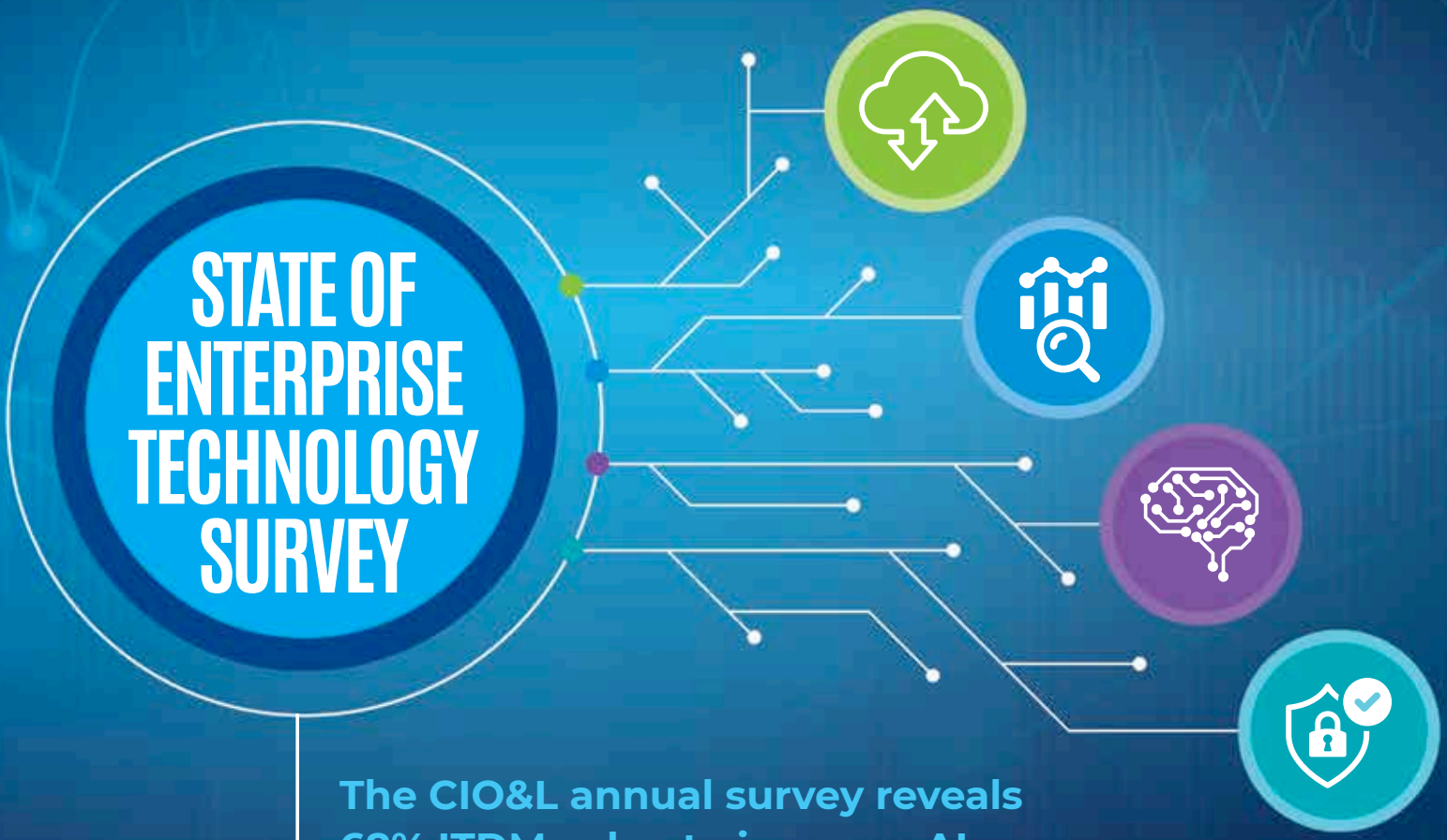
News and Views
HPE's $14 Billion Juniper Deal
Pg 08

Insight
Stay One Step Ahead of Cyber Threats
Pg 32

Volume 12
Issue 10
January 2024
₹150

25th ANNIVERSARY
CIO&LEADER
TRACK TECHNOLOGY • BUILD BUSINESS • SHAPE SELF



STATE OF ENTERPRISE TECHNOLOGY SURVEY

The CIO&L annual survey reveals 68% ITDMs plan to increase AI spending in 2024, with cloud investments facing challenges from security and skill shortages.

A 99 Group Publication

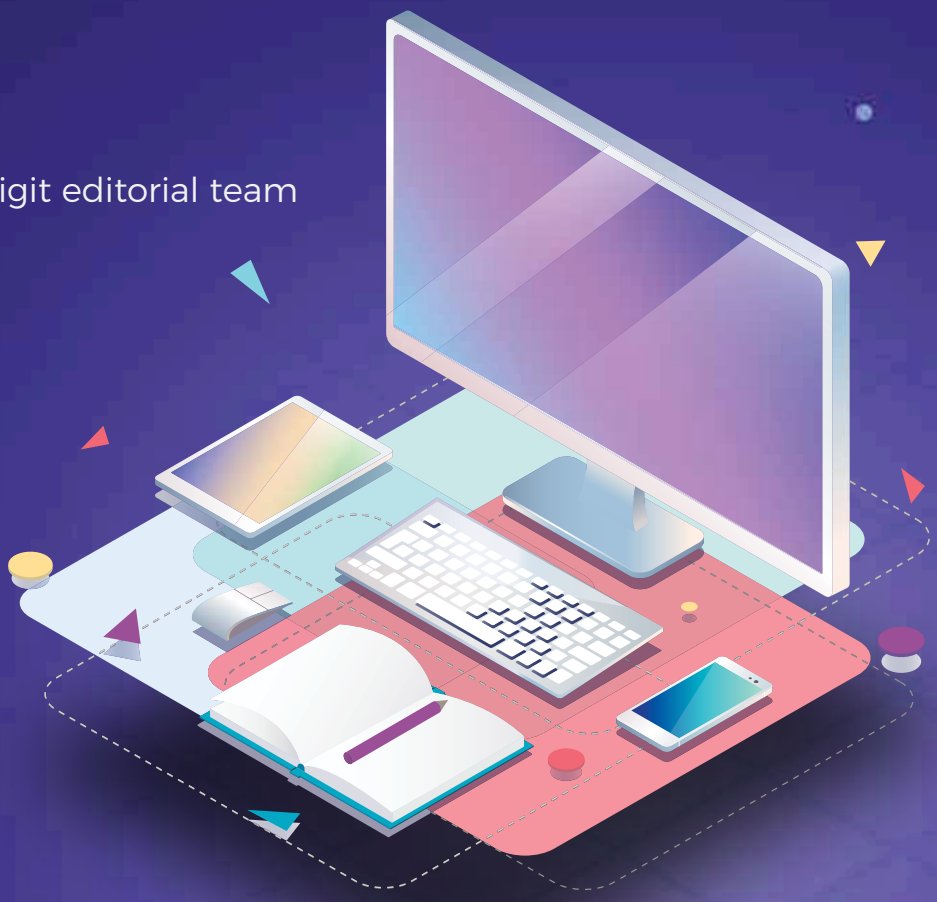
LAUNCHING

digit SQUAD

Here is your chance to become a Digit certified tech influencer

Benefits of Digit Squad Member

- Launch your own tech channel on Digit.in
- Become a Digit Certified tech influencer
- Engage with digit editorial team
- Make money



Apply now by scanning the QR code

www.digit.in/digit-squad/apply.html

2024: A game-changing year for AI?

Let me be honest with you! When OpenAI launched ChatGPT in November 2022, I wondered if it would be as successful. Not that I was unconvinced about the potential of AI, but I was skeptical about its correct usage and potential biases.

Of course, it captivated everyone with its conversational ability to respond to any question, leveraging vast amounts of data it was trained on to identify specific patterns and make intelligent judgments. One of the most significant advantages that Generative AI tools have brought is the enhanced accessibility and increased productivity they offer.

However, the initial versions of Gen AI tools certainly had their flaws. CIOs were still determining their enterprise usage due to concerns around accuracy, security, and factuality to make it more suitable for enterprise use cases.

Fast forward to 2024, and an array of AI-powered tools has been launched, intensifying the competition among large language models (LLMs). Their capabilities have expanded from writing articles and content to creating PPTs, code, images, and more.

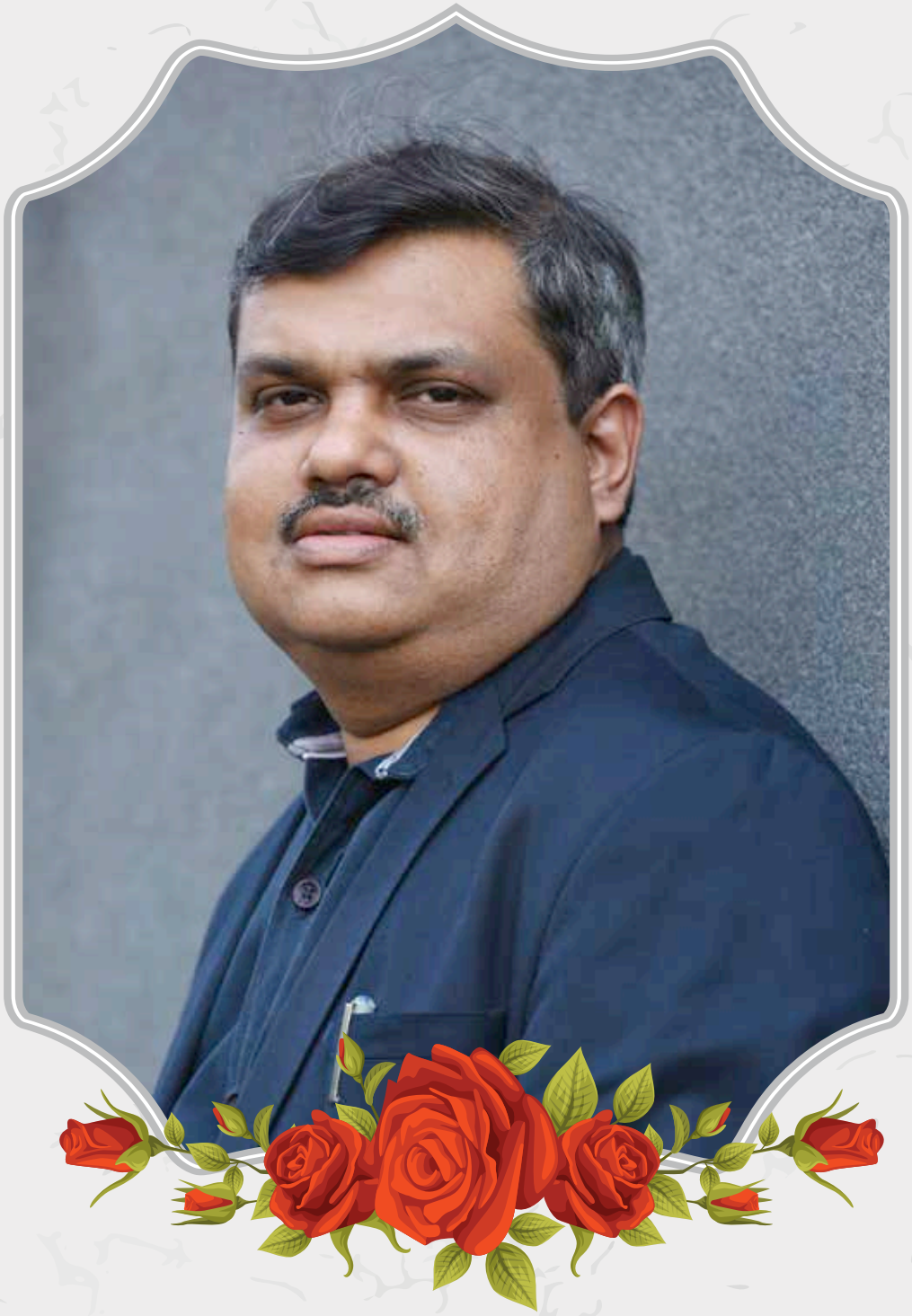
I have no reservations in acknowledging that my initial skepticism regarding Generative AI was too stringent. The launch of Generative AI tools like ChatGPT, Google Bard, and Meta Llama 2 has ignited a revolution, marking a significant stride in bringing AI to mainstream applications.

That being said, the future of AI relies heavily on gaining public trust. 2024 AI is expected to play a crucial role in organizations and economies, as evident from our first 'State of Enterprise Technology Survey.' Over the next twelve months, businesses will use AI to improve customer engagement, offer personalized products, and enhance defenses against cyber threats.

However, choosing the proper AI framework, platform, and tools for organization needs is becoming challenging. The global tech scene, widespread use of AI, and successful business applications depend on global AI governance. This governance is vital for protecting user data and ensuring responsible AI use. ■

In 2024, AI is expected to play a crucial role in organizations and economies, as seen in our first 'State of Enterprise Technology Survey.'

JATINDER SINGH
Executive Editor
jatinder.singh@9dot9.in



SHYAMANUJA DAS

9-MAY-1970 - 28-DEC-2023

Forever IN OUR HEARTS

CIO&Leader regrets to share the passing away of its Editorial Director, Mr. Shyamanuja Das, in New Delhi on December 28, 2023, at the age of 53. Mr. Das, who had been ailing for some time, leaves behind a legacy of impactful contributions to technology journalism.

