Blockchain Meets AI:
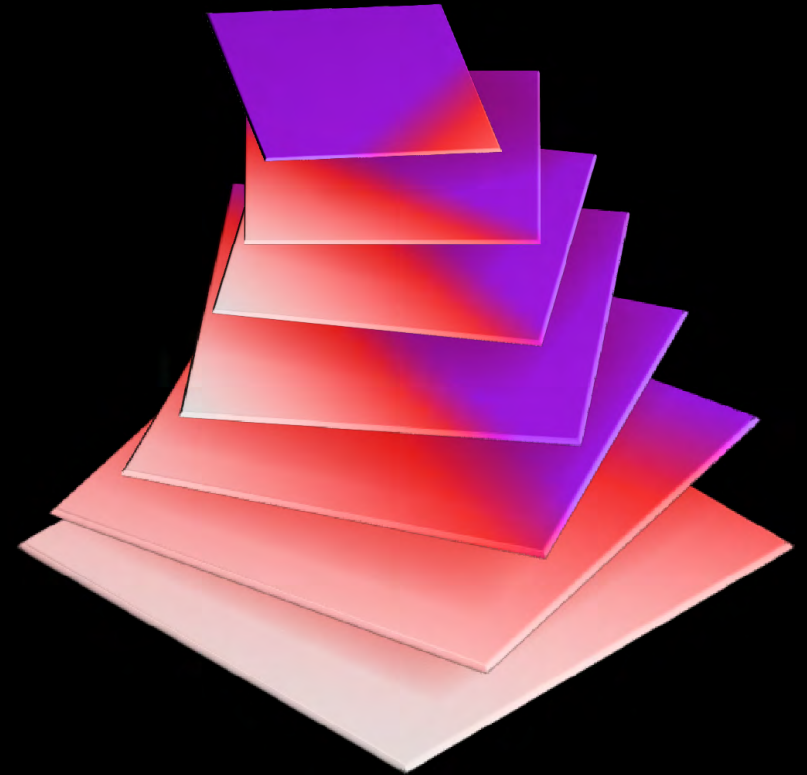
Exploring the Challenges
and Opportunities of Integration

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Letter from Casper Labs

We have definitively entered the AI era. Thanks to the emergence of ChatGPT and other machine learning models, AI is everywhere. It's the most transformative, change-making – and misunderstood – technology currently in the market, regardless of industry. From performance reporting to media to customer service, generative AI systems are being scaled to enable faster, more accurate workflows.

But current AI workflows don't have the structure, transparency nor explainability needed to create truly responsible AI systems—we often don't know why AIs weigh data the way they do, and it's nearly impossible to retroactively analyze or audit training data (nor to remediate issues that come from bad data). AI is still in its brute force era, where speed is prioritized over protecting and securing data. AI's opaque nature is making it difficult for businesses to identify and correct problematic outputs or misinformation, limiting AI's near-term potential.

In the race to solve AI's "black box" challenge, blockchain is emerging as a key solution for introducing greater transparency and auditability into the AI training process. It offers a tamper-proof, highly serialized ledger that ensures anyone can view how training data is weighted, and quickly diagnose where problems with data arise. Blockchain is the most secure, and cost-effective way to effectively audit AI systems, and provides a tamper-proof lens to better understanding (and modifying) AI logic.

The growing convergence between AI and blockchain is unlocking new opportunities for **operational transparency, efficiency, and security.**

In this report, we'll explore how businesses feel about AI and blockchain implementation and what benefits and challenges are top of mind.

The results are overwhelmingly positive: 51% said that working efficiently with AI is the best way to utilize blockchain in their business, and most respondents believe that integrating AI and blockchain can revolutionize their industry.

By leveraging AI's data-driven insights and automation capabilities alongside blockchain's transparent and secure ledger, businesses can enhance efficiency, reduce operating costs, and fortify trust with stakeholders. Whether it's optimizing customer service, supply chain logistics, gene sequencing or nearly any other data-intensive task, the combination of AI and blockchain is beginning to unlock new frontiers for businesses – and the most exciting days are ahead.

Mrinal Manohar
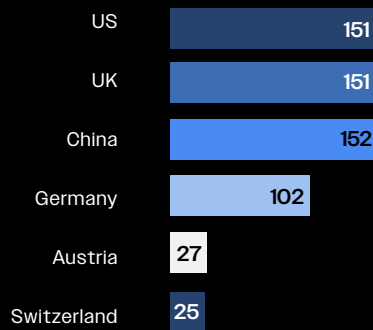Co-founder and CEO, Casper Labs

Demographics and Methodology

Casper Labs commissioned Zogby Analytics to conduct an online survey of 608 IT decision makers in 6 countries: US, UK, China, Germany, Austria, and Switzerland. For the purposes of this report, responses from Germany, Austria, and Switzerland were combined to refer to the region of "Europe."
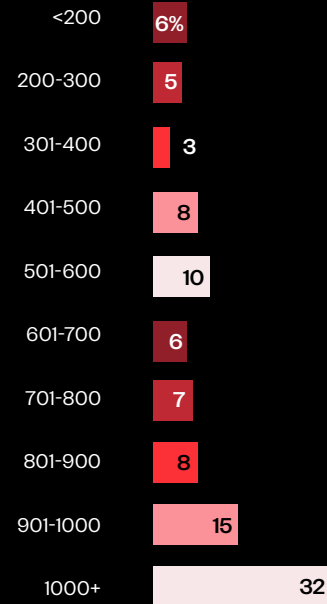
Using internal and trusted interactive partner resources, thousands of adults were randomly invited to participate in this interactive survey. Based on a confidence interval of 95%, the margin of error for 608 is +/- 4.0 percentage points.

Additional demographic information is outlined below.

Company Location

Location	Value
US	151
UK	151
China	152
Germany	102
Austria	27
Switzerland	25

How many Total Employees are at your organization?

Employees	Value
<200	6%
200-300	5
301-400	3
401-500	8
501-600	10
601-700	6
701-800	7
801-900	8
901-1000	15
1000+	32

What is your organization's Revenue?

Revenue	Value
<$100M	12%
$100M-$200M	6
$200M-$300M	6
$300M-$400M	7
$400M-$500M	5
$500M-$600M	17
$600M-$700M	7
$700M-$800M	6
$800M-$900M	7
$900M-$1B	11
$1B+	21

Which of the following best describes your Role?

Role	Value
CIO	20%
CTO	22
CXO	3
Business lead	14
CEO	22
Software developer	10
Software engineer	7
Front end developer	2

Which of the following best describes your Industry?

Industry	Value
Insurance	
Retai or E-commerce	18
Financial services	16
Consumer technology	21
Software and services	42
Public sector	8
Consumer goods	9
Energy & utility	8
Travel and hospitality	5
Healthcare technology	10
Automotive	8

Data Highlights: Blockchain and AI are Converging

In a survey of 608 global business decision-makers in the US, UK, China, and Europe, we found:

75%

3 in 4 respondents reported feeling positive and interested in adopting blockchain for their business.

90%

Nearly 9 in 10 organizations plan on investing in AI over the next 12 months.

71%

of organizations view blockchain and AI as complementary technologies.

Improving AI's effectiveness is the top use case for blockchain across industries.

Top 5 ways organizations use blockchain technology today:

Working more efficiently with AI	51%
Database automation	44
Ensuring security, compliance, or regulatory reporting	41
Supply chain management / optimization	38
Managing copy protection	36
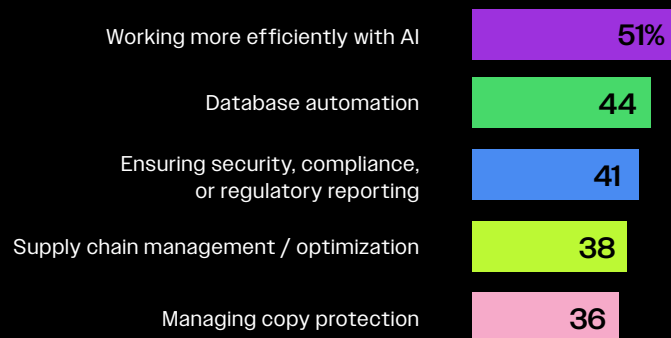
Nearly half of respondents said...

Being able to **heighten AI's trustworthiness and reliability** would increase their likelihood of adopting blockchain.

Integrating AI and blockchain has the potential to revolutionize their industry through **enhanced data security, transparency, and efficiency**.

Chapter 1

"This Casper Labs Blockchain report illustrates the growing adoption of real-world use cases of blockchain and related technologies in use today by enterprises and the public sector. Blockchain provides a clear advantage with better data provenance and audit trails, transparency and traceability of data, and potential interoperability acros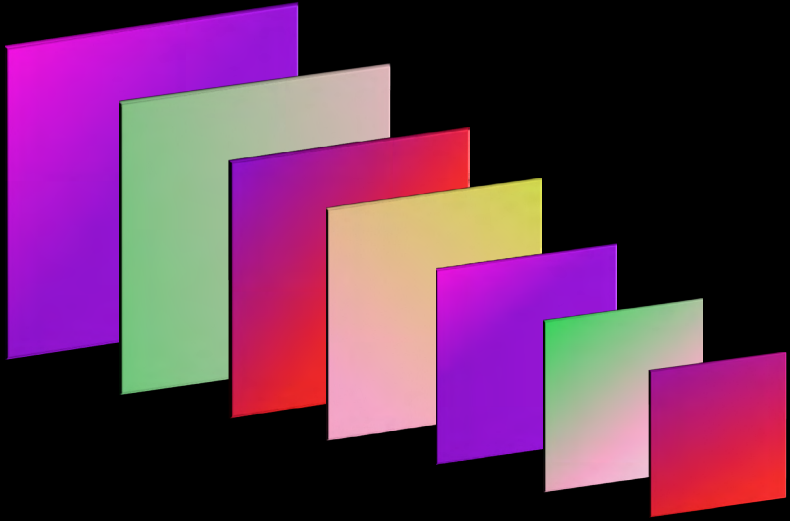s ecosystems, making it a key contender of the digital infrastructure backing the future of money and generative AI technology."

