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Tech Trajectory in 2024

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Tech Trajectory in 2024

As we stand on the cusp of a new year, the anticipation for technological advancements and their transformative impact on enterprises is palpable. In the ever-evolving landscape of business technology, the year 2024 is poised to be a pivotal chapter, steering enterprises through a profound transformation fueled by innovative technologies and disruptive trends. Read on as we delve into the main outlook for enterprise tech, exploring the next big thing on the horizon. As we chart the course for 2024, the spotlight is on emerging technologies that will redefine industries and propel enterprises into a new era of innovation and resilience

Amit Singh

The swift evolution of technology is profoundly reshaping our daily lives, as businesses strategically harness its advantages to usher in unprecedented changes, fundamentally altering the business landscape. Gartner's forward-looking projection for the upcoming year anticipates a seismic shift, with generative AI poised to impact 70% of the design and development processes for emerging web applications and mobile apps by 2026. Looking further ahead, the year 2027 is earmarked for the anticipated emergence of AI's productivity value as a primary economic indicator, symbolizing national prowess and predominantly fueled by noteworthy enhancements in workforce productivity.

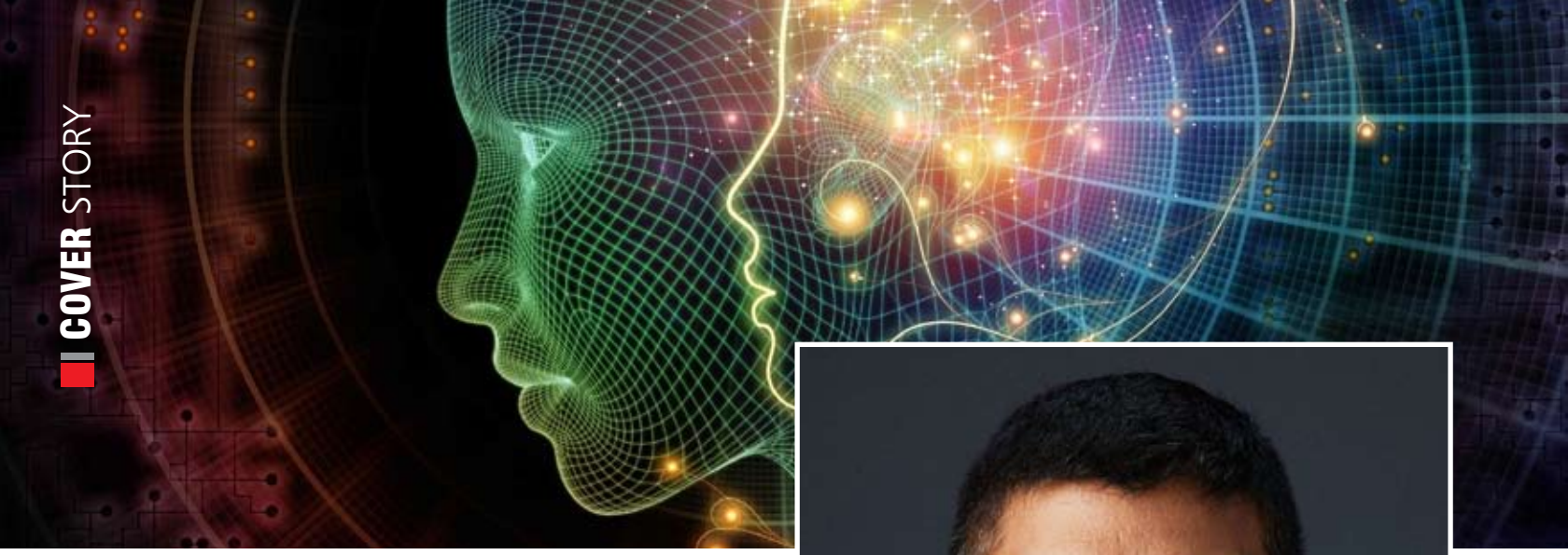
Concurrently, the projection for 2027 envisions a transformative landscape where a quarter of Fortune 500 companies actively seek neurodiverse talent, thereby enhancing overall business performance. Adding to this transformative narrative, GenAI tools are predicted to play a pivotal role by elucidating legacy business applications and engineering suitable replacements, thereby projecting a significant reduction in modernization costs, estimated at 70% by 2027.

The watershed year of 2023 witnessed a momentous breakthrough for generative AI, signaling its potential to catalyze further advancements and propel business growth in the foreseeable future. As outlined in the International Data Corporation's forecast, enterprises are expected to commit a substantial sum, reaching $143 billion, towards generative AI solutions by 2027. This staggering surge in investment represents a significant leap from the $16 billion spent in 2023 and underscores the commitment of the world's largest corporations, allocating over 40% of their core IT expenditures for initiatives related to artificial intelligence.

In the words of Nicolas Sekkaki, Global Practice Leader for Applications, Data, and AI at Kyndryl, "Enterprises around the world will continue to investigate the opportunity to weave AI tools and solutions — including generative AI — into their broader modernization plans." He emphasizes the prevailing consensus that the potential of generative AI far outweighs the risks. Despite this optimism, C-suite leaders remain vigilant, engaging in ongoing conversations and consulting work focused on maintaining privacy, safeguarding intellectual

> "Enterprises around the world will continue to investigate the opportunity to weave AI tools and solutions — including generative AI — into their broader modernization plans."

NICOLAS SEKKAKI,
Global Practice Leader for Applications, Data, and AI, Kyndryl



"The future belongs to those who harness the power of AI and automation to navigate complexity, allowing a dynamic collaboration between human ingenuity and robotic efficiency. As we pioneer safe AI, we're shaping a future where enterprises thrive through innovation, efficiency, and the harmonious collaboration of people and machines."

ARUN BALASUBRAMANIAN,
Vice President and Managing Director, India and South Asia, UiPath

"Collaboration has always been human-to-human, but now it's humans plus AI. Once AI learns deeply about a company, its teams, and how it works, the possibilities are endless. This means employees can get up to speed in minutes or hours. Imagine the impact across enterprises and industries working on complex problems."

RAJEEV RAJAN, CTO, Atlassian

property, preventing data leaks, and optimizing costs. This nuanced approach reflects a careful balancing act as organizations navigate the transformative potential of generative AI in their pursuit of innovation and efficiency.

Here are the top predictions for trends in 2024 that will help organizations root themselves in the bedrock of this new age of work.

AI to dominate in 2024

In 2024, the dominance

of AI is set to shape the technological landscape across various domains. The democratization of generative AI is rapidly unfolding, impacting global enterprises by making advanced models more accessible to employees. Gartner's insightful forecast predicts a remarkable surge, with an anticipated 80% of enterprises leveraging generative AI APIs and models, and integrating generative AI-enabled applications into their production environments. This represents a significant leap from the mere 5% reported in the early months of 2023.

Arun Balasubramanian, Vice President and Managing Director, India and South Asia, UiPath, envisions a future where those harnessing the power of AI and automation to navigate complexity will thrive. He underscores the evolving efficiency in navigating the AI landscape, citing advancements like process mining, task mining, and co-pilots as contributors to this efficiency. The vision is one of harmonious collaboration between human ingenuity and robotic efficiency, shaping an era where enterprises excel through innovation and streamlined collaboration between humans and machines.

Arundhati Bhattacharya, Chairperson & CEO, Salesforce India, sees the upcoming year as a massive opportunity for purpose-driven organizations. She emphasizes the need for funding and expertise in adopting AI, recognizing its potential to enhance service to communities. The evolving landscape of collaboration is highlighted by Rajeev Rajan, CTO, Atlassian, who notes the transformation from human-to-human collaboration to a partnership between humans and AI. Rajan envisions AI contributing to significant personal productivity gains, enabling employees to rapidly familiarize themselves with company intricacies. The prospect of AI saving time translates into increased freedom and flexibility for human teams to generate innovative ideas more efficiently.

Looking toward Asia, IDC's prediction for 2025 points to substantial investments in AI initiatives by the Asia-based 1000 organizations (A1000). The allocation of over 50% of their core IT spend on AI is expected to drive a double-digit increase in the rate of product and process innovations. IDC's findings reveal a significant momentum in the Asia/Pacific region, with 70% of respondents already investing

"Generative AI will hypercharge efficiency, and we will all get familiar with the term 'semantic query' and advancement in semantic query, which will dramatically change customer service. Businesses can provide quick and meaningful, hyper-personalized service with AI using text, images, videos, and audio for search. Throughout 2024, semantic query will become a cornerstone for AI."

