KPMG

Digital Business

Kazakhstan AI Readiness Report

How companies in Kazakhstan get ready for the AI revolution

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Foreword

Artificial intelligence (AI) is advancing rapidly, reshaping industries and redefining the way we work and live. Countries worldwide are striving to adapt, and Kazakhstan is no exception. In June 2024, the International Monetary Fund (IMF) released the AI Preparedness Index (AIPI), ranking Kazakhstan 48th out of 174 countries* in terms of AI readiness. This ranking highlights both the progress made and the work still needed to fully integrate AI into the economy. For businesses and policymakers, the challenge is clear: to accelerate AI adoption and strengthen the foundation for future growth.

Recognizing the importance of AI, Kazakhstan has taken significant steps to build a strong AI ecosystem. In 2024, the government introduced the Concept for AI Development (2024-2029), focusing on fostering innovation, supporting AI integration across industries, and investing in critical infrastructure. Key initiatives include the establishment of a supercomputer, data processing centers, and a National AI platform, all designed to accelerate AI development.

To ensure structured and responsible AI growth, a draft AI law has been introduced. This legislation aims to define ethical standards, regulatory frameworks, classification systems, and measures for state support. These efforts are intended to create a balanced environment where AI can thrive while mitigating risks.

To guide AI policy and ensure a coordinated approach, the government established the Artificial Intelligence and Innovation Development Committee in May 2024 under the Ministry of Digital Development, Innovation, and Aerospace Industry. This committee plays a central role in shaping Kazakhstan's AI strategy, setting legal and regulatory foundations, and driving AI-related initiatives across sectors. KPMG in Kazakhstan actively contributes to these efforts, collaborating with key stakeholders to support AI development and adoption across the country.

Understanding the urgency of AI transformation, we conducted this survey to assess how prepared Kazakhstani companies are for the shift. The study, conducted over a two-month period, gathered insights from more than 50 companies across diverse industries. By evaluating companies based on their AI readiness, we identified key trends, challenges, and opportunities shaping AI adoption.

The findings of this report serve as a resource for businesses, industry leaders, and policymakers. By sharing these insights, we aim to help organizations benchmark their AI readiness, navigate challenges, and contribute to Kazakhstan's AI-driven future.

** Kazakhstan entered the top 50 countries in terms of readiness for the implementation of AI.*

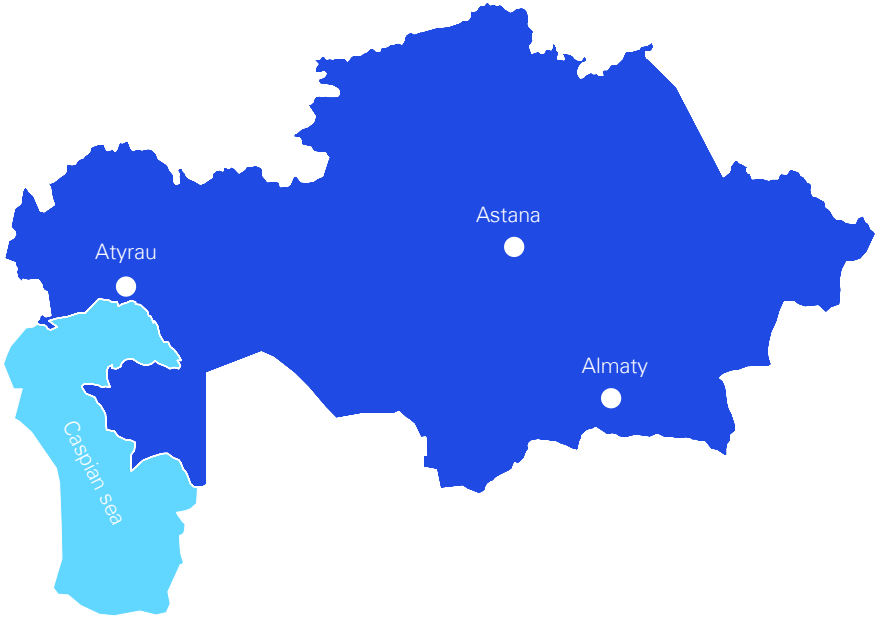
>50 Technology leaders and business executives from different sectors of Kazakhstan's economy.

Jafar Penot

Manager,
AI Services Lead, Technology Practice
KPMG Caucasus and Central Asia

Jafar is an AI and data analytics expert with a strong mathematical background and experience in risk management, automation, and decision-making. He has developed ML-driven risk strategies, optimized customer segmentation, and built AI-powered surveillance systems. His expertise includes data pipeline automation, business intelligence integration, and interactive dashboard development, driving innovation in predictive analytics and risk assessment.

About the research



The AI Readiness Survey engaged more than 50 companies from a diverse range of industries, including IT and Communication, finance, Retail and consumer services, Public services, and Industrial and energy sector.
To ensure a comprehensive perspective, participants represented organizations of varying sizes and financial scales, with 36% of respondents reporting annual revenue under $1 million, 25% in the $1–10 million range, 16% in the $10–100 million range, and 23% exceeding $100 million.
Although the survey focused on companies in Kazakhstan, many operate at local, regional (Central Asia), or global levels, providing a broader perspective on AI readiness.