Michael Greenwald | Amazon Web Services, Senior Executive and Global Lead for Digital Assets and Financial Innovation

State of the Industry: Blockchain Grows Up

Blockchain technology is emerging as a core piece of modern enterprise IT stacks. As its applications continue to expand—including its increasingly prominent role promoting greater transparency and governance with generative AI applications—innovative leaders are eager to learn about the ways that further adopting blockchain can help their business realize greater value.

The more that business leaders learn about how blockchain can improve operations at the enterprise level, the more it becomes apparent that in an age of digital disruption, blockchain adoption is a strategic imperative for businesses to remain competitive in the modern market.

Blockchain technology is no longer defined solely by crypto.

In this report's first iteration, which was conducted in December 2022, more than half of respondents saw "blockchain" and "cryptocurrency" as interchangeable terms. That narrative has shifted drastically, as business leaders demonstrate a more nuanced understanding of blockchain's potential to positively impact their business operations.

While trading cryptocurrencies was still the most commonly associated with blockchain (46%), improving data interoperability across an organization (37%) and gaining greater transparency into data sets (36%) were also popularly cited.

China leads the way in understanding how to creatively deploy blockchain technology to solve business problems—while the US still shows the closest association of blockchain and crypto.

When you think of blockchain, what comes to mind?

|	Globally	US	UK	China	Europe
Trading cryptocurrency	46%	51%	46%	41%	43%
Buying and selling digital art	28	30	24	28	29
Protecting personal property	27	19	29	30	29
Protecting corporate property	32	28	29	41	32
Reducing operational costs and growing revenue	32	33	27	41	27
Gaining greater transparency into data sets	36	36	30	41	36
Improving workflows and tracking across an organization	34	32	37	43	26
Improving data interoperability across a business	37	35	34	51	27
Supply chain management	27	26	24	40	19
All of the above	15	21	18	17	5
None of the above	1	1	2		2

Business fluency in blockchain technology is growing at a rapid clip.

In less than 12 months, leaders have demonstrated considerable progress in terms of realizing a deeper understanding of blockchain and its potential use cases. The number of organizations that reported they don't use blockchain in any form halved from the Q1 2023 version of this report (from 12% to 6%), suggesting a steady continued rate of blockchain adoption. The number of respondents who reported that they "fully understand blockchain and can explain its value to their team" also rose by 5 percentage points, to 77% of total respondents.

A vast majority of global respondents report feeling more confident about blockchain's potential to unlock latent value: 84% noted that their knowledge about blockchain's applications has grown over the past year. However, opportunity still exists to increase awareness—especially among European respondents.

What describes your level of understanding of blockchain?

- I fully understand blockchain and I can explain the value of it to my team
- I somewhat understand blockchain but I'm not comfortable explaining it to others
- I do not understand blockchain

Globally — 77%, 20, 3
US — 85%, 14
UK — 75%, 20, 5
China — 81%, 18
Europe — 67%, 28, 14
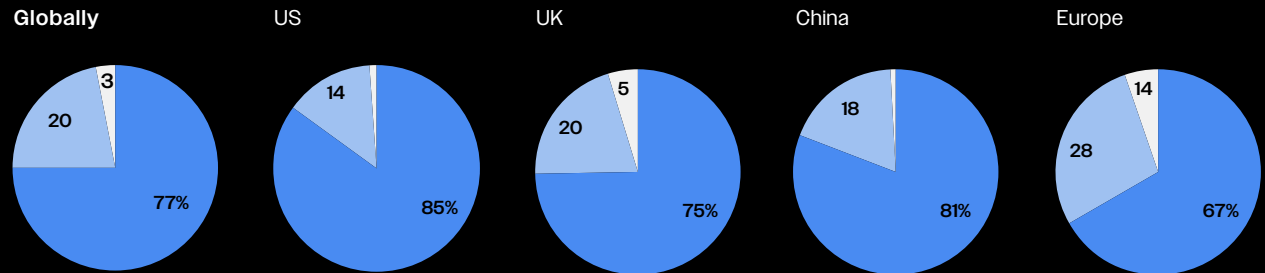
In what ways has your understanding of blockchain evolved over the past 6-12 months?

- I now have a greater understanding of its possible applications
- I now have less of an understanding of its possible applications
- My understanding of its possible applications has not changed

Globally — 84%, 6, 9
US — 87%, 12
UK — 87%, 11
China — 91%, 9
Europe — 73%, 12, 14
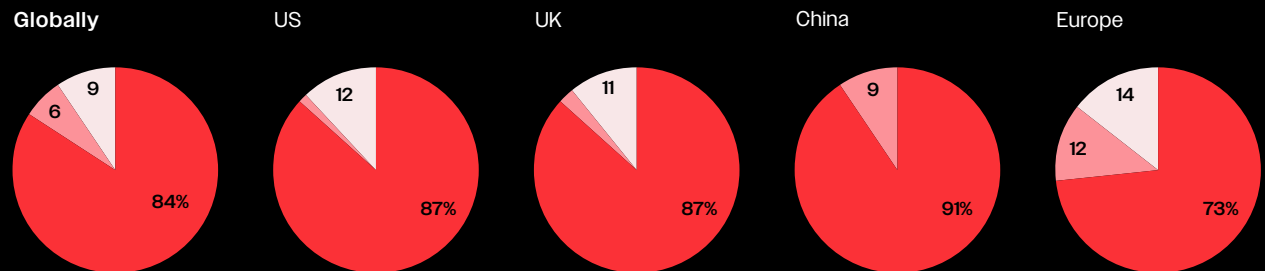
Leaders are adopting public and hybrid blockchains at a nearly even rate.

Depending on organizational needs, a company might benefit from using public (ie Ethereum, Solana, Avalanche, Hyperledger, Bitcoin), private (ie Hyperledger, Corda), or hybrid blockchain solutions. Among the 93% of organizations globally that use some form of blockchain technology, there was a nearly even split between public (37%) and hybrid (36%), with about 20% using private.

However, regional differences are stark. Hybrid blockchains came in second place for all regions except the UK, where it led with 38%. In both China and the US, integration of private blockchains was the lowest, at about 15%.

The opportunity for hybrid and private blockchain adoption may be greater for the UK—and more broadly, Europe—given the EU's current privacy laws under its General Data Protection Regulation (GDPR).

Which of the following best describes the kind of blockchain technology your organization employs?

- Public (i.e., Ethereum, Solana, Avalanche, Algorand, Hyperledger, Bitcoin)
- Private (i.e., Hyperledger, Corda)
- Hybrid
- My organization does not employ any blockchain technology
- Other

Globally

- 7
- 37%
- 20
- 36

US

- 6
- 43%
- 15
- 36

UK

- 6
- 29%
- 27
- 38

China

- 43%
- 15
- 40
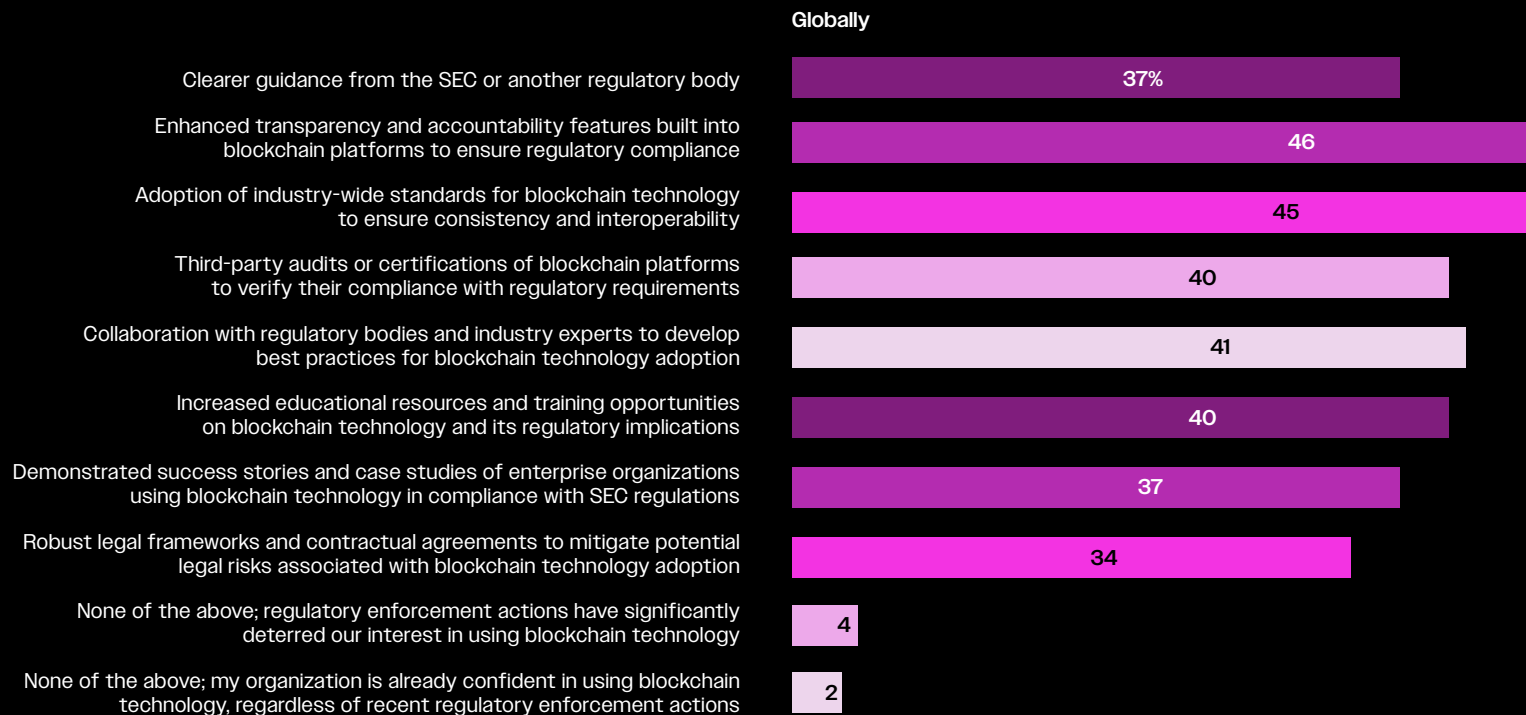
Europe

- 12
- 34%
- 22
- 30
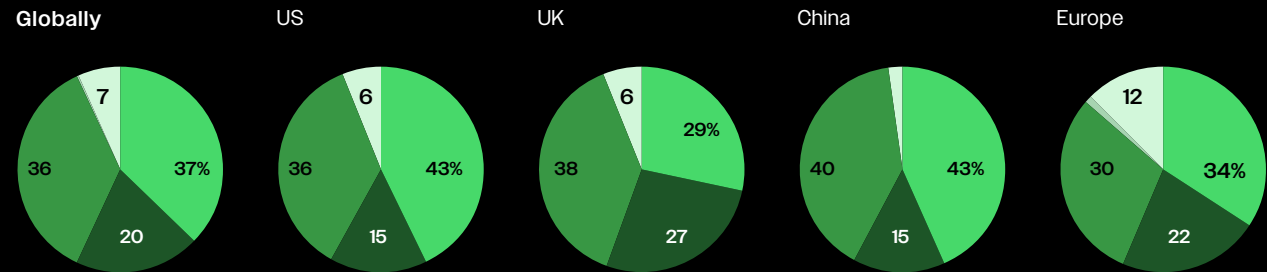
Enhanced transparency and accountability are key to augmenting confidence in blockchain technology.