ARUNDHATI BHATTACHARYA,
Chairperson & CEO, Salesforce India

"Ethical AI will gain prominence, emphasizing upfront governance, security, and compliance integration to mitigate real-life production risks. Intelligent applications powered by GenAI, including external aid, machine learning integration, and a human-in-the-loop approach, will showcase adaptive learning capabilities, transforming consumer and employee experiences."

JAYAPRAKASH NAIR,
Senior Engineering Leader - Data Science, Altimetrik

"AI models still have certain challenges like hallucination (giving answers without knowing them) and toxicity and bias (because the models were trained on the current corpus of data which has inherent bias and is not so pristine). Given the awareness of these issues, it will be a matter of time before these problems are resolved reasonably."

PAWAN PRABHAT,
Co-Founder, Shorthills AI

or exploring potential Generative AI (GenAI) use cases. This underscores the growing significance of AI in shaping the technological landscape, with Asia at the forefront of embracing and integrating innovative AI solutions.

GenAI to retain spotlight in 2024

In 2024, following the surge of generative AI in 2023, the industry anticipates an elevated growth trajectory. GenAI stands at the forefront of

technological advancement, playing a pivotal role in reshaping various industries, notably influencing language processing and computer vision.

The unfolding journey of GenAI promises substantial changes in our approach to work and interaction with technology. At its core, this evolution integrates machine learning (ML) and natural language processing (NLP), paving the way for workflow automation through algorithms trained on well-established datasets. Large Language Models (LLMs) play a crucial role, exhibiting proficiency in handling unstructured datasets and streamlining tasks related to data management.

According to Bhattacharya of Salesforce, "Generative AI will hypercharge efficiency, introducing the term 'semantic query'—a question written in a human language translated into machine language. This will dramatically change customer service, enabling businesses to provide quick, meaningful, hyper-personalized service using text, images, videos, and audio for search. In 2024, semantic query will become a cornerstone for AI."

Looking ahead, notable trends in GenAI include Democratized Generative AI disrupting traditional roles and business functions to enhance productivity. Ethical AI gains prominence, emphasizing upfront governance, security, and compliance integration to mitigate real-life production risks. Intelligent applications powered by GenAI, including external aid, machine learning integration, and a human-in-the-loop approach, showcase adaptive learning capabilities, transforming consumer and employee experiences, notes Jayaprakash Nair, Senior Engineering Leader - Data Science, Altimetrik.

In 2024, the industry foresees widespread adoption of GenAI, automating tasks, enhancing productivity, and catalyzing product and service creation. Positioned as a disruptive technology, GenAI drives the future workplace with user-friendly interfaces and intuitive interactions. Forecasts predict substantial investments, with IDC projecting global spending exceeding $500 billion by 2027.

Today's AI models accomplish remarkable feats, from writing poetry to interpreting medical reports. However, challenges such as hallucination, toxicity, and bias persist. Given increased awareness, it's a matter of time before these issues are reasonably resolved.

Copyright concerns,

"In 2024, we will see companies of every size and sector formally outline how responsible AI governance guides internal development, application, and use of AI. Until tech companies can credibly show they are trustworthy, you can anticipate governments creating more policies."

LIZ CENTONI,
EVP/GM Applications & Chief Strategy Officer, Cisco

especially regarding AI models trained on creators' content or confidential corporate data, require careful consideration. The ethical responsibility for any harm resulting from content generated by an AI model remains an unresolved aspect.

Pawan Prabhat, Co-Founder of Shorthills AI, notes the growing conviction, especially within corporate circles, regarding the transformative impact of AI on businesses. Corporations are earmarking budgets for AI development, signaling 2024 as the year the AI ecosystem expands and solidifies its position.

Privacy and AI governance to become a top business priority

In 2023, a cascade of regulations, exemplified by the EU's AI Act, the UAE's Data Protection Act, and India's Digital Personal Data Protection (DPDP) Act, emerged worldwide. These regulatory shifts hint at an impending wave of similar policies. With AI deeply integrated into various facets of business and the rise of disruptive technologies like deepfakes and augmented reality, significant privacy threats loom. Vigilant monitoring of these technologies in both public and private applications becomes imperative.

Recognizing the essential need for ethical, transparent, and fair technology use, the spotlight is now on AI governance, slated to take center stage for businesses. Privacy is poised to become the cornerstone of every business operation in the future. The responsibility for safeguarding privacy extends to every individual within an organization. Ensuring the responsible and accountable use of AI becomes crucial in navigating the dynamic landscape of technology and regulation.

Liz Centoni, EVP/ GM Applications & Chief Strategy Officer at Cisco, emphasizes the commitment of leaders to transparency and trustworthiness in the development, use, and outcomes of AI systems. She notes that addressing false content and unexpected outcomes should be driven by organizations, incorporating responsible AI assessments, and robust training of Large Language Models (LLMs) to reduce the chance of hallucinations, sentiment analysis, and output shaping.

Looking ahead to 2024, companies of all sizes and sectors are anticipated to formally outline how responsible AI governance guides internal development,

> "In 2024, the partner community is expecting a 56% growth in everything-as-a-service revenue, and delivering partner-branded services is becoming more critical than ever—with service providers generating more than half their revenue from their own branded services."
>
> **SIMON EWINGTON,** Vice President, Worldwide Channel & Partner Ecosystem, HPE

application, and use of AI. Until technology companies can credibly demonstrate trustworthiness, governments are likely to enact more policies to regulate AI practices. The story unfolds as businesses navigate the ethical frontier, emphasizing responsible AI governance and privacy in the dynamic landscape of the coming year.

Enterprises will prefer purpose-built LLMs over general-purpose LLMs

Since the inception of AI, businesses have harnessed its capabilities for predictive analysis and the automation of low-skill tasks. However, the limited scope of AI applications and the considerable engineering challenges it presents necessitate the development of AI training models that can comprehensively cater to all aspects of a business. Large language models (LLMs) designed specifically for enterprises play a crucial role in facilitating deep and nuanced conversations between employees, customers, and the offerings of the enterprise. This fosters better alignment with evolving software tools.

The adoption of such models equips enterprises to effectively leverage their extensive knowledge base, addressing both creative and repetitive workloads. Moreover, it empowers organizations to safeguard their data, mitigate biases in their datasets, and generate detailed audit reports to enhance understanding of AI-driven decisions. Embracing these enterprise-focused LLMs enhances the overall operational efficiency and ethical considerations in the deployment of AI within businesses.

Smarter cloud strategies will help enterprises navigate rising costs

The pace of public cloud adoption has recently witnessed a moderate slowdown, despite the clear advantages it offers in terms of system visibility, cybersecurity, and the deployment of AI across interconnected IT infrastructures. However, this deceleration is not expected to halt the trajectory of cloud growth. Business leaders are now engaged in contemplating the implementation of generative AI, conducting meticulous assessments of their workloads and architectural structures with a keen focus on efficiency. It is increasingly apparent that realizing value

> “2023 showed a lot of advancement in abusing supply chains to compromise victims as well. Whether through the compromise of managed service providers (MSPs), file-sharing appliances, or through authentication providers, sometimes the easiest way to break in is through the back door.”
>
> **CHESTER WISNIEWSKI,**
> **Global Field CTO, Sophos**

from the cloud demands a strategic and concerted effort.

Adding to the complexity, there is the challenge of a skills gap. Hybrid cloud environments provide current operators with the capability to manage mainframes—critical components in various core-infrastructure industries, particularly as individuals skilled in mainframe operations approach retirement. The solution is not to abandon cloud environments but rather to design and manage them strategically to extract maximum benefits and ensure cost-effectiveness. This approach acknowledges the continued importance of cloud solutions while addressing the evolving needs and challenges presented by the workforce and technology landscape.

Looking ahead to 2024, Simon Ewington, Vice President, Worldwide Channel & Partner Ecosystem at HPE, highlights the partner community's anticipation of a 56% growth in everything-as-a-service revenue. The delivery of partner-branded services is becoming more critical than ever, with service providers expected to generate more than half their revenue from these branded services. Partners who build practices enabling them to deliver value-added services are experiencing faster growth compared to those who do not. The story unfolds as businesses navigate the cloud, adopting strategies for sustainable growth in the dynamic landscape of the coming year.

Cyber resilience will become a strong business differentiator

In the dynamic landscape of the modern technological environment, companies grapple with a myriad of challenges that hinder progress on multiple fronts. Geopolitical uncertainties, technological disruptions, cyber threats, competitive pressures, and various other factors contribute to the complexity of this landscape. Recognizing the intricacies of this scenario, strategic planning becomes paramount to effectively confront and overcome these hurdles.