A qualified computer engineer, Shyamanuja Das embarked on his illustrious career in 1994, joining the newly launched Voice & Data magazine at Cyber Media after completing a journalism diploma from the prestigious Indian Institute of Mass Communications (IIMC), New Delhi. He evolved into a skilled writer and editor throughout an era marked by significant technological shifts.

Notably, Mr. Das successfully pioneered India's first publication dedicated to the domestic offshore BPO industry, BPOrbit, showcasing his forward-thinking approach. His fascination with data and analytics led him to spearhead significant research initiatives at Cyber Media. Subsequently, he assumed the role of Editor for Dataquest magazine, earning distinction and acclaim.

In 2012, he transitioned to JuxtConsult's business research & advisory practice, focusing on advisory opportunities in the digital economy. Along this journey, he founded the non-profit DataJourno community to promote data journalism and co-founded the active "Odias in Machine Learning" group, showcasing his commitment to fostering communities.

Joining the 9.9 Group in 2015, Shyamanuja Das played a pivotal role in overseeing all editorial and content activities for the Enterprise Technology group, comprising CIO&Leader, IT NEXT, and CSO FORUM. His emphasis on research and storytelling resulted in pioneering content-led engagement activities, showcasing his innovative approach.

In 2018, Mr. Das was honored with the 20th Polestar Award for a technology feature article in CIO&Leader titled "Decoding Digital Transformation in India," underlining his impact and recognition in the industry.

Shyamanuja Das was not just a celebrated technology editor but a multifaceted individual who made significant contributions to Odia culture, displayed a passion for cricket and music, engaged in philanthropy, and pursued scholarly research. His no-nonsense approach and a genuine appreciation for honesty and dedication earned him widespread respect in the industry.

A devout follower of the Bhagavad Gita, Mr. Das upheld a standard of perfection throughout his life. Despite his serious demeanor, he remained curious, creative, and always ready to help and guide others. Shyamanuja firmly believed that learning never ceases. He pursued a Ph.D. in his chosen field, further underscoring his dedication to knowledge acquisition and dissemination.

Shyamanuja Das's life was a testament to the pursuit of excellence, the love of culture, and the relentless pursuit of excellence. His legacy continues to inspire and illuminate the path for generations to come.

Shyamanuja, you will be deeply missed.

IN MEMORIUM

"Joie de vivre" is a French phrase often used in English to express a cheerful enjoyment of life, an exultation of spirit, and general happiness.

Shyamanuja, for me, was the embodiment of this spirit and attitude towards life. While he had a serious persona, he was full of life, bubbling with creative ideas, and always ready with a witty joke – a compendium of all things music - especially Bollywood songs. There was not a single Bollywood song, regardless of its era, whose lyrics, lyricist, musician, or movie taken from the actors picturized that he did not know about.

Despite the devastating illness that robbed him of his ability to express himself verbally or by writing, Shyamanuja continued to publish his editorial by using a device that tracked his eye movements as keyboard strokes.

A fantastic human being and editor, he was hugely respected for his professionalism and work amongst the B2B editors and the CIO community. A champion of the Oriya culture, he had a cult-like following on Twitter.

I will miss him as a friend and colleague!

– VIKAS GUPTA
Founder and Director, 9.9 Group

The CIO Klub mourns the loss of such a visionary and influential leader. His contributions to the industry and journalistic excellence have left an indelible mark. We extend our heartfelt sympathies to his family, friends, and colleagues during this difficult time. May his soul rest in peace.

– CIO ASSOCIATION (CIO KLUB)

This is very shocking and sad news for the IT fraternity in India. Shyamanuja was a nice and humble person who was connected to the IT fraternity for over two decades.

– UMESH MEHTA
President & CIO, PI Industries Ltd

I was deeply saddened to hear of the passing of Sh Shyamanuja Das, Editorial Director at 9.9 Group. My heartfelt condolences to his family, friends, and colleagues during this difficult time.

Shyamanuja Das was an exceptional leader and visionary in the industry, and his contributions to journalistic excellence were truly remarkable. His influence and dedication have left an indelible mark on all who had the privilege of knowing and working with him.

During our various engagements at events, I witnessed firsthand his passion and commitment to his work and his ability to inspire and lead with grace and wisdom.

– BASANT K CHATURVEDI
Regional Director IT at Perfetti VanMelle -South Asia, Middle East Africa & LATAM

I received this news with a total sense of loss. My interactions with Shyamanuja go over a couple of decades, and even on the few occasions in which we debated the content or context, there has been a quiet appreciation of his erudition and diligence. He was a thorough gentleman and will be missed.

– SANJAY PRASAD
CIO, RPSG CESC Power Group.

It is hard to believe that Mr Shyamanuja Das is no more. Such a simple and knowledgeable person, a significant loss for the industry!! Condolences to the family!

– LB SHARMA
GM-IT, BPCL

We lost one of the finest tech journalists in the country and a perfect human being! Condolences and RIP

– ANJANI KUMAR
Chief Technology Officer (CTO) and EVP, Tata AIG General Insurance Company Limited

REFLECTING ON SHYAMANUJA'S EDITORIAL

FRATERNITY LOST ONE MORE JEWEL: Life's never certain. However, some people leave a lasting mark and legacy with their work. Today, we are grieving to hear about a great journalist and a wonderful human being, Shyamanuja Das, who left this world untimely. You will always be remembered, brother!

– RAHUL NEELMANI
VP, ISMG, Former Director and Editor, CIO&Leader

Shyam was my personal friend - one whom I admired and cherished. Spontaneity was his nature. He held life in a celebratory mode constantly!! I will miss him.

– KARTHIKEYEN K
Chief Executive Officer at Atal Incubation Centre - Assam Agricultural University, Jorhat

Shyamanuja Das will be dearly missed. His wealth of knowledge, approachable nature, and unwavering commitment to integrity have profoundly impacted many. Rest in peace, Shyamanuja; your legacy will continue to inspire us all.

– PRITI SETIA
Vice President, Adfactors PR

It is with great sadness and shock that I read about the passing away of Shyamanuja Das. I and the Fortinet team have been working with him closely for the past decade, and he was the face for all 9dot9 editorials for us. He was a great Journalist to work with, and he has left a void in tech journalism that will be difficult to fill. Please accept our heartfelt condolences and convey the same to his family. Missing you, Shyamanuja Das, this was very soon.

– GUNASHEKAR SRINIVASAN
Director, Mediatalk

Our first managers play a huge role in shaping our careers. And if, like me, you got lucky and found a first manager like Shyamanuja Das, you not only amassed a wealth of knowledge but also found a friend and mentor for life. Over the years, as we moved on to different career paths, he often called me randomly to discuss ideas and things he'd been up to. I contacted him to get career advice, share milestones, and discuss data. I vividly remember my last long conversation with him when I was just about to join Google. You will always be my first editor. This world is a poorer place without you.

– MEHAK CHAWLA
Senior Communications Manager, Google Cloud

Shyamanuja will always be very special to me; he was the first person to interview and induct me into journalism, a pivotal point in my career, confidence, and being in this world. I have seen only admiration and respect for him from his teammates, having carved so many individuals as journalists and further communication professionals.

– MEENAKSHI ROHTAGI
Consultant - Communications, CEO Office, The Sona Group

He went too early, leaving a big vacuum behind. It's hard to believe that he is no more. Rest in peace, Shyamanuja Das.

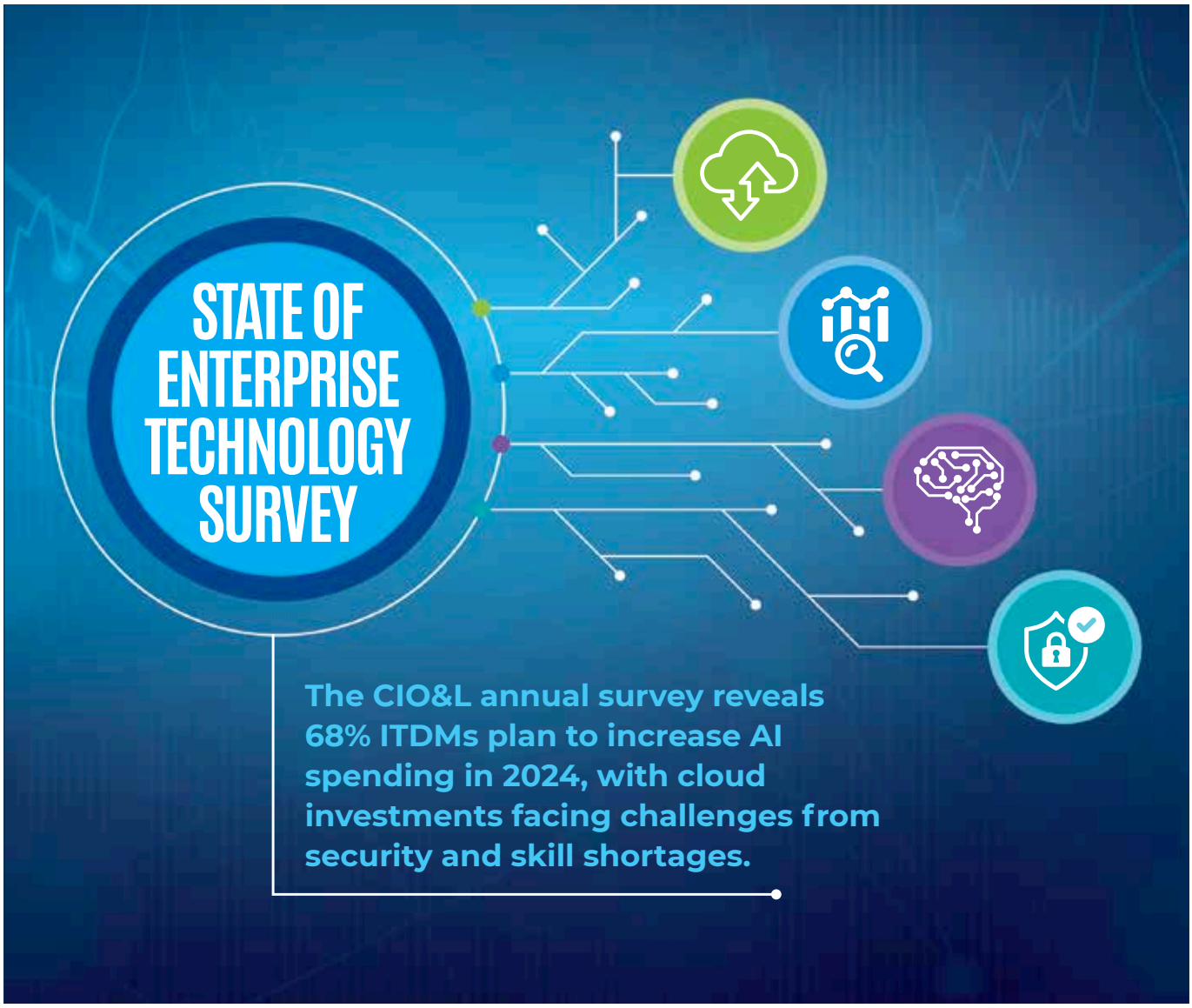
– DEEPAK KUMAR
Founder Analyst, B&M NXT

You were phenomenal as a boss, a mentor, a colleague, a journalist. I never thought you would leave us so soon! May God shower on your soul peace, Shyamanuja Das

– ONKAR SHARMA
AVP – Content, EXL

LEGACY THROUGH TIMELESS MOMENTS

CONTENT JANUARY 2024



COVER STORY

16-31

State of Enterprise Technology Survey

The CIO&L annual survey reveals 68% ITDMs plan to increase AI spending in 2024, with cloud investments facing challenges from security and skill shortages.

Please Recycle This Magazine And Remove Inserts Before Recycling

COPYRIGHT, All rights reserved: Reproduction in whole or in part without written permission from 9.9 Group Pvt. Ltd. (Formerly known as Nine Dot Nine Mediaworx Pvt. Ltd.) is prohibited. Printed and published by Vikas Gupta for 9.9 Group Pvt. Ltd. (Formerly known as Nine Dot Nine Mediaworx Pvt. Ltd.) 121, Patparganj, Mayur Vihar, Phase - I, Near Mandir Masjid, Delhi-110091. Printed at Tara Art Printers Pvt ltd. A-46-47, Sector-5, NOIDA (U.P.) 201301

NEWS & VIEWS
08-09
HPE's $14 Billion Juniper Deal: A New Era for Business Networking

INTERVIEW
12-15
AI is only as good as the data that it has.....