Overall, three-fourths of global respondents reported feeling positive and interested in adopting blockchain for their business.

When asked about what could boost their confidence in blockchain even further, 46% of all global respondents identified enhanced transparency and accountability features to ensure regulatory compliance (46%). For US participants, this means clearer guidance from regulatory bodies like the Securities and Exchange Commission (SEC). 54% of US respondents today say they are now more confident in blockchain in light of recent SEC enforcement actions.

Which of the following would provide your organization with greater confidence in using blockchain technology?

Globally

Category	Value
Clearer guidance from the SEC or another regulatory body	37%
Enhanced transparency and accountability features built into blockchain platforms to ensure regulatory compliance	46
Adoption of industry-wide standards for blockchain technology to ensure consistency and interoperability	45
Third-party audits or certifications of blockchain platforms to verify their compliance with regulatory requirements	40
Collaboration with regulatory bodies and industry experts to develop best practices for blockchain technology adoption	41
Increased educational resources and training opportunities on blockchain technology and its regulatory implications	40
Demonstrated success stories and case studies of enterprise organizations using blockchain technology in compliance with SEC regulations	37
Robust legal frameworks and contractual agreements to mitigate potential legal risks associated with blockchain technology adoption	34
None of the above; regulatory enforcement actions have significantly deterred our interest in using blockchain technology	4
None of the above; my organization is already confident in using blockchain technology, regardless of recent regulatory enforcement actions	2

Chapter 2

"AI is now the single-most popular business application for blockchain: 51% of businesses use blockchain technology to work more efficiently with AI."

How AI and Blockchain Work Together

AI is dominating the technology landscape, and organizations are prioritizing AI adoption to enhance their operational efficiency and improve customer service. But it's currently mired in a "brute force" era that prioritizes speed and performance over other key considerations, including transparency and auditability.

A growing number of organizations are using blockchain to introduce these critical features into their AI systems to ensure they're operating more efficiently and securely.

AI leads the way for blockchain's business applications.

Business leaders are learning more about applications for blockchain at the same time that use cases for AI are exploding across industries. And, the link between the two is clear—one of the primary ways that blockchain can be deployed is to support AI operations.

When asked how their organizations currently use blockchain, working efficiently with AI was the most popular response overall (51%), beating out other top responses like database automotion, ensuring security and compliance, and supply chain optimization.

Which of the following best describes how your organization uses blockchain technology today?
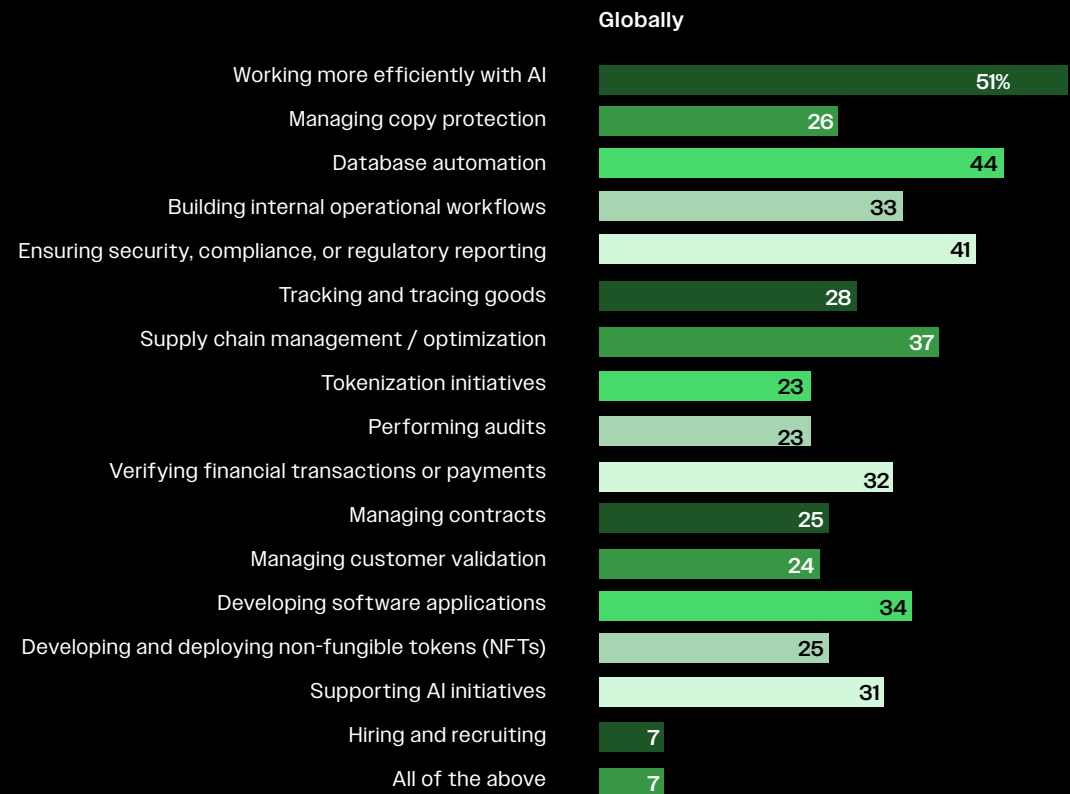
As supply chains continue to combat disruption in the face of high customer delivery expectations, businesses need more effective ways to verify product origin and authenticity and monitor shipments in real-time. Globally, around 30% of businesses are already using blockchain to track and trace their goods—a key application of the technology.

Globally

Working more efficiently with AI	51%
Managing copy protection	26
Database automation	44
Building internal operational workflows	33
Ensuring security, compliance, or regulatory reporting	41
Tracking and tracing goods	28
Supply chain management / optimization	37
Tokenization initiatives	23
Performing audits	23
Verifying financial transactions or payments	32
Managing contracts	25
Managing customer validation	24
Developing software applications	34
Developing and deploying non-fungible tokens (NFTs)	25
Supporting AI initiatives	31
Hiring and recruiting	7
All of the above	7

The appetite for enterprise-wide AI is growing.

A vast majority of global respondents noted that their organization has already invested in AI technology (83%), with the US leading the way (90%) and China following close behind (89%). The adoption rate in Europe was disproportionately low, however, with 27% of respondents saying their organizations have yet to invest in AI.

Has your organization already invested in AI?

- ■ Yes
- ■ No
- ■ I don't know

Globally

16

83%

UK

19

79%

Europe

27

73%

US

10

90%

China

9 2

89%
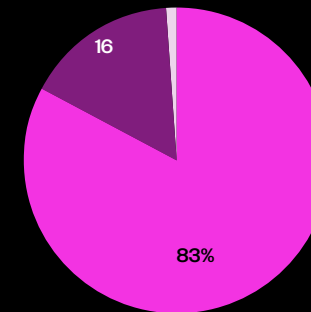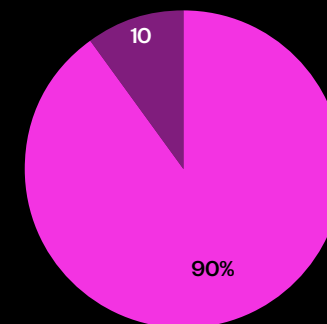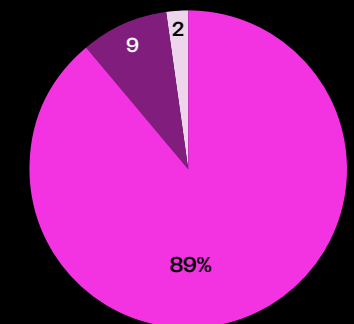
Overall, organizations are using AI to gain efficiencies in their business operations.

There's no question that AI can significantly streamline and automate key processes and workflows. Among all businesses globally, enhancing operational efficiency and automation (27%) was the primary reason for using AI. Next was gaining a competitive advantage through AI-driven insights (16%), and then improving customer experiences and engagement (16%).
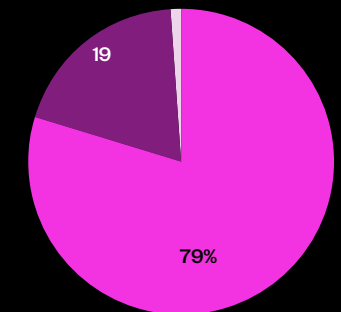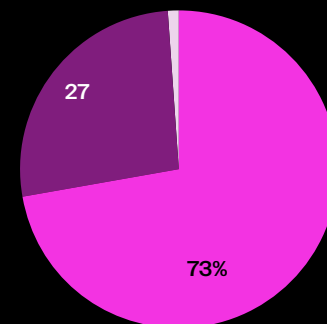
Participants in the US scored the highest by far on enhancing operational efficiency and automation (35%), whereas other regions saw less of a difference between their top choices.

What is the primary reason for your organization's use of AI in business operations?