Annual revenue of respondents:

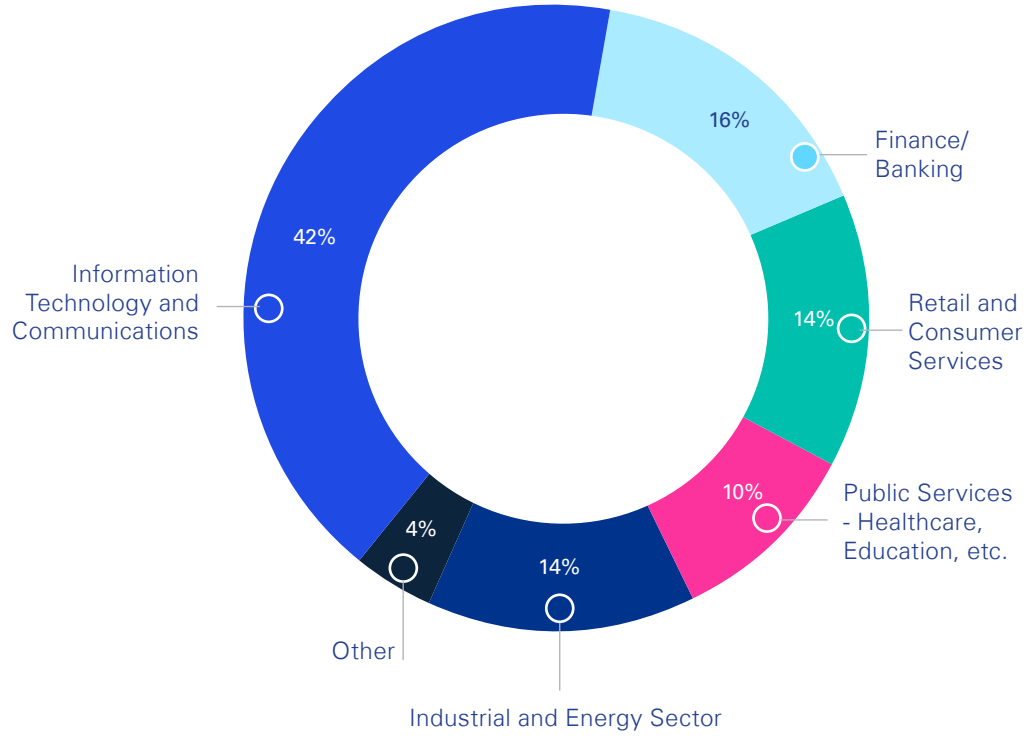
36%
< $1 Million

25%
$1-10 Million range

16%
$10–100 Million range

23%
>$100 Million

Figure 1: Distribution of respondents by industry



AI Adoption at a Glance: From Exploration to Leadership

Assessing AI Adoption among Organizations

At the outset of the survey, respondents were asked whether their organization had a dedicated AI transformation strategy. This question aimed to evaluate how advanced companies were in their AI adoption, capturing not only the presence of a strategy but also its stage of implementation. The choices ranged from a fully operational AI strategy to early-stage exploration. Notably, no companies indicated having no plans for AI.

Based on these responses, companies were classified into three categories:

- **Leaders** – Organizations with either a fully operational AI strategy or a defined strategy supported by implemented use cases.
- **Explorers** – Companies with an AI strategy in the pilot phase or in active development.
- **Beginners** – Businesses exploring AI without a formal strategy.

While one-third of organizations qualify as AI leaders, only 8% have a fully operational AI strategy, indicating that most companies are still in transition toward full-scale AI adoption.

32% Leaders

38% Explorers

30% Beginners

Larger Enterprises and Financial Sector Leading the Way

Company size and industry play a significant role in AI adoption. Large enterprises dominate AI leadership, with 50% classified as leaders, compared to fewer than 32% among smaller firms. The financial sector emerges as the frontrunner, with 63% of companies positioned as AI leaders. Meanwhile, the IT and telecommunications sector, with its high concentration of startups, has fewer leaders but a significant number of explorers, reflecting a strong experimental approach to AI adoption.