Chester Wisniewski, Global Field CTO at Sophos, reflects on the evolving threat landscape, emphasizing the increasing exploitation of supply chains for compromising victims. As networks harden and 'as-a-service' models become more

"The surge in sophisticated threats prompted us to adopt an agile stance. Leveraging AI-powered threat intelligence and predictive analytics has been pivotal in anticipating and countering evolving risks. Transitioning from traditional models to adaptive, intelligence-driven strategies has been instrumental."

VAIBHAV TARE,
Chief Information Security Officer, Fulcrum Digital

prevalent, the trend of attacks through backdoor entries is expected to escalate in 2024. The use of malicious proxies and social engineering, even in the era of ubiquitous multifactor authentication, remains a concern, with groups like LAPSU$ and Scattered Spider setting notable examples.

Anticipating the developments in 2024, companies are gearing up to proactively invest in initiatives that introduce tools, solutions, and cultural shifts to bolster their overall cyber-resilient posture. This strategic investment is poised to transform cyber resilience into a critical business differentiator, enabling organizations to thrive globally by fortifying their ability to withstand and recover from cyber threats. Cyber resilience, extending beyond traditional security measures, encompasses remote working procedures, ensuring business continuity in adverse circumstances.

Automating cyber defense through AI and machine learning, integrating frameworks that merge security measures with continuity protocols, and fostering awareness of societal factors are integral components of comprehensive cyber resilience strategies. As businesses navigate the cyber landscape, the focus on building resilience in 2024 emerges as a pivotal strategy to ensure adaptability and security in the face of evolving cyber threats.

Vaibhav Tare, Chief Information Security Officer at Fulcrum Digital, underscores the importance of adopting an agile stance against sophisticated threats. Leveraging AI-powered threat intelligence and predictive analytics proves pivotal in anticipating and countering evolving risks. Transitioning from traditional models to adaptive, intelligence-driven strategies becomes instrumental in addressing the ever-growing complexity of cyber threats.

Mignona Cote, Chief Security Officer at NetApp, acknowledges the need for a proactive and adaptive approach to security. Recognizing the industry-wide shortage of cybersecurity talent, the company actively contributes to addressing this gap through educational initiatives, collaboration with academic institutions, and skill development programs

> “The ever-growing complexity of cyber threats has required us to adopt a proactive and adaptive approach to security. Recognizing the industry-wide shortage of cybersecurity talent, we actively contribute to addressing this gap through educational initiatives, collaboration with academic institutions, and programs like boot camps, that demonstrate our commitment to skill development.”

MIGNONA COTE,
Chief Security Officer, NetApp

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> To fully leverage technology, IT, and sustainability leaders must develop scalable projects that can integrate environmental solutions within current business practices. Climate change is a global issue, so we need far-reaching partnerships and collaboration to make a difference.

FAITH TAYLOR,
Global Sustainability & ESG Officer, Kyndryl

like boot camps. This commitment underscores the proactive measures organizations are taking to navigate the evolving cyber landscape in the coming year.

Sustainable technology to take center stage

Sustainable technology is poised to maintain its prominent position in the spotlight throughout 2024, as nations and corporations persistently strive to fulfill their net-zero commitments. Simultaneously, individuals are increasingly turning to technology to minimize their environmental footprint.

The realm of sustainable technology encompasses environmentally-friendly approaches to familiar activities, such as the continued rise of electric cars, bikes, and public transport, expected to expand their market presence in 2024. Furthermore, it involves innovative solutions to environmental challenges, including advancements in carbon capture and storage, as well as the development of green and renewable energy technologies. The concept of a circular economy will gain greater significance, emphasizing the integration of durability, recyclability, and reusability into products at the design stage.

The tech industry is poised to further embrace progressive concepts like green cloud computing, where infrastructure and services prioritize the reduction of energy consumption and carbon emissions. Additionally, sustainable apps will gain traction, representing software tools explicitly designed to assist users in adopting more eco-friendly lifestyles. This collective emphasis on sustainable technology underscores a growing commitment to environmentally conscious practices across various sectors.

"Organizations have to adapt to climate change while also managing the rapid pace of technological change," said Faith Taylor, Global Sustainability & ESG Officer at Kyndryl. "To fully leverage technology, IT, and sustainability leaders must develop scalable projects that can integrate environmental solutions within current business practices. Climate change is a global issue, so we need far-reaching partnerships and collaboration to make a difference."

The 7 Biggest Tech Trends to Expect in 2024: Kyndryl

Generative AI had a breakout year in 2023, with all indications that it will usher in even more ways to drive business growth in the coming months.

According to an International Data Corporation forecast, enterprise spending on generative AI solutions could reach $143 billion in 2027, up from $16 billion in 2023, with the world's largest companies expected to allocate over 40% of their core IT spending to AI-related initiatives.

"Enterprises worldwide will continue to investigate the opportunity to weave AI tools and solutions — including generative AI — into their broader modernization plans," said Nicolas Sekkaki, Global Practice Leader for Applications, Data and AI at Kyndryl. "The consensus is that the potential of generative AI far outweighs the risk. Still, C-suite leaders are mindful of risks, and even as they push to test and innovate, there will be a lot of conversation and consulting work around maintaining privacy, IP protection, stopping data leaks, and harnessing costs."

However, other trends — like smart cloud strategies, using technology for climate progress, and bolstering security and resiliency systems — also will define the tech landscape and decision-making in the year ahead.

Here are the top trends and the steps organizations can take to navigate 2024.

New ways of working will drive culture, technology, and workplace transformation

IVAN DOPPLÉ,
Global Practice Leader, Digital Workplace, Kyndryl

Since companies began equipping themselves for an economy based, in part, on hybrid working a few years ago, the need for digital agility has only accelerated. "In addition to continuing their investments in digital workplace technologies to improve efficiency, productivity, security, and capability, enterprises across the globe will begin to focus more on the experience," said Ivan Dopplé, Global Practice Leader for Digital Workplace at Kyndryl. "Companies need to invest now in systems and tools that enable increasingly scarce talent to maximize its potential."

Indeed, whether remote, in-person, or a mix of both, skilled workers seek employers with supportive corporate cultures. For most, that means working for a company that practices empathy, values diversity, and enables (and encourages) people to take ownership of their careers. Technologies like AI and the cloud are helping to drive these trends. Still, employers must integrate them with human-centered strategies to attract and retain top talent. With a clear purpose and the right values, companies can deploy technologies that build teams, strengthen feelings of belonging, and reduce friction in the completion of daily tasks.

What you need to do:

- Survey your workers to gain valuable feedback on business processes, friction and roadblocks, and overall job satisfaction.
- Revisit your corporate culture to align it with the purpose and values that drive inclusion and productivity.
- Work with a partner who understands your business, and will collaborate with you on scalable, best-in-class AI-enabled solutions that will help protect your investments.

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Data governance will emerge as the critical factor in AI adoption

NICOLAS SEKKAKI,
Global Practice Leader for Applications, Data, and AI, Kyndryl

Everybody wants a new skyscraper, but any building must have a solid foundation. In the case of both enterprise and generative AI, that foundation is data. Enterprises lacking the in-house skills to manage their data will need trusted partners who are experts in data governance, business processes, and the appropriate best-in-class applications for their industries. Only then will AI-infused IT estates deliver essential business value. "It's important to have well-organized data for your AI to run on," said Sekkaki. "It's like if you were on a train going full speed — you better have tracks to sustain that speed."

What you need to do:

- Ask the right questions to define your organization's desired business outcomes.
- Have a comprehensive data strategy and governance, and build your data platform.
- Invest for the future — AI is here to help.

Smarter cloud strategies will help enterprises navigate rising costs

HARISH GRAMA,
Global Cloud Practice Leader at Kyndryl

Why it matters: The pace of public cloud adoption has eased somewhat, despite the cloud's obvious advantages in systems visibility, cybersecurity, and the ability to deploy AI across connected IT estates. "Despite the slowdown in the last year, cloud growth will certainly continue," said Harish Grama, Global Cloud Practice Leader at Kyndryl. "Business leaders are going to be considering how to implement generative AI and carefully examining their workloads and architecture with an eye to efficiency. The reality is setting in that driving value with the cloud requires strategic effort."

And then there's the skills gap. Hybrid cloud environments enable today's operators to manage mainframes — which remain vital to many core infrastructure industries — even as those trained in mainframe operations reach retirement age. So the answer is not to walk away from cloud environments, but to design and manage them for maximum benefit and cost-effectiveness.

What you need to do:

- Plan for a future in which public cloud and hybrid cloud environments will deliver needed business results while controlling costs and managing skills gaps.
- Get help to design a long-term cloud strategy that enables your business to be proactive instead of reactive to the rapidly changing IT landscape.
- Be aware of the trends and real-world experiences of generative AI, even before implementation.