	Globally	US	UK	China	Europe
Enhancing operational efficiency and automation	27%	34%	19%	24%	29%
Gaining a competitive advantage through AI-driven insights	16	10	17	23	15
Improving customer experience and engagement	16	21	18	15	10
Leveraging data-driven decision-making with AI analytics	10	5	12	13	12
Driving innovation and research through AI applications	11	10	19	9	15
Achieving cost savings and resource optimization	6	4	6	4	8
Enhancing cybersecurity and mitigating risks with AI	8	7	8	10	5
Keeping pace with technological advancements	5	7	7	2	4
Ensuring regulatory compliance and governance	1	1		1	2
My organization does not use AI for business operations	1		1	1	

casper

AI's most popular use case today is customer support.

Most organizations around the world are using AI specifically to optimize customer service and relationship management (61%). This includes the adoption of AI capabilities such as chatbots, customer sentiment analysis, and personalized recommendation systems.

Data security (53%) and data analytics (50%) came in second and third place, respectively. But for China in particular, data security (66%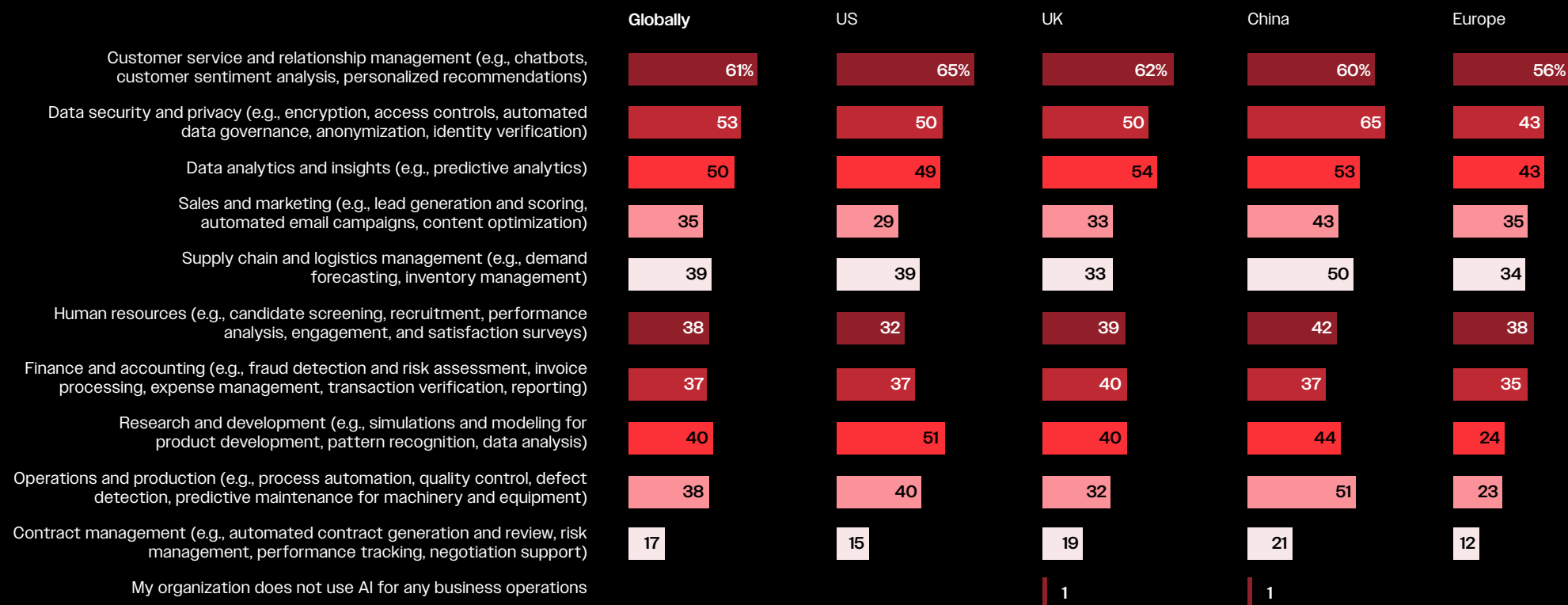) was the most prevalent AI use. Respondents in China also leveraged AI systems in supply chain and logistics (50%) far more than other regions.

How does your organization currently use artificial intelligence (AI) for business operations?

|	Globally	US	UK	China	Europe
Customer service and relationship management (e.g., chatbots, customer sentiment analysis, personalized recommendations)	61%	65%	62%	60%	56%
Data security and privacy (e.g., encryption, access controls, automated data governance, anonymization, identity verification)	53	50	50	65	43
Data analytics and insights (e.g., predictive analytics)	50	49	54	53	43
Sales and marketing (e.g., lead generation and scoring, automated email campaigns, content optimization)	35	29	33	43	35
Supply chain and logistics management (e.g., demand forecasting, inventory management)	39	39	33	50	34
Human resources (e.g., candidate screening, recruitment, performance analysis, engagement, and satisfaction surveys)	38	32	39	42	38
Finance and accounting (e.g., fraud detection and risk assessment, invoice processing, expense management, transaction verification, reporting)	37	37	40	37	35
Research and development (e.g., simulations and modeling for product development, pattern recognition, data analysis)	40	51	40	44	24
Operations and production (e.g., process automation, quality control, defect detection, predictive maintenance for machinery and equipment)	38	40	32	51	23
Contract management (e.g., automated contract generation and review, risk management, performance tracking, negotiation support)	17	15	19	21	12
My organization does not use AI for any business operations			1	1	

Businesses overwhelmingly view AI and blockchain as complementary technologies.

On the surface, AI and blockchain can seem like disparate systems. But the compound benefits of AI and blockchain used together—including enhanced efficiency, accountability, and integrity—demonstrate that they are, in fact, complementary solutions that reinforce one another. Leaders around the world agree: 71% of global respondents believe that AI and blockchain are fully complementary technologies.

However, a comparatively significant group of Europe respondents (26%) disagreed with this sentiment, describing the solutions as unrelated. This tracks with our other findings that suggest greater opportunity for blockchain education and expansion.

How does your organization view the intersection of AI technology and blockchain technology?

- ■ They are two different, unrelated technologies with no potential intersection
- ■ They are complementary technologies (for example, blockchain can strengthen AI implementation)
- ■ They are interchangeable technologies; they do the same things
- ■ I don't understand how blockchain and AI can work together

Globally

7 3 19
71%

US

3 3 18
75%

UK

9 4 16
71%

China

10 17
72%

Europe

5 6 26
63%
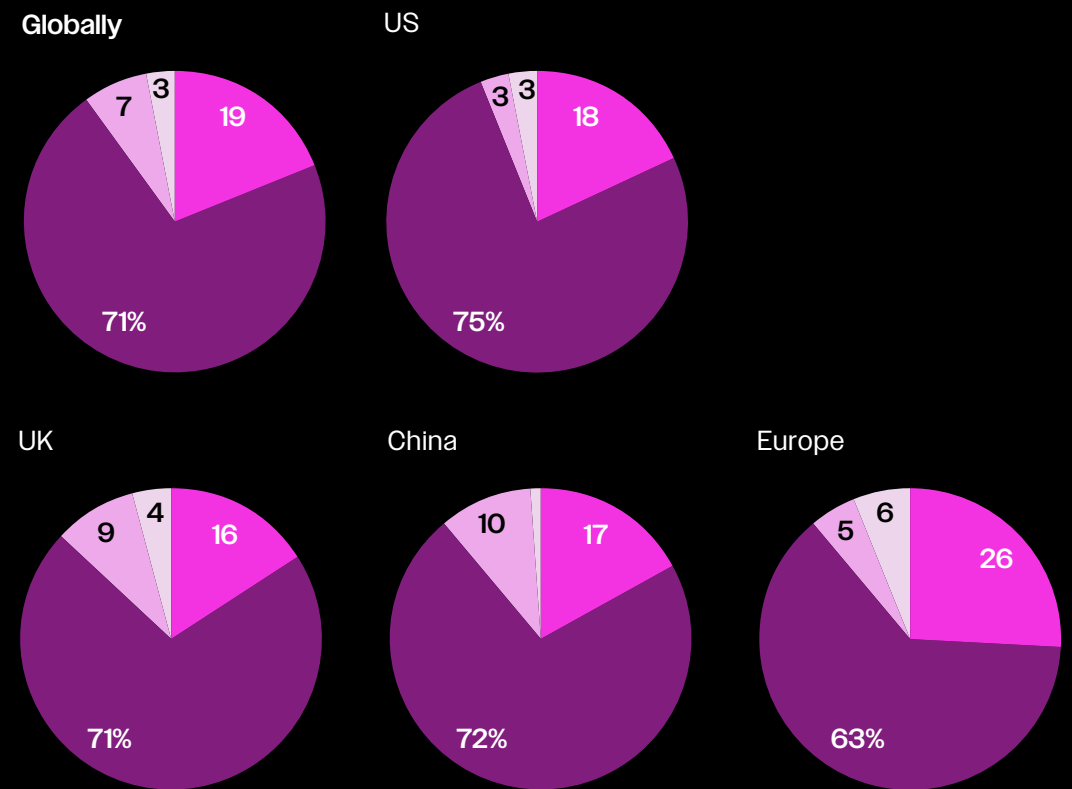
Together, AI and blockchain will power future-looking businesses.

Combining AI and blockchain can have a groundbreaking impact on transparency, security, and efficiency. With the power of AI and blockchain, leaders can access real-time analytics and insights, apply nuanced permission controls to sensitive data, integrate various siloed databases, and automate time-consuming tasks to make smarter, faster decisions.

Most leaders reported that their organization already uses both blockchain and AI solutions (71%). China had the highest rate of using both AI and blockchain—90% of respondents reported that they currently leverage both technologies. The UK and Europe lagged behind at 60% and 59%, respectively.

