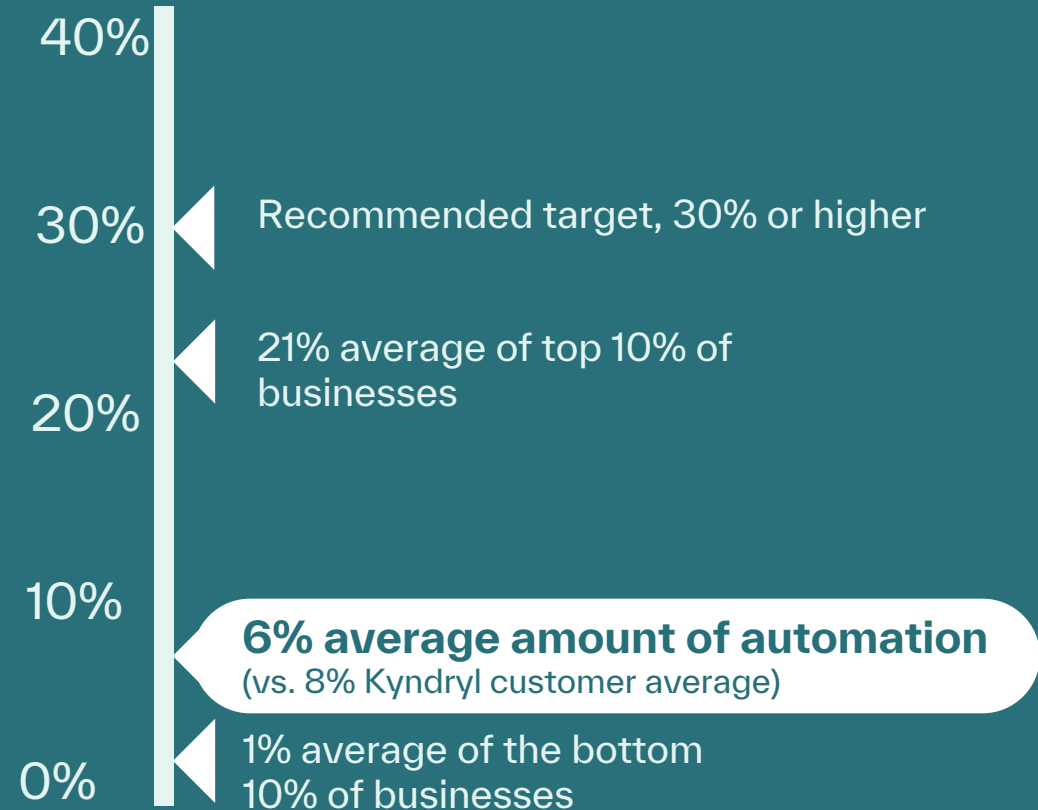
About this statistic: Best practice adoption is a holistic measure of effective IT, comprised of industry IT standards and measures for security compliance and regulatory compliance that can be monitored automatically.



