TOP IT INSIGHTS FOR 2025

Navigating the Future of Technology and Business

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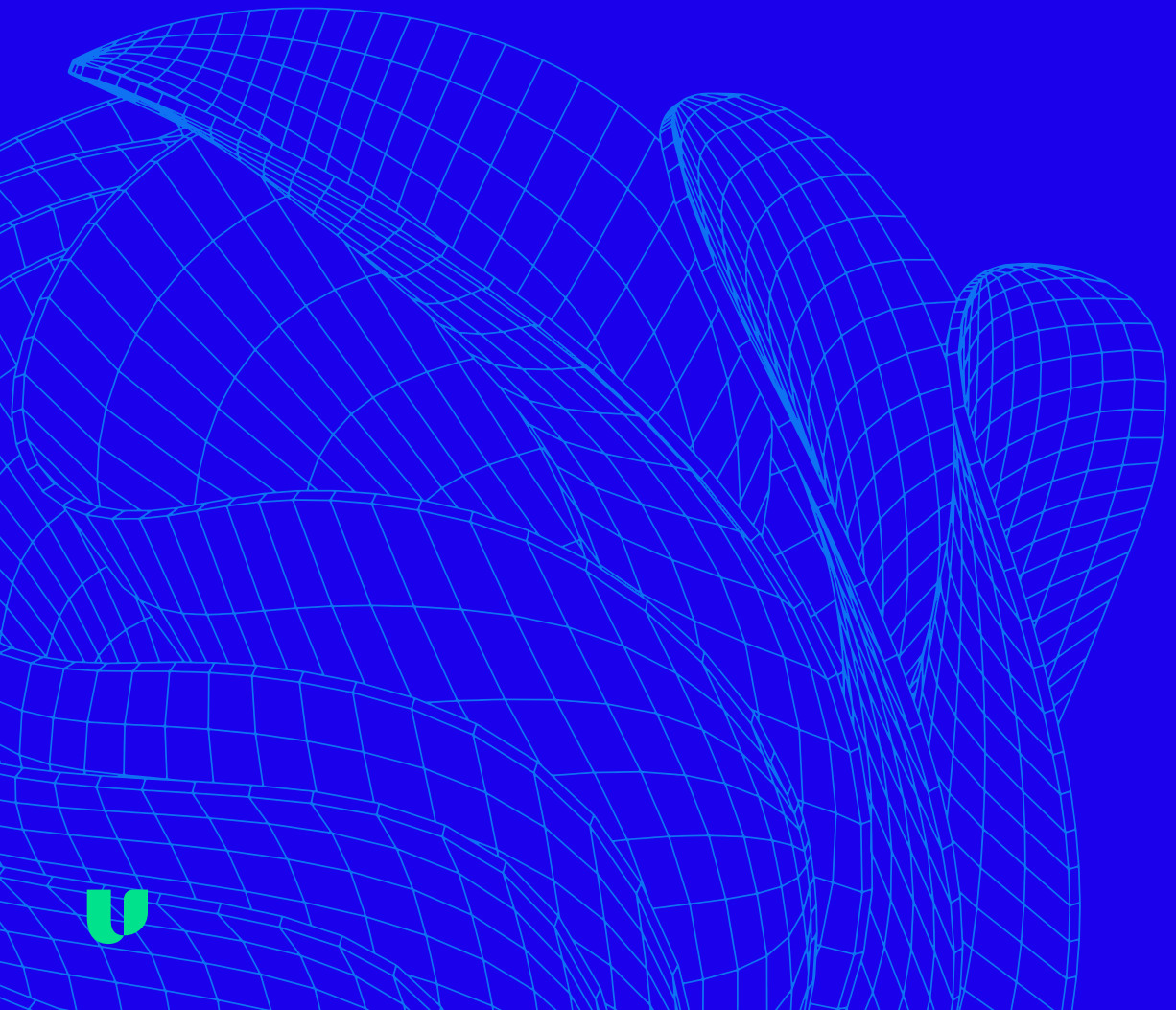
Contents



Foreword

Every business leader can feel the velocity of change around them. Recent innovations in AI, cloud computing, and quantum cryptography create opportunities that would have seemed impossible not long ago. The rapid pace of advancement energizes us — and challenges us to think bigger about what technology can achieve.

Through extensive conversations with industry experts and our own technology leaders, we've identified eight pivotal insights that will shape enterprise technology decisions in 2025. These insights reflect both immediate opportunities and crucial areas for preparation.

Enterprises face extraordinary possibilities: AI becoming the primary interface for human-computer interaction, edge computing revolutionizing data processing and quantum-safe security protecting tomorrow's innovations. At the same time, we see fundamental shifts in how organizations approach hybrid work, manage energy consumption and build their workforce for an AI-enabled future.

Some organizations will recognize elements that align with their current strategies. Others will discover new perspectives that challenge their assumptions. Either way, these findings provide a practical foundation for technology investment, security planning and workplace transformation.

We invite you to explore these insights and consider their implications for your organization. The enterprises that thrive through 2025 will be those that understand these technology shifts and adapt strategically and thoughtfully.

Let's embrace these opportunities together.

Peter Altabef
Chair and Chief Executive Officer

Mike Thomson
President and Chief Operating Officer

Top IT insights

01 Natural language becomes the default for AI-human interaction

The focus shifts from teaching humans to prompt AI toward teaching AI to understand humans — a complete reversal of current approaches. Prepare workplaces for conversational AI tools, plan for voice and gesture interfaces beyond screens and identify processes that would benefit from natural language automation. This shift follows AI becoming more intuitive and accessible across devices.

02 Small language models and edge computing are the next frontier

Contrary to "bigger is better," smaller specialized AI models often outperform large ones in business applications. Identify processes requiring fast local AI processing, evaluate edge computing solutions for sensitive data and develop hybrid strategies combining edge and cloud resources. Edge deployment reduces costs while improving security and latency. Prepare for a shift toward more efficient, specialized AI solutions.

03 Hybrid cloud ascends as cloud migration decisions demand nuance

The "cloud-first" era begins to shift as rising costs push companies to rediscover on-premises benefits. Reassess cloud costs against business value, identify which workloads belong on-premises versus in the cloud and develop clear criteria for future migration decisions. Rising cloud costs require more strategic approaches to infrastructure and sound expertise.

04 Post-quantum cryptography moves from theory to practice

Data stolen today could be decrypted by quantum computers tomorrow — creating an urgency for quantum-safe encryption now. Begin adopting post-quantum cryptography standards, identify systems requiring quantum-safe encryption and create timelines for cryptography updates. Current encrypted data faces future quantum decryption risks.

Top IT insights

05 Entry-level workers are the model for an AI-enabled workforce

Less experienced workers often adapt to AI tools more effectively than more senior employees. Maintain entry-level hiring to capture digital-native talent, develop AI training programs and create mentorship opportunities connecting different experience levels. Success comes from blending fresh perspectives with proven expertise.

06 The sweet spot for hybrid work is three days

The optimal office schedule isn't fully remote or fully in person — it's three days on-site. Structure hybrid schedules around three office days, design spaces for collaboration and strengthen virtual engagement tools. Balance face-to-face interaction with remote flexibility to optimize productivity and retention. Reimagine office spaces to maximize collaboration during on-site days.

07 Energy-efficient AI will be a competitive advantage

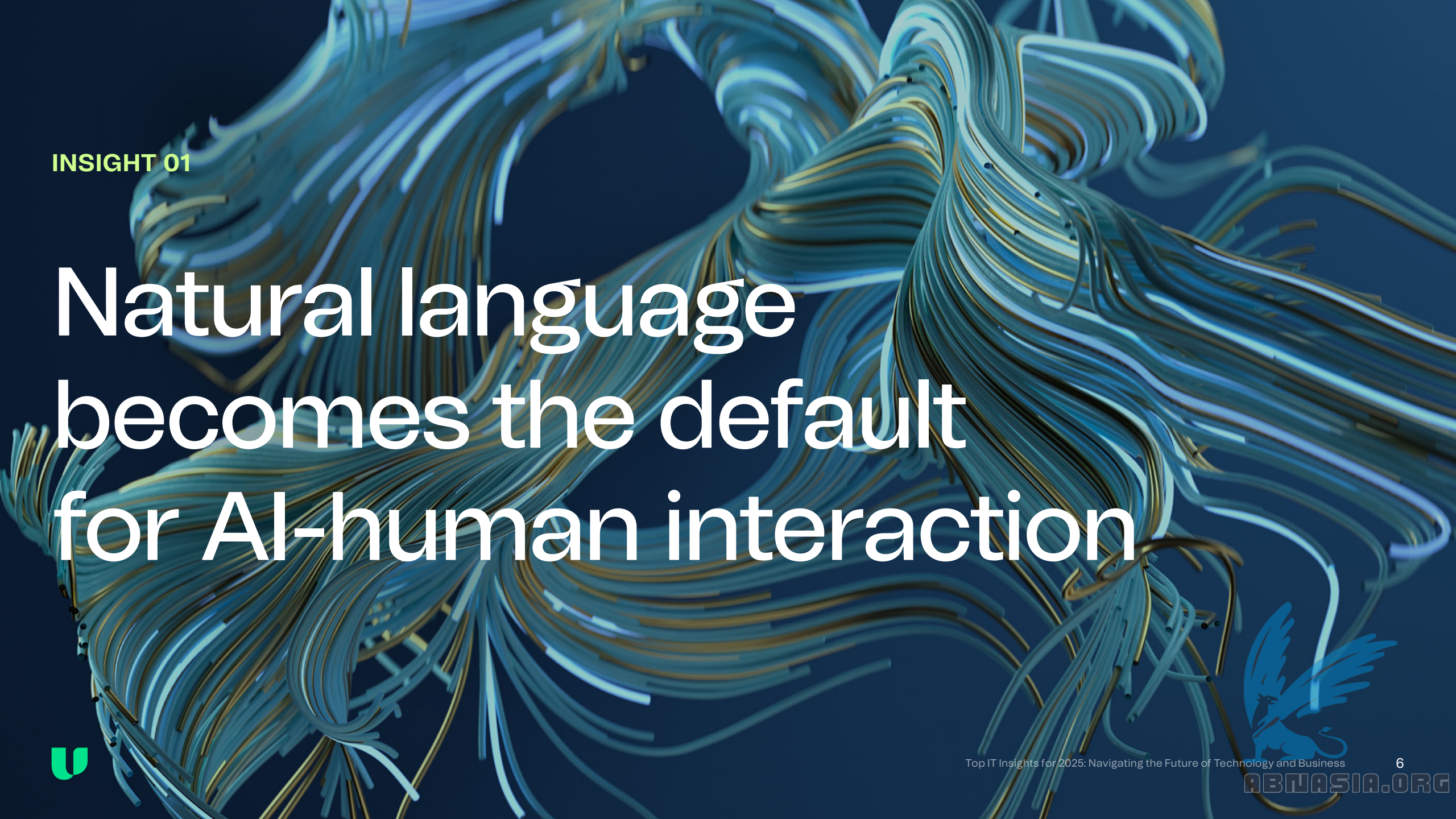
AI's growing energy consumption could become its biggest limitation unless efficiency improves. Measure AI energy consumption, explore efficient model architectures and consider sustainability in AI deployment decisions. Rising compute costs and energy demands make efficiency crucial.