Does your organization currently use blockchain in conjunction with AI solutions?
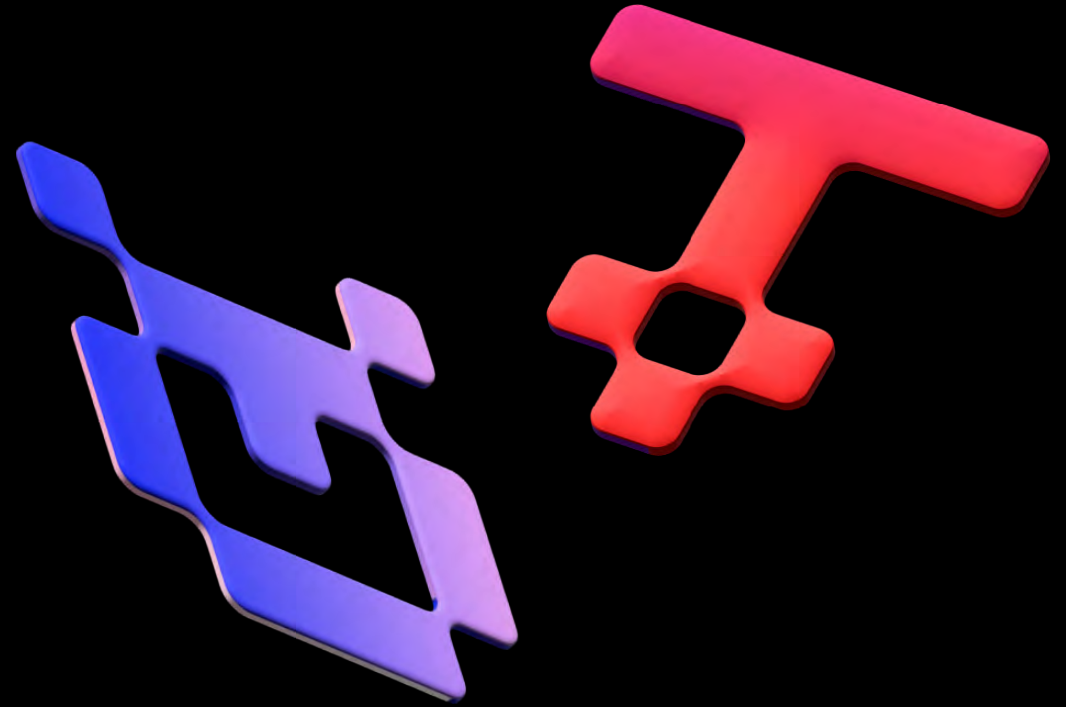
- Yes
- No
- I don't know

Globally

26
2
71%

US

23
77%

UK

3
36
60%

China

8
2
90%

Europe

3
38
59%
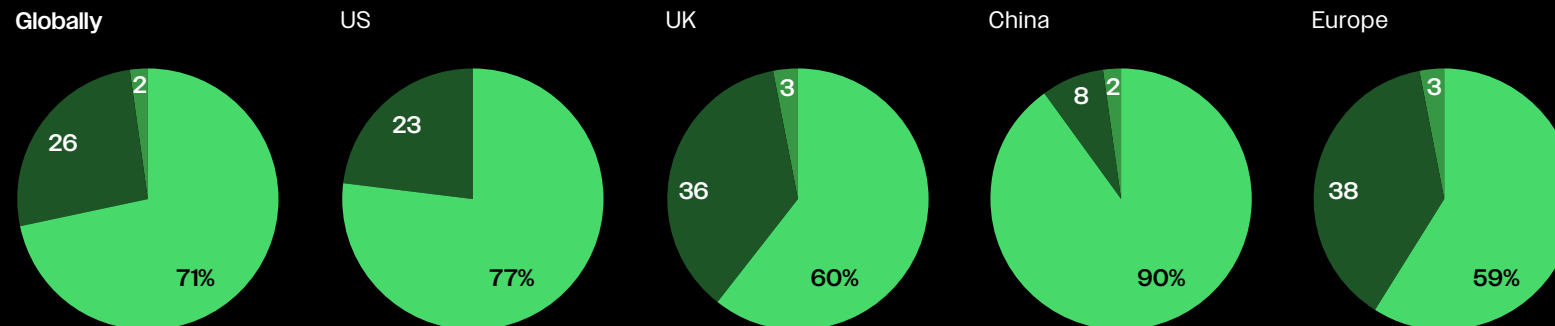
90%

Today, 9 in 10 organizations in China use both blockchain and AI solutions.

Chapter 3

Safeguarding Data
in the Age of AI

With the ability to source and analyze nearly limitless amounts of data, AI is the superpower businesses have long sought. But using intelligent tools and platforms also introduces new legal and security challenges. If businesses don't take adequate measures to effectively monitor and govern training data, solutions can be compromised to make erroneous decisions, spread misinformation, and expose businesses to lawsuits.
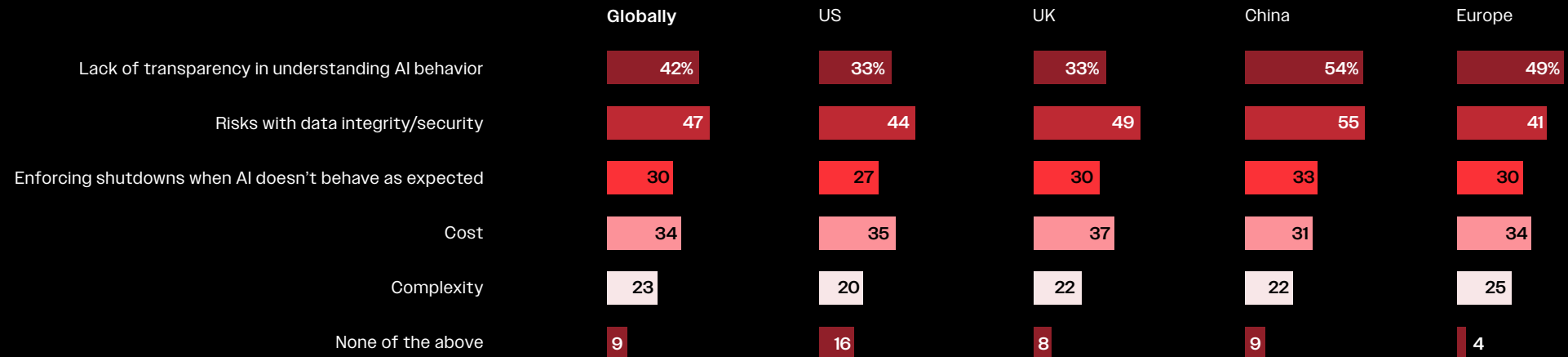
Leaders recognize the need to embrace ethical AI standards to avoid this unacceptable level of risk. And blockchain is emerging as a key guardrail against them, offering the most cost-effective and comprehensive path to effectively auditing and analyzing AI outputs, and remediating issues—all while maintaining the utmost security and data transparency.

AI brings undeniable benefits, but leaders are wary of security risks.

As leaders learn more about the technology, safeguarding their AI systems and the data they use has emerged as a top priority. Nearly half of all global respondents believe that AI operations in business pose risks to data integrity and security (47%), revealing the need for stronger, more reliable data architecture.

Participants in China were the most concerned with risks to data integrity and security (55%), and a significant group of UK respondents agreed (49%).

What challenges do you experience with your use of AI in business operations?

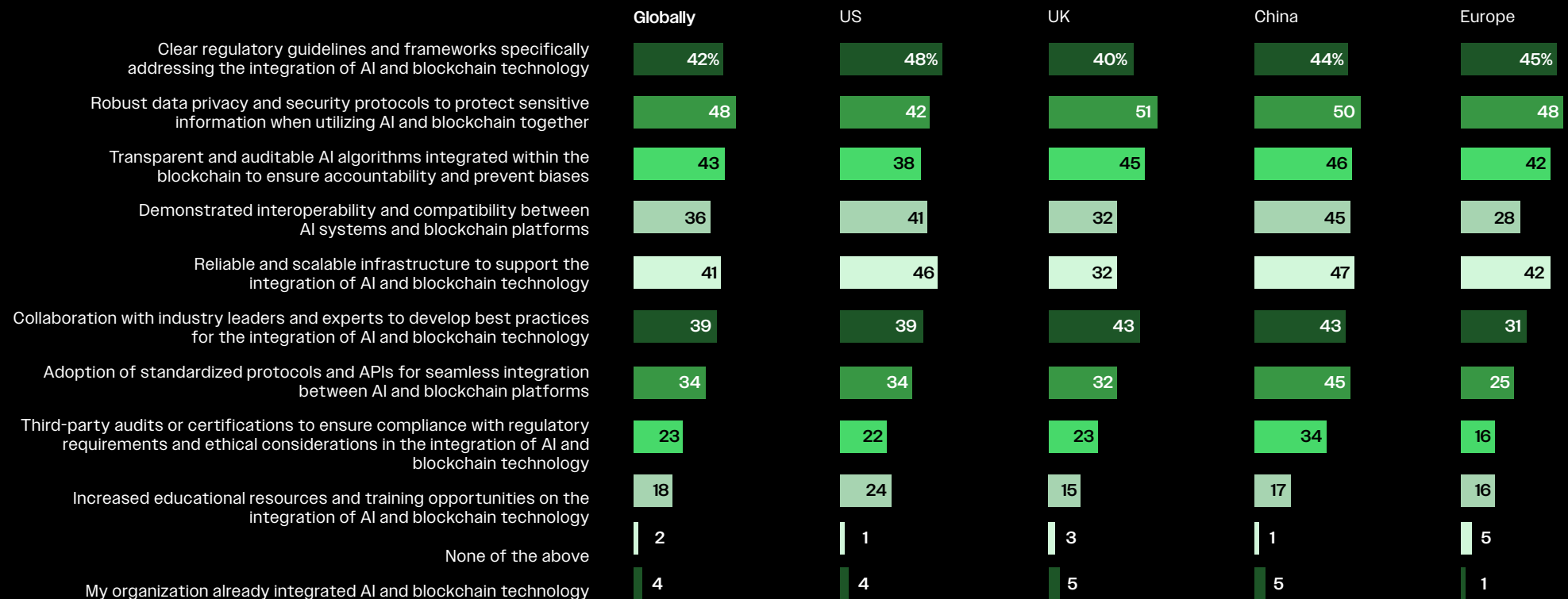|	Globally	US	UK	China	Europe
Lack of transparency in understanding AI behavior	42%	33%	33%	54%	49%
Risks with data integrity/security	47	44	49	55	41
Enforcing shutdowns when AI doesn't behave as expected	30	27	30	33	30
Cost	34	35	37	31	34
Complexity	23	20	22	22	25
None of the above	9	16	8	9	4

Responsible AI-blockchain integration requires governance and transparency.