03. Energy and Utilities are below average on automation



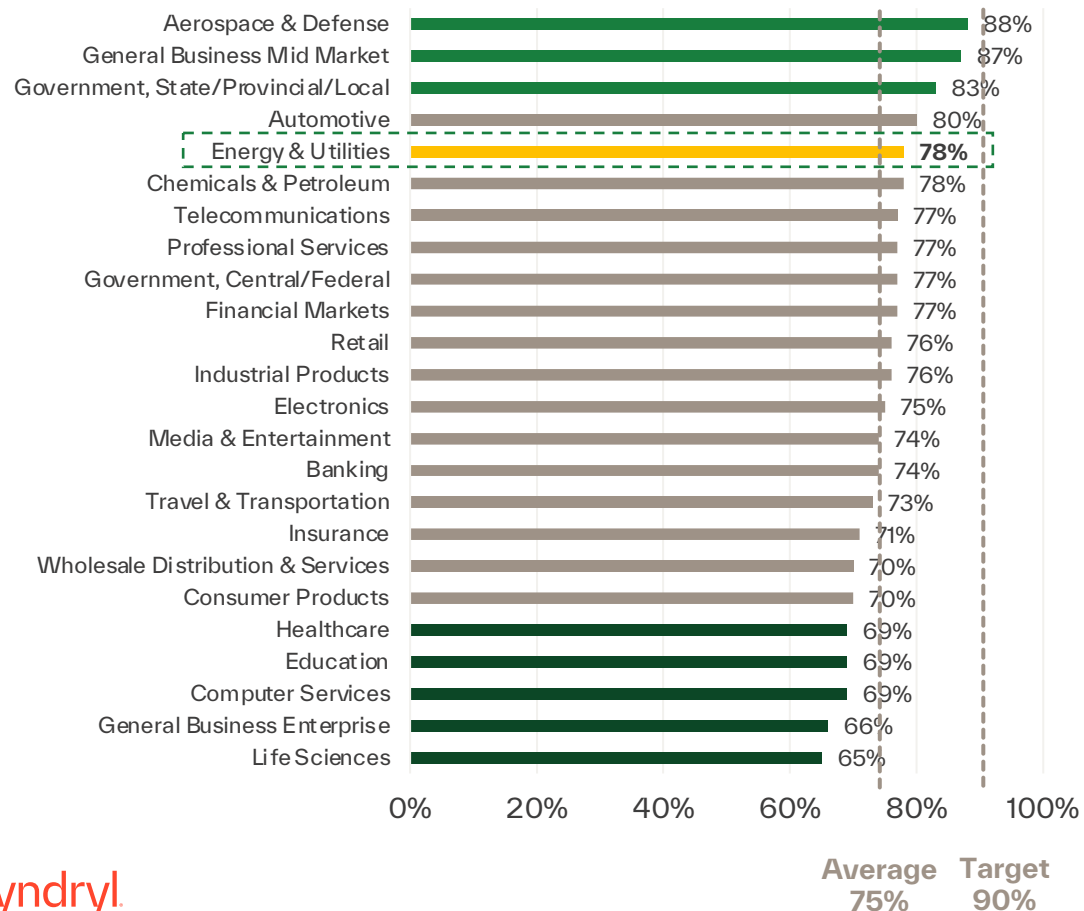
% of IT events resolved through automation



Source: Kyndryl Bridge data

03. Energy and Utilities are above average on best practice adoption

% of IT best practice adoption



About this statistic: Best practice adoption is a holistic measure of effective IT, comprised of industry IT standards and measures for security compliance and regulatory compliance that can be monitored automatically.

% of IT best practice adoption

100%

94% average of top 10% of businesses

Recommended target, 90% or higher

78% IT best practice adoption
(vs. 75% Kyndryl customer average)

61% average of the bottom
10% of businesses

50%

04.

Keeping tech modernized is hindered by complexity and prioritization paralysis

Complexity, resistance to change and misalignment between business and tech leaders are common challenges hindering modernization.

Conflicting priorities and diverse organizational needs like short-term gains vs. long-term benefits, innovation vs. risk and cost vs. function can paralyze leaders as they try to run the business and modernize simultaneously.

Sustainability goals also complicate modernization efforts. Most leaders cite sustainability as a priority, yet difficult tradeoffs often impede their ESG initiatives and only 27% of leaders are currently seeing sustainability-based outcomes from their tech modernization.

#1

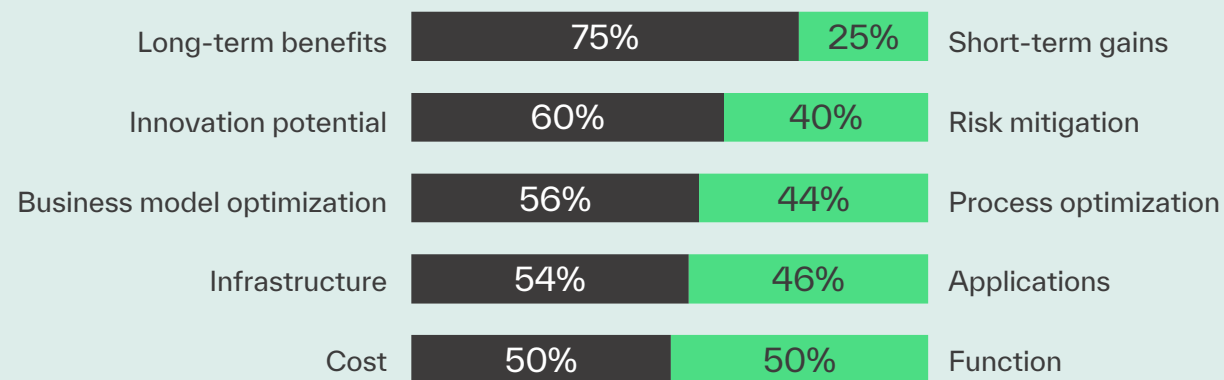
Complexity is the #1 challenge to tech modernization