08 Diverse global standards will shape the future of AI compliance

Regional data requirements will force companies to localize AI operations contrary to the cloud's globalization trend. Establish AI governance frameworks, prepare for regional data sovereignty requirements and create clear employee guidelines for AI use. Varying global regulations call for robust compliance strategies. Develop a flexible region-specific approach to AI governance and data management.

INSIGHT 01

Natural language becomes the default for AI-human interaction



Prompt engineering fades as AI becomes intuitive

Today, prompt engineering — a skill set dedicated to crafting precise inputs for AI — plays a key role in making AI systems deliver optimal results. However, in the near future, as natural language processing improves and AI becomes more intuitive, prompt engineering will become obsolete. This shift is already visible across industries as organizations increasingly adopt more natural interfaces for their AI applications. AI will seamlessly integrate into all aspects of our lives, enabling us to communicate with machines as naturally as we do with humans. As AI evolves, we see a clear progression from basic web interfaces to fully natural interactions.

AI is advancing so fast that, honestly, any particular skill you get as a prompt engineer will be irrelevant within two or three years because you won't need any special questions. Prompting will be natural language, and it largely already is."

— Peter Altabef, Unisys CEO

AI-human interaction will be multimodal, not just on your laptop

Most AI interfaces today — especially those for generative AI — are accessed through web applications. While these have opened new possibilities, the next wave of AI will move beyond the boundaries of screens and keyboards. From healthcare providers dictating patient notes to field technicians using voice commands for equipment diagnostics, AI is becoming more mobile, voice-driven and woven into daily life in ways that feel natural and intuitive.

Imagine AI not just on your laptop but seamlessly integrated into your phone, home and workplace, responding to voice commands, gestures and even predictive cues. This integration is already happening in industries like manufacturing, where workers use voice-activated AI assistants to access technical documentation and safety protocols hands-free. This shift will make AI feel more like a helpful presence in our routines, adapting to where we are and what we need, rather than a tool we open only when we sit down at a computer.

We're just climbing that curve. . . . The embedding of large language models into automation, robots and products will be transformational for business."

— Engineering Professor at Purdue University

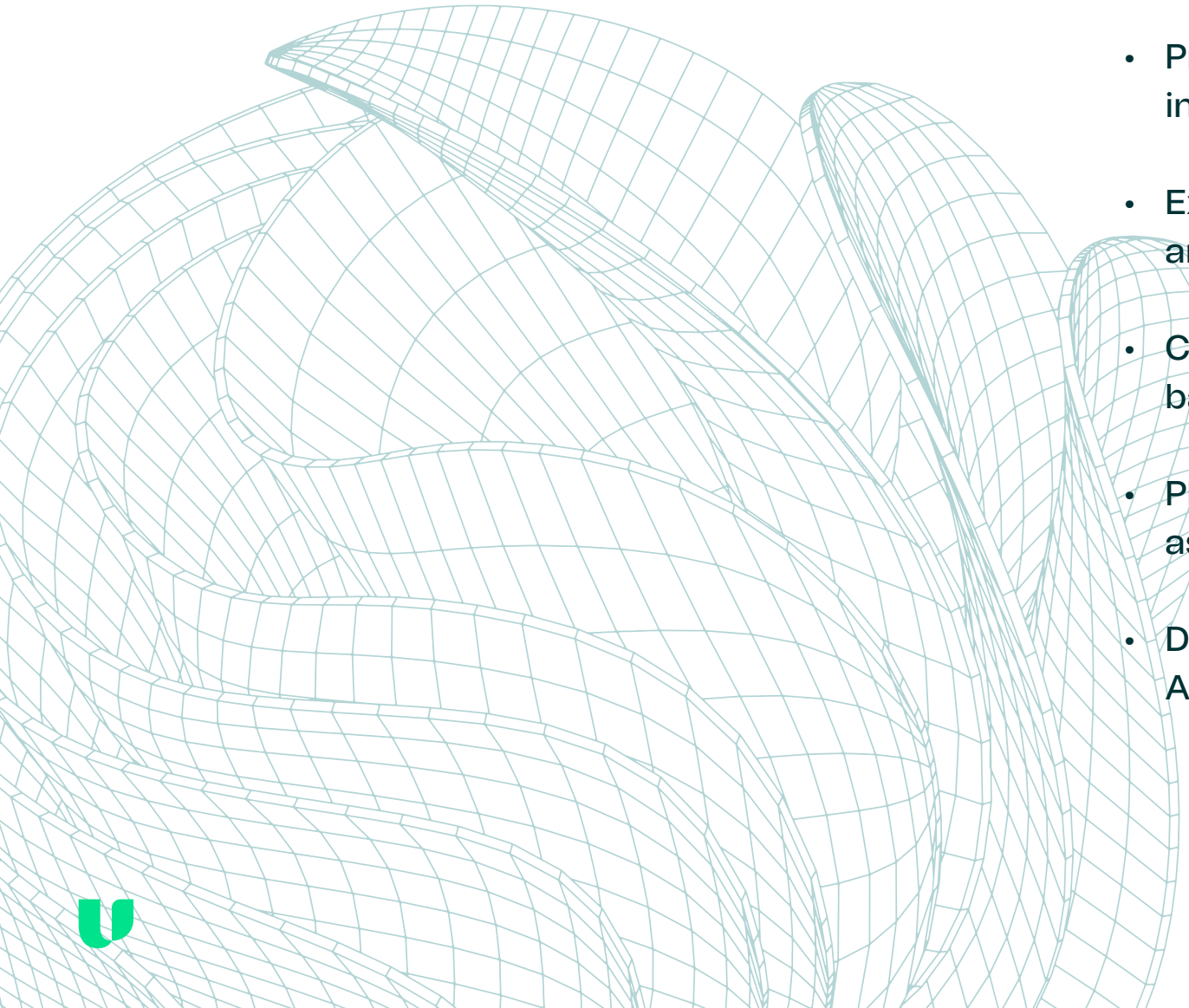
Breaking down human-AI barriers

These interactions will become multimodal, smoother and more intuitive as AI interfaces better understand natural language and human context. Organizations implementing these natural interfaces are seeing improved task-completion rates and higher user satisfaction across their operations.

AI will recognize nuances in tone, intent and voice, drawing from external and proprietary data sources to deliver tailored responses to your needs.

You're going to be able to have an AI detector in your house. You're already seeing it on the smartwatches. If it hears glass breaking, it can alert you. If it hears you coughing a certain way, it warns you."

— Cybersecurity Lecturer, Columbia University



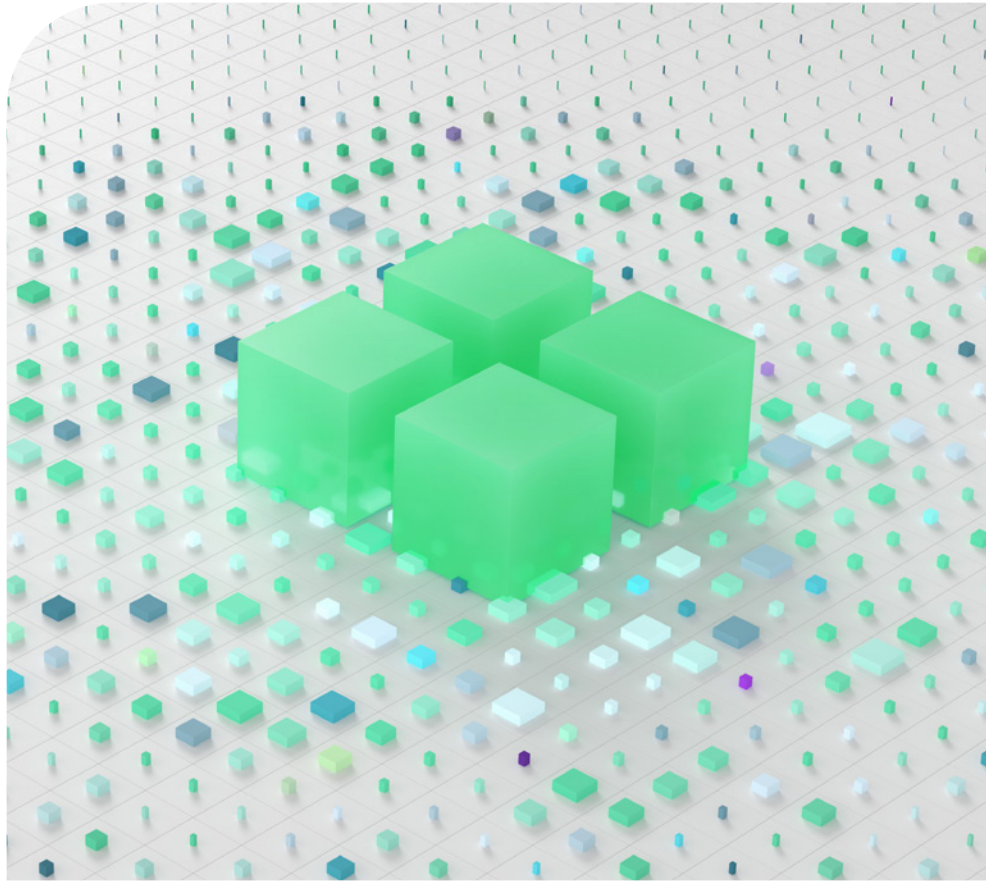
Key takeaways

- Prepare for a transition to natural language interfaces in AI applications.
- Expand AI deployment beyond desktop and web applications.
- Consider user experience in reducing barriers to AI access.
- Plan for infrastructure and security needs as AI interfaces become more pervasive.
- Develop guidelines for consistent AI interaction across all channels.