The mainframe will remain relevant as part of a hybrid environment

PETRA GOUDE, Global Practice Leader, Core Enterprise and zCloud at Kyndryl

Predictions that enterprises would move their entire workloads and data to the cloud have turned out to be overstated — it is clear a hybrid approach is the way to go. The mainframe is alive, and modern and remains the only platform that can handle the "failure is not an option" demands of the industries the world depends on every day. "It used to be that everyone was going to move off the mainframe to the cloud, and now it is all about how to leverage the platform in the right way, what workload should stay, and what should move," said Petra Goude, Global Practice Leader, Core Enterprise and zCloud at Kyndryl. "But guess what? History is repeating itself. Two reasons everyone didn't move everything off is because of the high volume of transactions being executed and the cost of moving everything."

Indeed, mainframes can manage the vast amounts of data required for AI and IoT. But mainframes only can work wonders when in the hands of experienced operators. That's why working with the people with the best mainframe skills will remain critical to the success of the enterprises and governments that rely on the superpowers of this timeless platform.

What you need to do:

- Join the 95% of businesses that are adopting a hybrid approach to mainframe modernization by determining the right platform for the right workload.
- Realize the business value of 9% to 11% increased profitability that can be achieved annually from mainframe modernization.
- Trust the mainframe to adapt and grow — reinventing itself to deliver value in nearly every business environment — but secure the expert skills needed to future-proof the platform.

As AI-driven devices proliferate, data protection and reduced latency will become paramount

PAUL SAVILL, Global Practice Leader, Network & Edge at Kyndryl

5G is great for mobile phones, but its primary value lies in its ability to connect internet-enabled devices — whether factory robotics or self-driving vehicles — rapidly, reliably, and securely. Rapidly and reliably because nobody wants their self-driving car to "get confused" or stop working at 70 miles per hour. Ditto on the production line, where manufacturers must be able to modify or change instructions instantaneously based on demand. And securely because the IT estate "chain of custody" of confidential and proprietary data is only as strong as its weakest link. Want to prevent wrongdoers from stealing trade secrets from your warehouse, or hacking into your automotive production line by exploiting access from a stolen car? You need a modern network.

"We're at a point in which new technologies around software — including security embedded in the network, and AI analytics helping with models — are mature and ready for prime time," said Paul Savill, Global Practice Leader, Network & Edge at Kyndryl. "AI is going to transform operations, and it's going to change general management decision-making and how to optimize cost structure. And that's why enterprises are seeing that it's time to make changes in their networks to prepare to adopt these new technologies."

What you need to do:

- Assess your current network, including data center and networking equipment to determine its weak points for failure and if it's still being supported by the vendor.
- Determine the projected cost savings for running a modern network that enables real-time decision-making while protecting your data.
- Partner with experts in your industry, and your business to adopt the latest cloud networking technologies.

Cyberattacks will increase in number and sophistication

KRIS LOVEJOY,
Global Practice Leader of Security & Resiliency at Kyndryl

Everybody's talking about it, but nobody wants to think about it: Bad actors can launch cyberattacks to shut down operations, hijack organizational agendas, and destroy reputations and trust. Cyberattacks have become commonplace across every industry and government function. Systems modernization to optimize security and resilience requires more than patchwork and a new coat of paint. "During the pandemic, the majority of organizations globally pivoted from modernizing already aging infrastructure and introduced new digital capabilities to enable new ways of working for existential reasons — often abbreviating or skipping security control," said Kris Lovejoy, Global Practice Leader of Security & Resiliency at Kyndryl. "The result is a mix of very old and very new but insecure infrastructure. What must happen now will be difficult. It's going to require spending. But businesses will need to assess and deal with the complexity and age of their environment to become more resilient."

What you need to do:
- Understand that IT systems with advanced security and resiliency require strong and modern foundations since bad actors (who may use malicious AI) can — and will — exploit any weakness.
- Lower the barriers and expand access to cybersecurity training and hiring. People — and their diverse perspectives — are the best weapons against cyberattacks.

Sustainable technology will be a priority

FAITH TAYLOR,
Global Sustainability & ESG Officer, Kyndryl

Despite a challenging Environmental, Social, and Governance environment, the research is clear: Consumers care about the brands they support, professionals want to work for companies that align with their values and investors evaluate companies on how they manage these risks. "Organizations have to adapt to climate change while also managing the rapid pace of technological change," said Faith Taylor, Global Sustainability & ESG Officer at Kyndryl. "To fully leverage technology, IT and sustainability leaders must develop scalable projects that can integrate environmental solutions within current business practices. Climate change is a global issue, so we need far-reaching partnerships and collaboration to make a difference."

For organizations to reach their environmental goals, they need to understand where they are in their sustainability journeys. In 2024, enterprises will continue to invest in becoming more data-driven to transparently measure their progress and make more informed sustainability decisions. Organizations will look for guidance on creating a sustainability-centric culture and start to meaningfully reduce their carbon footprints.

What you need to do:
- Understand that IT systems with advanced security and resiliency require strong and modern foundations since bad actors (who may use malicious AI) can — and will — exploit any weakness.
- Lower the barriers and expand access to cybersecurity training and hiring. People — and their diverse perspectives — are the best weapons against cyberattacks.

The Year of AI Readiness, Adoption, and Tech Integration

Liz Centoni, EVP/GM Applications & Chief Strategy Officer, Cisco

To adopt and integrate AI, organizations need to centralize data, embrace a unified platform-based approach, and adopt responsible, sustainable practices, to achieve more simplicity, security, and efficiency. Organizations must also prioritize resilience, agility, and ethical principles to successfully operate in a rapidly changing world.

Innovation combined with a demonstrated commitment to responsible principles from concept to commercialization are required to build long-term trust. These insights inspired these tech trend predictions for 2024.

GenAI will expand into B2B with NLIs, custom LLMs, tailored applications, and business context

Most organizations have one year or less to implement AI before falling behind according to the Cisco AI Readiness Index. In 2024, natural language interfaces (NLIs) powered by GenAI will be expected for new products and services. More than half will have this by default, enabling natural language interactions and boosting observability for AI usage, cost, and experience. GenAI will also be leveraged by B2B interactions and providers, as users demand more contextualized, personalized, and integrated solutions. GenAI will offer APIs, interfaces, and services to access, analyze, and visualize data and insights. GenAI will be pervasive across business applications such as project management, software quality and testing, compliance assessments, and recruitment efforts. This will increase the need for observability for AI usage, cost, and experience.

The demand for customized GenAI large language models (LLMs) will increase as businesses seek more control and flexibility over training, data retention, and expendability processes. Organizations will adapt LLMs for their data, fine-tuning parameters, and model scaling. General-purpose language models can be adapted for tasks like sentiment analysis and entity recognition, and systems can use external sources for accuracy and to avoid 'hallucinations' as with Retrieval Augmented Generation which can be fine-tuned and updated without model retraining. We will also see the rise of specialized AI models and LLMs with better accuracy and precision in areas such as code completion or few-shotting image classification. Moreover, a multi-modal combination of data types such as images, text, speech, and numerical with multiple algorithms will expand into areas such as business planning, medicine, and finance.

A movement for responsible, ethical AI will begin with governance

LIZ CENTONI,
EVP/GM Applications & Chief Strategy Officer, Cisco

The adoption of AI is a once-in-a-generation shift that is at the intersection of innovation and trust. Yet, 76% of organizations don't have comprehensive AI policies in place. There is general agreement that we need regulations/policy and industry self-policing and governance to mitigate the risks from GenAI. However, nuance is needed in areas like IP infringement, where bits of existing works of original art are scraped to generate new digital art. We must also ensure that consumers have access to and control over their data in the spirit of the recent EU Data Act. With the rising importance of AI systems, available public data will soon hit a ceiling, and high-

quality language data will likely be exhausted before 2026. Organizations need to shift to private and/or synthetic data which opens the possibility for unintended access and usage.

There is plenty that organizations can do on their own. Leaders must commit to transparency and trustworthiness around the development, use, and outcomes of AI systems. For instance, in reliability, addressing false content and unanticipated outcomes should be driven by organizations with responsible AI assessments, robust training of LLMs to reduce the chance of hallucinations, sentiment analysis, and output shaping. In 2024, we will see companies of every size and sector formally outline how responsible AI governance guides internal development, application, and use of AI. Until tech companies can credibly show they are trustworthy, you can anticipate governments creating more policies.

Consumers and companies will face increased risks from AI

In 2024, the increasing role of AI in disinformation campaigns, scams, and fraud will be a growing threat to the integrity of companies, non-profits, and even candidates and elections. According to Cisco's 2023 Cyber Readiness Index, only 15% of respondents are resilient enough to respond to a cybersecurity threat. Tech companies will make significant progress in developing inclusive new AI solutions that guard against cloned voices, deepfakes, and videos, as well as social media bots and influence campaigns. More companies will invest in technologies that detect and mitigate risks, and AI models will be trained on large datasets to improve their accuracy and effectiveness. We will see advancements in platforms and tools that promote transparency and accountability in AI-generated content including mechanisms for content authentication and provenance.