Top sources of tension between business and tech leaders:

1. Resistance to change
2. Challenges in balancing short-term needs with long-term investments
3. Difficulty quantifying ROI

Priorities When Evaluating the Success of Tech Investments

% Prioritizing (Selected, forced choice)



90%

Prioritize **sustainability** when implementing tech modernization initiatives

27%

Report seeing **sustainability-based outcomes** (e.g. lower emissions) from tech modernization, in the past year

04. Energy and Utilities cite security as a top challenge to modernization

While most industries cite Complexity as the top tech modernization challenge, Energy and Utilities leaders are more likely to focus on other challenges such as the rise in data breaches or cyberattacks (24% vs. 19% all-industry average)

Additionally, Energy and Utilities businesses uniquely struggle with tech modernization needs not aligning with business objectives as well as data loss or corruption during the transition to new systems

Top 5 Tech Modernization Challenges

% Selected

Energy and Utilities

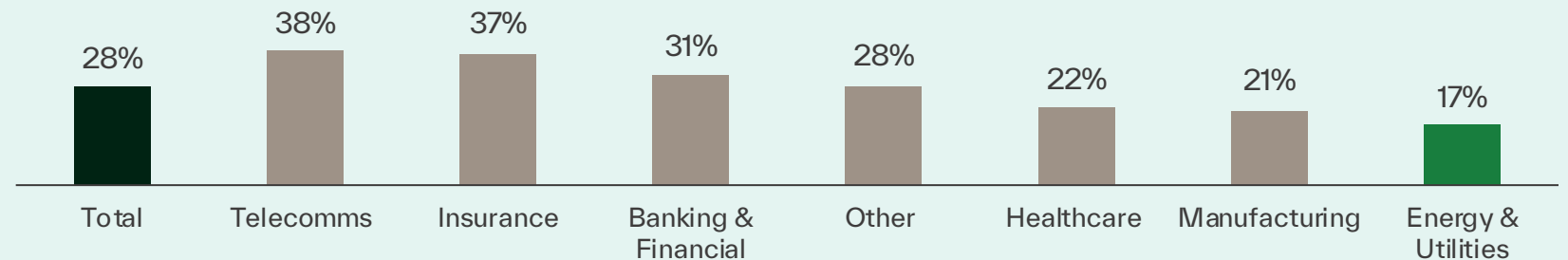
1. **Rise in data breaches or cyberattacks**
2. Compatibility
3. Long-term financial costs
4. Technology modernization needs not aligned with business objectives
5. Data loss or corruption during the transition to new systems

All Industries

1. **Complexity**
2. Compatibility
3. Long-term financial costs
4. Rise in data breaches or cyberattacks
5. Technical debt

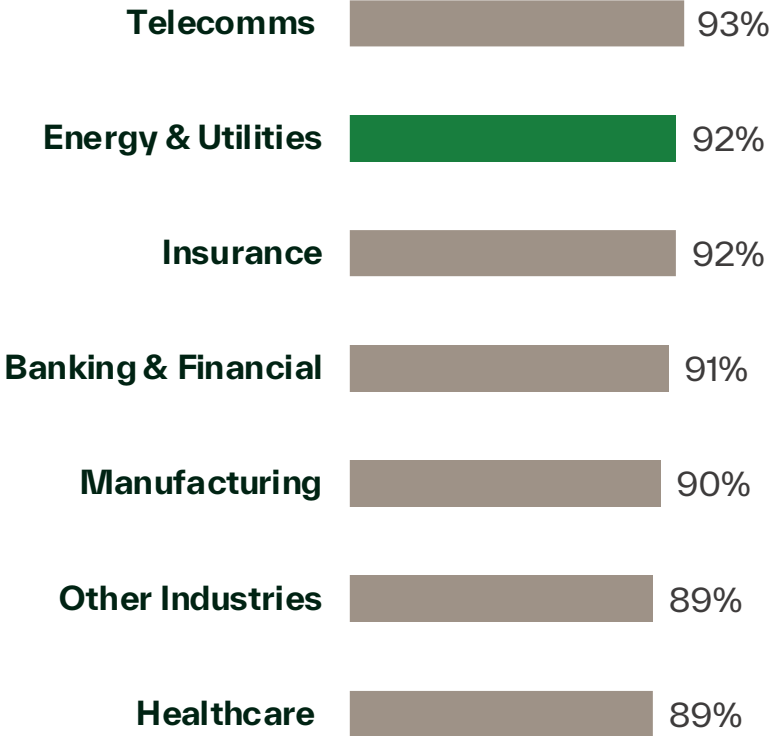
Cite 'Complexity' Among Top 3 Largest Tech Modernization Challenges