INSIGHT
32-33
Stay One Step Ahead of Cyber Threats

EVENT REPORT
34-37
TPL 2023: A Thrilling Season of Innovation and Excellence

EVENT REPORT
38-40
Securing Ecosystems: Navigating Online Safety and Workplace Connectivity

Cover Design by:
Baiju NV

CIO&LEADER

www.cioandleader.com

MANAGEMENT
Managing Director: **Dr Pramath Raj Sinha**
Printer & Publisher: **Vikas Gupta**

EDITORIAL
Group Editor - 9.9 Group: **R Giridhar**
Editorial Director - B2B Tech: **Shyamanuja Das**
Executive Editor - B2B Tech: **Jatinder Singh**
Principal Correspondent-B2B Tech: **Nisha Sharma**

DESIGN
Associate Art Director: **Baiju NV**
Sr. UI UX Designer: **Nikhil Wahal**
Sr. Designer: **Vipin Rai**

SALES & MARKETING
Executive Director - B2B Tech:
Sachin Nandkishor Mhashilkar (+91 99203 48755)
Associate Director - Enterprise Technology:
Vandana Chauhan (+91 99589 84581)
National Sales Head-B2B Tech:
Vaibhav Kumar (+91 97176 74460)
National Digital Head:
Kaizad Patel (+91 98208 20998)
Brand Manager:
Sheena Dawar
Senior Manager - Community Development:
Neelam Adhangale (+91 93214 39304)

Regional Sales Manager
North: **Pratika Barua (+91 9999510523)**
Ad Co-ordination/Scheduling: **Kishan Singh**

OPERATIONS
Head - Projects (Enterprise Technology): **Dipanjan Mitra**
Head - Digital & Event Operations: **Naveen Kumar**
Head - Digital Operations: **Atul Kumar Pandey**

PRODUCTION & LOGISTICS
Manager - Operations: **Rakesh Upadhyay**
Executive - Logistics: **Nilesh Shiravadekar**
Senior Manager - Operations: **Mahendra Kumar Singh**
Logistics: **Mohd. Ansari**

OFFICE ADDRESS
9.9 Group Pvt. Ltd.
(Formerly known as Nine Dot Nine Mediaworx Pvt. Ltd.)
121, Patparganj, Mayur Vihar, Phase - I
Near Mandir Masjid, Delhi-110091
Published, Printed and Owned by 9.9 Group Pvt. Ltd.
(Formerly known as Nine Dot Nine Mediaworx Pvt. Ltd.)
Published and printed on their behalf by
Vikas Gupta. Published at 121, Patparganj,
Mayur Vihar, Phase - I, Near Mandir Masjid, Delhi-110091,
India. Printed at Tara Art Printers Pvt Ltd., A-46-47,
Sector-5, NOIDA (U.P.) 201301.
Editor: **Vikas Gupta**

9.9 GROUP

HPE's $14 Billion Juniper Deal: A New Era for Business Networking

This is a significant financial merger and a strategic alignment poised to reshape the dynamics of AI-driven, cloud-native networking.

By **Nisha Sharma** | nisha.sharma@9dot9.in

In a landmark move to redefine the tech industry, Hewlett Packard Enterprise (HPE) announced its plan to acquire Juniper Networks, Inc., an AI-native networking leader, for approximately $14 billion. This all-cash transaction, at $40.00 per share, is a significant financial merger and a strategic alignment poised to reshape the dynamics of AI-driven, cloud-native networking.

1. A New Era in Networking

The acquisition is a pivotal step in HPE's strategy, marking a shift towards high-growth, high-margin solutions in the networking domain. By integrating Juniper's capabilities, HPE aims to bolster its portfolio with innovative AI and cloud networking solutions, expecting immediate accretion to its non-GAAP EPS and free cash flow in the first year post-closure.

2. Industry-Wide Implications

Consolidation and Competition

The merger is poised to create a challenging force in the networking industry, potentially challenging giants like Cisco and Arista Networks. The combined portfolio of HPE and Juniper promises broader and more integrated product offerings, leading to intensified market competition.

Acceleration of AI-Driven Networking

This union underscores a significant push towards AI-driven networking technologies. The combined expertise and resources could spur further innovation, leading to more efficient, secure networking technologies across the industry.

Market Dynamics and Opportunities

The acquisition could disrupt current market dynamics, leading to new business opportunities, especially in cloud services, edge computing, and IoT sectors. It may also influence market shares, pricing strategies, and customer choices.

Customer and Partner Impact

Customers of both HPE and Juniper Networks could benefit from a more diverse range of products and solutions. However, channel partners might face adjustments in sales strategies and product training.

Global Reach and Regulatory Landscape

The merger will likely enhance HPE's global presence, particularly in emerging markets. It also highlights the regulatory aspects, with potential implications for industry data security and privacy standards.

3. Leadership and Future Vision

Post-acquisition, Juniper CEO Rami Rahim will lead the combined HPE networking business under the oversight of HPE President and CEO Antonio Neri. This move is a transformative step for both companies, aligning with HPE's goal to bridge AI-native and cloud-native technologies.

This strategic realignment is set to redefine HPE's and Juniper's roles in the industry and potentially set new standards and directions for networking in a digital, AI-driven world.

4. Financials and Approvals

Funded through a mix of term loans, new debt, and cash, the transaction is set for completion between late 2024 and early 2025. It is subject to regulatory approvals, Juniper shareholder consent, and other customary closing conditions. The companies anticipate $450 million in annual cost synergies within three years post-closure, with a plan to reduce leverage to approximately 2x in two years.

Conclusion

HPE's acquisition of Juniper Networks represents a major shift in the technology and networking industry, with significant implications for market competition, AI-driven networking innovation, and customer offerings. This strategic realignment is set to redefine HPE's and Juniper's roles in the industry and potentially set new standards and directions for networking in a digital, AI-driven world. ■

INDUSTRY MOVEMENTS

Angel One appoints Anuprita Daga as Group CISO

Anuprita Daga has joined Angel One as Group CISO. She joined from YES BANK, where she served as president and chief information security officer. She was earlier associated with Reliance Capital Limited, Reliance Life Insurance, Kotak Mahindra Old Mutual Life Insurance, BIRLA TECHNOLOGIES, and Systime Computers India.

Next 100 Winner Krishnakant Gaitonde joins KPMG India as Director of Technology (Head of Enterprise Applications & Delivery)

Next 100 Winner Krishnakant Gaitonde has started the new position as Director – Technology (Head -Enterprise Applications & Delivery) at KPMG India. Before this, he was Sr. VP IT at Edelweiss Tokio Life Insurance. He was earlier associated with Momentum Metropolitan Services, Avantha ERGO Life Insurance, Birla Sun Life Insurance, ICICI Prudential Life Insurance Company, Kotak Life Insurance, Citicorp Overseas Software, and Bharat Bijlee Limited.

Shibin Chulliparambil is now Head of IT at Blue Star Limited

Shibin Chulliparambil has started his new position as Head of Information Technology at Blue Star Limited. Before this, he was the Chief of Information Technology at Mafatlal Industries Limited. He was previously associated with Vrata Tech Solutions, Bhaktivedanta Hospital & Research Institute, Cipla, and Clearpoint Electronics.

Shweta Srivastava joins Matix Fertilisers and Chemicals Limited as Head-IT

Shweta Srivastava has joined Matix Fertilisers and Chemicals Limited as Head of IT. She joins from JKCement, where she served as Head of IT Applications. She was earlier associated with Paul Merchants Finance, Paul Merchants, Safexpress, Fortis Hospitals, Sahara Hospital and Convergence Technologies.

Poorav Sheth Starts A New Position As CDIO At Hindalco Industries Limited

Poorav Sheth has started his new position as CDIO at Hindalco Industries Limited. Before this, he was Chief Digital Officer at Godrej & Boyce Mfg. Co. Ltd. He was earlier associated with Piramal Glass, L&T Infotech, Stratellect Consulting, V2Solutions Inc., Pace Analytical, and SDK Software.

Neeti Wahi Starts A New Position As Chief Digital and Information Officer At Indus Towers

Neeti Wahi has started her new position as Chief Digital and Information Officer at Indus Towers. Before this, she was the Group Chief Information and Digital Officer at Sterlite Power. She was previously associated with Clix Capital, GE Capital, and GE India.

Badar Afaq Starts A New Position As Group Head IT At KCT Group

Badar Afaq has joined KCT Group as Group Head IT (CIO). He joined from Antara Senior Care (Max India Group), where he served as VP & Head of IT. He was earlier associated with The Lemon Tree Hotel Company, ITC – Fortune Hotels, DLF Group, Radisson Hotel Delhi and Usha Group Company.

Manish Chandegara Joins Simpolo Ceramics As Group CIO

Manish Chandegara has joined Simpolo Ceramics as Group CIO. He joins from CERA Sanitaryware, where he served as CIO. He was earlier associated with Aditya Birla, Maahi Milk Producer Company, KSP Solution, Magna Seating, Roquette, PMC Projects (India), Adani Group, Sai Info System, and HP.

Satish Kumar Dwibhashi Starts A New Position As CISO At KreditBee

Satish Kumar Dwibhashi has joined KreditBee as CISO. He joins from InMobi, where he served as SVP & CISO. He was previously associated with Wibmo, Scope International, IBM, SecureSynergy, Sterlite Industries, and Varroc.

Edsel Pereira was promoted to executive vice president, IT at Glenmark Pharmaceuticals Ltd.

Edsel Pereira has been promoted to Executive Vice President – IT at Glenmark Pharmaceuticals Ltd. Before this, he was Group Vice President at the same company.

AI is only as good as the data that it has...

By Nisha Sharma | nisha.sharma@9dot9.in

ARUN KUMAR PARAMESWARAN
Senior Vice President & Managing Director, Salesforce

As organizations grapple with the integration of generative AI, the focus has shifted from its adoption to its responsible and ethical use. ***Arun Kumar Parameswaran,*** *Senior Vice President & Managing Director at Salesforce, highlights how this platform positions itself at the forefront of this shift, emphasizing training and policy development for secure AI implementation.*

In the rapidly evolving landscape of enterprise IT, 2024 is poised to be a year of significant transformation, driven by advancements in AI, automation, and a heightened focus on data privacy and compliance. This in-depth conversation between **Nisha Sharma**, Principal Correspondent, CIO&Leader, and **Arun Kumar Parameswaran**, Senior Vice President & Managing Director of Salesforce, sheds light on the key trends shaping the enterprise IT space and how solutions are being tailored to address these evolving needs.

Moreover, the discussion provides a glimpse into how customer success stories inform the company's strategies, with examples like a luxury retailer's use of AI to enhance call center operations and a leading manufacturer's use of field service solutions. These cases demonstrate the practical benefits of the company's products and underscore its dedication to empowering organizations through digital transformation.

Let's dive into the insights from Arun Kumar Parameswaran as we explore the cutting-edge strategies and solutions poised to redefine enterprise IT in 2024.

CIO&Leader: What are the key trends shaping the enterprise IT landscape in 2024? How are your solutions positioned to address these trends?

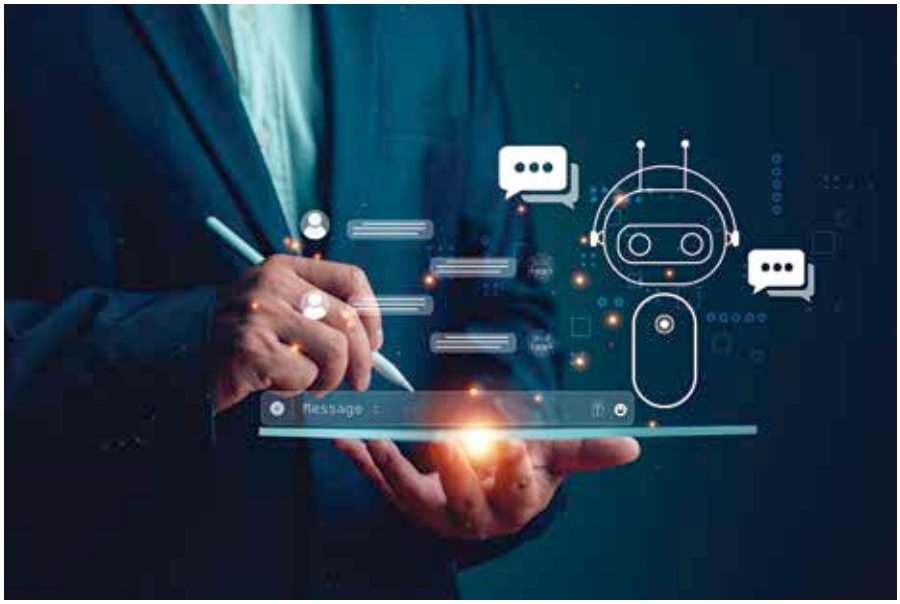
Arun Kumar Parameswaran: By 2026, Gartner predicts over 80% of enterprises will use generative AI, up from less than 5% in 2023. The goal is full workflow automation across business sectors. 2024, data privacy and compliance will be crucial, requiring accurate data and strict governance policies. Cyber defense strategies will evolve to meet new threats. 'Semantic query' will become a key term, reflecting AI's role in daily workflows.

At Salesforce, our strategy aligns with these trends, focusing on ethical and secure generative AI implementation. The emphasis is on training and policy development to help businesses use generative AI effectively while maintaining security. Next year, the focus will shift from whether to use generative AI to how to do it responsibly.

CIO&Leader: What are your top priorities for 2024?

Arun Kumar Parameswaran: Salesforce is engaging in India's growth opportunity, supporting businesses and the economy. As a digital partner, we've seen growth and customer success and aim to continue this trend in 2024, focusing on industry transformations. Our commitment is highlighted by our expanded Centre of Excellence in Hyderabad and Bangalore offices, marking India as a critical talent and innovation hub for Salesforce.

We are hiring across various roles in technology, product, sales, business support, and customer success in India. We work with major customers like TVS Motor, Kotak Mahindra Bank, Asian Paints, Atomberg, Air India, and Mahindra & Mahindra. The ecosystem of partners and startups in India is a vital part of our opera-



Looking ahead to 2024, we anticipate further advancements in applying Generative AI. Our focus remains on making this technology accessible to businesses of all sizes.

tions. With many Salesforce developers and Trailhead users, India is an essential market for us outside the US. We are dedicated to continuing our support for innovation and growth in India.