INSIGHT 02

Small language models and edge computing are the next frontier

Edge computing and small language models: the hybrid solution for faster, more secure AI



Although 5G and beyond have expanded coverage globally, not all data infrastructures and AI applications can connect to large language models (LLMs). This is due to connectivity limitations and privacy and security concerns. Utilizing small language models alongside edge computing can reduce LLM token usage, improve latency and address privacy and security challenges by processing data closer to its source.

This hybrid approach enables organizations to process sensitive data locally while maintaining the advanced capabilities of AI. This results in faster, more secure AI applications without relying heavily on centralized large-scale models. However, the choice between model size and compute location creates distinct tradeoffs in performance, security and efficiency.

Edge computing is going to get the uptick here. OEMs now have devices with GPUs that can compute at the edge. By taking tokens from large language models and creating fit-for-purpose small language models, we can push computation to the edge. This hybrid approach to edge computing will become the standard solution."

— Mike Thomson, President and Chief Operating Officer, Unisys

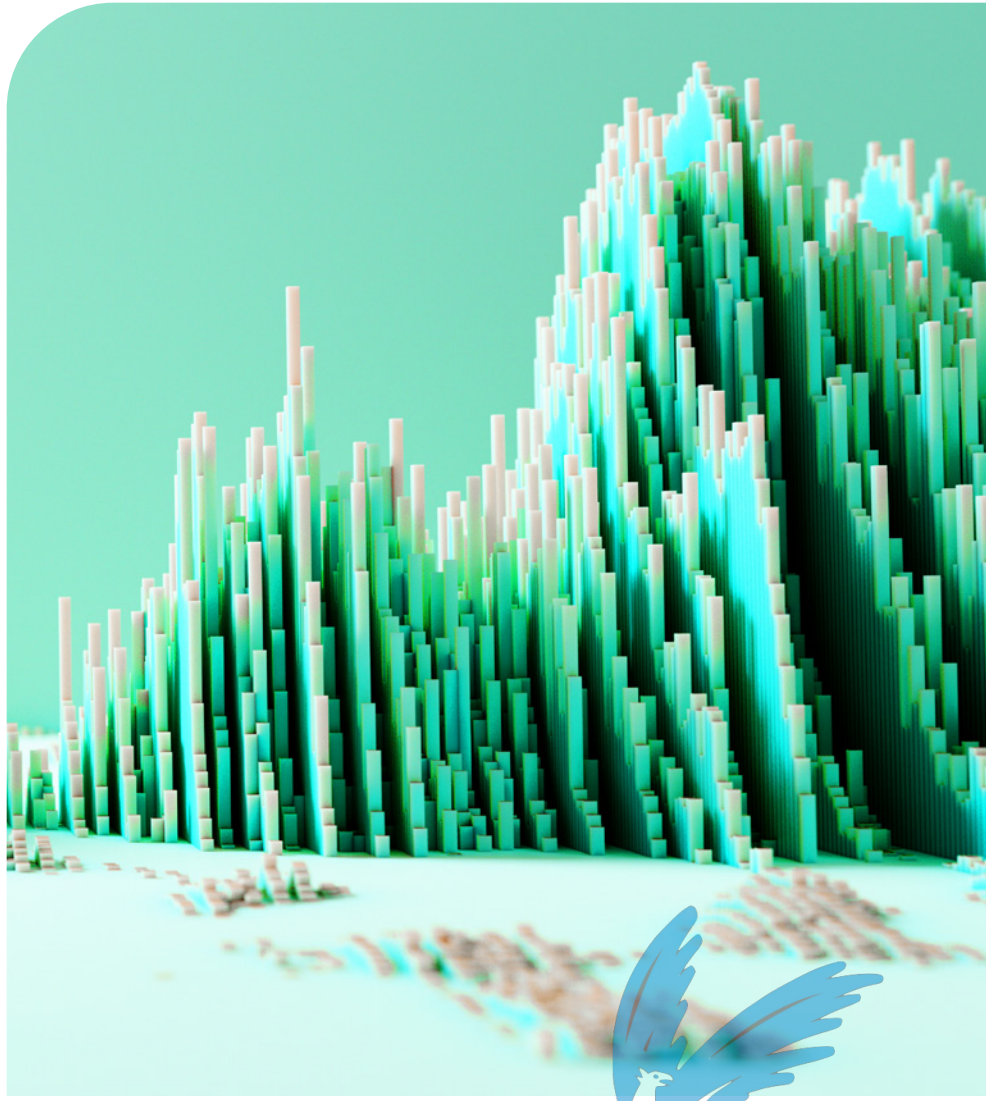
Changing the economics of AI compute

A shift toward smaller specialized models with controlled, trusted data sources can significantly reduce computational demands while enhancing output accuracy. By using localized models that rely on curated data, organizations can minimize the risk of hallucinations and improve the cost-efficiency of deploying language models.

This approach enables businesses to achieve more reliable AI-driven insights while optimizing resource use and managing operational costs effectively. It particularly benefits organizations operating in regulated environments or those handling confidential information.

There's that breakthrough as we bring it down to smaller multimodal models . . . a rack-worth of AI compute costs over a million dollars now. So, the average company won't spend that without guaranteed outcomes. But if you could run this on smaller compute power, maybe even on a laptop with a GPU, then you won't have the same power and cost constraints."

— Joel Raper, Chief Commercial Officer, Unisys



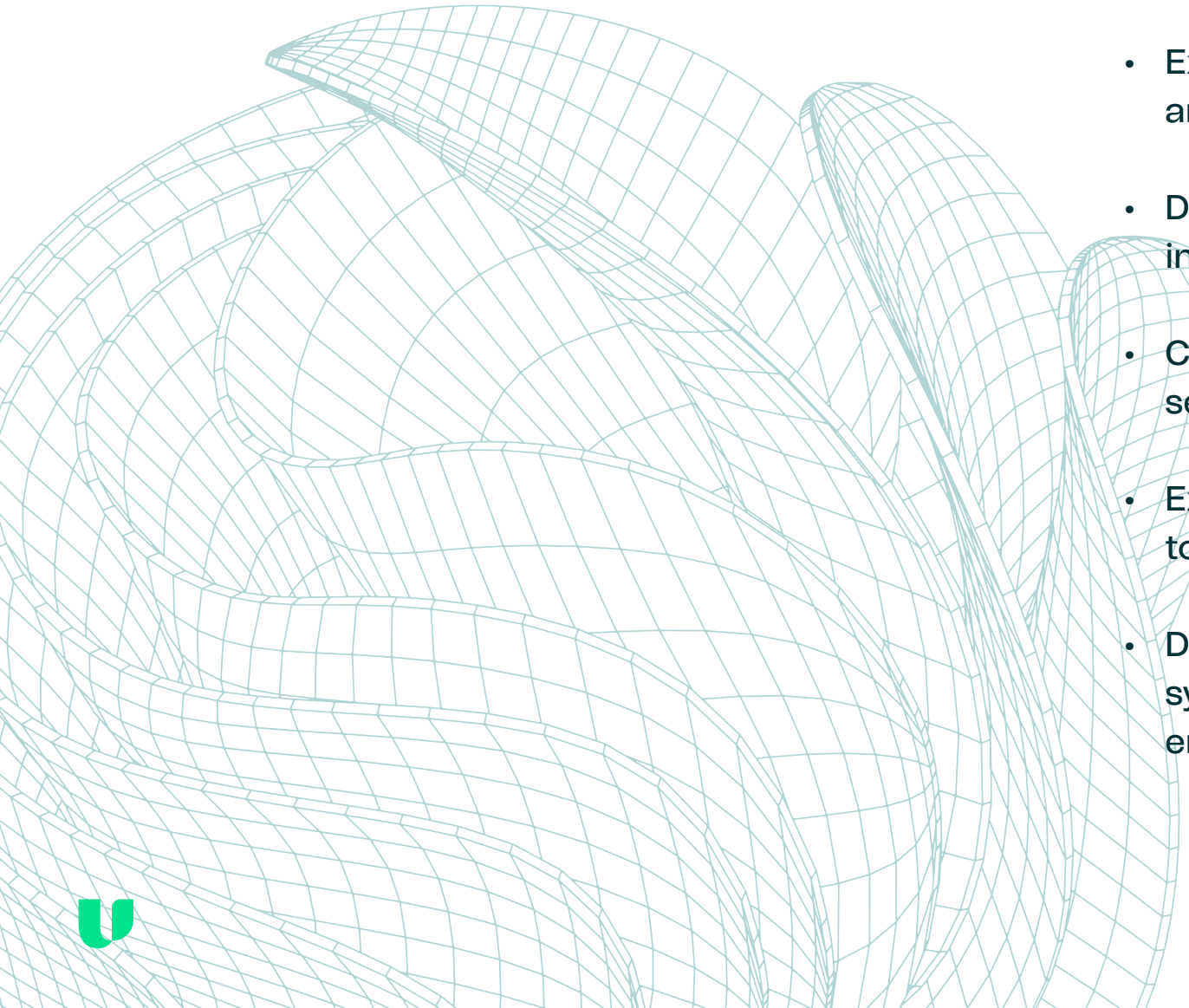
Distributing workloads to the edge

Speed is crucial in business, manufacturing and many other industries, making edge computing invaluable. A small language model deployed on an edge system can respond instantly to inquiries and tasks, reducing dependency on connectivity, minimizing security risks and cutting central computing costs.

This shift toward edge deployment also helps organizations maintain control over their AI operations, reducing reliance on external cloud providers while improving response times.

Our clients want to push to the edge things that can be distributed, processed and manipulated. They don't want to have to continually increase load, even in the cloud. So, whether it's your tablet, your wearables, your phone, smaller servers. . . . the use cases are expanding, and they will enable workers to be more agile and responsive at the point of impact."

— Daniel Ferry, VP, Corporate Development and Transformation



Key takeaways

- Explore edge computing to boost speed and security and reduce central dependency.
- Deploy small language models to cut costs, increase accuracy and lower compute needs.
- Combine edge and small models for a fast, secure and efficient AI solution.
- Explore partnerships with edge computing providers to enhance your capabilities.
- Develop a strategy for data management and synchronization between edge and cloud environments.