% Selected

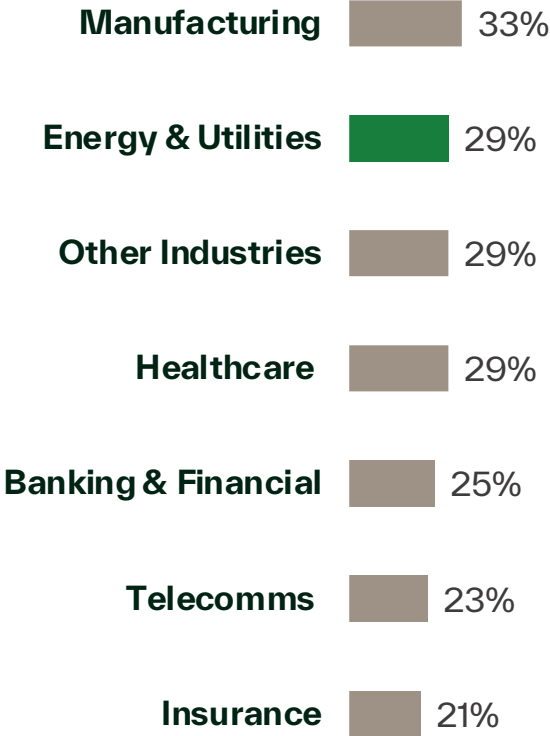


04. Sustainable modernization is even more important in Energy and Utilities, and also more of a challenge

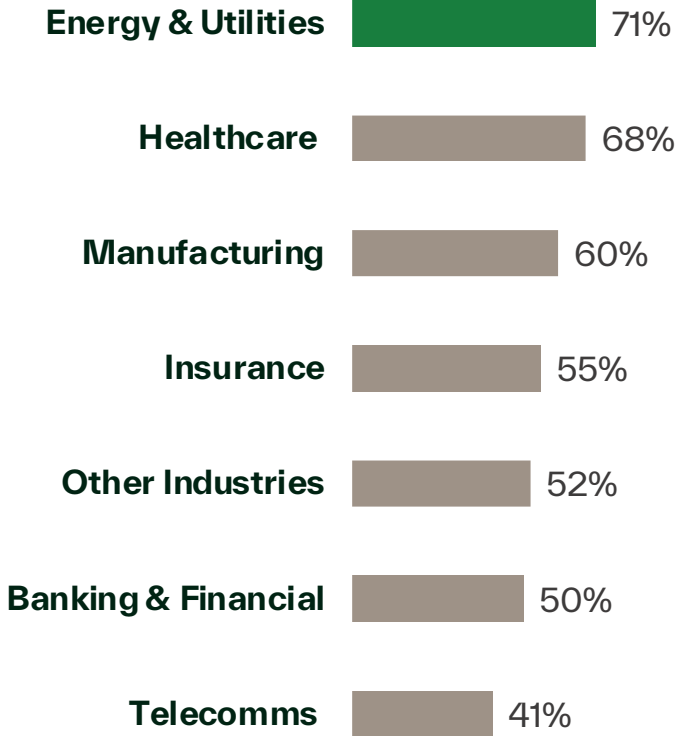
Prioritize sustainability when implementing tech modernization initiatives
Agree %



Experienced improved sustainability-based outcomes from tech modernization in the past year
Selected %



Cite meeting sustainability / ESG goals as a challenge for their modernization efforts
Selected %



05.