Figure 2: AI adoption by size

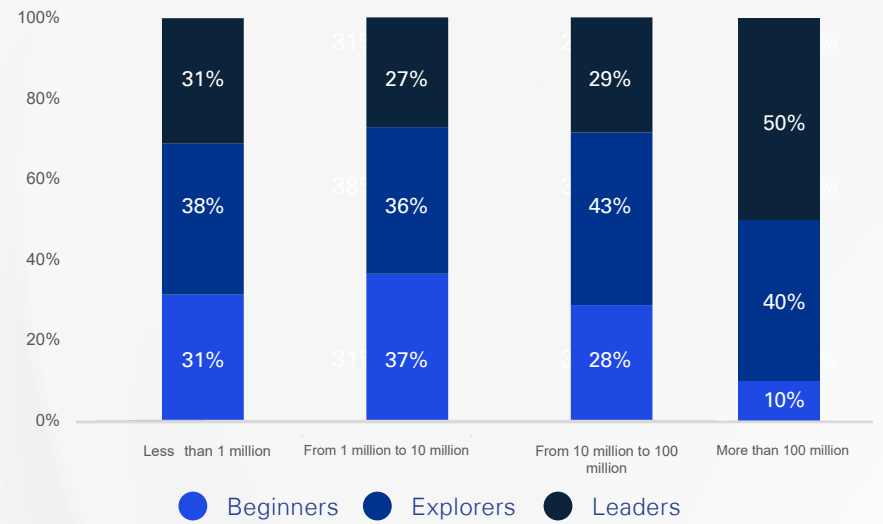
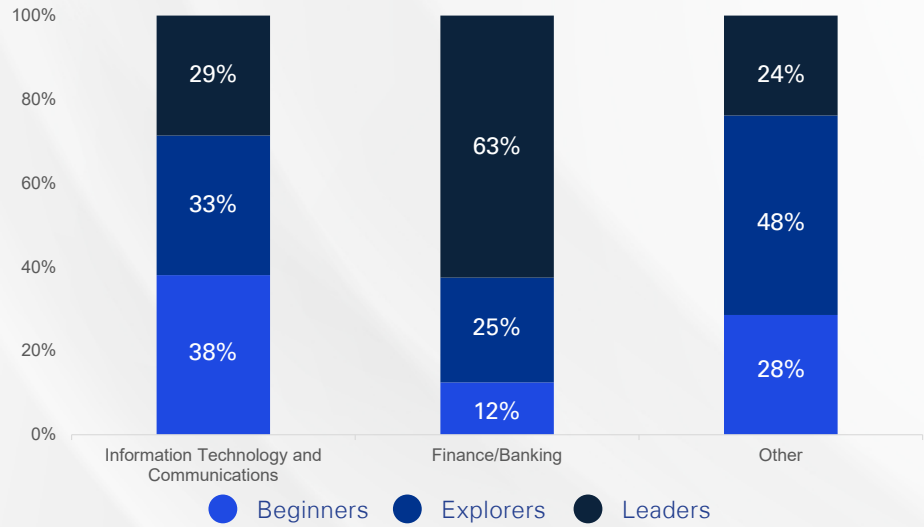


Figure 3: AI adoption by industry



AI Awareness Is Strong Across Businesses

The survey shows that all companies have some level of AI awareness, with 52% highly familiar and actively engaged in AI-related decisions. Another 30% are somewhat familiar but not directly involved, while 18% are aware but not engaged. Larger enterprises (500+ employees) are particularly involved, leveraging structured leadership and innovation strategies, while smaller firms show lower direct engagement.

52% Highly familiar and actively engaged

30% Are somewhat familiar but not directly involved

18% Are aware but not engaged

GenAI Fuels Growing AI Interest

Survey results indicate that Generative AI (GenAI) is seen as the most promising AI technology, reflecting the rapid advancements and industry-wide focus on large language models (LLMs). The rise of LLMs like ChatGPT, Gemini, DeepSeek, Mistral, and others, along with the fierce competition between AI developers, has heightened awareness and accelerated corporate AI adoption. This growing momentum underscores how organizations, even those without a fully developed AI strategy, are proactively exploring AI applications, recognizing its transformative potential across industries.

AI becomes our reliable co-pilot, while the professionals remain the captains of the ship. We set the course, make strategic decisions, and leverage technology to deliver maximum value to clients.

Sergey Nezdemkovskiy
Partner, Audit
KPMG Caucasus and Central Asia

AI as a Core Business Priority

While direct involvement varies, AI is now seen as a strategic priority across industries. The engagement from large enterprises and the rise of GenAI indicate that AI is no longer a niche innovation but a fundamental component of business strategy.

Laying the AI Groundwork

A strong AI strategy requires more than just ambition—it depends on robust data infrastructure, skilled talent, and a clear regulatory framework. While Kazakhstan's businesses are increasingly aware of AI's potential, many still face challenges in building AI-ready data systems, securing the right expertise, and navigating evolving regulations, but a shift toward better infrastructure and training shows progress.

Many Companies Struggle with AI-Ready Data Systems

Half of the surveyed companies acknowledge that their data infrastructure is insufficient or needs improvement, posing a major challenge for AI adoption. While AI leaders invest in advanced solutions, many organizations still rely on basic systems, limiting their ability to scale AI initiatives effectively.

AI is only as powerful as the data infrastructure behind it. Without a solid foundation, even the most advanced models will fail to deliver real value.