INSIGHT 03

Hybrid cloud ascends as cloud migration decisions demand nuance

Rising costs shift cloud strategy

Cloud computing offers essential benefits for today's corporate environment — speed, scalability, agility and centralized security — and will continue to capture a growing share of the market. However, as usage costs rise, the once-clear cost savings of cloud migration are becoming less certain. This shift is prompting organizations to reassess their cloud strategies and consider more nuanced approaches to infrastructure deployment. The business case for cloud migration isn't as clear-cut as it once was.

Cloud adoption is still growing, but its rate of growth is slowing. On-premises infrastructure is poised to maintain a significant portion of the market share, even as cloud usage increases. This trend reflects a maturing market where organizations are becoming more discerning about which workloads truly benefit from cloud deployment. This underscores the enduring relevance of hybrid solutions that optimize the mix of cloud and on-premises resources based on specific business needs and constraints.

We're moving past the philosophy of five years ago, where people said, 'We're going to be cloud-first or cloud-only.' I don't think companies have seen the economic benefit of that storyline actually come to fruition. Moving forward, a more balanced strategy is needed."

— Mike Thomson, President and Chief Operating Officer, Unisys

Cloud economics are squeezing CIOs

The original promise of the cloud was a trade-off: reduced upfront costs in exchange for lower ongoing maintenance, eliminating the need for heavy investments in on-prem infrastructure, data center investments and dedicated staff. However, as cloud providers capitalize on vendor lock-in, this trade-off is becoming harder to justify.

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CIOs now face escalating, often hidden cloud costs and frequent price hikes. These costs can include data transfer fees, storage charges and premium services that were not initially factored into budgets. Meanwhile, cloud providers are also under pressure, ramping up AI compute without clear returns and passing these costs onto tenants. This situation is creating a ripple effect throughout the industry, affecting both providers and customers. Today, CIOs must take a more rigorous approach to weighing cloud versus on-premises economics.

If you are a CIO, you will face a lot of pressure on cloud costs because it is not cheap. You need to start modernizing your applications. This means spending more up front to gain more value, especially through faster time to market with cloud and application modernization."

— Manju Naglapur, Senior Vice President and General Manager, Cloud, Applications and Infrastructure, Unisys

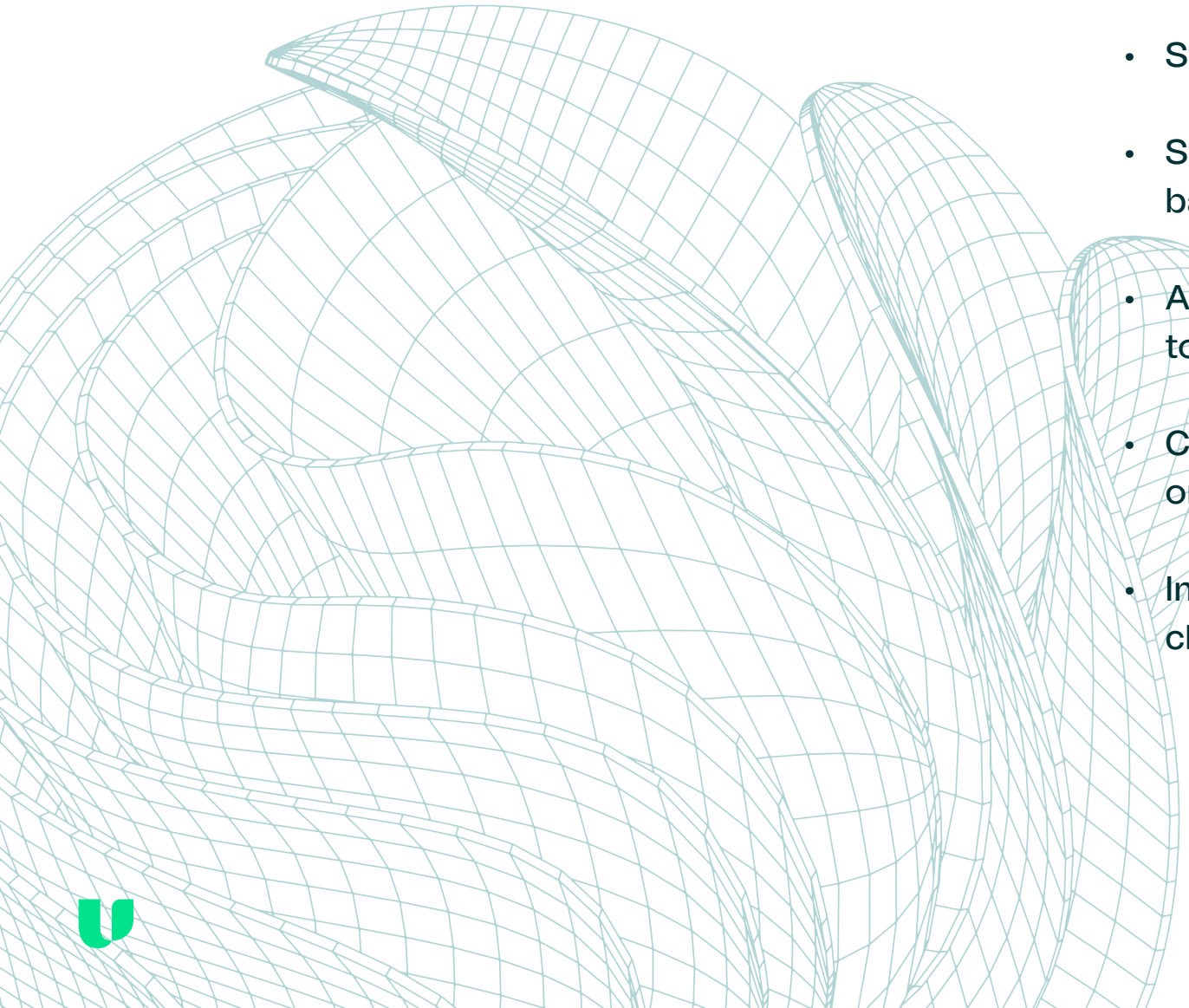
Hybrid is the way of the future

Most enterprises benefit from a hybrid approach: sensitive, latency-dependent or regulated resources remain on-premises, while scalable, data-intensive and customer-facing applications move to the cloud.

This balanced strategy allows organizations to leverage the strengths of both environments while mitigating their respective weaknesses. Many companies adopt a multi-cloud strategy to prevent vendor lock-in and comply with regional data privacy regulations.

Hybrid is the way of the future, no doubt. And when you think about the expectations that enterprises have built into the value they're going to drive from their AI investments, that is going to be reliant on a hybrid infrastructure as well."

— Chris Arrasmith, Senior Vice President and General Manager, Enterprise Computing Solutions, Unisys



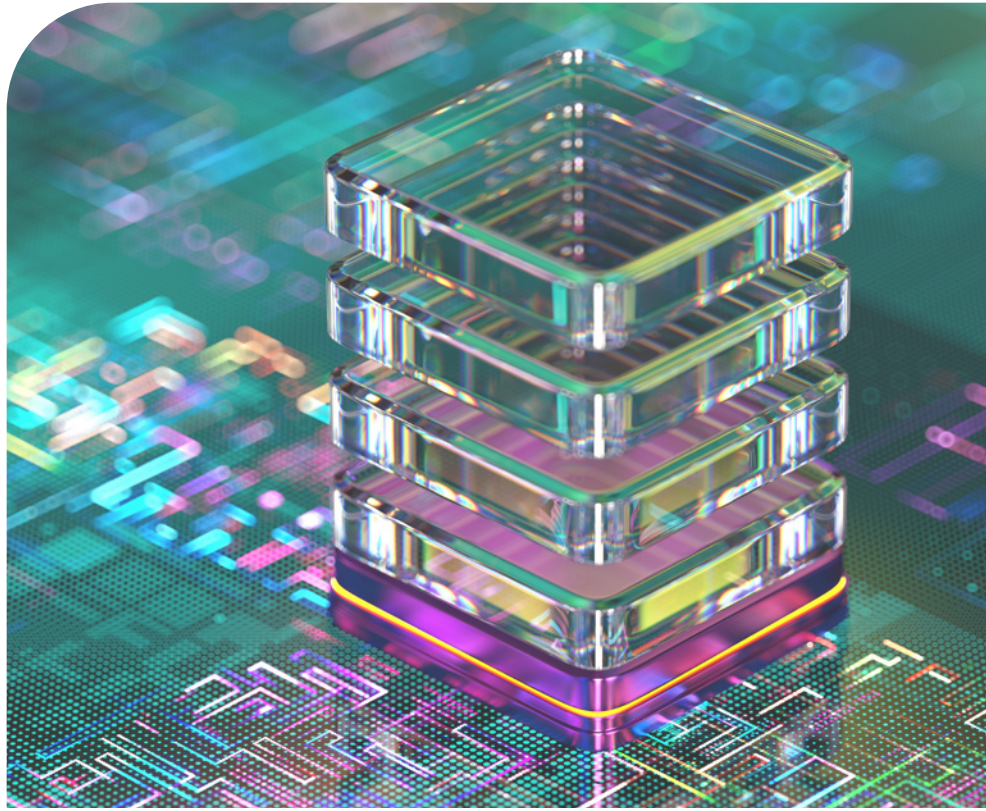
Key takeaways

- Scrutinize cloud costs and ROI as complexity grows
- Segment workloads between cloud and on-prem based on sensitivity and scalability
- Adopt multi-cloud and consider data residency to avoid lock-in and stay compliant
- Consider cloud cost increases and potential on-prem migrations for some applications.
- Implement robust monitoring tools to track cloud usage and costs across the organization.

INSIGHT 04

Post-quantum cryptography moves from theory to practice

Prepare now for post-quantum cryptography



Quantum computing has been "five years away" for over a decade, but ChatGPT has shown that a breakthrough can reshape a market overnight. While broad quantum applications or general-purpose quantum technology may still be distant, companies must now prepare for post-quantum cryptography (PQC) standards. Even encrypted data, if stolen today, could be decrypted in the future when quantum technology advances enough to break current encryption methods. This concept, known as "harvest now, decrypt later," poses a significant threat to long-term data confidentiality.

The number of qubits is projected to grow exponentially, with estimates suggesting that by 2030, quantum computers may have sufficient logical qubits to break current encryption standards like RSA-2048 and AES-256. This underscores the urgency for organizations to adopt post-quantum cryptography and prepare for the impending quantum threat to data security.