CIO&Leader: With the growing importance of digital transformation, what strategic initiatives and product offerings can your company provide to help organizations stay competitive in 2024 and beyond?

Arun Kumar Parameswaran: Salesforce is actively engaged in the AI revolution, prioritizing trust as our core value due to the challenges of privacy, bias, and toxicity in AI. We emphasize a digital strategy that enhances productivity and efficiency for today's needs and future visions. Salesforce leads in providing trusted solutions to business leaders.

Our focus has been on developing safe, responsible AI for over a decade. Salesforce Einstein generates over 1 trillion AI-powered predictions weekly, integrated across Customer 360. This empowers both technical and non-technical businesses. AI advancements are reshaping CRM user interactions for improved performance and satisfaction. At Dreamforce, we introduced the Einstein 1 Platform, a safe AI platform for customer companies to build AI-powered apps and enhance CRM experiences. The platform includes conversational AI assistants and tools like Einstein Copilot and Data Cloud, simplifying the creation of AI assistants and integrating AI into various workflows. The Einstein Copilot and Studio operate within the Einstein Trust Layer, ensuring secure AI use. These AI capabilities benefit clients like Heathrow Airport, Gucci, and RBC US Wealth Management.

CIO&Leader: How are your solutions adapting to support automation and AI? What innovations can we expect in this space in 2024?

Arun Kumar Parameswaran: Looking ahead to 2024, we anticipate further advancements in applying Generative AI. Our focus remains on making this technology accessible to businesses of all sizes. Additionally, continuing our dedication to responsible AI development, Salesforce has developed comprehensive guidelines for generative AI based on our Trusted AI Principles. These principles serve as an industry-leading framework, guiding companies on the thoughtful integration of generative AI into their operations while upholding ethical standards. As the AI landscape evolves, our commitment to responsible and inclusive AI development ensures that our solutions continue to meet the changing needs of businesses, both large and small.

CIO&Leader: As organizations value their intelligence, what enhancements can we anticipate in your solutions?

Arun Kumar Parameswaran: AI is only as good as the data that it has. We can't unlock the promise of AI without being able to trust what it generates. 2024 will see a strong focus on data privacy and compliance. We can expect a strong continued focus on data privacy and compliance, which includes implementing more robust data governance frameworks, establishing clear policies for data collection, storage, and usage, and continuous monitoring and auditing of training data. Data harmonization will be crucial for business leaders to extract value from their data sources better and effectively leverage AI. Fostering a robust data-driven company requires a focus on driving confidence and trust to drive adoption. The emphasis on democratizing data and analytics will take a new turn. Data and analytics will become more proactive by automatically identifying anomalies in underlying business data, delivering insights in natural language, and allowing users to ask questions and get answers quickly without pulling in a data analyst.

We can expect a strong continued focus on data privacy and compliance, which includes implementing more robust data governance frameworks, establishing clear policies for data collection, storage, and usage, and continuous monitoring.

CIO&Leader: The talent gap in IT remains a concern. How are you supporting CIOs/enterprises in addressing the skills shortage, and what initiatives are in place to foster education and training for IT professionals in the coming year?

Arun Kumar Parameswaran: Our approach to addressing the IT talent gap includes partnerships with various stakeholders and offering online instructor-led Salesforce technology training. This training, led by experts, provides tailored, accessible content.

With a growing need for AI and automation skills, we emphasize training in data security, ethical AI, and programming. Our free, self-paced learning platform, Trailhead, enables users to gain and showcase skills. We also support learners through "Ask a Mentor" sessions and SoftSkill training, enhancing their employability. Additionally, we organize career fairs and connection events, linking learners with potential employers.

Trailhead has empowered about 4 million individuals with in-demand skills. Locally, our collaborations with

entities like NASSCOM and AICTE have facilitated innovation and introduced thousands to Salesforce.

Beyond technical skills, we advocate for diverse tech career paths, emphasizing the need for continuous investment in digital skills for the global economy's growth.

CIO&Leader: Can you provide examples of successful customer use cases from the past year demonstrating the value of your products and solutions, and how do these success stories inform your 2024 strategy?

Arun Kumar Parameswaran: In the past year, we've seen impactful customer use cases that highlight the value of our products, guiding our 2024 strategy toward customer success and digital transformation.

A prominent luxury retailer utilized our AI products to upgrade their call center operations, successfully transforming agents into multifaceted sales and marketing professionals. This approach, emphasizing "human touch powered by technology," resulted in a 30% increase in case handling efficiency.

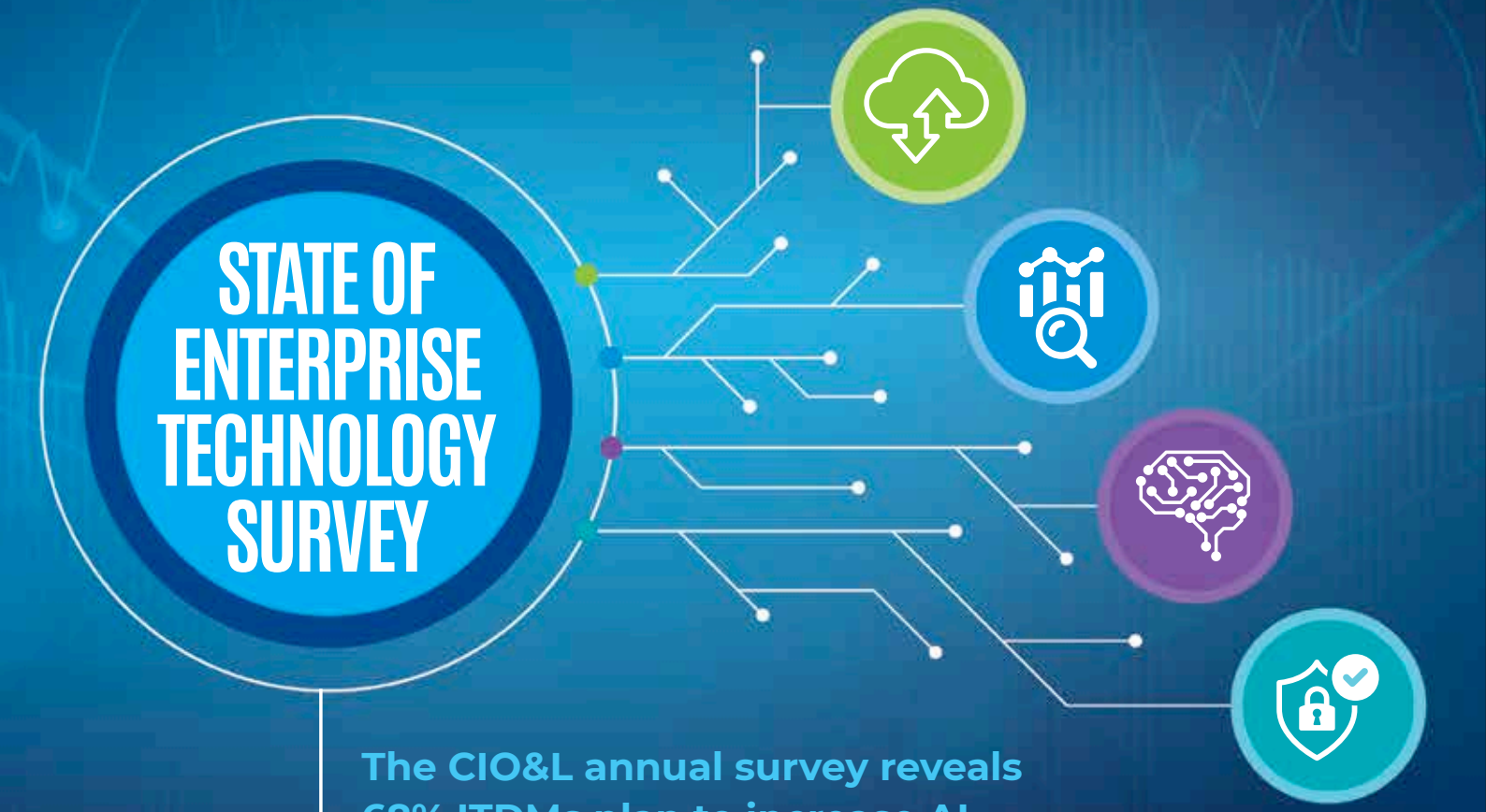
Similarly, Atomberg Technologies in India leveraged our Field Service solution to enhance their on-site service capabilities. This move significantly boosted their productivity and customer experience, demonstrating the practical benefits of our offerings in diverse settings.

CIO&Leader: Vendor partnerships are crucial in the enterprise IT ecosystem. What collaborations and alliances are in the pipeline for your company, and how will they benefit CIOs and their organizations in 2024?

Arun Kumar Parameswaran: These partnerships are crucial for CIOs and their organizations as they drive customer success. For example, a notable CRM platform's partner ecosystem is a dynamic force, with projections indicating it will outgrow the company itself by sixfold by 2026. These vendor partnerships bring extensive expertise, as partners are adept in the platform's products, allowing for seamless technology integration. Such collaborations enable organizations to harness the ecosystem's vast capabilities quickly, providing CIOs with essential tools for success in the rapidly evolving enterprise IT landscape. The partners in this ecosystem specialize in technology and expertise that span the entire digital transformation journey, from managing large-scale implementations to creating solutions for improved operational efficiency, catering to the diverse needs of businesses at different transformation stages.

Addressing CIOs' concerns about the total cost of ownership, this approach in 2024 is centered on enhancing operational efficiency through AI-driven automation, minimizing manual tasks, and increasing productivity. The suite of cloud-based services is designed for scalability, ensuring customers only pay for the services they use. The model offers a subscription basis, prioritizes personalization, maintains high security and compliance standards, and champions training and upskilling through customer success programs. This holistic approach aims to optimize costs while delivering a tangible return on investment, strategically positioning customers for long-term benefits. ■

STATE OF ENTERPRISE TECHNOLOGY SURVEY



The CIO&L annual survey reveals 68% ITDMs plan to increase AI spending in 2024, with cloud investments facing challenges from security and skill shortages.

By **CIO&Leader Research**

In the ever-evolving landscape of Indian enterprise tech, the shift to digital has become a top priority. The impetus for this transformation gained momentum during the pandemic as businesses adapted to new ways of operating. In the post-disruption era, businesses are strategically adopting innovative tools and tech to enhance engagement, productivity, and customer satisfaction.

Our cover story for January 2024 is based on the CIO&Leader research report, 'State of Enterprise IT in India'. It explores the enterprise technology landscape. With insights from over 300 IT decision-makers, it is a valuable barometer of the technology trends shaping Indian organizations. From Cloud Infrastructure and Security to Data Analytics and Artificial Intelligence (AI), our research, conducted between July and September 2023, provides a 360-degree view of technology deployment, challenges, and future plans.

The report explores everything—from the impact of AI to the enduring use of on-premise solutions, despite the clamor for the cloud. Key takeaways highlight a consensus on the importance of AI but reveal a readiness gap. Cloud strategies continue to be impacted by security concerns and skill shortages.

More than just data, our report mirrors the dreams and challenges of Indian enterprises in the digital age. It aims to forecast the trajectory of Indian enterprise IT, drawing insights from top CIOs and CTOs of leading businesses. It sheds light on how organizations are leveraging cutting-edge technologies to drive innovation, enhance operational efficiency, and remain competitive. Specifically, the report provides insights into the adoption of Cloud solutions, the state of security in organizations, the utilization of data and analytics, and the integration of AI to impact business outcomes.

By highlighting the key insights gathered from IT decision-makers, the report offers actionable intelligence to businesses, technology providers, policymakers, and other stakeholders. The insights will enable a better understanding of the current IT landscape, identify opportunities, and address challenges in adopting and implementing specific technologies.

The insights gleaned from the minds that shape and steer IT strategies will help businesses make informed choices in the quest for technology-led transformational capabilities. We thank all IT leaders who participated in this research study, patiently answering a series of surveys—and revealing their views, perceptions, and opinions.

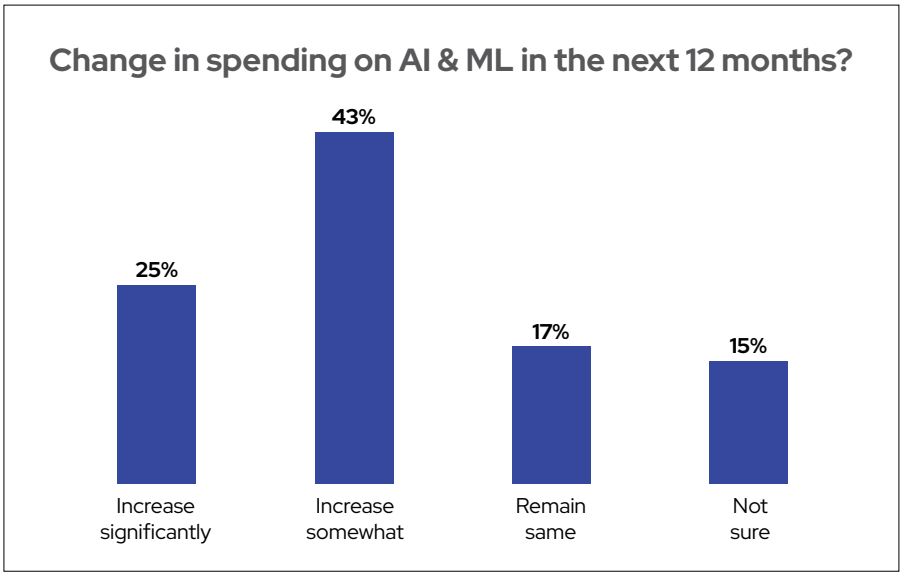
Key takeaways highlight a consensus on the importance of AI but reveal a readiness gap. Cloud strategies continue to be impacted by security concerns and skill shortages.