Despite significant AI investments to drive modernization, leaders struggle to see positive ROI

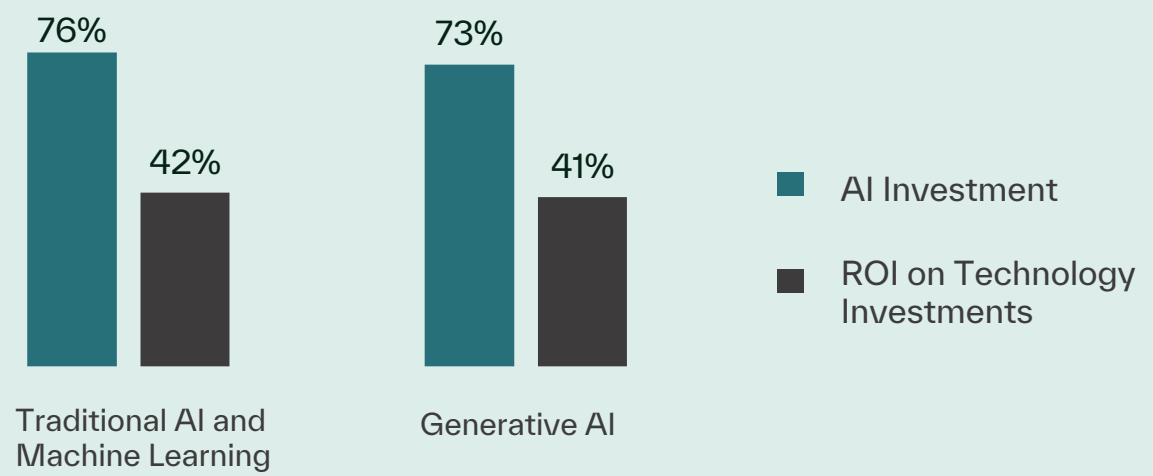
Most businesses are investing in both traditional AI—which includes Machine Learning—and Generative AI. However, only 42% of business leaders currently see positive ROI on their AI investments.

And 86% say their AI implementation is best in class, yet only 29% feel their AI is ready to navigate future risks.

Business leaders report data privacy, uncertainty of ROI and compliance as the biggest barriers to AI adoption; AI skills are the number one skills shortage they are desperately trying to fill to stay ahead of their competition.

AI Investment vs. ROI

% Selected, Currently Investing; % Net Positive ROI



86%

Say their AI implementation is best-in-class

YET ONLY 29%

think their AI implementation is ready to manage future risks

Top 5 barriers to AI adoption:

1. Data Privacy and security
2. Uncertainty of ROI
3. Regulation and compliance
4. Integration
5. AI Skills gaps

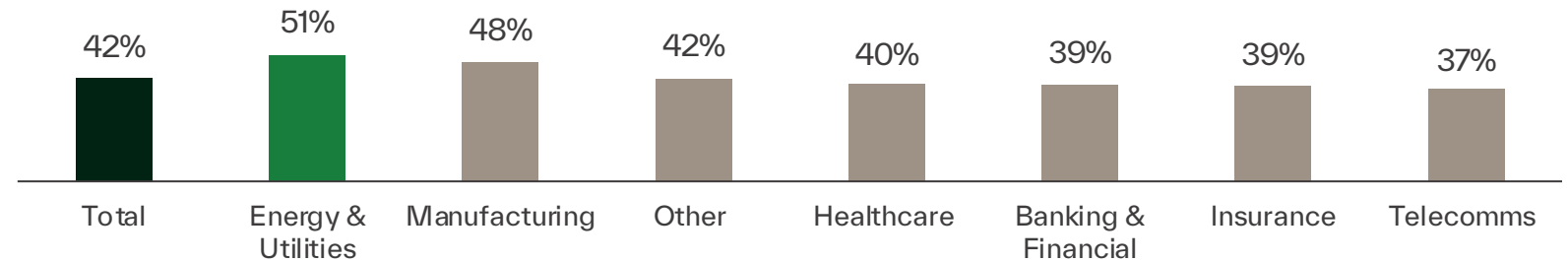
Most common skills gaps:

1. AI / ML skills
2. Cyber-security
3. Data science / analytics

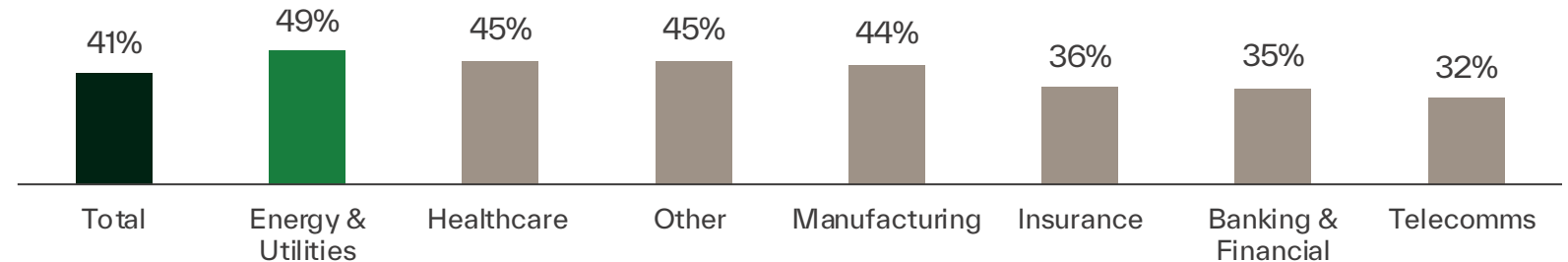
05. Energy and Utilities businesses are more likely to report positive ROI on AI

With investments in AI and demand for AI datacenters on the rise, energy and utility companies will prepare to meet these increasing power needs while also using AI to increase their own efficiency. Companies continue to explore how smart grid technologies and AI can help them use real-time data to optimize energy flow, forecast energy generation, assess climate risks and more.

ROI on Artificial Intelligence and/or Machine Learning Investments (% Selected NET Positive ROI)



ROI on Generative AI Investments (% Selected NET Positive ROI)



05. Barriers to AI adoption include insufficient data, limited understanding, and skills gaps

Top 5 Barriers to AI Adoption % Selected

Energy and Utilities

1. **Insufficient data**
(+7 ppts vs. all-industry average)
2. Limited understanding
(+6 ppts vs. all-industry average)
3. AI skills gaps
4. Poorly structured data
(+7 ppts vs. all-industry average)
5. Uncertainty of ROI

All Industries

1. **Data privacy & security**
2. Uncertainty of ROI
3. Regulation & compliance
4. Integration
5. AI skills gaps

06.

Leaders that have progressed on the modernization journey overcome this prioritization paralysis and are more ready for the future

The leaders that are further along the tech modernization journey feel a heightened level of readiness to navigate risks (+11% pts vs. early stage modernization) and demonstrate four characteristics that set them apart:

- Prioritizing in a way that lets them both run their mission-critical business operations today while transforming for the future
- Seeing better ROI on emerging technology (e.g., AI, Quantum, Edge)
- Nurturing talent, skills and culture
- Collaborating effectively to achieve business goals

Businesses that report they are leading on their tech modernization journey, compared to those who are early stage:

+11% pts

feel more ready for future risks

+55% pts

say their IT is updated and ready for current and future needs

DECISION-MAKING

+22% pts

agree executive leadership effectively allocates resources to support IT infrastructure and technology modernization projects

MEASURING SUCCESS

+16% pts

see a positive ROI on emerging technologies such as AI, Generative AI, Quantum Computing and Edge Computing

TALENT

+19% pts

have a pool of talent proficient in emerging technologies

COLLABORATION

+43% pts

have seamless collaboration and alignment between business leaders and tech leaders

Among Energy and Utilities businesses, there is appetite for more support on leadership decision-making and talent management to navigate tech modernization

Areas of Support Needed for Modernization Efforts Total %

70%
Leadership
decision-making
support

vs. 63% all industries

- Enhancing collaboration between IT and other departments
- Ensuring alignment of modernization efforts with business objectives