We will also see more collaboration between tech companies and governments to raise awareness of AI-enabled threats and implement verification mechanisms and cybersecurity measures in keeping with the G7 Guiding Principles on AI regarding threats to democratic values, as well as the Biden administration's Safe AI Executive Order and the EU's draft AI Act. Governments will continue to sanction those responsible for digital disinformation, working closely with tech companies to ensure regulatory compliance. Organizations should prioritize protecting data from unauthorized access, tampering, or manipulation including investment in threat detection systems, regular vulnerability assessments, updating security systems, and thorough audits of network infrastructures. Consumers need to be vigilant in identifying and preventing scams that target their identities, savings, and credit.

Quantum computing is rising as the future of cryptography

In 2024, we will see the adoption of post-quantum cryptography (PQC) – even before it is standardized – as a software-based approach that works with conventional systems to protect data from future quantum attacks. PQC will be used by browsers, operating systems, and libraries, and innovators will experiment with integrating

it into protocols such as SSL/TLS 1.3, which governs classic cryptography. PQC will also start to trickle down to enterprises as they aim to ensure data security in the post-quantum world.

Another trend will be the growing importance of quantum networking, which in the not-so-distant future – 4 or 5 years (perhaps more) – will enable quantum computers to communicate and collaborate with each other for more scalable quantum solutions. Quantum networking will leverage quantum phenomena such as entanglement and superposition to transmit information. Last year, we correctly predicted that quantum key distribution (QKD) would roll out more widely with upgrades to data centers, autonomous cars, and consumer devices. QKD as an alternative or a complement to PQC depending on the level of security and performance required, will also leverage quantum networking. Quantum networking will be a growing area of research and investment for sectors such as government and financial services, which have high demands for data security and processing.

Enterprises will embrace the power and potential of AI through API abstraction

Natural language interfaces (NLIs) powered by GenAI will be expected for new products and more than half will have this by default by the end of 2024. GenAI will also be leveraged in B2B interactions with users demanding more contextualized, personalized, and integrated solutions. GenAI will offer APIs, interfaces, and services to access, analyze, and visualize data and insights, becoming pervasive across areas such as project management, software quality and testing, compliance assessments, and recruitment efforts. As a result, observability for AI will grow.

We will also see the rise of specialized, domain-specific AI models and a shift to smaller, specialized LLMs with higher levels of accuracy, relevancy, precision, and niche domain understanding. For instance, LLaMA-7B models – often used for code completion and few-shotting – will see increasing adoption. Moreover, a multi-modality combination of various data types such as images, text, speech, and numerical with intelligence processing algorithms will expand B2B use cases. This will result in better results in areas such as business planning, medicine, and financial services.

AI will drive energy usage while unlocking new energy networking and efficiency paradigms

More companies are committing to net zero goals, but only 4% of them meet the UN criteria, according to Net Zero Tracker. Energy networking and energy efficiency can help reduce the world's energy needs and emissions by 2050 and help control global emissions of greenhouse gases. Sustainable energy is vital for addressing climate change. The International Energy Agency indicates that energy efficiency can achieve more than 40% of emissions reductions by 2040. Smaller AI models with fewer layers and filters can reduce energy consumption costs compared to general systems. These models are trained on smaller, accurate data sets and accomplish specific tasks. Deep learning models need vast amounts of data to get results.

The fast-emerging category of energy networking, which combines the capabilities of software-defined networking and an electric power system made up of direct current micro grids, will contribute to energy efficiency, delivering increased visibility, insights, and automation. Energy networking will help organizations measure energy usage and emissions more accurately, automate many functions across IT, smart buildings, and IoT sensors, and unlock inefficient and unused energy. With embedded energy management capabilities, the network will become a control plane for measuring, monitoring, and managing energy consumption.

Better software development and quality will emerge from platforms, collaboration, and help from AI

Software development will change dramatically in 2024 as organizations "shift left" and adopt GenAI, such as LLMs, to augment or replace human capabilities. A McKinsey study showed that GenAI-based tools can speed up common developer tasks such as documenting, writing, and optimizing code. As we move into 2024, programmers assisted by GenAI will spend less time counting lines of code and looking up library functions, and more time working with customers and removing obstacles. Visionary software developers will embrace platforms, collaboration – and even a little help from AI – to spend more time on solving problems and responding to changes.

They will also use platform capabilities such as CNAPP, CSPM, and CWPP to combat tool sprawl, streamline workflows, and centralize their toolkit. They will automate operations with AI to speed up testing, handling errors, and boosting delivery timelines. Collaboration tools and AI assistants will help developers tackle the complexities of security, observability, and infrastructure. They will use AI-derived insights and intelligent automation to navigate components, protocols, and tools. We believe that human judgment should always be involved in AI decisions and that AI should augment human decision-making, not replace it. We will see humans providing checks and balances to ensure that AI is fair, unbiased, and aligned with ethical and moral values.

Top 5 Networking Predictions for 2024: HPE

David Hughes, Senior Vice President and Chief Product and Technology Officer, HPE Aruba Networking, offers his insights on what the next year will bring.

DAVID HUGHES,
Senior VP & Chief Product and Technology Officer, HPE Aruba Networking

The death of the standalone firewall

The rise of the hybrid workforce and the extensive deployment of IoT devices have irreversibly eroded the network perimeter, and the standalone firewall is dying with it. No longer can a good "inside" be protected from a bad "outside" by a ring of firewalls. Trying to plug the gaps by deploying even more firewalls inside an organization only adds complexity, creates room for errors, and slows down businesses that want to move rapidly.

Consequently, the next-gen firewall appliance is rapidly becoming the last-gen firewall appliance. On one side, the secure service edge (SSE) is replacing firewalls and proxies with cloud-delivered secure web gateway, cloud access security broker, and zero trust network access. SSE provides a compelling way of managing security for users accessing applications from anywhere. On the other side, for IoT security, segmentation is needed on-prem, right at the edge of the network, and to achieve this firewall services are being built directly into access points, switches, and SD-WAN gateways. Even in the data center, the introduction of top-of-rack switches with L4-7 security functionality can deliver east-west segmentation far more cost-effectively than traditional next-gen firewalls at end-of-aisle. Over the coming couple of years, the next-gen firewall market will continue to decline as these new cloud-based and built-in capabilities usher in a simpler way of managing secure connectivity.

Industry Supporting Stat: As more organizations choose programmatic, hybrid work strategies, buyers are more likely to select firewall vendors that offer cloud-based security services with credible cloud security strategies. Gartner Critical Capabilities for Network Firewalls (Adam Hils, Rajpreet Kaur, Thomas Lintemuth) May 16, 2023

Zero trust principles accelerate the alignment of security and networking objectives

Most organizations have separate teams managing networking and security, and in many ways, their goals can be at odds with one another. In 2024 leading enterprises will demonstrate how zero trust principles can be employed to align the two teams' interests to deliver better end-user experience and business outcomes.

In a typical organization, the networking team's objectives are to keep people and services connected reliably, and up and running with predictably good performance. They are intended to make it easy for people to connect to anything and avoid complexity that will result in outages, latency, or slowdowns. On the other hand, the security organization is tasked with minimizing risk and maintaining compliance. Too often the user and their experience are caught in the middle. An overzealous security implementation might make it slow or impossible for users to access the apps and data they need, slowing down the business. On the other hand, lax security or a networking team that aims to please by bypassing security measures can result in infiltration and ransomware.

Leading enterprises will adopt zero trust architectures where the network's job is defined not in terms of connecting anything to anything, but rather as being an enforcement layer for security policy. For users accessing applications

security policy may be enforced in the cloud, but for many traffic flows, particularly for IoT devices and their associated services it will be more efficient to automatically implement this policy in access devices like access points, switches, and routers. With the right level of shared visibility, automation, and clear delineation of policy and enforcement, networking and security teams will have aligned goals and deliver a better experience.

Industry Supporting Stat: According to Forrester, 96% of customers stated that security and networking worked together to implement SASE

Measuring end-user experience becomes a must for driving operational excellence

To deliver what employees and customers expect, IT organizations will need to shift to SLOs and SLAs based on measured user experience. Users don't care what is at fault, they are focused on one simple thing: is the application they are using working well or not? User satisfaction plummets when they are first to find problems, and are then rebuffed by IT with reports that all devices are up and operating correctly.