Indian Businesses Gearing up for AI Spending

A standout revelation from the annual CIO&Leader State of Enterprise Technology survey indicates that 68% of Indian enterprises are poised for a significant uptick in AI spending within the next 12 months. The survey underscores that the adaptability of AI is inspiring businesses to delve into various applications within their operational frameworks, fostering a heightened enthusiasm for AI integration.

The surge in AI investment can be attributed to the successful outcomes of pilot projects, with:

- 25% of respondents foresee a substantial rise in spending
- 43% of participants anticipating a moderate increase
- Only 15% of the respondents are undecided about future spending on AI and ML.



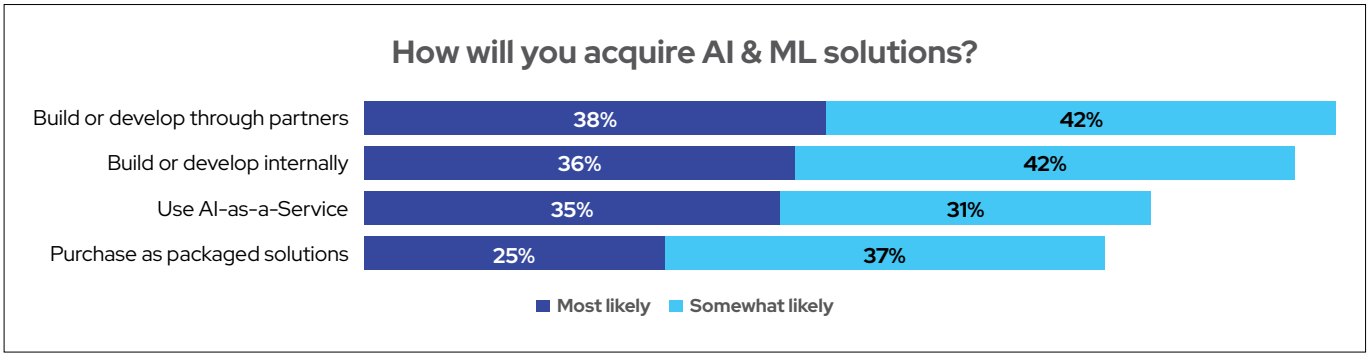
Tech developments key to unlocking potential: The survey underscores the substantial enhancement of AI capabilities, driven by increased availability of data and cloud-enabled processing power. The availability of large volumes of data, multiple AI platforms, cloud-based resources, a growing skill base, and accelerating technological advancements are coming together to lower barriers to trial and adoption.

While business functions like IT operations, sales and marketing, and customer service have been quick to leverage the benefits of AI/ML, survey respondents anticipate that supply chain, HR, and finance-related processes also have good potential for using specialized AI/ML solutions.

Traditional R&D processes often involved sifting through massive datasets, which was time-consuming and resource-intensive. With AI/ML learning algorithms can quickly analyze vast amounts of data, identifying patterns, trends, and correlations that human researchers may have missed.

Organizations are seeking effective ways to acquire AI capabilities by employing diverse strategies, including forming partnerships (38%), building internal expertise (36%), and leveraging AI-as-a-Service offerings (35%)

Revolutionizing customer experience: As customers increasingly seek seamless and personalized experiences, AI has become the linchpin of a successful CX strategy. AI empowers companies to better understand customer needs, insights into preferences, and contextual information by analyzing vast amounts of data at speed and scale. Early AI implementations were confined to IT and supply chain management. Having demonstrated its value proposition with greater efficiency and cost savings, AI adoption has transformed from a niche technology in fringe functions to becoming an integral component of core business applications. Now organizations are more confident that AI adoption can create an impact and use it for competitive advantage. Adoption in core business applications is expected to accelerate with advancements in AI research, natural language understanding, and computer vision.



Businesses are using AI to re-imagine customer engagement strategies (23%) and deliver highly personalized products and services (23%). AI is providing organizations with the tools to understand customer preferences, anticipate needs, offer tailored experiences, and create greater customer loyalty.

Technology, Data, and Compliance are the top challenges: Despite the growing enthusiasm for AI, organizations are struggling to cope with the profusion of choices and the rapid pace of technological evolution.

Embracing AI is throwing up significant challenges, chief amongst which is choosing the right technologies (46%) and identifying suitable use cases (44%). The rapidly evolving landscape of AI technologies is overwhelming organizations and selecting the most suitable AI framework, platform, and tools to align with business needs is turning out to be the most formidable challenge. Determining the right combination of technologies that fit within the existing IT infrastructure and can easily integrate requires an understanding of IT estate and AI technologies.

Some organizations struggle to identify the right use cases wherein AI can create meaningful value; enhance existing processes; or create new opportunities. This requires a thorough understanding of business processes, customer needs, and industry trends to pinpoint areas where AI can make an impact

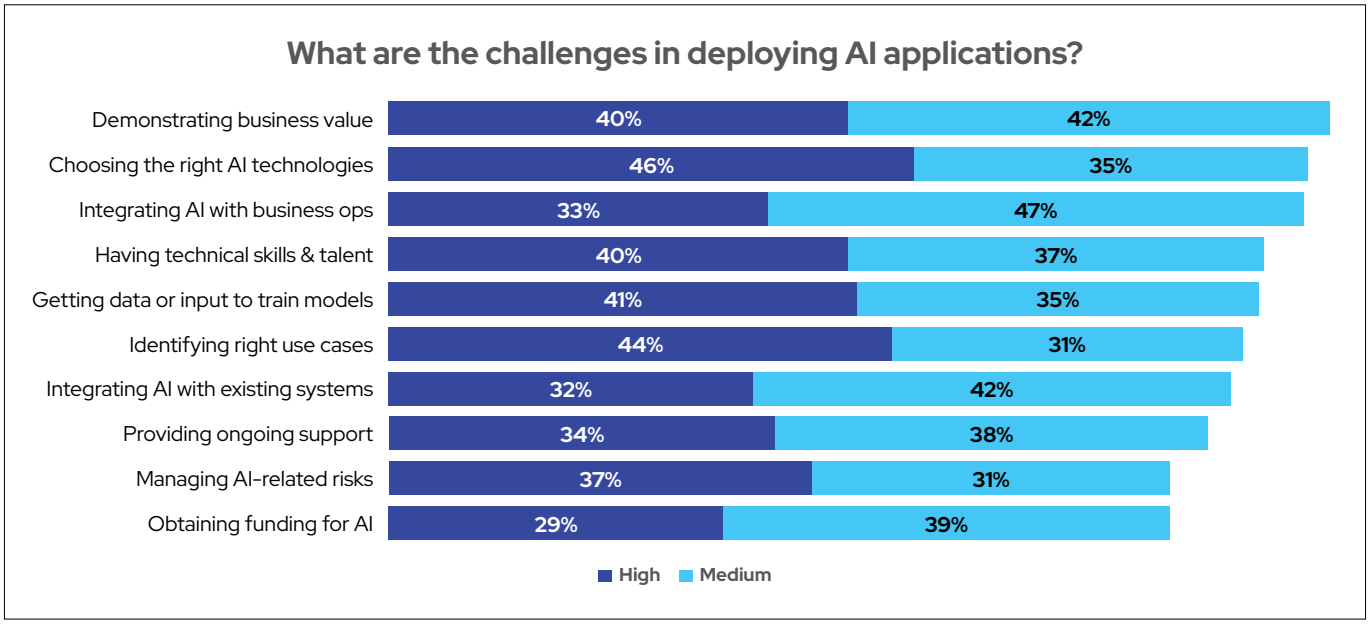
The versatility of AI is prompting businesses to explore diverse applications in the context of business operations, driving growing interest in using AI.

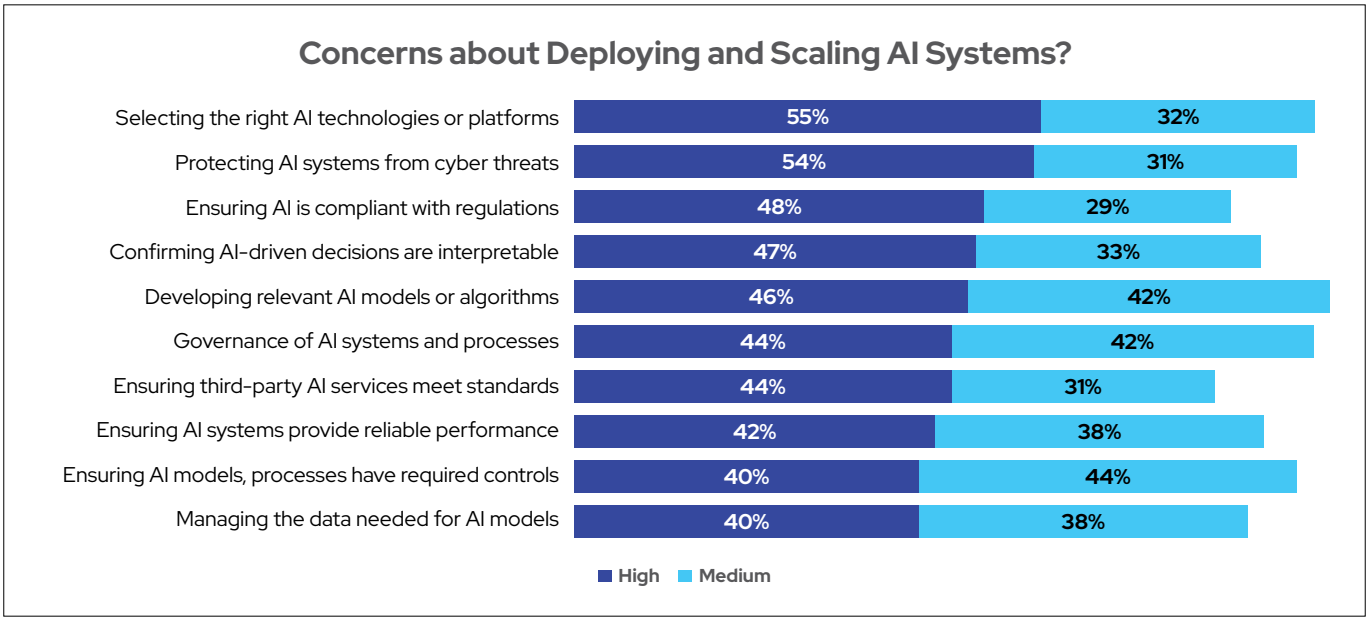
Additionally, 54% of participants are concerned about protecting AI systems from cyber threats, particularly in critical applications. Ensuring AI's compliance with emerging regulatory standards is another significant concern that was highlighted by nearly half of the survey participants.

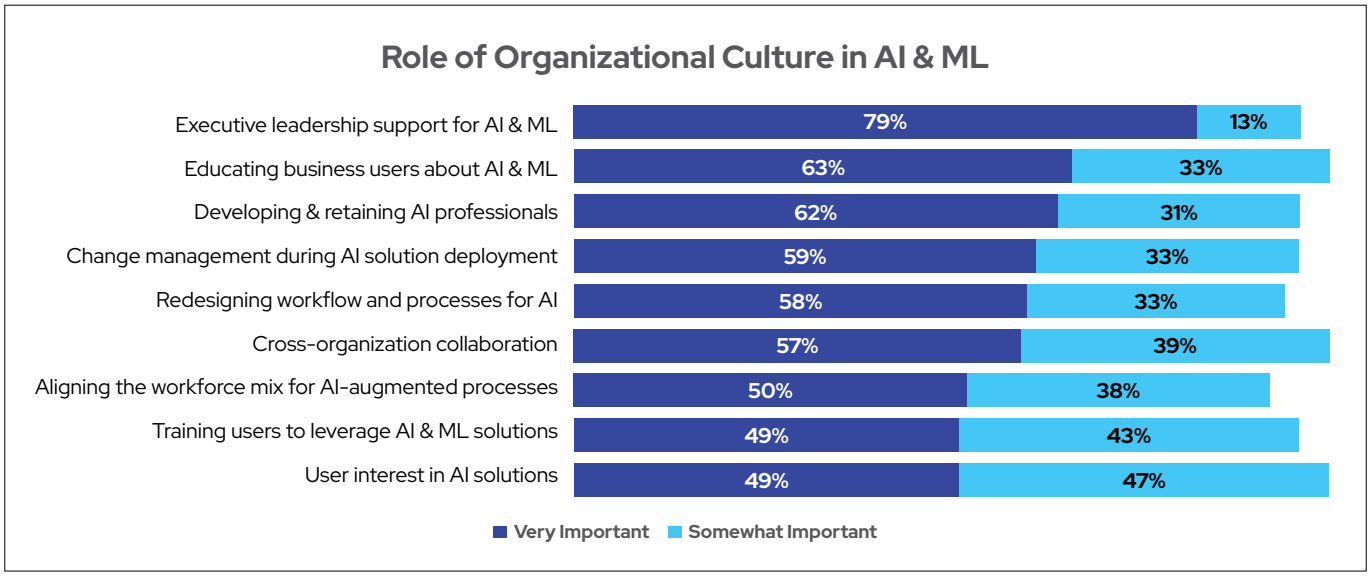
Leadership support more critical for AI success: Respondents identified leadership support as the the most crucial element for the successful integration of AI/ ML technologies. A strong and supportive leadership team (79%) enables to creation a clear roadmap for AI/ML adoption, defines key performance indicators (KPIs) to measure success, and establishes a framework to evaluate the ROI.