Almira Bekreneva
Partner, Technology Practice
KPMG Caucasus and Central Asia

Resource Allocation Signals a Shift in AI Strategy

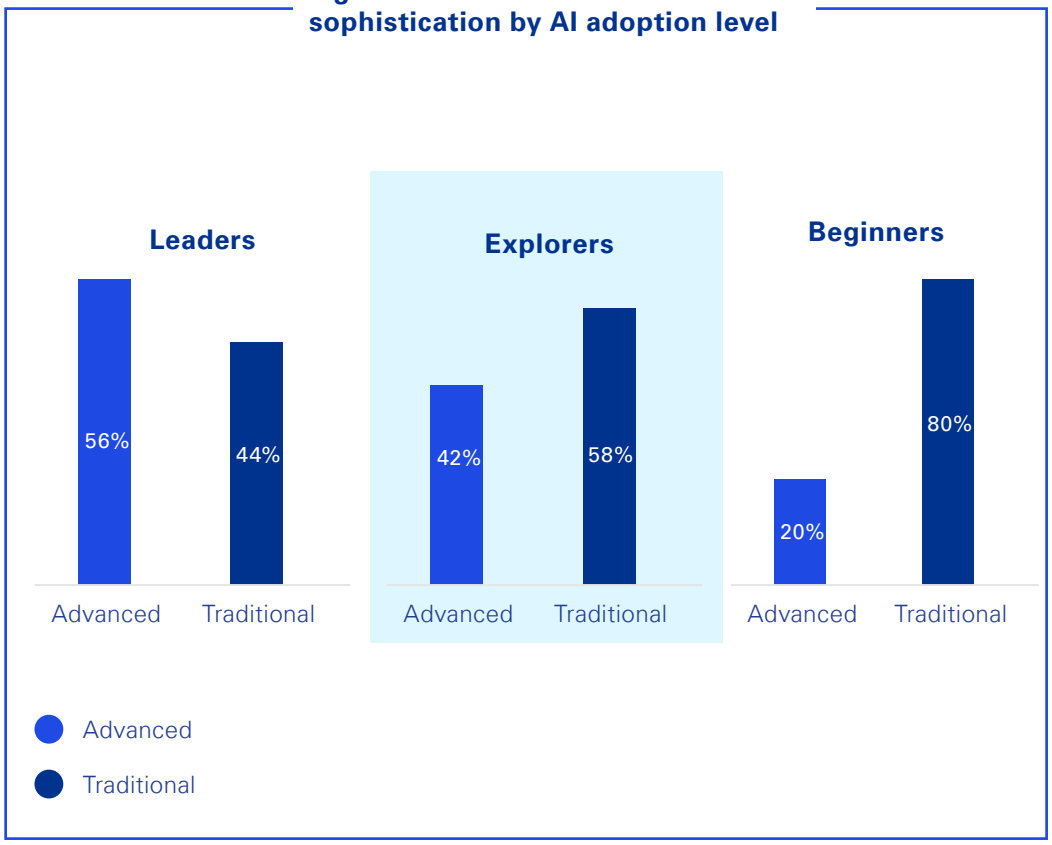
A well-developed data ecosystem is critical for AI implementation success, but how companies allocate resources reflects their strategic approach. AI leaders distribute resources more evenly across infrastructure, R&D, and training, indicating a top-down approach to AI strategy.

Among explorers, infrastructure ranks as the top priority, showing a growing awareness that data readiness is essential for AI adoption. Even among beginners, infrastructure ranks second, suggesting that companies at all adoption levels recognize its importance. While many organizations may not yet have a fully structured AI strategy, resource allocation patterns suggest a shift, with companies increasingly prioritizing data infrastructure alongside training rather than focusing solely on isolated AI use cases, signaling a broader commitment to AI readiness.

Advanced Data Storage Solutions Set AI Leaders Apart

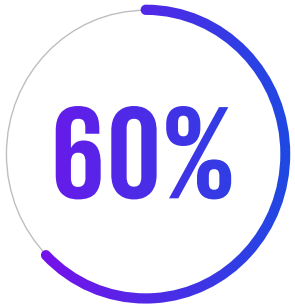
A clear divide exists between AI adoption levels and data infrastructure sophistication. Among AI leaders, 56% use advanced data infrastructure, such as data warehouses and data lakes, enabling better accessibility, integration, and analytics. In contrast, only 42% of explorers and 20% of beginners leverage these solutions, with most relying on ERP systems and simple databases that may not be optimized for AI-driven insights

Figure 4: Data infrastructure sophistication by AI adoption level



A Skilled Workforce Reinforced by International Talent

Survey results show that 60% of companies report a workforce with moderate to high AI proficiency, reflecting a strong talent pool. This aligns with Kazakhstan's existing technical expertise and growing capabilities in AI. Additionally, the migration of many professionals from Russia, Ukraine, and Belarus* has further reinforced the AI labor market, contributing to an overall increase in workforce readiness.