> **We know that there is an immense amount of data out there that's encrypted in a fashion that in the not-so-distant future is going to be worthless. So, we'll have to change the encryption. Parties have been collecting this data; some of it won't matter if it's decrypted three or five years after it's generated, but some of it needs to remain confidential in perpetuity. The general business world has not focused enough attention on the risk of quantum."**
>
> **— Cybersecurity Lecturer, Columbia University**

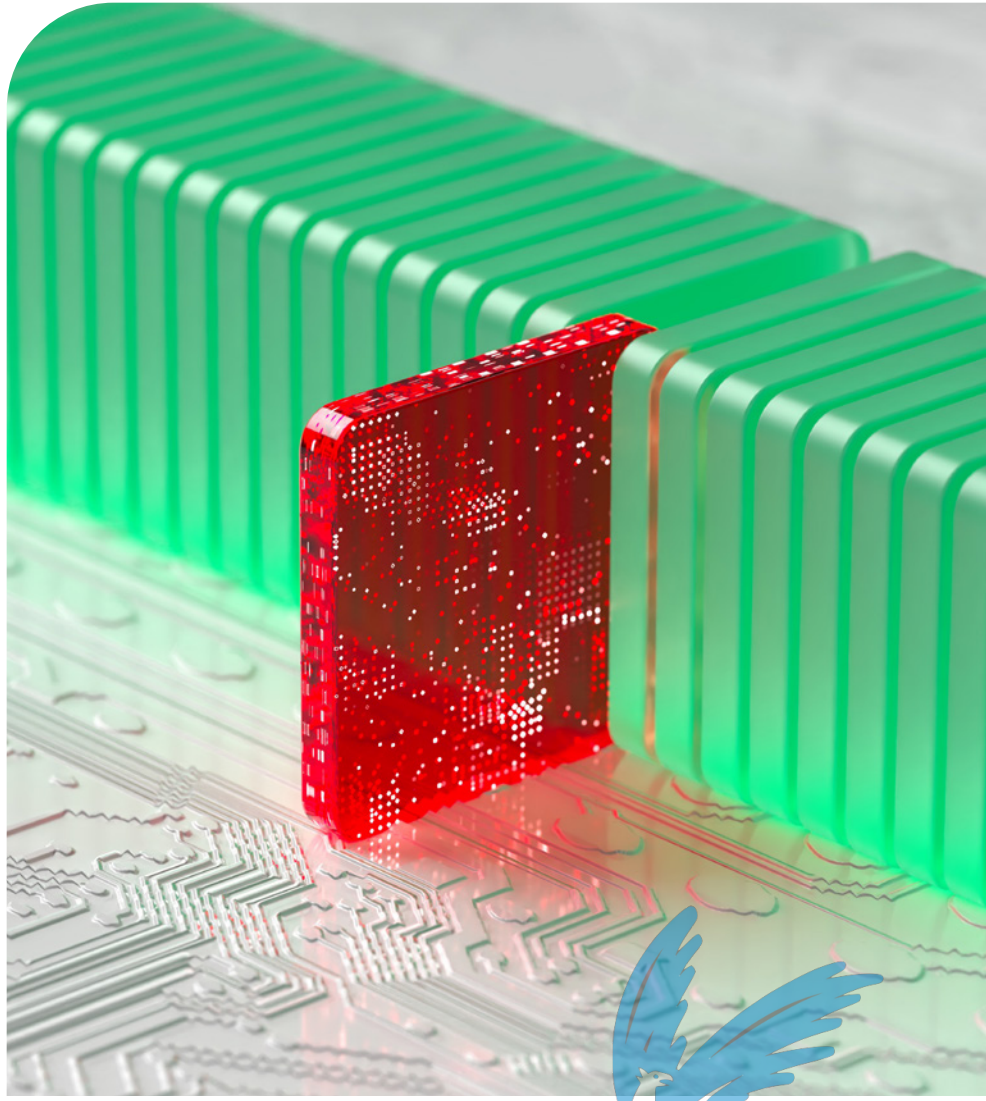
Post-quantum cryptography standards are now here, but even they might not last

In August 2024, the National Institute of Standards and Technology (NIST) released its first set of PQC standards "designed to withstand cyber attacks from a quantum computer." The era of PQC is here, and companies should adopt these standards as quickly as possible.

Additionally, the evolving nature of conventional and quantum cyber threats requires firms to continuously update their cryptography standards to stay ahead and prevent future breaches. This ongoing process of cryptographic agility willbe crucial for maintaining long-term data security in the quantum era.

With quantum, long-term cryptography standards become obsolete faster. One of the previous NIST candidate algorithms for post-quantum resistance was immediately taken off the table because it had been proven to be exploitable. Organizations must build flexibility into their systems, as crypto standards will continue to evolve much more rapidly than in the past."

— Chris Arrasmith, Senior Vice President and General Manager, Enterprise Computing Solutions, Unisys



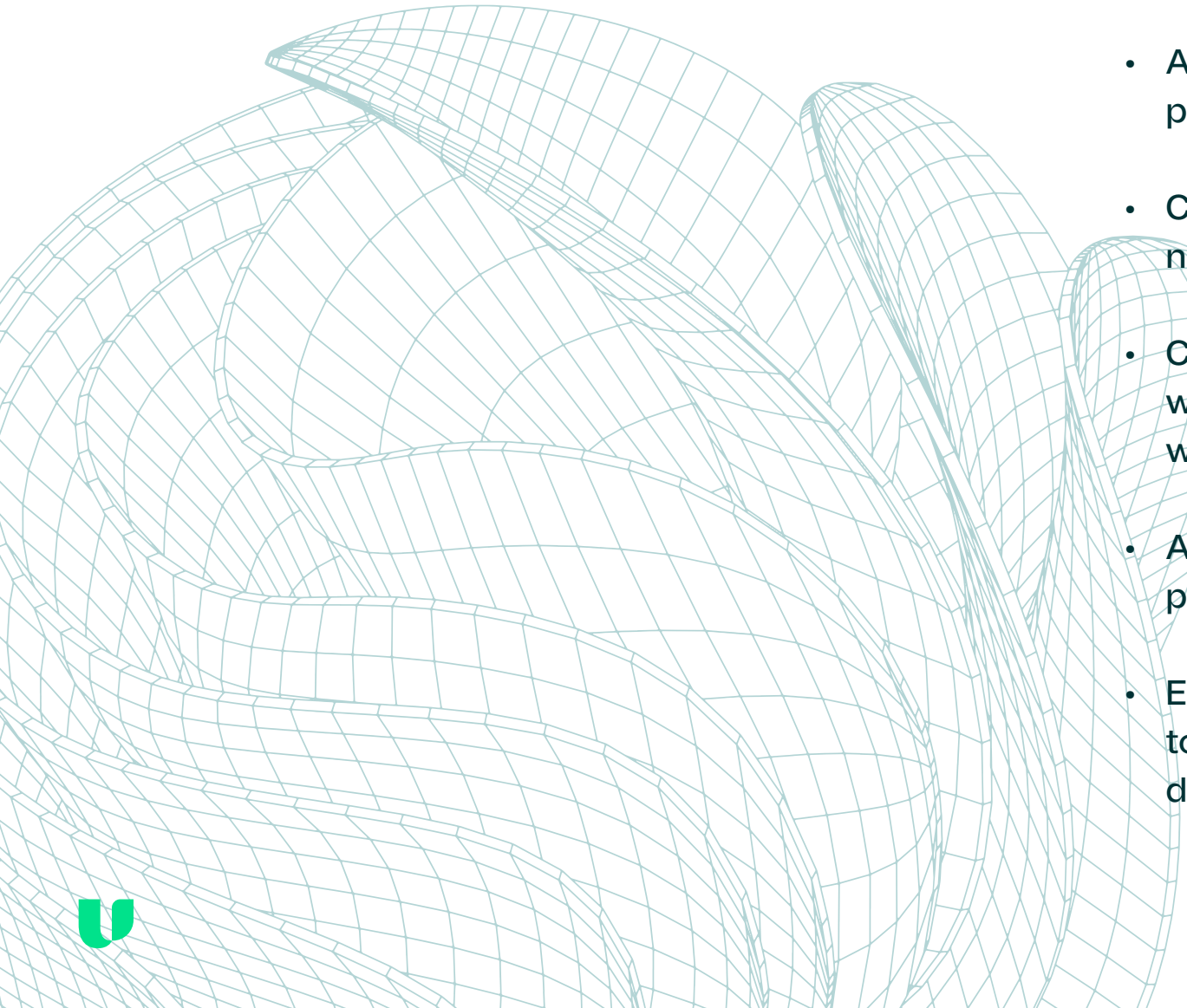
General-purpose quantum computing would revolutionize industries as significantly as generative AI

While general-purpose quantum applications may still be in the future, quantum computing will soon have significant implications for specific computational challenges. The combination of AI and quantum could accelerate innovation in areas like drug discovery, material science, optimization, climate modeling, financial modeling, chemistry and traffic management.

Today's executives should stay informed about these developments, as they will likely reshape the industries affected. Quantum machine learning, in particular, shows promise in handling complex datasets and solving optimization problems that are currently intractable for classical computers.

I believe the coming quantum revolution will surpass the AI revolution. . . . There are limited quantum applications available today because the technology is limited . . . but in less than 10 years, quantum will start to dominate because of its breakthrough potential."

— Peter Altabef, Chair and Chief Executive Officer, Unisys



Key takeaways

- Adopt post-quantum cryptography standards promptly to safeguard sensitive data.
- Continuously update cryptography protocols; no encryption standard will be permanent.
- Consider that quantum's impact could surpass AI, with revolutionary applications in multiple industries within the next decade.
- Assess data assets and prioritize the transition to post-quantum cryptography for sensitive, long-term data.
- Engage with industry partners and standards bodies to stay updated on post-quantum cryptography developments.

INSIGHT 05

Entry-level workers are the model for an AI-enabled workforce

Entry-level talent is essential for an AI-driven future workforce

Despite the advances in generative AI, entry-level workers remain essential to the future of business. While AI can automate many repetitive tasks, entry-level employees often possess a deeper understanding of generative AI tools and how to effectively integrate them into workflows. This is because they have grown up immersed in technology and are more comfortable experimenting with new digital tools and techniques.

For example, an entry-level AI-native worker will likely approach business tasks much differently than a seasoned employee. These workers are digital natives, highly adaptable, innovative and capable of handling AI technologies, making them valuable contributors to an AI-enabled workforce.

One of the temptations with the technology is to think generative AI can do the work of entry-level people. That's a very limited outlook because entry-level people tend to be more knowledgeable about technology than people with gray hair. And if you don't bring in entry-level people, then you have no leadership for the future."