To address this organizations will widely deploy digital experience management (DEM) tools that both measure the experience of end users and make synthetic probes to ensure infrastructure readiness even when users are not present. Organizations will likely want a mix of measurements collected from endpoint agents (like an SSE agent) and measurements collected by dedicated hardware sensors, particularly when monitoring Wi-Fi performance. Ideally, these same measurements feed automated AIOps that can learn and then implement best practices, rapidly triage problems, and automatically remediate issues.

Industry Supporting Stat: By 2026, at least 60% of I&O leaders will use DEM to measure application, services, and endpoint performance from the user's viewpoint, up from less than 20% in 2021. (Gartner, Market Guide for Digital Experience Monitoring, March 2022)

6GHz Wi-Fi adoption skyrockets – and will continue to be the biggest feature of Wi-Fi 7

The barriers slowing Wi-Fi deployment in the 6GHz spectrum will be removed in most geographies, and adoption will start to skyrocket.

A couple of years ago, the Wi-Fi 6E standard introduced support for the 6GHz band, more than doubling Wi-Fi capacity, enabling more users and faster speeds. It's been rapidly adopted in some segments, but others have been more cautious. In 2024 the last remaining barriers to broad adoption will be resolved.

First, the use of the 6GHz band, particularly outdoors is subject to approval by government authorities. Although some, like the US, have been quick to open the spectrum for Wi-Fi, other countries have been slower. Fortunately, there has been much forward progress in this area, and in 2024 most enterprises will have 6GHz spectrum accessible in most parts of the world.

Second, some enterprises have been leery about adopting Wi-Fi 6E when Wi-Fi 7 is around the corner. Now with Wi-Fi 7 ratified, there is no doubt that Wi-Fi 6E and Wi-Fi 7 will be interoperable, so with 6E devices and access points shipping in volume, 6GHz Wi-Fi deployments can move ahead full steam.

Finally, adoption is gated by support on both access points and client devices. We are witnessing a slew of new devices that support Wi-Fi 6E, and the mainstreaming of 6E access points. On top of this, more Wi-Fi 7 devices are on the horizon, and these can utilize the 6GHz band to deliver a better user experience with either Wi-Fi 6E or Wi-Fi 7 access points.

The combination of these developments sees a big uptake of the 6GHz spectrum in 2024, and with it, faster transfers and better user experience!

Industry Supporting Stat: "HPE Aruba Networking has shipped over 1.5 times the number of Wi-Fi 6E APs than any other vendor in the industry" - Sian Morgan is the lead networking analyst for Dell'Oro Group.

AI will liberate IT admins

It is sometimes told you that won't lose your job to AI, you'll lose your job to someone who is effectively using AI. This is becoming true for the IT admin.

The increasing burden of implementing new technology and maintaining cyber-security with a fixed or even shrinking headcount means that each admin must handle more. Fortunately, AI and automation are advancing rapidly, shifting the job from managing and configuring individual devices, to instead defining policy across a whole estate and having that policy implemented automatically and consistently. AI is also able to comb through huge volumes of data to identify anomalies and recommend (and even implement) remedies. It's now well established that AI is only as good as its data set and bigger, high-quality data sets are key. Leading vendors will be drawing AI insights from data lakes representing millions of managed devices and hundreds of millions of end-points. Finally, large language models (LLMs) are turbocharging existing natural language interfaces and providing a more convenient way for admins to get the information they need.

The bottom line is organizations need to ensure that they are providing their IT teams the AI force-multiplier admins need to remain competitive.

Industry Supporting Stat: By 2026, generative artificial intelligence (GenAI) technology will account for 20% of initial network configuration, which is an increase from near zero in 2023. (Gartner, Strategic Roadmap for Enterprise Networking, October 2023)

Trends Revolutionizing India's Approach to AI and Automation: UiPath

Arun Balasubramanian, Vice President and Managing Director, India and South Asia, UiPath

ARUN BALASUBRAMANIAN,
Vice President and Managing Director, India and South Asia, UiPath

In the realm of digital transformation, the synergy between automation and AI is unlocking unprecedented value for enterprises worldwide. This isn't merely about scaling up automation; it's about unleashing the full potential of these technologies to revolutionize how we work. As we navigate the evolving landscape, it's clear that the future lies in the seamless integration of AI and automation.

Here are the top AI and Automation trends for 2024:

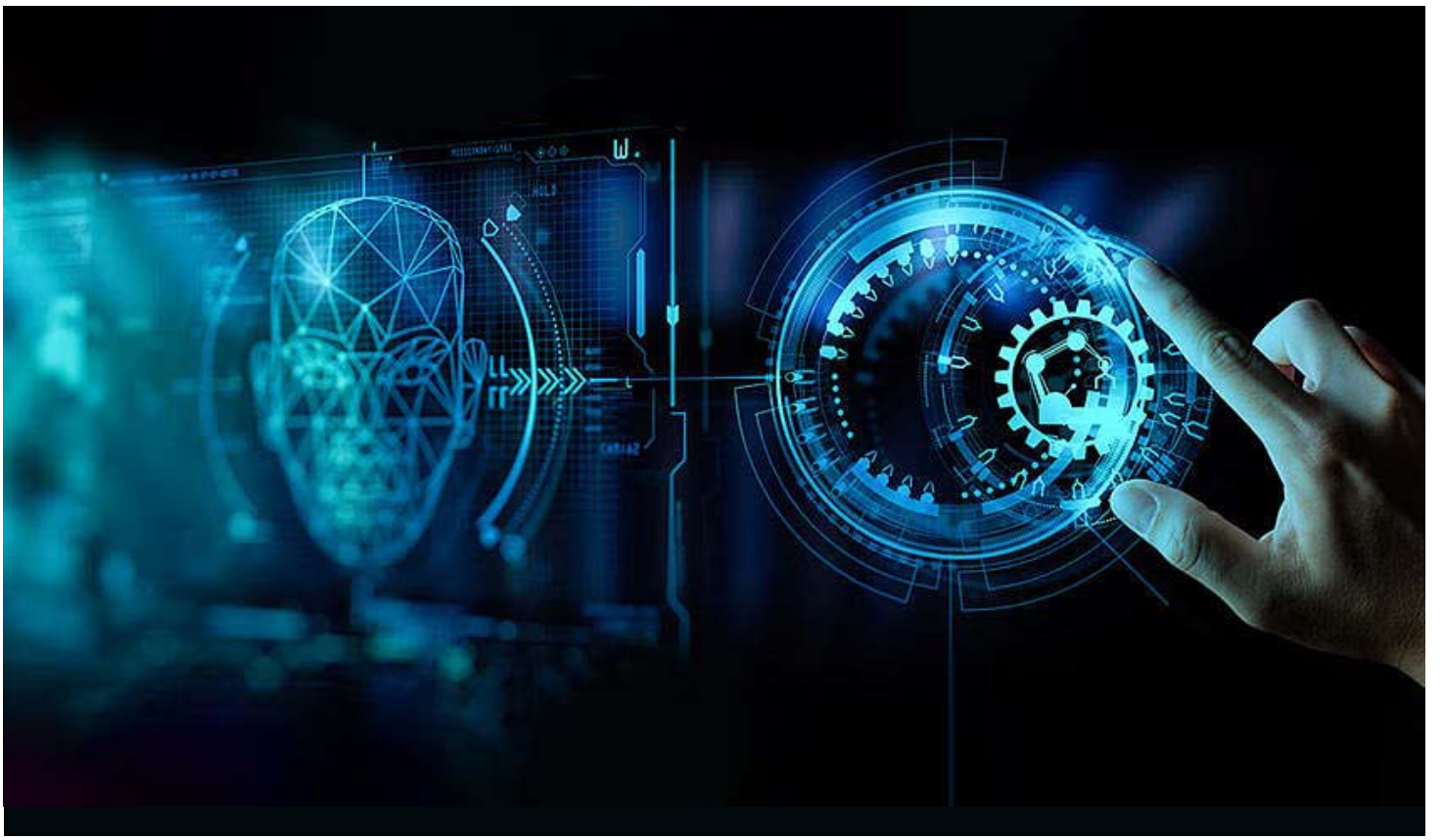
LLMs power virtual BFFs

According to the UiPath Automation Generation Survey 2023, elder Indian employees are more receptive to the potential of AI-powered automation in helping them at work: 91% of Baby Boomer respondents think that automation would help them do their jobs better, while 87% of Generation Z, 86% of Millennial, and 84% of Generation X (84%) respondents feel similarly.