Of companies report a workforce with moderate to high AI proficiency

Reliance on External Consultants Reveals Talent Gaps

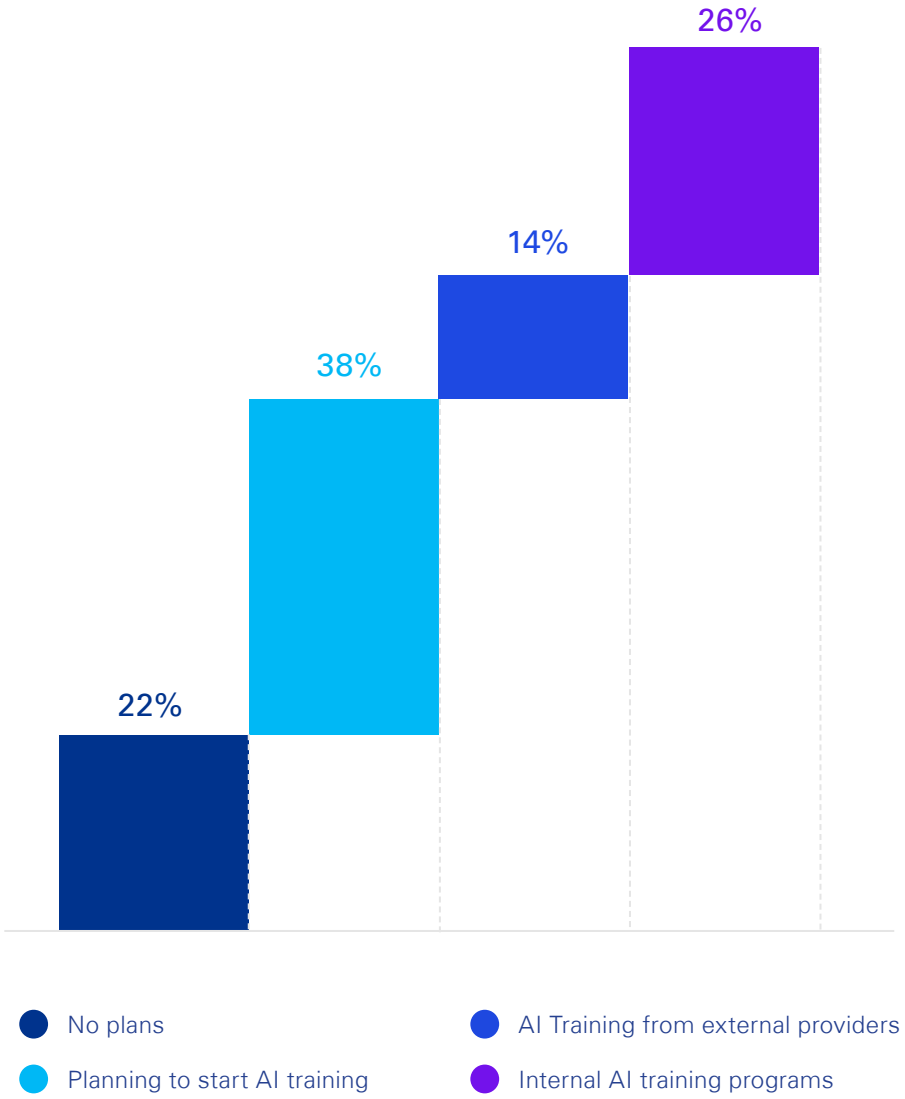
Despite this positive outlook, 24% of companies still depend on external consultants for AI initiatives, signaling gaps in internal expertise or difficulties in recruiting AI talent. The shortage of internal AI specialists ranks as one of the top challenges to AI adoption, suggesting that while Kazakhstan has a skilled workforce, many companies still struggle to find or develop the right expertise for advanced AI implementation.

Companies Prioritize Upskilling, but Execution Lags

Encouragingly, 78% of companies express a commitment to upskilling their workforce to meet AI demands. However, 38% have yet to implement formal training programs, highlighting a disconnect between ambition and execution. Meanwhile, 22% of companies have not yet planned for team upskilling, which could pose challenges for their long-term AI strategy and competitiveness or indicate a future focus on hiring AI professionals instead.

* *Socio-economic impacts of the war in Ukraine on host communities and emerging migration and displacement patterns | United Nations Development Programme*

Figure 5: AI-Specific training for employees



A Developing AI Regulatory Landscape

In Kazakhstan, AI governance is still evolving, with regulatory frameworks gradually taking shape. Survey results show that only 20% of companies have implemented AI-specific regulations, while 40% rely primarily on general data policies. This reflects not only the country's transition toward more structured AI oversight but also a potential lack of awareness among companies regarding AI policies and regulations.

While businesses are increasingly familiar with AI and actively implementing it, as seen earlier in the survey, many may not yet be fully aware of the evolving regulatory landscape. Even among AI leaders, more than 60% do not have AI-specific regulations in place, indicating that regulatory considerations are not yet fully integrated into AI strategies. As AI adoption progresses, companies will need to pay closer attention to compliance requirements and ensure alignment with future regulatory developments.

Today, AI agenda worries every person of every age and every background. This fact differentiate AI from other innovative hypes from recent years. In one sense, it stimulates rapid developments across the industries, but at the same time it results in many fears, threats, and, of course, spendings. Companies need to form a clear AI strategies and governance frameworks encompassing the questions of data and privacy management, ethical matter, transparency, efficiency, value achievability, roles and responsibility, and compliance.

Konstantin Aushev
Partner, Head of Technology Practice
KPMG Caucasus and Central Asia