57%
Talent management
support

vs. 57% all industries

- Talent acquisition and retention in IT-related roles
- Enhancing user adoption and training for new technologies

36%
Integrating new tech in
existing infrastructure

vs. 43% all industries

- Integration of new technologies into existing infrastructure
- Addressing legacy system limitations and modernization challenges

The readiness mindset shift

While all modern organizations are building readiness and transforming through technology, as this data shows, there are difficult trade-offs to be made. To overcome these challenges, organizations should consider a shift in mindset: Readiness goes beyond preparedness and resilience—going beyond transformation to arrive at transformative and sustainable performance. IT is core to this expansive vision, and organizations that allow for new investment paradigms, evolve collaboration models within their C-suite and adopt a holistic view of assets driving long-term success.

Being 'people-ready' is just as important as being 'tech-ready'. IT is everyone's business.

- With IT playing a more prominent role in shaping workplace culture than ever, it is just as critical to the CMO and CHRO as it is for the CTO and CIO. Getting on the same page is crucial, and bringing employees along is necessary.
- While automation may help with some IT challenges, rather than replacing people, it allows for an expansion of skills, creating new business imperatives for upskilling and reskilling.

Weigh the fantastic vs. the familiar and embrace their interdependence.

- Emerging technologies offer tantalizing opportunities to grow in new directions, but leaders must weigh new investments alongside upgrades to their existing IT.
- To make the most of new tech, leaders need to understand how those tools will integrate not only with technology but the company culture, processes and goals.
- All new tech capabilities rely on a solid foundation; investing in the familiar first may get better ROI.

Operate, accelerate, iterate. Agility is a hallmark of modern tech leadership.

- No enterprise can stay competitive by standing still, and talent can be the best bulwark against risks—and the best levers for opportunity.
- Businesses struggling to realize a meaningful ROI can start with shorter-term success metrics to drive long-term value. Those smaller starts can help build a better case to move into more complex projects.

Reframe the conversation about tech debt. Observability is an important ally.

- In an evolving market, with everyone continuously confronting this challenge, businesses are not alone.
- Observability across IT allows teams to identify aging equipment and potential issues, offering intelligence for the entire C-suite.
- Knowing where to start can be a challenge, but reducing technical debt eliminates operational inefficiencies and unlocks potential for faster growth.

Methodology

The Kyndryl Readiness Report combines survey data from 3,200 senior leaders and decision-makers with insights from Kyndryl Bridge, the company's AI-powered, open integration digital business platform.

About Kyndryl Bridge

Kyndryl Bridge uses operational data, IP and embedded AI to provide observability across an enterprise's entire IT estate. To date, more than 1,200 enterprises have been onboarded onto the platform, which delivers 5.6 million AI-driven insights monthly. Kyndryl Bridge data in this report is a rolling three-month average from July to September 2024.

Kyndryl Bridge shows the status of IT estates across these dimensions

- **Best practices:** A score that shows alignment to both security and compliance requirements as well as industry best practices
- **Responsive:** A count of incidents automatically resolved (vs. requiring human intervention)
- **Competitive:** The amount of an IT estate that has aged past its expected life

3,200

Leaders and senior decision-makers

C-Suite business leaders (CEOs, CFOs), C-Suite tech leaders (CIOs, CTOs) and Senior Directors and Business Unit Leaders. Within this sample, 50% of respondents were C-Suite level executives and 50% of respondents represented companies with \$1 billion in revenue.

17

Markets

US	Brazil	Spain	Germany	Netherlands	Australia
Japan	Mexico	France	Italy	Luxembourg	China
Canada	UK	Belgium	Middle East	India	

25

Industries, with a focus on a core 6

Banking and Financial	Insurance	Other: e.g., Technology, Retail Professional services, Automotive, Government
Manufacturing	Healthcare	
Telecommunications	Energy and Utilities	

The survey was conducted by Edelman DXI, on behalf of Kyndryl. Fieldwork was conducted via online survey and telephone interview between July 1, 2024 and August 12, 2024.

Learn More

The Kyndryl Readiness Report combines survey data from 3,200 senior leaders and decision-makers with insights from Kyndryl Bridge, the company's AI-powered, open integration digital business platform.



Scan the QR code or visit
kyndryl.com/readiness-report
for more insights

Thank you

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