Leaders can identify strategic use cases where AI/ML can have the most significant impact, prioritizing projects that drive tangible value and competitive advantage. Their involvement helps avoid disjointed and ad-hoc AI/ML implementations and encourages a more cohesive and integrated approach across different business units (57%).

According to the survey findings, educating business users about AI/ ML empowers employees to make informed decisions about AI/ML adoption (63%) by dispelling misconceptions and ability to identify suitable AI/ ML use cases within their domains to better drive innovation and efficiency while avoiding unrealistic expectations. Crucially, input data from business users helps data scientists and AI experts refine models and tailor solu-







tions to better suit business requirements. Developing and retaining talent is crucial (62%) to provide stability to AI initiatives which will then yield sustainable business impact.

Cloud Adoption Continues to Surge

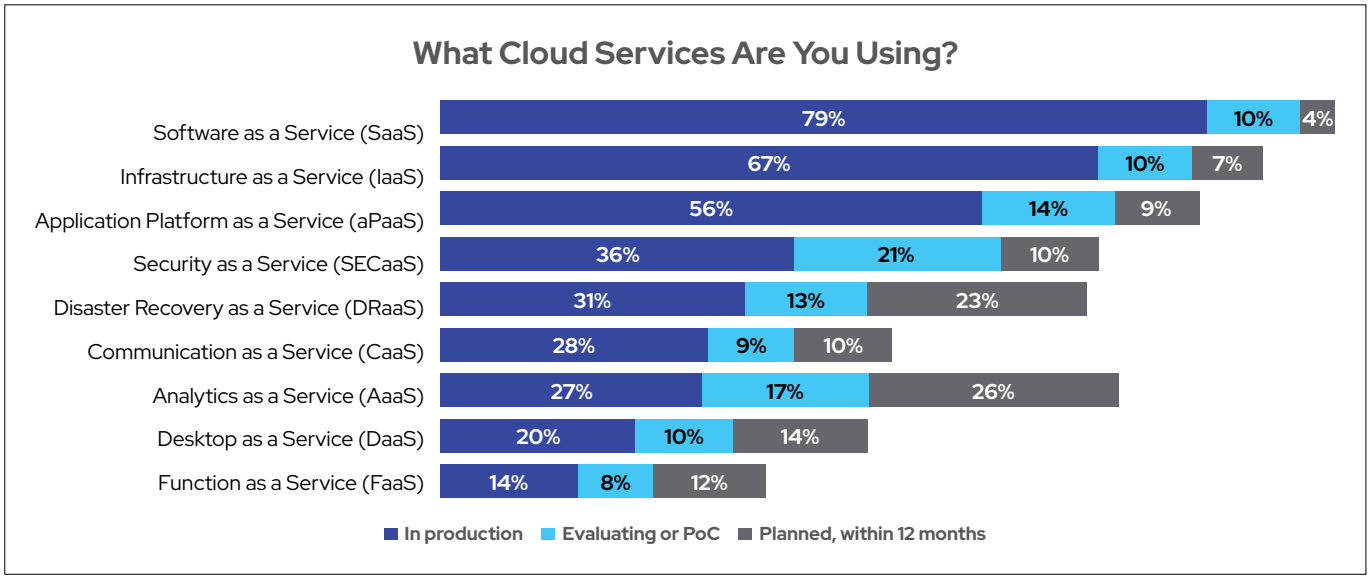
Cloud adoption continues to surge, driven by digital transformation initiatives and the demand for innovation and enhanced customer experiences. Additionally, the imperative to leverage advanced technologies such as AI further fuels the momentum.

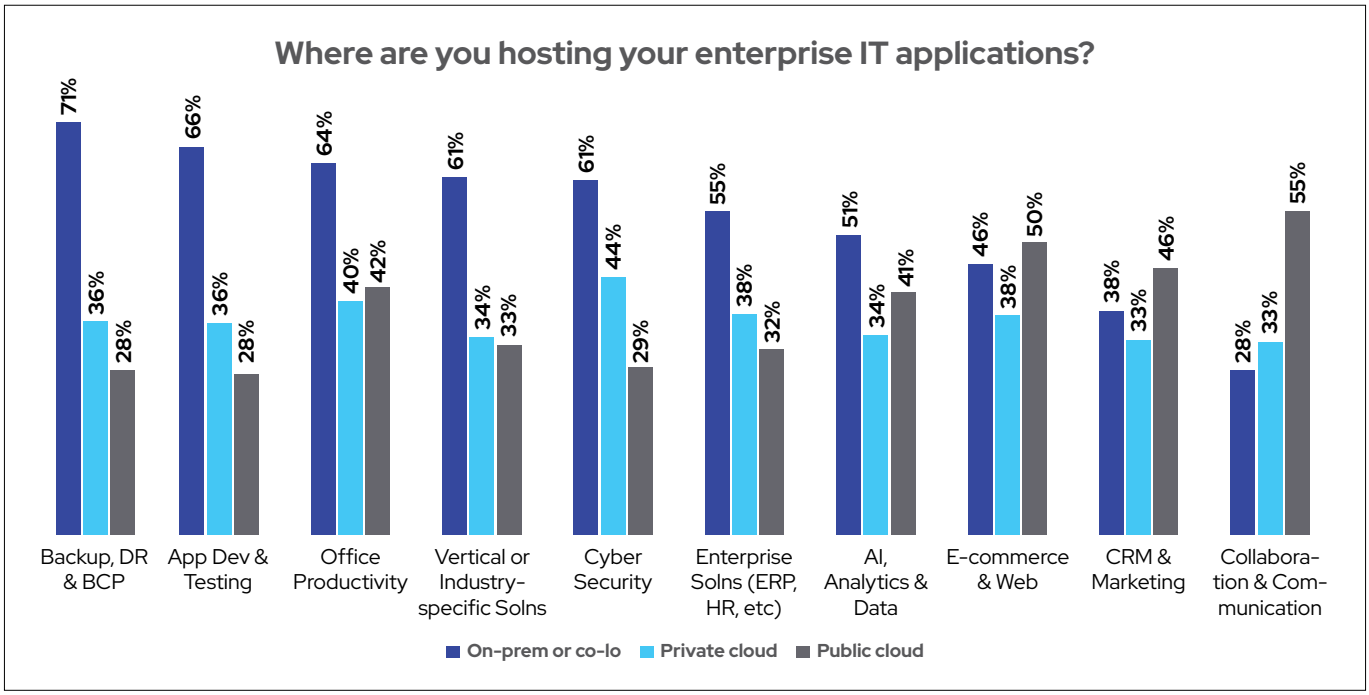
Despite the growing momentum of the cloud, the majority of workloads continue to operate in traditional environments and co-location.

Businesses are reaping substantial benefits as Cloud deployments reach higher levels of maturity. This is evident in the wide adoption of cloud-native architectures, containers, and micro-services, implementing DevOps practices, and utilizing APIs to create value.

Overall, the as-a-service model is maturing with adopters using a variety of services. SaaS is in an advanced stage of adoption.

ITDMs are wary about managing cloud security. Organizations need to adopt a comprehensive approach,





combining robust security tools, well-defined policies, regular audits, and staff training to address the unique challenges.

Businesses are faced with performance issues and there is an urgent need to optimize application performance.

What Cloud Services India Inc. is using: Indian businesses are using a wide variety of Cloud services from SaaS (79%) at the top end to Function as-a-service (15%) at the other end.

Infrastructure-as-service is widely adopted amongst 67% of respondents with another 10% evaluating adoption with PoCs, clearly indicating that the promise of Cloud-native capabilities is luring Indian businesses to migrate workloads. PaaS is witnessing significant adoption in India amongst 56% of the respondents with 14% evaluating it via PoCs. This momentum can be attributed to the presence of mature platforms such as Salesforce, Microsoft SharePoint, Office 360, SAP Business Technology Platform, Zoho. The proliferation of low-code-no-code platform providers such as ServiceNow, Automation Anywhere, and Kissflow. Security-as-a-service (SECaaS) is popular at 36% which points to the need for comprehensive security solutions. In addition to getting full-featured security tools, SECaaS allows businesses to overcome skill gaps with remote monitoring, incident management, and remediation of security incidents.

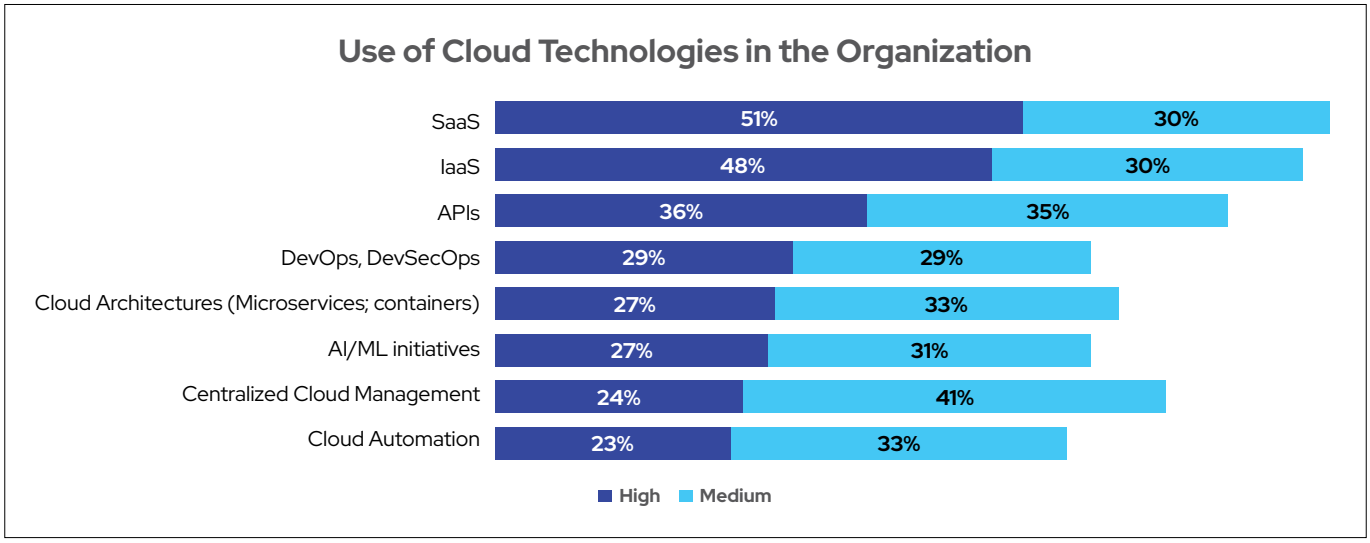
Disaster Recovery-as-a-Service also picking amongst 31% of respondents with another 13% of respondents evaluating it seeking to ensure business continuity in the event of an attack or natural disaster.

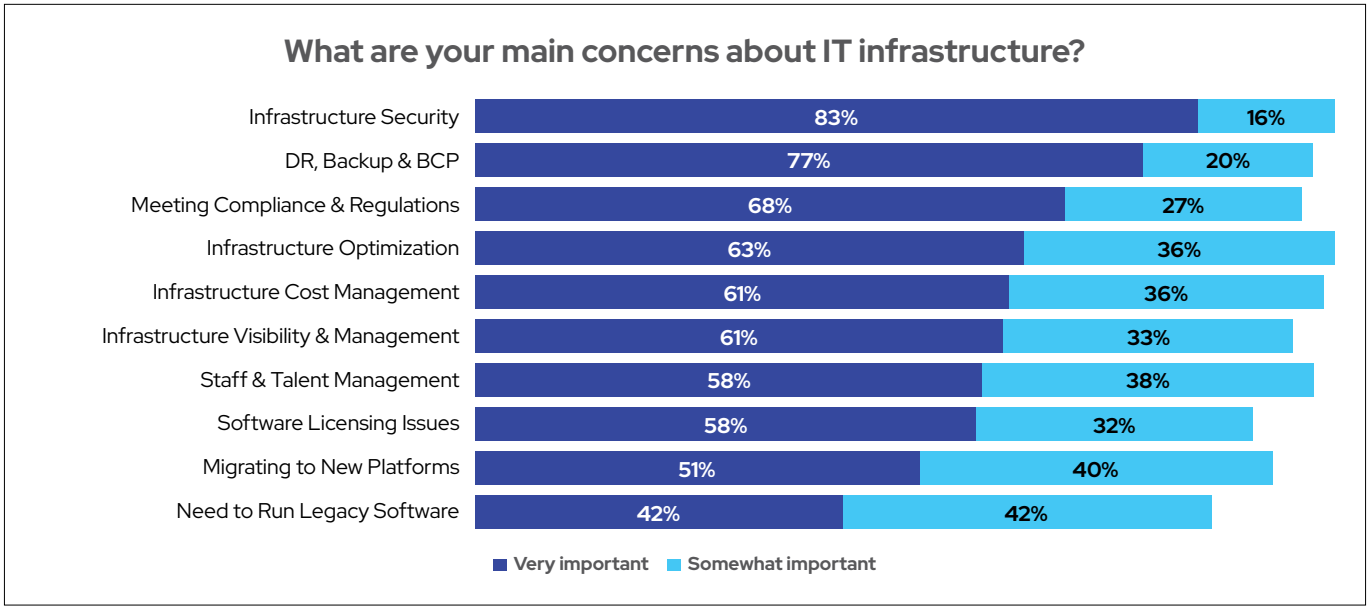
The majority of workloads continue to operate in traditional environments: Despite the growing momentum of cloud technology, the majority of workloads continue to operate in traditional environments and co-location. Public cloud is gaining popularity, but the private cloud remains dominant.