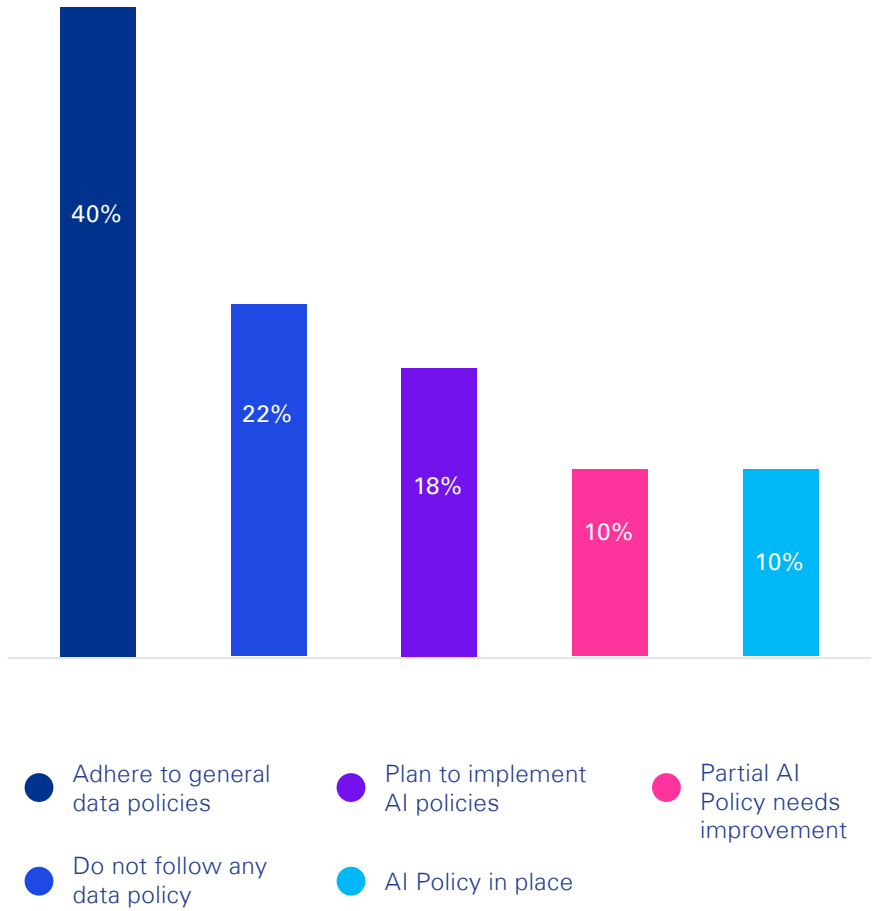
Data Privacy and Ethical Considerations as Key Concerns

The most pressing regulatory concern among businesses is data privacy and protection, with 40% of companies expressing apprehension. Ethical considerations are also notable, with 24% of respondents highlighting AI ethics and 22% citing a lack of clarity in existing regulations. These concerns align with ongoing global discussions on responsible AI development and governance.

Government Approach Balances Innovation and Oversight

Only 13% of companies express concern over government-imposed restrictions on AI, suggesting that Kazakhstan's regulatory direction is seen as supportive of AI growth rather than overly restrictive. This contrasts with some regions, such as Europe, where strict AI regulations have raised concerns among businesses about compliance complexity and innovation constraints.

Figure 6: Adoption of AI-Specific or general data policies



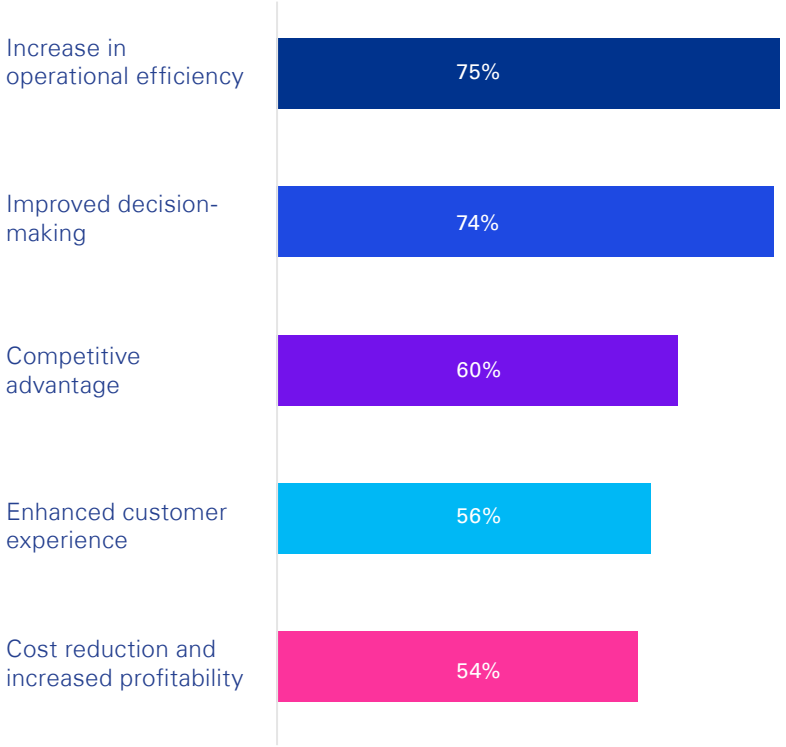
AI's Promise and Path Forward

Companies are optimistic about AI's potential across business functions, but many struggle to turn it into real value due to challenges in identifying the right use cases. While 58% report early success, uneven impact and cautious spending limit progress, though higher investment correlates with greater AI-driven results.

High Expectations for AI Across Business Functions

Survey results show widespread confidence in AI's potential, with most companies expecting benefits across nearly all key business dimensions. Notably, no respondents expressed skepticism about AI's potential, underscoring the widespread confidence in its transformative impact.

Figure 7: Expectations of AI benefits across business areas



Early Success but Uneven Impact

So far, 58% of companies report seeing improvements from AI adoption, with half of them experiencing major advancements, while the rest have seen more limited improvements in specific areas. However, the level of success varies significantly by AI adoption. Leaders are far ahead, with all of them reporting improvements, and a majority (69%) seeing significant gains from AI. Explorers, on the other hand, have seen only partial progress. While a small portion (22%) has yet to implement AI use cases, those who have adopted AI largely report little to no benefits. Nearly 50% have not observed any real impact, suggesting that their initiatives remain in early stages or are limited to isolated pilot projects that have yet to drive meaningful results.