As AI operations go mainstream—and as people raise concerns about the technology—leaders are recognizing the need for a more responsible AI that prioritizes data security and transparency. Ensuring trustworthiness and reliability of their AI tools is a top priority for businesses, and blockchain is the turnkey solution for addressing the risks that come with AI implementation.

Global respondents agree that having robust data privacy and security protocols is the most important measure to increase AI-blockchain integration (48%). Regulatory guidelines and frameworks specifically addressing the integration of AI and blockchain came in as a close second.

Which of the following measures would provide your organization with greater confidence about the prospect of integrating AI and blockchain technology?

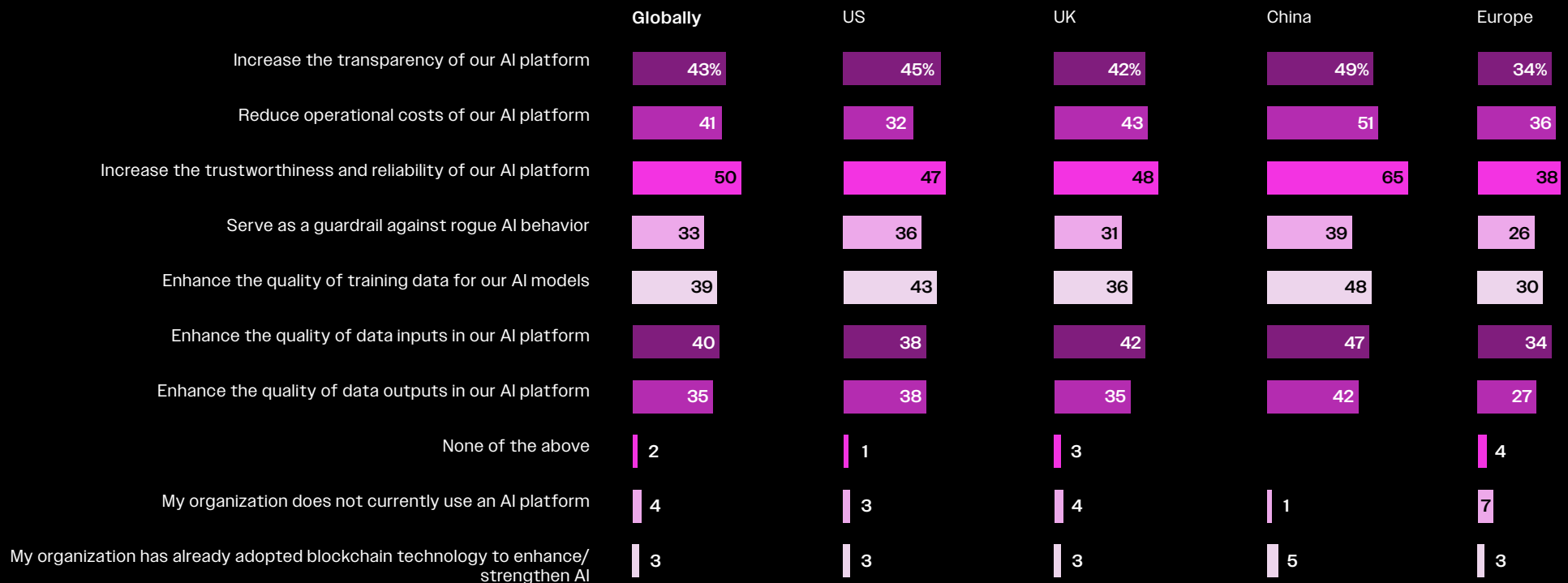|	Globally	US	UK	China	Europe
Clear regulatory guidelines and frameworks specifically addressing the integration of AI and blockchain technology	42%	48%	40%	44%	45%
Robust data privacy and security protocols to protect sensitive information when utilizing AI and blockchain together	48	42	51	50	48
Transparent and auditable AI algorithms integrated within the blockchain to ensure accountability and prevent biases	43	38	45	46	42
Demonstrated interoperability and compatibility between AI systems and blockchain platforms	36	41	32	45	28
Reliable and scalable infrastructure to support the integration of AI and blockchain technology	41	46	32	47	42
Collaboration with industry leaders and experts to develop best practices for the integration of AI and blockchain technology	39	39	43	43	31
Adoption of standardized protocols and APIs for seamless integration between AI and blockchain platforms	34	34	32	45	25
Third-party audits or certifications to ensure compliance with regulatory requirements and ethical considerations in the integration of AI and blockchain technology	23	22	23	34	16
Increased educational resources and training opportunities on the integration of AI and blockchain technology	18	24	15	17	16
None of the above	2	1	3	1	5
My organization already integrated AI and blockchain technology	4	4	5	5	1

Trustworthiness and reliability are key for AI-blockchain integration.

Half of global participants noted that they would consider adopting blockchain to enhance or strengthen their organization's AI platform if they knew blockchain could increase the trustworthiness and reliability of their AI platform (50%).

Respondents in China were the most preoccupied with how blockchain could improve their AI system's trustworthiness and reliability (65%), while Europe was almost equally concerned with its ability to reduce operational costs for AI (36%). Across the board, increasing transparency in AI was also an enticing feature of blockchain (43%).

I would consider adopting blockchain to enhance/strengthen my organization's AI platform if I knew blockchain could:

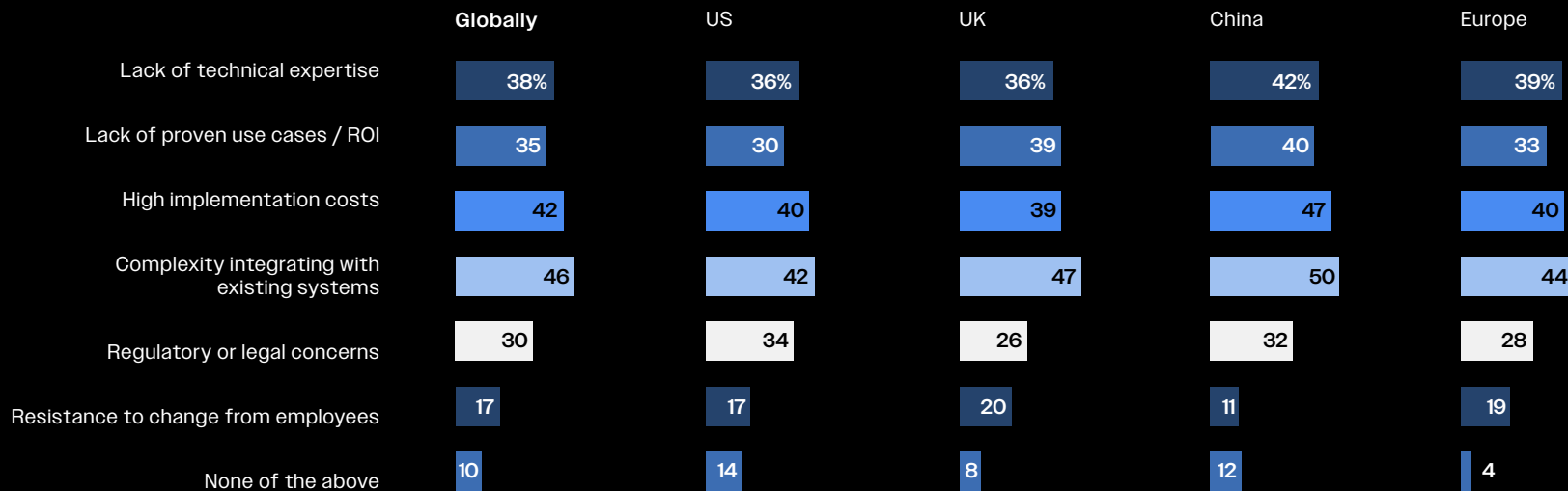|	Globally	US	UK	China	Europe
Increase the transparency of our AI platform	43%	45%	42%	49%	34%
Reduce operational costs of our AI platform	41	32	43	51	36
Increase the trustworthiness and reliability of our AI platform	50	47	48	65	38
Serve as a guardrail against rogue AI behavior	33	36	31	39	26
Enhance the quality of training data for our AI models	39	43	36	48	30
Enhance the quality of data inputs in our AI platform	40	38	42	47	34
Enhance the quality of data outputs in our AI platform	35	38	35	42	27
None of the above	2	1	3		4
My organization does not currently use an AI platform	4	3	4	1	7
My organization has already adopted blockchain technology to enhance/strengthen AI	3	3	3	5	3

Compatibility and interoperability with existing systems is a must.

Despite general enthusiasm for blockchain and AI in the enterprise landscape, it's understandable that leaders may still be intimidated by the adoption process. Maintaining interoperability with existing tools is critical for removing obstacles to widespread implementation of AI and blockchain.

Complexity integrating with existing systems was by far the most prevalent concern about merging blockchain and AI technology (46%), followed by high implementation costs (42%) and lack of technical expertise (38%). Participants in China indicated the most concern over the AI and blockchain's compatibility with their existing systems (50%).

1 in 10 global respondents said none of the potential obstacles for AI-blockchain integration applied to their organizations—further demonstrating that leaders are now more educated and confident about the prospect of AI and blockchain adoption.

What challenges do you anticipate in integrating AI and blockchain technology within your organization?