These sentiments would echo through 2024, as enterprise software providers are already integrating Large Language Models (LLMs). One notable application is copilots—virtual desktop assistants that comprehend individuals' work contexts and tasks, communicating in plain language. Like the best human assistants, these copilots can rapidly learn to auto-complete various activities and proactively enhance workflow efficiency. UiPath, for example, incorporates Autopilot into tools for various users, streamlining tasks like data entry and email management. With such significant developments, LLMs and Gen AI solutions are all set to reinvent how we work with machines and usher in a new boom in global productivity.

Safe AI becomes a focus of action and innovation

The C-suite will prioritize countering AI risks, emphasizing safe AI to improve the risk/benefit equation. Expect a significant acceleration in AI governance adoption, with enterprise software companies integrating robust AI controls. Technology providers will enhance human-in-the-loop capabilities for improved human review.



In 2024, organizations are shifting from aspirational to implementation phases, driven by innovative approaches. The Indian government already emphasizes innovation and is formulating policy frameworks like the National Artificial Intelligence Strategy for responsible AI adoption, highlighting a commitment to transparency and accountability.

The C-suite seizes AI's value with the help of automation

Today, executives are exhilarated by the potential of AI to drive growth, and innovation, and revolutionize various aspects of work, enhancing productivity in unprecedented ways. In 2024, their primary focus will shift towards translating the potential of AI into tangible returns. Per a Nasscom report, AI adoption is poised to add $500 billion to India's GDP by 2025. Automation is proving to be a swift enabler of various AI benefits. As companies in 2024 zero in on realizing their AI ambitions, they will increasingly turn to enterprise automation to facilitate the achievement of their objectives.

The transparent organization comes into focus—end-to-end

Until recently, enterprise managers grappled with poor visibility into end-to-end work processes, hindering problem diagnosis and issue resolution. Process intelligence, powered by AI in advanced process, task, and communications mining, has transformed this landscape. Now, organizations can continually monitor and evaluate processes comprehensively, gaining insights and identifying optimal solutions for efficient workflows. Leading innovators are even creating "digital twins" of their operations, providing dynamic real-time visibility, and modeling potential workflow improvements before implementation. This innovation is anticipated to drive increased adoption in 2024 and beyond.

Redefining work by building new relationships with machines

The rise of large language models (LLMs) is expected to significantly impact the future of work, with the potential to automate up to 30% of current tasks by 2030. As LLMs continue to advance, they will likely be applied in various professions, and the workforce will need to adapt to new roles and responsibilities. Key areas of focus for thought leaders, policymakers, and education professionals include learning from professions further along the adoption path, addressing the labor implications of a virtual workforce, and redefining the best skillsets for the future. By 2024, these efforts will begin to reshape the workforce, requiring workers to develop new skills and adapt to new roles, while also addressing the needs and views of employees, employers, unions, governments, and the public at large.

AI, Sustainability at Forefront as the Industry Turns Attention to 2024: Vertiv

Giordano (Gio) Albertazzi,
CEO, Vertiv

The intense, urgent demand for artificial intelligence (AI) capabilities – and the dueling pressure to reduce energy consumption, costs, and greenhouse gas emissions – loom large over the data center industry heading into 2024. The proliferation of AI along with the infrastructure and sustainability challenges inherent in AI-capable computing can be felt across the industry and throughout the 2024 data center trends.

"AI and its downstream impact on data center densities and power demands have become the dominant storylines in our industry," said Giordano (Gio) Albertazzi, CEO, Vertiv. "Finding ways to help customers both support the demand for AI and reduce energy consumption and greenhouse gas emissions is a significant challenge requiring new collaborations between data centers, chip and server manufacturers, and infrastructure providers."

These are the trends expected to dominate the data center ecosystem in 2024:

AI sets the terms for new builds and retrofits

Surging demand for artificial intelligence across applications is pressuring organizations to make significant changes to their operations. Legacy facilities are ill-equipped to support widespread implementation of the high-density computing required for AI, with many lacking the required infrastructure for liquid cooling. In the coming year, more and more organizations are going to realize half-measures are insufficient and opt instead for new construction – increasingly featuring prefabricated modular solutions that shorten deployment timelines – or large-scale retrofits that fundamentally alter their power and cooling infrastructure. Such significant changes present opportunities to implement more eco-friendly technologies and practices, including liquid cooling for AI servers, applied in concert with air-cooled thermal management to support the entire data center space.

Expanding the search for energy storage alternatives

New energy storage technologies and approaches have shown the ability to intelligently integrate with the grid and deliver on a pressing objective – reducing generator starts. Battery energy storage systems (BESS) support extended runtime demands by shifting the load as necessary and for longer durations and can integrate seamlessly with alternative energy sources, such as solar or fuel cells. This minimizes generator use and reduces their environmental impact. BESS installations will be more common in 2024, eventually evolving to fit "bring your own power" (BYOP) models and delivering the capacity, reliability, and cost-effectiveness needed to support AI-driven demand.

Enterprises prioritize flexibility

While cloud and colocation providers aggressively pursue new deployments to meet demand, organizations with enterprise data centers are likely to diversify investments and deployment strategies. AI is a factor here as organizations wrestle with how best to enable and apply the technology while still meeting sustainability objectives. Businesses may start to look to on-premise capacity to support proprietary AI and edge application deployments may be impacted by AI tailwinds. Many organizations can be expected to prioritize incremental investment – leaning heavily on prefabricated modular solutions – and service and maintenance to extend the life of legacy equipment. Such services can provide ancillary benefits, optimizing operations to free up capacity in maxed-out computing environments and increasing energy efficiency in the process. Likewise, organizations can reduce Scope 3 carbon emissions by extending the life of existing servers rather than replacing and scrapping them.

The race to the cloud faces security hurdles

Gartner projects global spending on public cloud services to increase by 20.4% in 2024, and the mass migration to the cloud shows no signs of abating. This puts pressure on cloud providers to increase capacity quickly to support demand for AI and high-performance computing, and they will continue to turn to colocation partners around the world to enable that expansion. For cloud customers moving more and more data offsite, security is paramount, and according to Gartner, 80% of CIOs plan to increase spending on cyber/information security in 2024. Disparate national and regional data security regulations may create complex security challenges as efforts to standardize continue.

Cybersecurity Predictions for 2024: CyberArk

With a population surpassing 1.4 billion and a rapidly expanding economy, India's digital footprint has made it an alluring target for cybercriminals seeking to exploit vulnerabilities. Drawing insights from our experience, here are predictions for the key cybersecurity trends in India:

Data breaches expected to skyrocket

In 2023, India experienced a surge in these cyberattacks, leaving a trail of compromised personal information, disrupted operations, and eroded public trust. In 2024, we expect a sharp uptick in data breaches as the digital landscape expands, primarily because of the scale and diversity of attacks, which have impacted almost every sector, from government to healthcare to startups.

Continued acceleration in ransomware activities

Ransomware attacks are expected to surge, surpassing the alarming 91% reported in 2022. As India's digital landscape expands and digital dependencies increase, we believe that organizations will pay significantly more to enable recovery. Organizations should gear up for an intensified wave, implementing robust backup and recovery strategies, and enhancing threat detection capabilities.

A rise in cloud adoption could lead to a surge of identity-based attacks

The overall India public cloud services market is expected to gallop to $17.8 billion by 2027, exhibiting a formidable CAGR of 23.4% for the period spanning 2022-2027 (IDC). However, as organizations migrate their data, applications, and workloads to the cloud, the attack surface widens, providing a broader canvas for threat actors to exploit. Cloud environments, which are inherently dynamic and distributed, introduce identity and access management complexities. Organizations may also have less visibility and control over cloud resource access than in on-premises environments. This can make it difficult to detect and prevent unauthorized access. Cloud environments often rely on shared credentials, such as passwords or API keys, to access resources. This can be a security risk if these credentials are compromised.

Prepare for new AI-based attacks

An equally potent threat emerges for every positive stride made in the realm of AI. The dark side of AI can manifest in sophisticated cyber threats and malicious activities fuelled by the same technologies that are designed to enhance efficiency, automation, and decision-making. As AI becomes more pervasive, adversaries will quickly capitalize on its capabilities, crafting new attack vectors that exploit vulnerabilities in novel ways.

Deepfakes will pose a looming threat to India's cybersecurity in 2024

As the sophistication of deepfake technology continues to advance, India is anticipated to witness a surge in deepfake-related cyberattacks in 2024. These attacks will target individuals, businesses, and even government institutions, aiming to spread misinformation, manipulate public opinion, and disrupt critical infrastructure. The financial repercussions of these attacks could be severe, potentially leading to reputational damage, loss of investor confidence, and even economic instability. To combat this growing threat, Indian organizations must invest in deepfake detection and mitigation technologies, raise awareness among their employees about the dangers of deepfakes, and develop robust cybersecurity strategies that can withstand these sophisticated attacks.