> *Consultancies that fail to embed AI into their core will be overtaken by those that do—it's the dividing line between relevance and redundancy in a data-driven world.*

Timur Omashev
Partner, Head of Consulting Practice
KPMG Caucasus and Central Asia

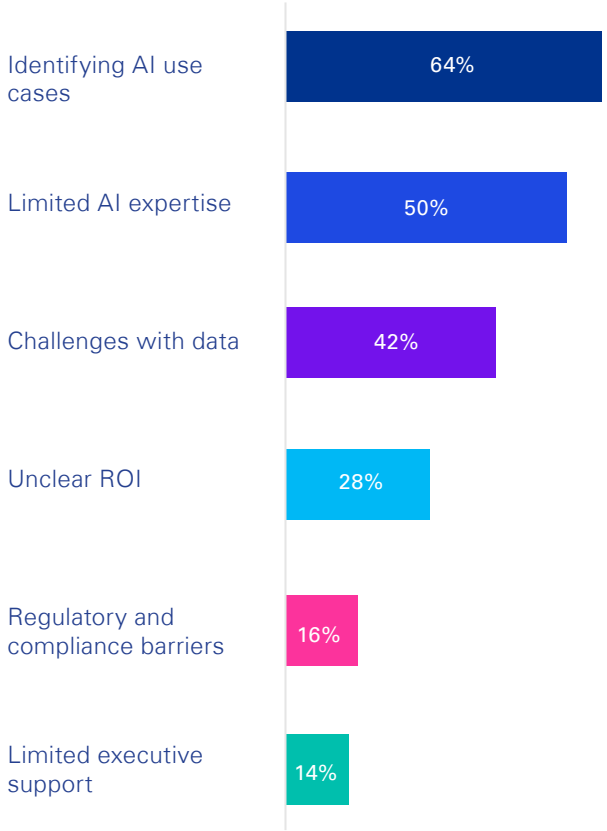
Challenges in Turning AI into Real Business Value

These findings correlate with later insights that many companies struggle to identify the right AI use cases. Some may have deployed AI in areas that do not fully align with their business needs, leading to suboptimal results. This reinforces the need for a structured, company-wide AI strategy, ensuring AI is implemented in the right areas, addressing real business challenges, and maximizing its transformative potential.

Identifying the Right Use Cases as the Biggest Challenge

Despite the enthusiasm for AI, companies face significant challenges in moving from isolated experiments to full-scale implementation. The primary obstacle, cited by 64% of all companies, is identifying the right use cases for AI. Even among AI leaders, who have more experience with AI integration, 50% still struggle to determine where and how to best apply AI solutions.

Figure 8: Biggest difficulties to AI adoption



Different Adoption Levels, Different Obstacles

Companies in the beginner and explorer phases face even greater difficulties, not only in use case identification and accessing clean, usable data, but also in building internal AI expertise—a challenge that is much less pronounced for leaders. While AI leaders primarily struggle with refining their AI strategy and ensuring high-quality data, beginners and explorers still lack the skilled talent needed to implement AI solutions effectively. This suggests that having a structured AI approach helps in closing the skills gap, but it does not fully resolve the broader issues of identifying impactful AI applications or ensuring data readiness. One possible reason is that many organizations have only a partial AI strategy, covering certain aspects of AI adoption but lacking a fully developed, company-wide approach that ensures consistency and scalability.

Expanding AI Remains a Priority Despite Challenges

The ambition to expand AI initiatives remains strong across all companies. 66% plan to extend AI into new business areas, while many are also looking to adopt new AI technologies, reinforcing earlier findings that companies see AI as a long-term strategic driver. However, to translate this ambition into impact, organizations must address these key challenges—refining AI use case identification, strengthening internal expertise, and ensuring high-quality data accessibility.

64%

Of all companies, struggle identifying the right use cases for AI.

66%

Of respondents plan to extend AI into new business areas

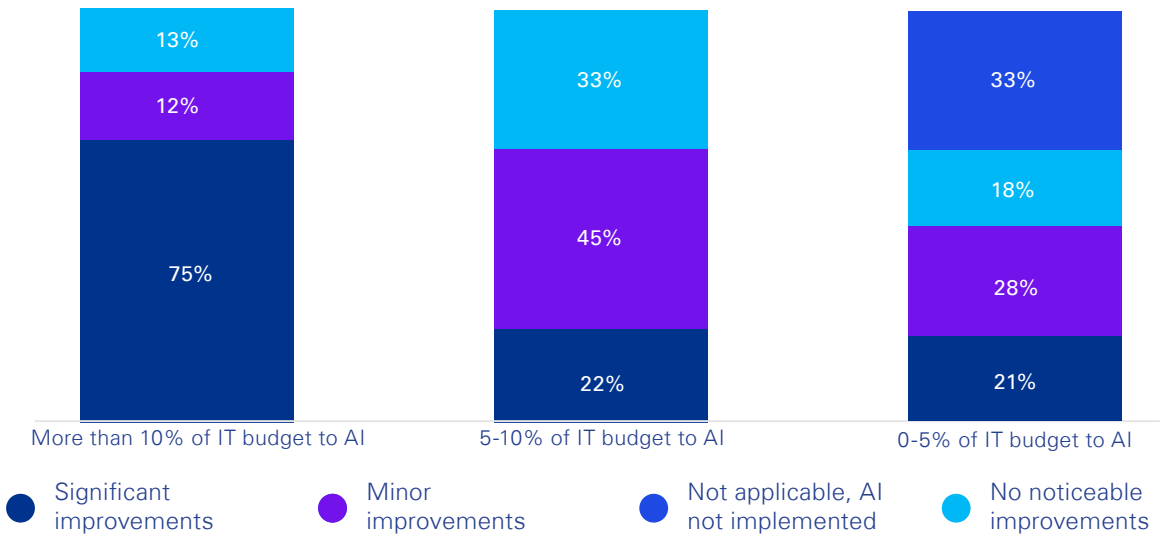
Most Companies Expect ROI, But Timelines Vary