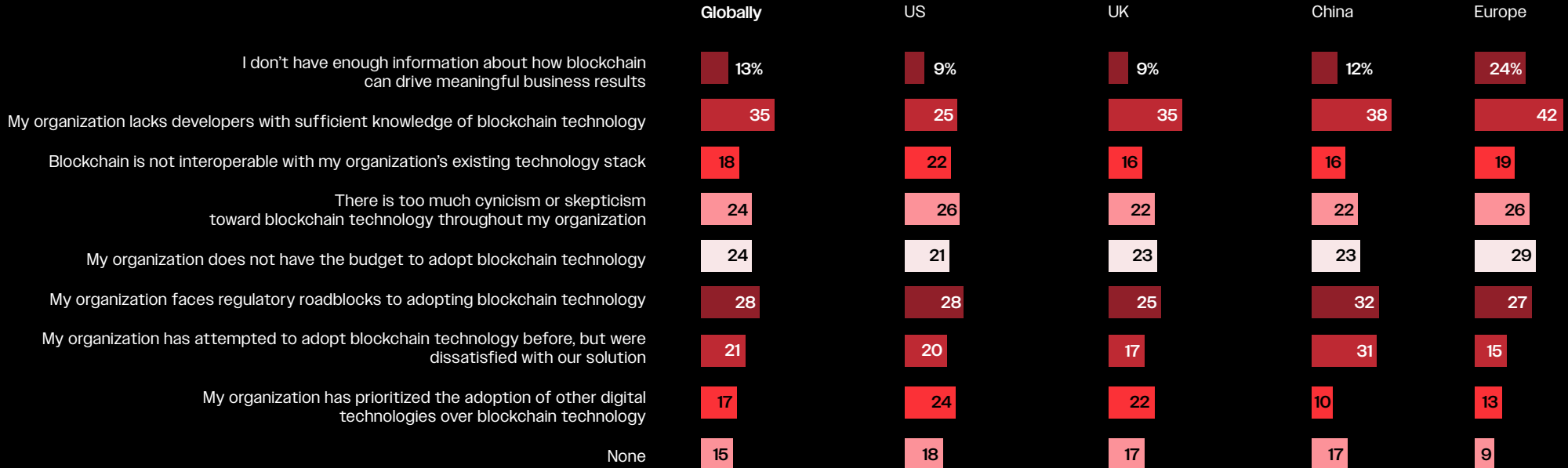|	Globally	US	UK	China	Europe
Lack of technical expertise	38%	36%	36%	42%	39%
Lack of proven use cases / ROI	35	30	39	40	33
High implementation costs	42	40	39	47	40
Complexity integrating with existing systems	46	42	47	50	44
Regulatory or legal concerns	30	34	26	32	28
Resistance to change from employees	17	17	20	11	19
None of the above	10	14	8	12	4

A few key obstacles still stand in the way.

Despite seeing huge potential for blockchain and AI, many global respondents (35%) reported that their organization lacks developers with sufficient knowledge of blockchain technology. China led the way with 38% of respondents acknowledging the need for more qualified developers.
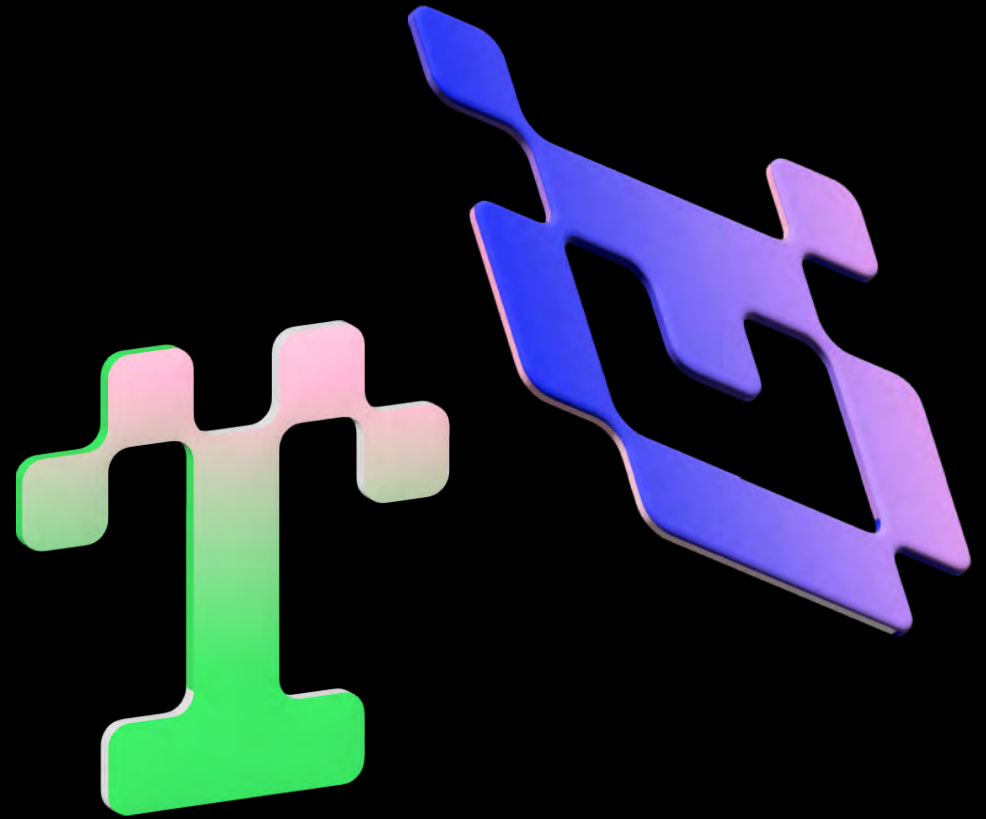
More than any other region, respondents in Europe indicated that they don't have enough information about how blockchain can drive meaningful results (24%). This points to a clear opportunity for organizations in Europe to provide education on how the two technologies can benefit their existing systems and workflows.

Blockchain solutions are increasingly adopting the WebAssembly (WASM) standard to make their technology more open, accessible, and easier to use for developers who aren't necessarily specialized in blockchain. This is enabling businesses to maintain their competitive edge without having to spend the time vetting and hiring engineers in a specific field.

Which of the following best describes an obstacle to blockchain adoption that your organization faces?

	Globally	US	UK	China	Europe
I don't have enough information about how blockchain can drive meaningful business results	13%	9%	9%	12%	24%
My organization lacks developers with sufficient knowledge of blockchain technology	35	25	35	38	42
Blockchain is not interoperable with my organization's existing technology stack	18	22	16	16	19
There is too much cynicism or skepticism toward blockchain technology throughout my organization	24	26	22	22	26
My organization does not have the budget to adopt blockchain technology	24	21	23	23	29
My organization faces regulatory roadblocks to adopting blockchain technology	28	28	25	32	27
My organization has attempted to adopt blockchain technology before, but were dissatisfied with our solution	21	20	17	31	15
My organization has prioritized the adoption of other digital technologies over blockchain technology	17	24	22	10	13
None	15	18	17	17	9

Blockchain Adoption Poised for Considerable Growth in the AI Era

Despite implementation challenges—such as uncertainty around integrating with existing technologies, evolving regulations, and a shortage of developers—enterprise leaders see significant potential for merging AI and blockchain. Most organizations today are planning future investments in both blockchain and AI.

Together, these two complementary technologies can have a transformative impact. Blockchain enables better training of AI models—with a tamper proof ledger of data inputs and outputs— while also serving as a guardrail to accelerate the safe adoption of AI that business leaders hope for.

The future is bright for AI and blockchain adoption.

An overwhelming majority of respondents (89%) are planning to invest in AI for 2024. China had the highest percentage responding yes (95%), followed by the US (91%), the UK (89%) and Europe (81%).

Many are also actively planning to invest in a blockchain solution over the next 12 months. Again, China led the US in terms of planning a blockchain investment (90% for China, 79% for the US).
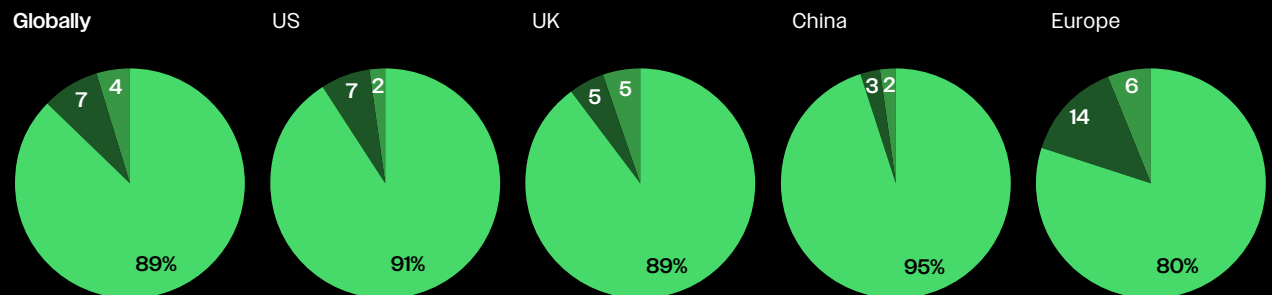
Will your organization consider investing in a blockchain solution during the fiscal year 2024?

- ■ Yes, we are actively planning to invest in a blockchain solution
- ■ We are considering blockchain investment but have not made a final decision
- ■ No, we do not have any plans to invest in a blockchain solution in 2024
- ■ I don't know

Globally — 6, 18, 76%

US — 4, 17, 79%

UK — 6, 19, 74%

China — 10, 89%

Europe — 12, 26, 60%
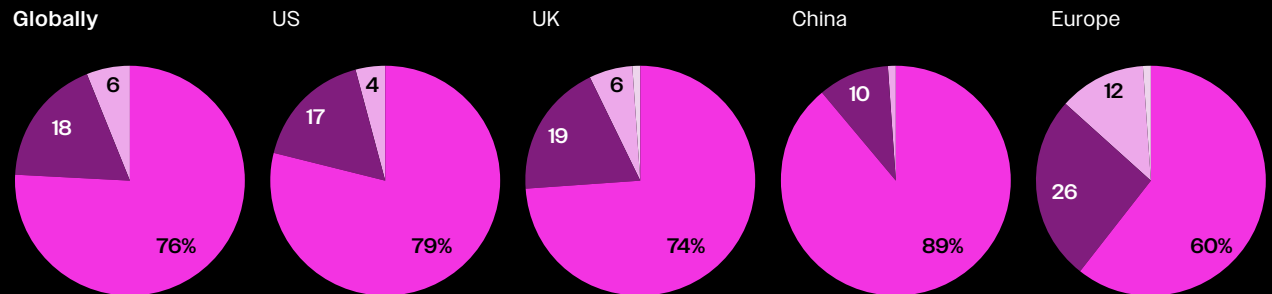
Do you plan to invest in AI in the next 12 months?

- ■ Yes
- ■ No
- ■ I don't know

Globally — 7, 4, 89%

US — 7, 2, 91%

UK — 5, 5, 89%

**China** — 3, 2, 95%

Europe — 14, 6, 80%

Demand for a global AI standards body is growing.