In India's vast and dynamic digital landscape, the stakes for cybersecurity have never been higher. As we gaze into the future, the trajectory appears promising and perilous. The surge in data breaches, a continued acceleration in ransomware activities, the rise in cloud adoption, and the ominous specter of AI-based attacks and deepfakes collectively paint a complex canvas. CISOs will find themselves not merely as guardians of technical fortresses but as stewards of personal and professional accountability, navigating the delicate balance between protocols and reputation in an unforgiving digital realm.

These predictions for 2024 underline the urgency for organizations to invest in cutting-edge technologies, raise awareness, and craft robust strategies that can withstand the onslaught of evolving cyber threats. The future demands a proactive, adaptive, and comprehensive approach to cybersecurity. This can help us safeguard the digital future of a nation on the rise.

Cisco Revolutionizes Application Instrumentation through Smart Agent for Cisco AppDynamics

RONAK DESAI,
Senior VP and GM,
Cisco AppDynamics

Cisco has introduced the Smart Agent for Cisco AppDynamics, revolutionizing application instrumentation. This technology facilitates the management of agent lifecycles, streamlining the process of application instrumentation for comprehensive observability across the entire stack. The Smart Agent employs intelligent automation and management, enabling swift identification and upgrading of outdated agents. This is achieved through a user-friendly centralized agent management interface, allowing customers to efficiently onboard new applications.

As applications evolve to become more distributed and scalable, the increasing number of agents poses a challenge for technologists. Large enterprises, in particular, grapple with the management of hundreds of thousands of agents, leading to delays in upgrading to the latest versions. The Smart Agent addresses this complexity by simplifying the installation and upgrade processes, offering a UI-driven approach for easy agent management. This automation not only saves time but also enhances the efficiency of operations teams, enabling them to focus on optimizing application performance.

The Smart Agent's push-button upgrade feature ensures that customers can access new capabilities promptly, maintaining compliance and minimizing security risks associated with outdated agents. Moreover, the technology provides valuable insights into application performance and business outcomes with its streamlined process discovery and automated deployment. By automating application instrumentation, the Smart Agent allows for quick data collection and visualization of application topography, reducing the time required from days to minutes. Ronak Desai, Senior Vice President and General Manager at Cisco AppDynamics, emphasized the company's commitment to leveraging automation and intelligence to alleviate the challenges posed by complex technology environments. The Smart Agent aims to empower IT teams, enabling them to shift their focus from agent management to innovation. Brad Johns, Manager of Solutions Architecture at Sabre, expressed eagerness about utilizing Smart Agent for Cisco AppDynamics, anticipating a simplified process that enhances responsiveness and facilitates the adoption of new agent-based features.

Mastek Collaborates with Microsoft to Revolutionize Industries through Generative AI

Mastek has entered into a strategic partnership with Microsoft to innovate solutions utilizing Microsoft Azure OpenAI Service and Azure AI Services. This collaboration aims to leverage generative AI capabilities to transform industries such as retail, healthcare, manufacturing, financial services, and the public sector. Mastek recently secured a significant deal in the banking sector, incorporating generative AI to enhance customer marketing and service domains. The company's InfoGENius, a generative AI-based accelerator, addresses user queries using published articles, policies, and structured data, enhancing user experience and productivity with 24/7 secured access.

Mastek's Decomplex Generative AI services, developed in collaboration with Microsoft, include Plan.ai, Create.ai, Orchestrate.ai, Transform.ai, and Deliver.ai, simplifying generative AI for clients. The strategic alliance with Microsoft signifies Mastek's commitment to driving digital engineering, data cloud modernization, and customer experience transformation through the integration of generative AI across core service domains. Hiral Chandrana, Global CEO of Mastek, emphasized the collaboration's dedication to innovation and excellence, while Sangita Singh, General Manager IT & ITES at Microsoft India, highlighted the joint effort's potential to reshape various sectors by enhancing operational efficiency and customer experiences through generative AI solutions. The collaboration is poised to facilitate a shift from a digital-first to an AI-first approach in diverse industries.

Boosting Cyber Resilience Demand, Veeam Enhances ProPartner Network

Veeam Software has introduced updates to its ProPartner Network program, aiming to support global partners in leveraging the growing adoption of Veeam technology. The goal is to help companies enhance their resilience against increasing cyber threats and disruptions. The program enhancements prioritize partner profitability, ensuring secure business engagement with Veeam. The expanded network, consisting of 35,000 technology partners across 150 countries, reflects Veeam's commitment to supporting partners globally.

Larissa Crandall, VP of Global Channel and Alliances at Veeam, emphasized the company's partner-centric approach, with plans to announce new program enhancements in collaboration

LARISSA CRANDALL,
VP of Global Channel and Alliances, Veeam

STEVE WHITE,
Program Vice President, IDC

with partners, alliances, and GSIs throughout 2024. The updates include benefits such as increased front-end margin improvements, broader deal registration eligibility, a price protection system, enhanced training aligned with competencies, and additional marketing support through the Veeam Marketing Centre.

Steve White, Program Vice President at IDC, noted the evolution in the partner ecosystem, emphasizing shared success and profitability at the core of the new Veeam ProPartner Network. Partner testimonials from companies like Advizex and American Digital highlighted the positive impact of the program updates on joint customer success and business growth.

Kyndryl Introduces Services Orchestration Empowered by GenAI

Kyndryl, a global IT infrastructure services provider, has introduced its Kyndryl Workflow Orchestration services, a generative AI-powered technology aimed at enhancing service delivery and empowering customers to optimize their own services. This initiative utilizes no-code and low-code platforms to maximize business value for customers, moving beyond conventional IT optimization. Kyndryl aims to streamline business processes with a focus on improving employee experience, integrating Generative AI (GenAI) into these processes

to enhance efficiency. The Kyndryl Workflow Orchestration services have already been employed for various use cases, including quick provisioning of handheld devices, construction site inspections via mobile applications, and automated employee onboarding. The integration of GenAI simplifies complex tasks, facilitates natural interfaces for executing tasks, and enables dynamic decision-making. Kyndryl plans to scale its Workflow Orchestration services, leveraging a library of 50 reusable assets to swiftly create new workflows for customers.

Channel Point

Embracing Prudent Growth: India's Tech Startups Move Beyond Valuations

Friends! This issue, we want to delve into an exciting topic that is shaping the landscape of India's tech startup ecosystem - the era of prudent growth. In a world often obsessed with valuations, it is refreshing to witness a shift towards a more sustainable and responsible approach to building successful startups.

India's tech startup scene is no stranger to rapid growth and skyrocketing valuations. However, recent years have seen a paradigm shift as entrepreneurs and investors realize that valuations alone do not guarantee long-term success. Instead, there is a growing focus on building a solid foundation, fostering profitability, and ensuring sustainable growth.

One of the key drivers behind this shift is the realization that sustainable growth leads to a more stable and resilient startup ecosystem. By prioritizing profitability over mere valuations, Indian tech startups are building businesses that can weather market uncertainties and economic downturns. This focus on prudent growth allows startups to make strategic decisions, optimize operations, and achieve profitability without compromising their long-term vision.

Another important aspect of the era of prudent growth is the increasing emphasis on unit economics. Startups are now paying closer attention to the economics of their business models, ensuring that each unit sold or acquired adds value to the overall growth trajectory. This approach not only helps in achieving profitability but also attracts investors who are looking for well-grounded and sustainable opportunities.

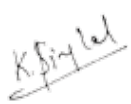
Furthermore, the era of prudent growth encourages Indian tech startups to diversify their revenue streams and explore untapped markets. By expanding beyond their core offerings and venturing into complementary sectors, startups can reduce their reliance on a single product or service, mitigating risks and creating additional avenues for growth.

In addition, the focus on prudent growth fosters a culture of innovation and efficiency. Startups are encouraged to think creatively, optimize resources, and find innovative solutions to industry challenges. This mindset is not only beneficial for the startups themselves but also for the overall development of the Indian startup ecosystem.

The era of prudent growth is not without its challenges. Startups may face pressure from investors or stakeholders who prioritize short-term gains over long-term sustainability. However, by staying true to their vision and embracing a sustainable growth mindset, Indian tech startups are setting themselves up for long-term success.

As a part of the Indian tech startup community, I am thrilled to witness this shift towards prudent growth. It inspires confidence in the resilience and potential of our startup ecosystem. By focusing on profitability, unit economics, diversification, and innovation, India's tech startups are charting a path that ensures their long-term viability and contributes to the overall growth of our nation's economy.

Let's continue to support, encourage, and learn from these visionary entrepreneurs who are redefining success in the Indian tech startup landscape. Together, we can build a future where prudent growth and sustainable practices are the pillars of success.



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