Survey results show that 86% of companies anticipate a return on investment (ROI) from AI, yet expectations for when ROI will materialize are widely spread. Some foresee results within a year, while others expect returns over a longer period or through indirect benefits. Even among AI leaders, who are more advanced in adoption, expectations remain diverse, with 31% expecting ROI within a year, compared to fewer than 6% of explorers and beginners.

Cautious Spending Limits AI's Full Potential

Despite recognizing AI's value, most organizations remain conservative in their investment approach. 66% allocate less than 5% of their IT budget to AI, often restricting efforts to specific use cases or pilot projects rather than large-scale implementation. This cautious approach aligns with uncertainties around AI strategy and execution, but results suggest that greater investment leads to substantial impact, reinforcing the need for a clearer, more committed AI vision.

Figure 9: Improvements observed from AI adoption



Higher Investment Yields Greater AI Impact

Companies that invest more heavily in AI report significantly better results. Among those allocating more than 10% of their IT budget to AI, 75% have seen major improvements, while only 22% of companies investing 5–10% report similar success. This reinforces earlier findings that many companies struggle with AI strategy, use case identification, and vision, limiting their ability to fully unlock AI's potential.

86%

Of companies anticipate a return on investment (ROI) from AI

Among those allocating **more than 10% of their IT budget to AI, 75% have seen major improvements**

66%

Of companies allocate less than 5% of their IT budget to AI

Conclusions and Recommendations

Integrating AI across Kazakhstan's business landscape is a strategic endeavor that demands vision, persistence, and robust planning — yet, as our survey reveals, the potential to drive operational excellence and economic growth makes the journey well worth the effort.

Here are five key recommendations that may help you focus your efforts and make tangible progress, faster:

01

Leverage Data and Infrastructure as a Foundation

Adopt advanced, scalable data systems and ensure data quality to seamlessly integrate and analyze information for AI success. A strong foundation of both infrastructure and clean data will enable efficient AI deployment and drive competitive advantage across all operations.

02

Clarify and Communicate AI Regulations

Stay proactive in understanding and shaping AI regulations by engaging with emerging frameworks and advocating for clarity. This will help your company innovate responsibly while maintaining compliance and trust with stakeholders.

03

Adopt a Top-Down AI Strategy for Maximum Impact

A top-down approach ensures leadership alignment, enabling organizations to drive AI initiatives with clear direction. By integrating AI into the broader business strategy, companies can identify high-value use cases and maximize its impact across operations.

04

Invest in Talent and Upskilling for AI Success

Kazakhstan is rich in talent, but companies must actively invest in identifying and developing the right expertise. A strategic approach to hiring and upskilling, aligned with your AI vision, will ensure a workforce capable of driving AI initiatives and fostering long-term innovation.

05

Increase AI Investment for Higher ROI

Commit significant resources to scaling AI efforts beyond initial trials, unlocking its transformative power across your operations. Bold, strategic investments aligned with your AI vision will drive substantial returns and ensure long-term competitive advantage.

KPMG Can Support your AI Journey

Our survey insights reveal that Kazakhstani businesses face significant challenges in adopting AI, from data infrastructure gaps to regulatory uncertainties and talent shortages. KPMG in Kazakhstan can help you define a clear AI vision aligned with your organizational objectives, execute transformative strategies, and provide ongoing support to navigate these complexities.

We have made significant investments in AI, equipping us with the expertise and resources to implement a wide range of AI-driven solutions. With a deep understanding of market dynamics, industry regulations, and evolving AI trends, we bring broad experience in deploying AI across various sectors while ensuring responsible, ethical, and transparent AI adoption through our TrustedAI framework.

Our approach integrates AI strategy development, governance, and compliance with hands-on implementation, helping businesses optimize their data infrastructure, leverage cutting-edge AI applications, and align with regulatory requirements. We support workforce upskilling and provide innovative tools, accelerators, and best practices to fast-track AI adoption and drive measurable business outcomes.

Through strategic alliances and our global network, we deliver end-to-end support to help organizations unlock AI's full potential, ensuring sustainable growth and a strong foundation for long-term success.

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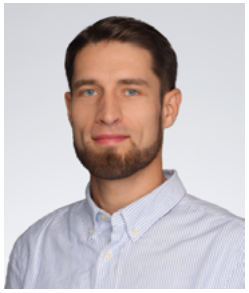

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