Leaders are in clear agreement: Continuing to quickly and confidently adopt blockchain and AI solutions must go hand in hand with some degree of oversight, regulation, and transparency.

Survey respondents overwhelmingly support (87%) the launch of a dedicated governing body made up of technology companies committed to promoting a more ethical form of AI.

Would you support the launch of a dedicated governing body made up of technology companies committed to promoting a more ethical form of AI?

- ■ Yes
- ■ No
- ■ I don't know

Globally

8 4

87%

US

6 4

90%

UK

9 5

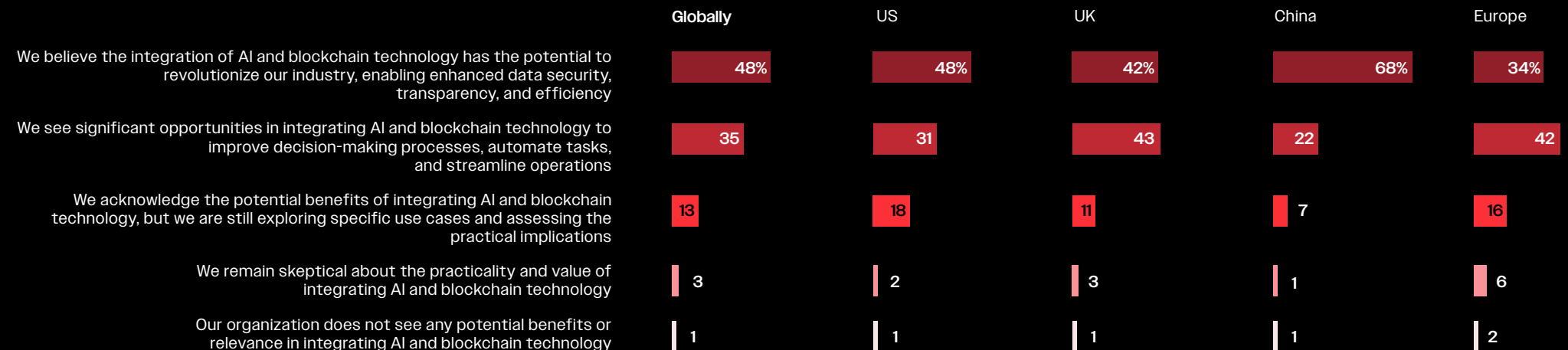85%

China

5 3

92%

Europe

12 6

82%
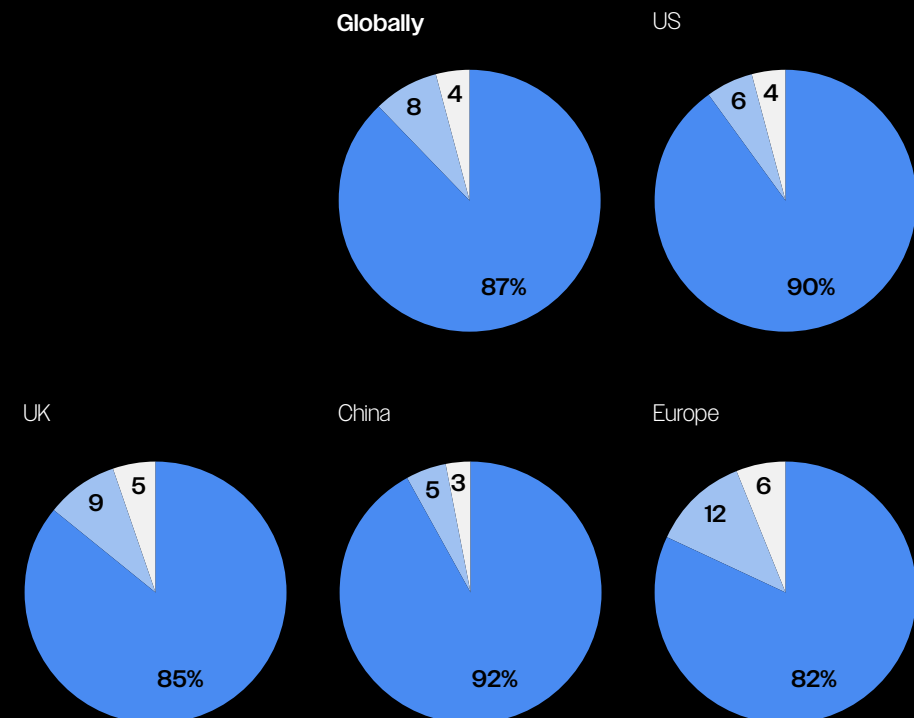
Combining AI and blockchain will revolutionize industries worldwide.

The integration of AI and blockchain is poised to transform organizations worldwide. Blockchain can effectively solve AI's "black box" problem by providing a transparent, immutable ledger to monitor model training and trace decision-making processes. This gives organizations the ability to audit the data and algorithms used, enabling greater security and trust in AI systems—a lack of which was cited by nearly half of global respondents when discussing concerns regarding AI.

When asked how the integration of AI and blockchain will impact the future, 48% of IT leaders said that it will have a revolutionary impact on their respective industries and organizations, and an additional 35% having identified significant opportunities in integrating AI and blockchain to improve decision-making processes, automate tasks, and streamline operations.

How do you think integrated AI and blockchain technology will impact the future of your industry/organization?

|	Globally	US	UK	China	Europe
We believe the integration of AI and blockchain technology has the potential to revolutionize our industry, enabling enhanced data security, transparency, and efficiency	48%	48%	42%	68%	34%
We see significant opportunities in integrating AI and blockchain technology to improve decision-making processes, automate tasks, and streamline operations	35	31	43	22	42
We acknowledge the potential benefits of integrating AI and blockchain technology, but we are still exploring specific use cases and assessing the practical implications	13	18	11	7	16
We remain skeptical about the practicality and value of integrating AI and blockchain technology	3	2	3	1	6
Our organization does not see any potential benefits or relevance in integrating AI and blockchain technology	1	1	1	1	2

Business leaders believe that blockchain will help AI reach its potential.

As use cases for AI grow and begin to demonstrate a series of unprecedented challenges for organizations, there's a chance now for leaders to leverage the benefits of blockchain to address these obstacles. With blockchain technology, businesses can reinforce AI systems by increasing their data reliability and trustworthiness.

Survey findings also indicate the need for clearer regulatory guidelines so that businesses can confidently implement AI and blockchain technologies. The rapidly evolving nature of these solutions can lead to uncertainty about compliance, data privacy, and legal responsibilities. With well-defined regulations in place, organizations can ensure they're taking the necessary steps to adhere to the right rules, establish best practices for dealing with data breaches and algorithmic biases, as well as promote interoperability between different systems to foster broader collaboration.

By adopting AI and blockchain thoughtfully and in alignment with existing regulations, businesses can position themselves to meet the evolving demands of their industries and gain a competitive edge in an increasingly interconnected world. Embracing these solutions will not only help businesses keep pace with competitors, it can also enable greater organizational adaptability as newer, smarter technologies crop up in the race toward more security, efficiency, and productivity.
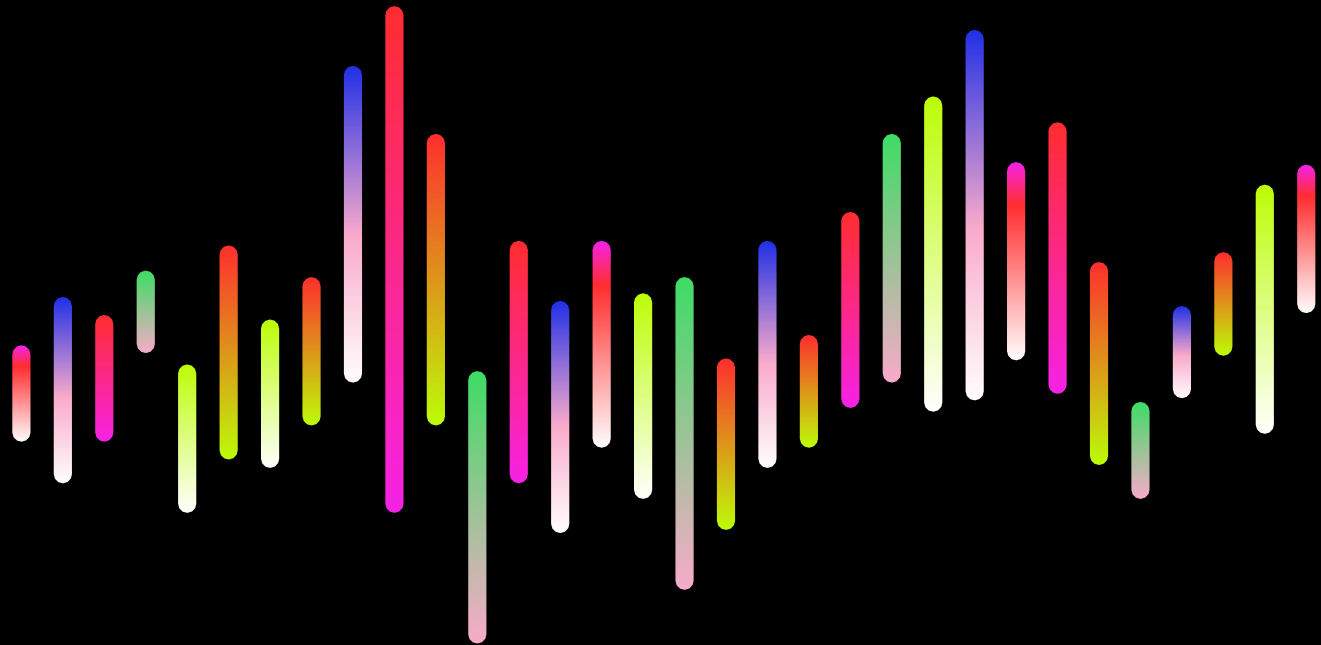
About
Casper Labs

Casper Labs is the enterprise blockchain software leader.
Casper Labs built the first layer-1 blockchain for the scale and
operational needs of business, creating complete transparency
for all business transactions. Casper Labs delivers applications
and services that drive revenue and radical efficiency for
companies and governments. We are on a mission to build the
essential foundation for an entirely new era of customer value
and business success.