— Peter Altabef, Chair and Chief Executive Officer, Unisys

The future of work will increasingly involve human-AI collaboration

As AI is embedded in common tools and workflows, employees will find AI-assisted tools to help them achieve more. For example, AI can perform repetitive data entry, analysis and reporting tasks, allowing workers to focus on higher-order responsibilities that require human judgment and creativity.

However, companies must guide this transition, ensuring productivity gains are channeled into meaningful work rather than merely extra free time. As AI becomes a trusted team player, it can handle repetitive tasks, allowing employees to focus on strategic and creative work that AI cannot replicate.

We are entering the era of integration, and that integration is going to be human-centered. We're identifying tasks where we've fallen short and where the language models might be able to help us."

— Professor of Computer Science, Northwestern University

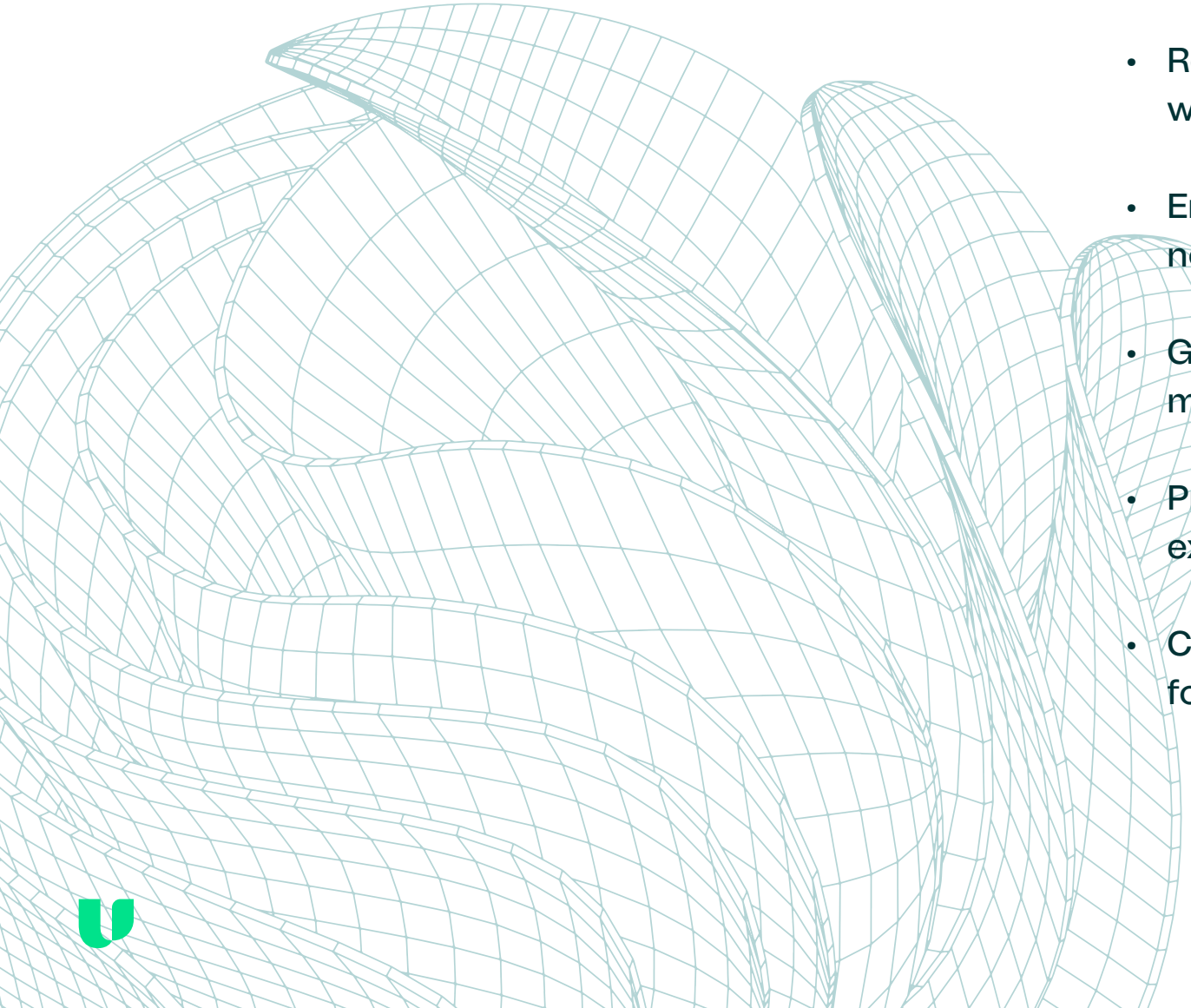
The adoption of AI tools remains a key challenge

Employees vary widely in their openness to AI. Some workers are eager to explore AI's capabilities, creating and customizing tools for personal productivity, while others resist change due to concerns about job security or a lack of familiarity.

For AI to be successfully integrated, the focus should be on collaboration — positioning AI to enhance rather than replace human roles. This shift helps employees see AI as a supportive team member that frees up time for higher-value work rather than a threat.

Companies are asking proactively what it takes to drive long-term value from a large language model. . . . Developing an LLM requires discovery of where data acquisition, data infrastructure, business intelligence and machine learning can drive value. After that is determined, remember that this is a program, not a discrete project. The program is a bit like caring for a child in that it requires constant care, feeding and attention. LLMs have to be monitored and updated, they have to be kept secure to maintain relevance."

— Brett Barton, AI Practice Leader, Unisys



Key takeaways

- Retain entry-level talent to build future leadership with AI skills.
- Encourage a view of AI as a supportive tool, not a replacement.
- Guide employees to use AI-enhanced tools for meaningful productivity gains.
- Provide training and upskilling programs to help experienced workers adapt to AI-powered workflows.
- Continuously evaluate which tasks are best suited for automation versus human judgment and creativity.

INSIGHT 06

The sweet spot for hybrid work is three days

Finding the balance in hybrid work

Remote work has helped companies reduce office space and cut operational costs, but challenges like employee isolation, disengagement and "quiet quitting" persist. Hybrid work — often settling around three days in-office — will likely become the norm as companies strive to balance remote flexibility with in the office engagement, fostering retention and adapting to new workplace expectations.

This hybrid approach aims to provide employees with the best of both worlds, enabling them to experience the benefits of remote work while also maintaining important in-person interactions. To support this model, companies are deploying a range of workforce engagement tactics across in-office, remote and hybrid work environments. These tactics are designed to foster a sense of community, support employee well-being and maintain productivity, regardless of location.

I think we're going to be hybrid a little bit longer, leaning toward a back-in-the-office culture. So, if it is two days right now, it will be three days. If you're creating pods, you'll need a lot more coordination among those pods to work together. So, we'll never go back to full-time work in the office. I think we'll probably stay at the sweet spot of three days in the office."

— Private Equity Portfolio Company CEO, Former U.S. State CIO

Even young workforces benefit from face-to-face interaction

Younger workers, often assumed to prefer fully remote setups, are seeing that a balanced hybrid schedule — such as three days in the office — can enhance collaboration, innovation and career growth. While remote work has become a standard option, particularly in the wake of the pandemic, the hybrid work model is proving to be the most sustainable long-term solution for employers and employees. Younger employees value the networking, mentorship and creative spark that often come from in-person work, even as they also appreciate the flexibility of remote options.

I think the hybrid model will continue but with a different dynamic. Remote work remains, but there's been a reevaluation. Younger people want face-to-face interaction in office spaces. When their first job is online, they feel really isolated."

— Former Managing Director, New York City Housing Authority

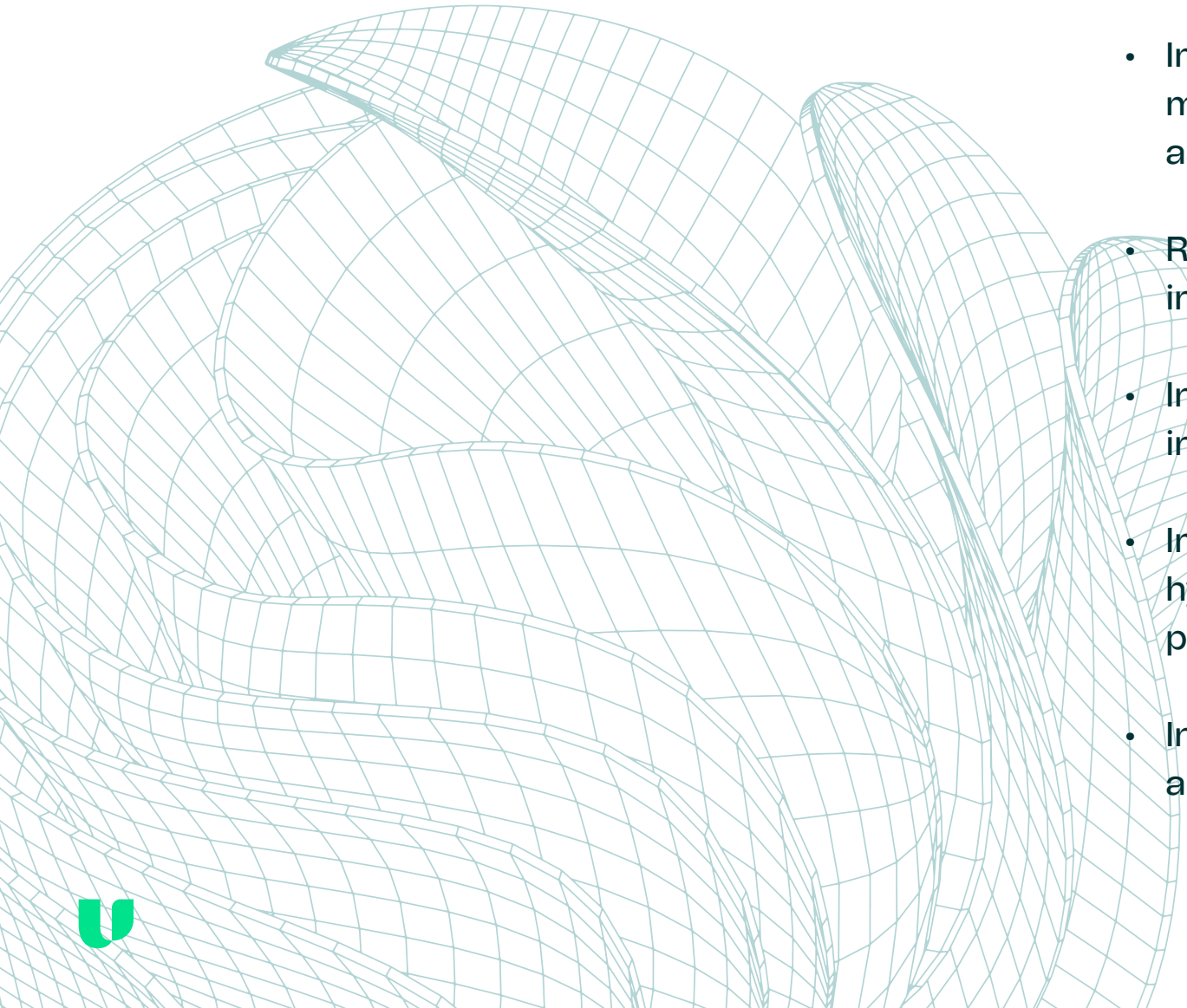
Companies need to invest in mental health and community-building efforts to foster a sense of belonging

During the COVID-19 pandemic, mental health declined sharply as employees faced prolonged isolation. The core challenges of isolation remain in remote work, requiring companies to intensify efforts to support mental well-being, foster a shared mission and keep employees engaged despite physical distance.