Organizations often leverage the public cloud for periodic capacity access and to manage traffic surges during seasonal peaks. For example, 55% of enterprise applications' workloads (ERP, SCM, HR) are on-prem or in co-lo, 38% in private cloud, and 32% in public cloud. Even in app development and testing, traditionally favored for cloud environments, 66% of respondents still use traditional setups, while 36% opt for public cloud and 28% for private cloud.

Similarly, deployments for disaster recovery, backup, and business continuity planning, ideally suited for the public cloud (28%), are gradually gaining traction, with a significant number of initiatives ongoing in traditional on-premises and co-location environments (71%) and public cloud (36%). Discerning Indian businesses recognize the cloud's value proposition, with the highest number of respondents choosing to host e-commerce applications in the public cloud (50%), followed closely by on-premises solutions at 46%.

What keeps IT awake: The responses to this question are not a surprise and are on expected lines with infrastructure security by far the most dominant concern amongst 83% of respondents followed by disaster recovery, back up and business continuity amongst 77% of





respondents, followed by meeting compliance and regulatory at 69%.

This is a strong indication that keeping the lights on continues to be a major preoccupation for the IT department. Given the surge in the number and sophistication of cyberattacks and the consequent cost of data breaches along with regulatory and compliance challenges, this is not surprising.

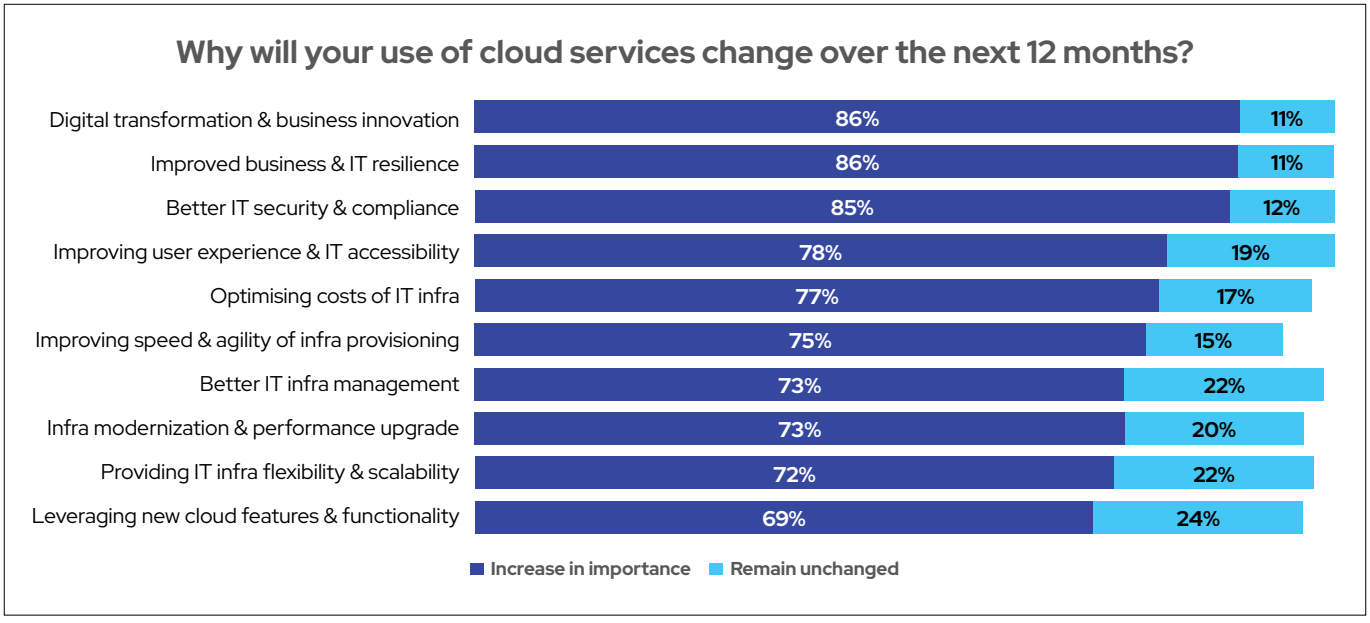
The next set of IT preoccupations relates to cost with infrastructure optimization at 63%; cost management at 62% and infrastructure visibility and management at 72%.

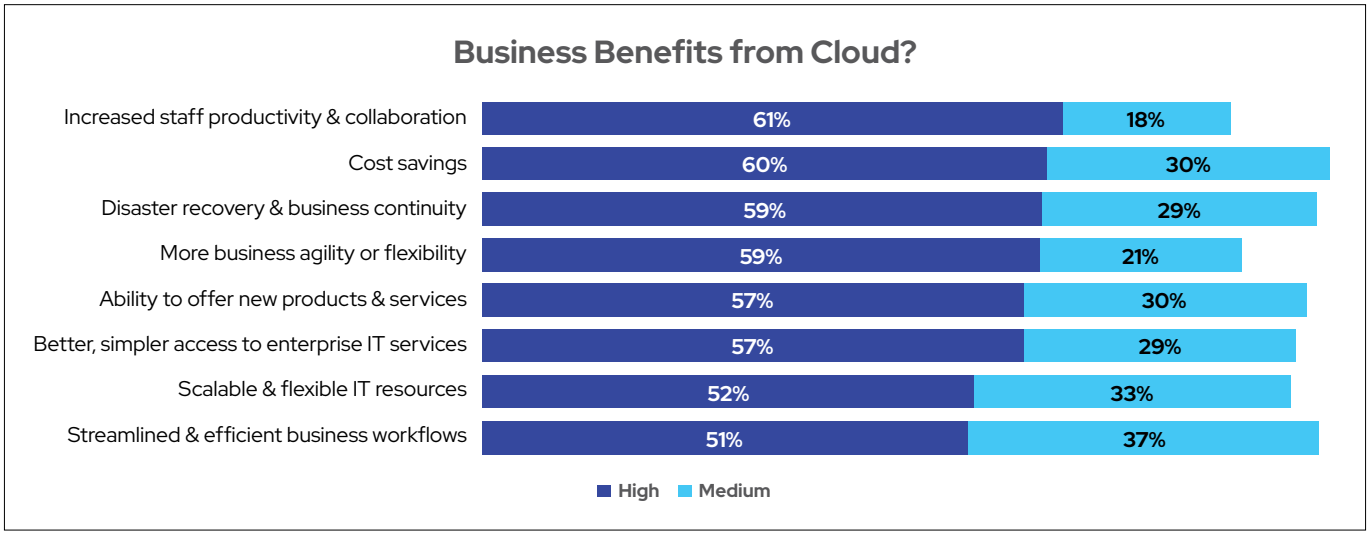
Factors driving cloud adoption: India Inc. has clearly understood the value proposition of the cloud and using it to achieve better strategic outcomes. The top three reasons for cloud adoption in the next 12 months are:

- To drive digital transformation and innovation (86%)
- Better IT security and compliance (85%)
- Improve business and IT resilience (85%)

The need to drive digital transformation is closely reflected in the imperative to deliver a better user experience and IT accessibility (78%) wherein decision-makers in IT perceive the end consumer and internal business as its users. The speed and agility (75%) of the cloud is a lever IT is using to enhance user experience seamlessly. Cloud accessibility makes it easy to experiment and fail fast empowering businesses to innovate frequently, and provide new features and functionalities to enhance user experience. Accessibility also supports infrastructure modernization and upgradation to better application performance (73%). The visibility and flexibility of cloud accords are enabling businesses to optimize IT infrastructure costs (77%), and better manage the infra (73%).

Indian businesses are reaping the classic benefits of cloud adoption





including cost savings (60%); business agility (59%) and leveraging for disaster recovery (59%).

Challenges in using cloud services: Businesses have accurately identified managing cloud security as the top challenge among 88% of respondents. Cloud security is different from the traditional environment as security is a shared responsibility where the CSP is responsible for the physical security of the data center and the underlying infrastructure, while the security of the infrastructure resources and applications must be configured by the customer—the customer decides who has access to which resources.

Several factors make cloud security more challenging. The easy accessibility means individual departments are setting up environments separately, and if the configuring is not secure the entire organization is exposed to data breaches and compliance and regulatory challenges (79%).

Easy accessibility is also creating challenges for ensuring adequate visibility and management for 63% of respondents which is causing a larger challenge of managing the cost of cloud resources for 81% of respondents. Cost management is also due to poor hygiene practices such as leaving unused resources on, underutilized resources, and misalignment of subscription options.

Indian businesses have accumulated a vast quantity of data with a significant number of respondents storing more than 50 PB of hot data which is in active use, across various tiers of storage.

Managing workloads across cloud providers is less challenging at 48% and scaling across regions and Cloud providers at 61% indicating low adoption of multi-cloud workloads in which managing security could be a key deterrent.

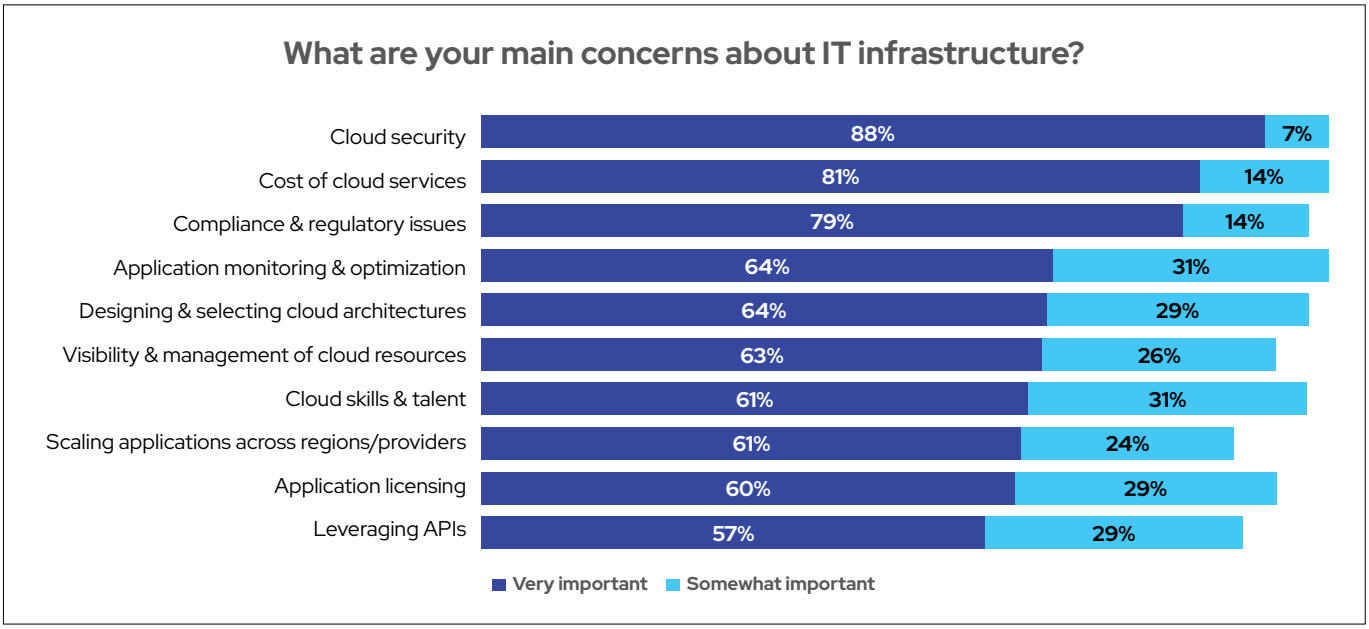
The Data Explosion

Data analytics is emerging as a transformative force driving innovation and growth across sectors in India. There is an explosion of data triggered by digitalization, the proliferation of smart devices, social media engagements, e-commerce activities, and IoT deployment. According to the survey findings, Indian businesses have accumulated a vast quantity of data with a significant number of respondents storing more than 50 PB of hot data which is in active use, across various tiers of storage.

This is a huge volume of data, and to put it into perspective, 50 PB data is approximately 25,000 billion pages of printed text or 10 million minutes of uncompressed 4K Ultra HD video!

The government's Digital India initiative to provide e-services to citizens and the launch of the 5G network is triggering unprecedented growth in data generation. Public cloud services and the proliferation of data centers in India are making scalable storage capabilities easily accessible at cost-effective rates.