Providing outlets for social interaction, regular check-ins, and opportunities for collaboration can help combat the feelings of disconnection that remote work can sometimes breed.

The onus is going to be on companies to measure people objectively based on performance and how they use their head, heart and guts to collaborate, challenge the status quo, show emotional intelligence, and execute strategy. They need to find creative ways to engage remote workers so that they don't feel like they have to be in the office to be considered part of the team."

— Fortune 500 Board Member



Key takeaways

- Implement and evaluate a three-day in-office hybrid model, developing metrics to measure its effectiveness as this approach emerges as the sustainable norm.
- Recognize that younger workers also value in-person interaction for growth and innovation.
- Intensify efforts to support mental health and belonging in remote settings.
- Implement a diverse mix of in-office, remote and hybrid engagement tactics to cater to varied employee preferences.
- Invest in technologies that seamlessly blend in-office and remote work experiences.

INSIGHT 07

Energy-efficient AI will be a competitive advantage

Balancing growth with sustainability amid energy demands

As AI adoption surges, tech giants and companies across industries are building massive data centers to support AI workloads, putting immense pressure on the global energy grid. These data centers, essential for training and running advanced AI models, consume vast amounts of power, sparking concerns about infrastructure capacity as firms compete to have the latest and greatest models. This energy-intensive approach is prompting discussions about more energy-efficient AI models as companies are forced to address the environmental impact of AI operations.

Practicing sustainable AI could be a differentiator in two dimensions: optimizing the use of energy resources in the training and operation of AI, as well as applying AI to energy-intensive processes and applications. Often sustainability and cost savings go together. We're already seeing AI optimizing processes in industries like cargo, leading to sustainability benefits. The future will involve green AI as a competitive edge."

— Suzanne Taylor, Vice President, AI Portfolio, Unisys

Surging energy demands of AI highlight sustainability concerns

Google's former CEO Eric Schmidt noted, "... we're not going to hit the climate goals anyway because we're not organized to do it. . . . I'd rather bet on AI solving the problem than constraining it and having the problem."

While this quote highlights the potential for AI to drive sustainability breakthroughs, it also reflects the current tension between the technology's rapid growth and environmental concerns.

It is not clear if sustainability or more energy-efficient AI will be a priority for companies that are in a race to develop cutting-edge large language models. Still, in a race for energy demand, the market or even AI itself can create incentives or pathways to reduce energy usage or increase capacity in a sustainable way. To that end, there are many pathways companies are exploring to increase energy capacity and apply more energy-efficient AI practices.

Everyone is trying to come up with better solutions to fuel AI. Microsoft, for example, is investing in nuclear reactors. But this is a huge challenge and will take time to fully solve."

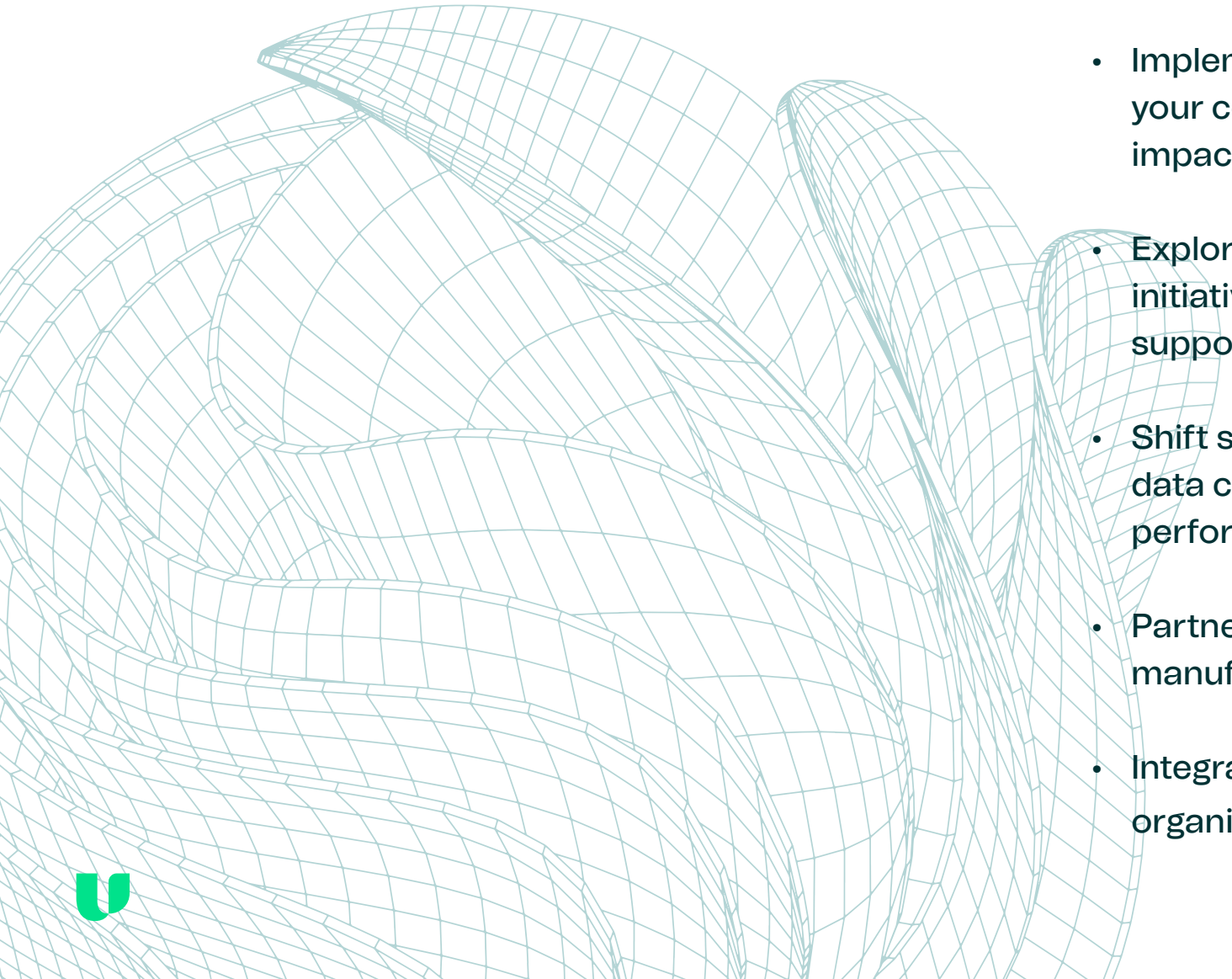
— Manju Naglapur, Senior Vice President and General Manager, Cloud, Applications and Infrastructure, Unisys

The generative AI space is moving quickly to power– or computationally efficient models

Economic pressures are also accelerating this trend as the cost of training and running AI models — especially large models — continues to rise. This is leading companies like Microsoft and Google to innovate in energy efficiency and optimize their models. To alleviate the burden on data centers, some firms are looking toward edge computing to distribute processing. Moving some AI workloads closer to the source of data — like on local servers, laptops and mobile devices — can reduce the load on centralized data centers, improve latency and ultimately decrease energy consumption.

I think that the algorithmic space is moving very fast, and there are new, more computationally efficient approaches that are appearing that will translate into better performance at lower cost."

— Industry Chief Technology Officer, Dell Technologies



Key takeaways

- Implement sustainable AI practices to differentiate your company and reduce environmental and cost impact as energy demands grow.
- Explore alternative energy sources and efficiency initiatives to ease data center energy strain and support AI expansion.
- Shift some AI workloads to edge devices to reduce data center load, cut energy use and improve performance at lower costs.
- Partner with cloud providers and hardware manufacturers focused on energy-efficient AI solutions.
- Integrate AI energy efficiency metrics into your organization's overall sustainability goals.

INSIGHT 08

Diverse global standards will shape the future of AI compliance

AI regulation becomes imminent

Governments around the world are racing to regulate AI use. By 2026, we expect to see AI legislation or principles emerge that address issues like data privacy, security, intellectual property and ethics. These regulations will likely cover a wide range of AI applications, from facial recognition to automated decision-making systems.

While the United States, the European Union and other nations have different approaches to regulating AI, businesses everywhere will feel the impact of this global patchwork. For boards and executives, creating strong AI governance will be essential to navigating these regulations and mitigating non-compliance risks.

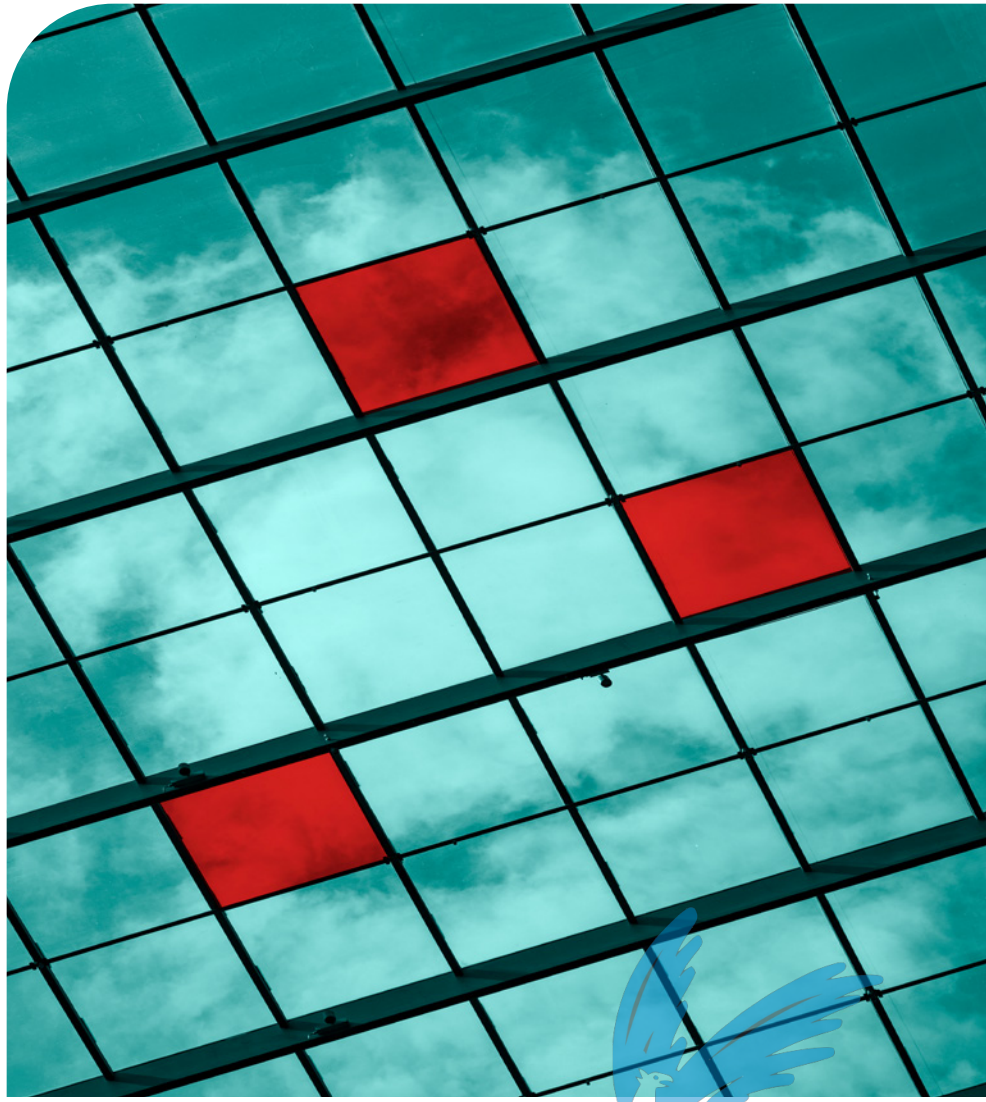
We need to adjust how we operate. From a data residency and regulatory standpoint, Europe has been leading the way in regulatory frameworks and increased security, whether through GDPR or other data residency regulations."

— Patrycja Sobera, Vice President and General Manager, Digital Workplace Solutions, Unisys

Data sovereignty will create regionalization of data

Global AI standards are expected to shift national policy as businesses navigate a complex web of regional regulations. This will shape how companies develop and deploy AI to avoid compliance issues and potential fines. Companies may need to create region-specific AI models or data processing pipelines to comply with local regulations.

Data privacy and security will be key concerns, especially for AI systems like large language models that process sensitive information. With increasing demands for hyperlocalized data control, the push for data sovereignty will likely intensify. This could lead to the creation of regional AI ecosystems, with data centers and AI development hubs strategically located to comply with local data sovereignty laws.



There'll be much more regionalization of data. There'll be a lot more demand for hyperlocal data sovereignty. So right now, it's the EU, but it might get even smaller than that as you move forward. I don't see the difference between the politics of nationalization and nationalistic data sovereignty. I think they'll go together."

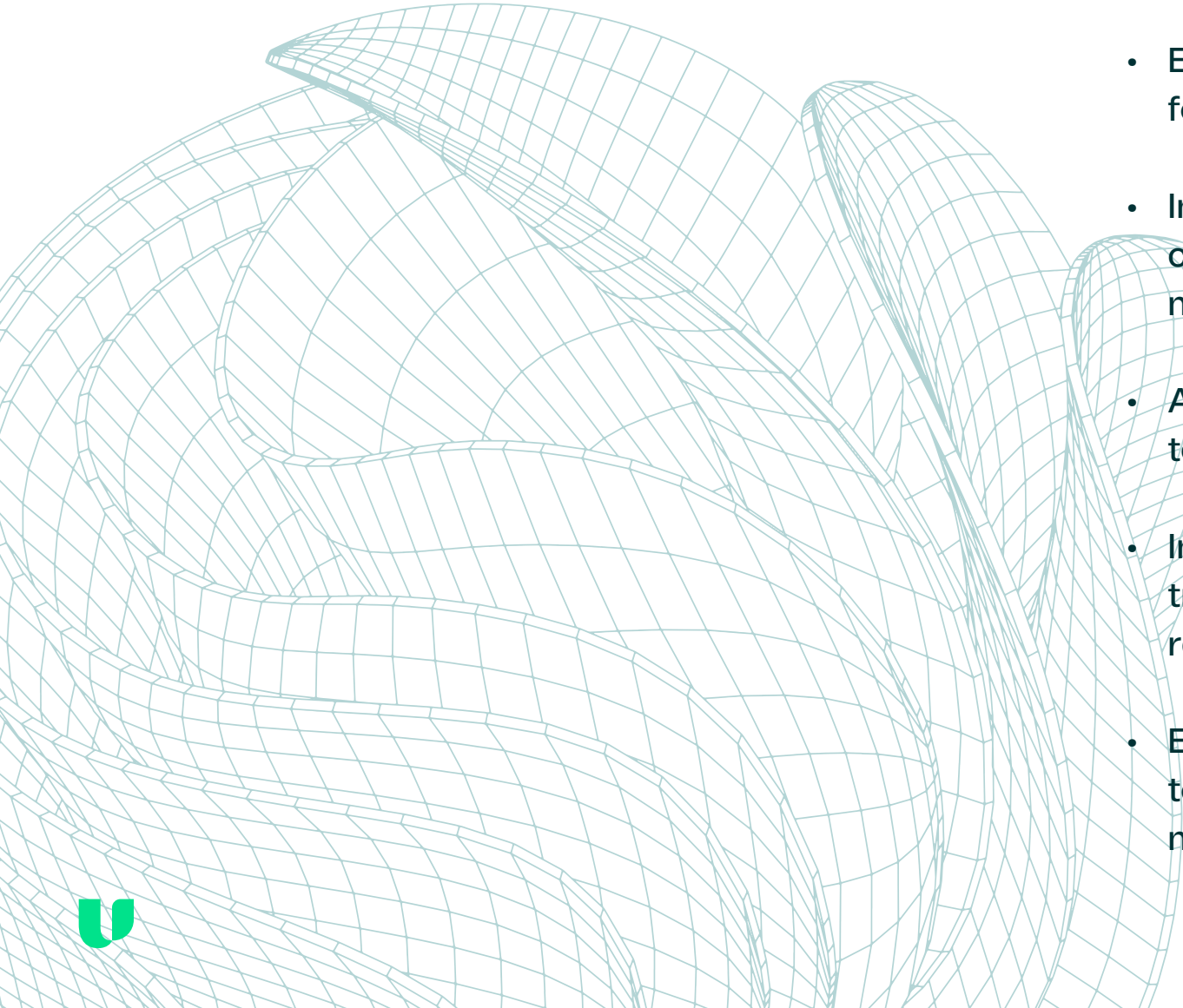
— Private Equity Portfolio Company CEO, Former U.S. State CIO

Guardrails and guidance on AI are needed for employees

Regulatory frameworks are expected to mandate rigorous testing and certification of AI models, especially in regulated industries like healthcare and finance. As AI adoption grows, particularly in fields where errors could have serious consequences (e.g., healthcare), there is a need for clear legal guidelines for employees set by leadership around liability and avoiding harm in cases of AI-related accidents or failures. Companies will need to develop comprehensive AI ethics policies and provide ongoing training to ensure employees understand their responsibilities when working with AI systems.

AI will have access to vast amounts of information, and companies will need to ethically manage and protect that data so it is used appropriately. AI is all about the data — without good master data management, they don't stand a chance."

— Fortune 500 Board Member



Key takeaways

- Establish clear AI guidelines and training for employees to meet regulatory standards.
- Implement strong governance to ensure compliance with new AI regulations and mitigate risks to user privacy.
- Adapt AI data storage and processing methods to align with regional data policies.
- Implement continuous monitoring systems to track changes in AI regulations across different regions.
- Engage with local regulators and policymakers to stay informed about AI regulations in key markets.

Looking ahead

These eight insights reveal a technology landscape that demands both immediate action and long-term strategic planning. Organizations face a crucial period where AI becomes more intuitive and pervasive, computing architectures grow more sophisticated and workforce models continue to evolve. The convergence of these shifts creates both opportunities and imperatives for business leaders. We see three critical factors that will determine organizational success through 2025:

Technology integration and adaptation

Success requires more than simply implementing new technologies. Organizations must thoughtfully integrate AI, cloud and quantum-safe security into their operations while building the expertise to maximize these investments. This means developing clear technology roadmaps, establishing strong governance frameworks, and creating flexible architectures that can adapt as technologies mature.

Workforce evolution

The relationship between people and technology continues to transform. Organizations must balance the fresh perspectives of digital natives with experienced talent while adapting to hybrid work models that maximize both collaboration and flexibility. Building an AI-enabled workforce requires new approaches to training, mentorship and talent development.

Operational resilience

As technology becomes more central to operations, organizations must strengthen their resilience against disruption. This includes preparing for quantum threats to encryption, managing AI energy consumption, adapting to regional data requirements and building robust compliance frameworks. Organizations that proactively address these challenges will be better positioned to navigate future uncertainties.

The path forward requires careful balance. Move too slowly and risk falling behind competitors. Move too quickly without proper preparation and risk costly missteps. The organizations that succeed will be those that maintain a clear vision of their technological future while taking measured, strategic steps to achieve it.

Leaders must keep their teams focused on long-term objectives while remaining flexible enough to adapt to evolving technologies and market conditions. This means fostering a culture of continuous learning, encouraging experimentation within clear frameworks and maintaining strong communication across all levels of the organization. The technology shifts we've outlined will reshape how organizations operate, compete and deliver value. By understanding these changes and taking thoughtful action now, organizations can build the foundation for sustained success in an increasingly dynamic business environment.

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