Consequently, data storage is witnessing a huge surge driven by business needs for analytics, AI initia-

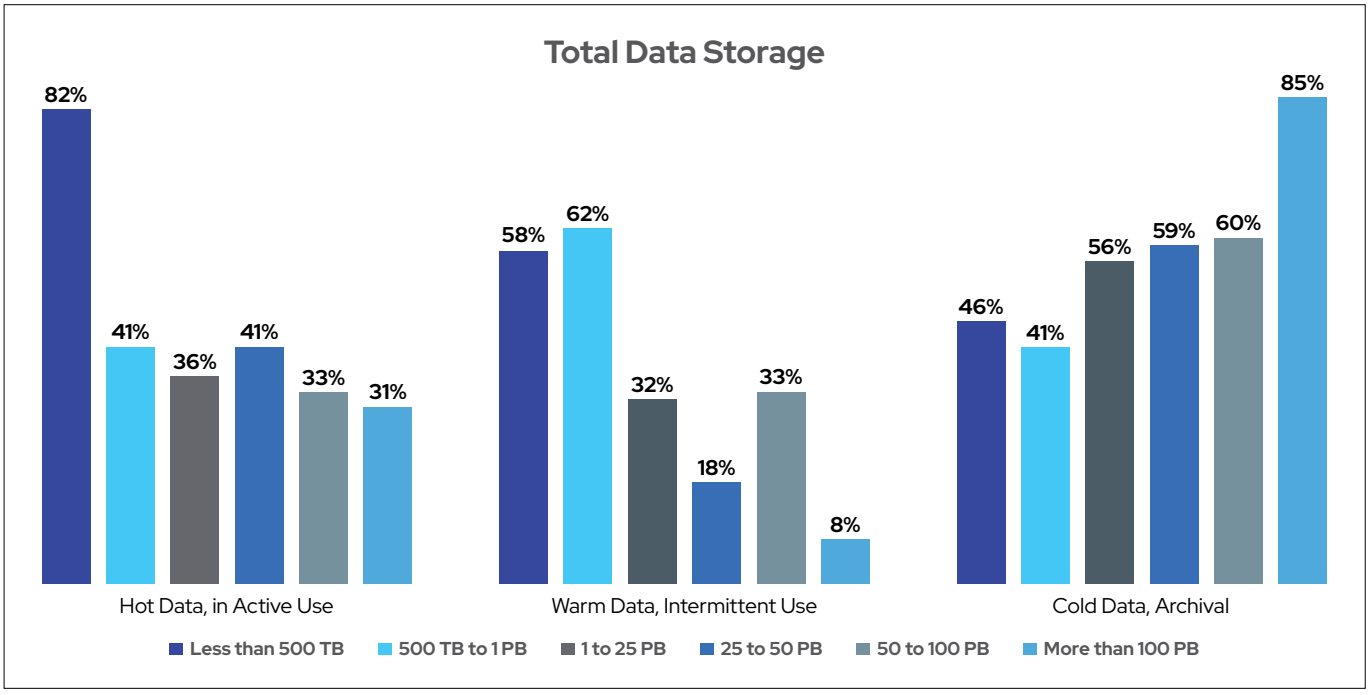


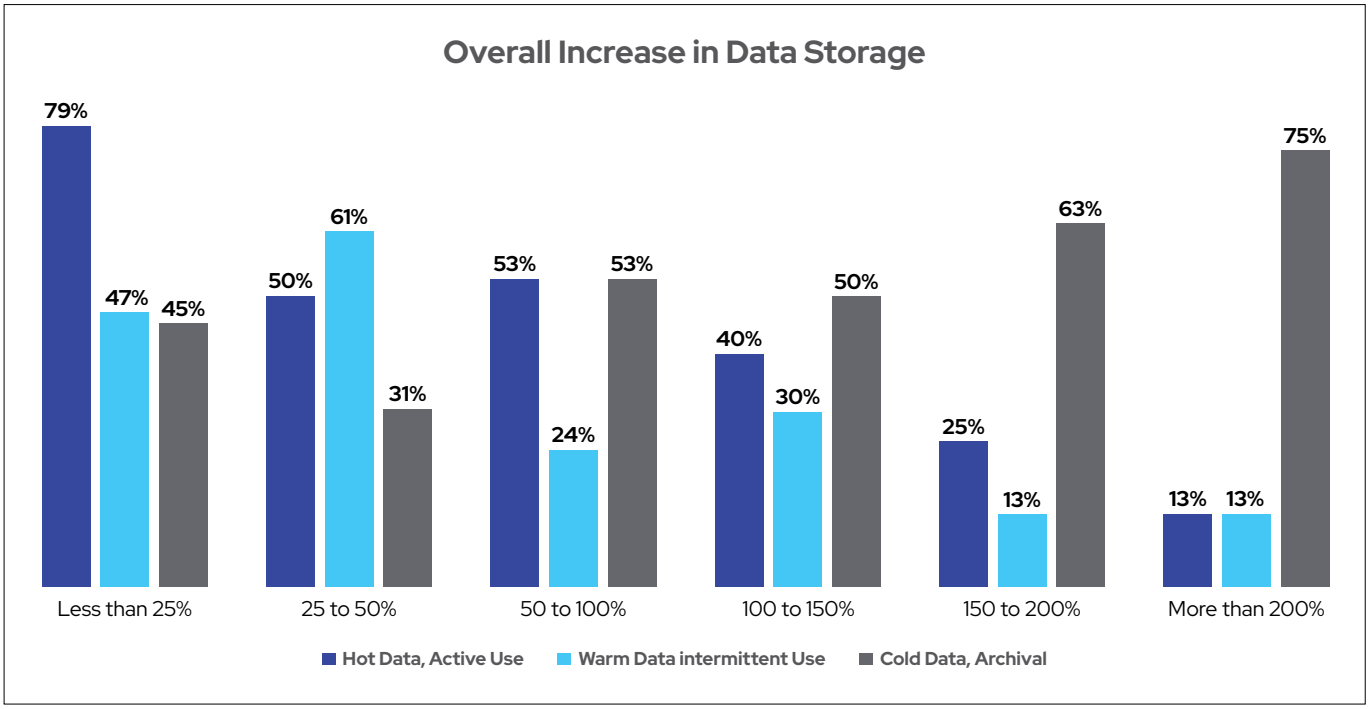
tives, and compliance and regulatory requirements. This is validated in the survey findings where organizations are archiving copious amounts of data to meet regulatory and compliance requirements.

The volume of data across all tiers has increased significantly in the past 12 months. For instance, 53% of respondents stated that the active data increased by 50 to 100% and 61% indicated that the warm data increased by 25 to 50% during the period.

Technological advancements in AI, machine learning, and big data technologies are making data analytics more accessible and impactful. Digital native companies such as fintech, edtech, and e-commerce are using advanced analytics in innovative ways to design new business models; boost fraud detection; and manage infrastructure, logistics, operations, and supply chains.

Fintechs are leveraging advanced AI models to offer financial products to the marginalized who do not pos-





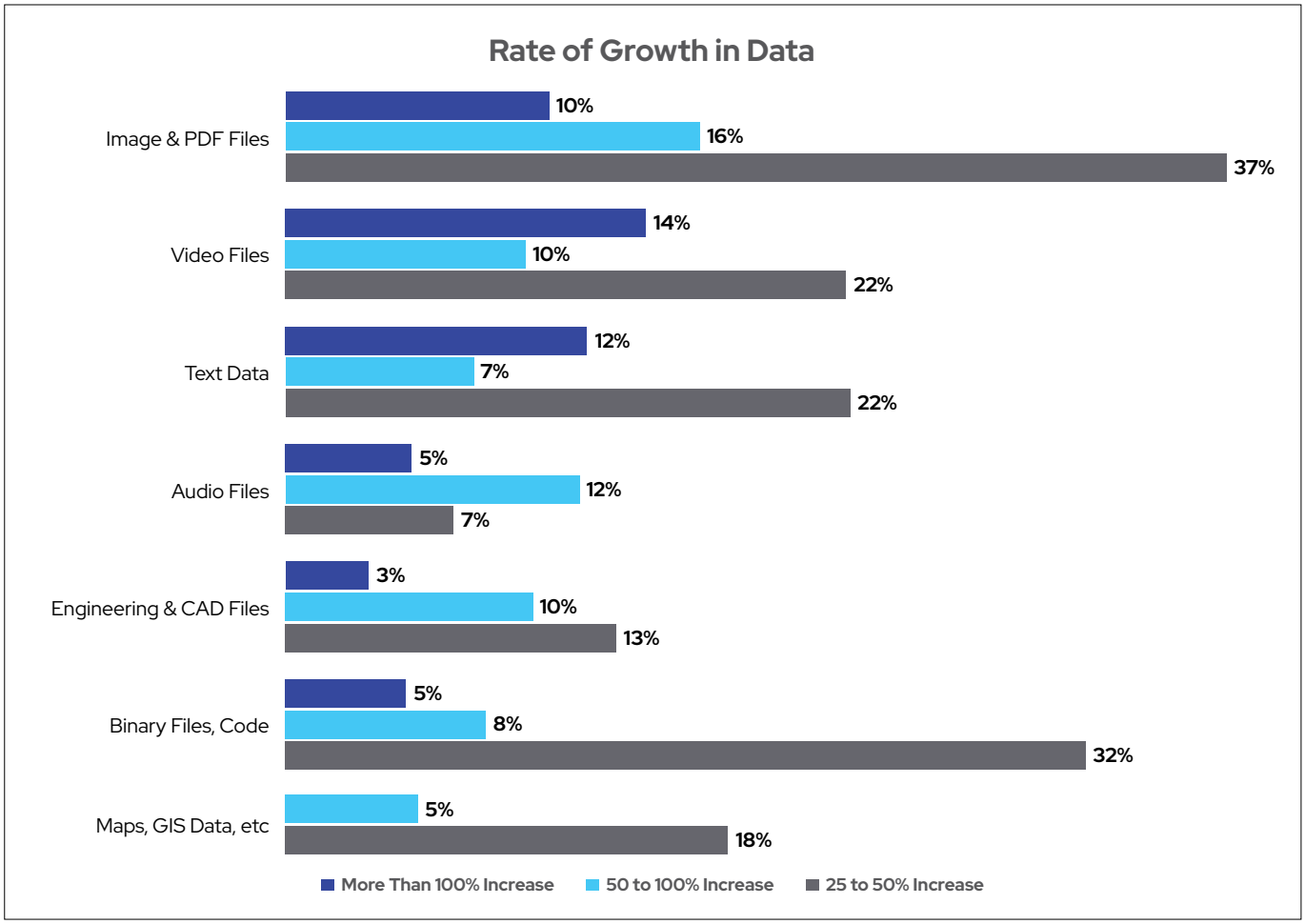
sess the traditional parameters for risk assessment and creditworthiness. Just as retail and e-commerce companies are offering personalization based on historical data, customer segmentation, and personal preferences.

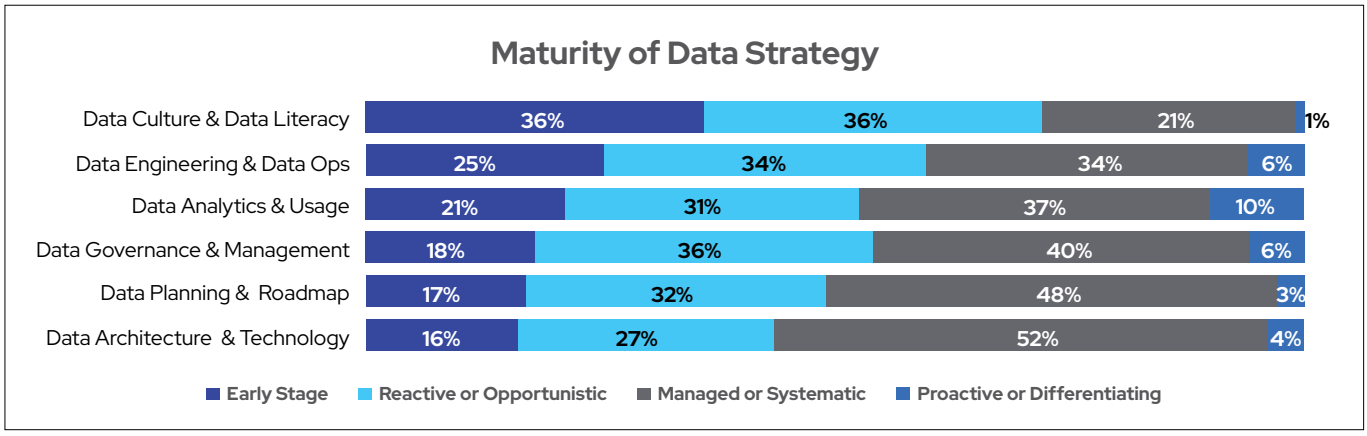
The survey finds that Indian businesses understand the importance of having a good data architecture and technology infrastructure to meet strategic goals and using a systematic approach to implementation. There is also evidence of advanced data adoption with third-party data integration, data warehousing, and data lakes with pipelines— all of which indicate copious harvesting and mature processing capabilities.

How fast is data increasing? The way we consume and communicate information has undergone a dramatic shift and this is evident in the kind of content enterprises are using and storing. There is a surge in the storage of video with more than 14% of respondents registering more than 100 percent growth. Image and PDF storage have increased by 50 to 100% for around 15% of respondents. Businesses are increasingly using visual media in promotional activities and the rise of e-commerce is directly related to the role of images and videos to influence consumer behavior. Overall, cold data is increasing at a faster rate for most organizations. This indicates an increasingly stringent regulatory environment and the need for organizations to store data for compliance. Also, some industries have an imperative to store customer interaction data.

The primary causes of data breaches often stem from human vulnerabilities, emphasizing the adage that man is the weakest link in cybersecurity.

Maturity of data strategy: There is a high level of maturity in the data strategy of Indian businesses with 52% having a managed and systematic approach with regards to technology and architecture and 48% towards data planning and roadmap indicating the foundations of a robust data strategy are well in place. Businesses have cemented the strong foundations by





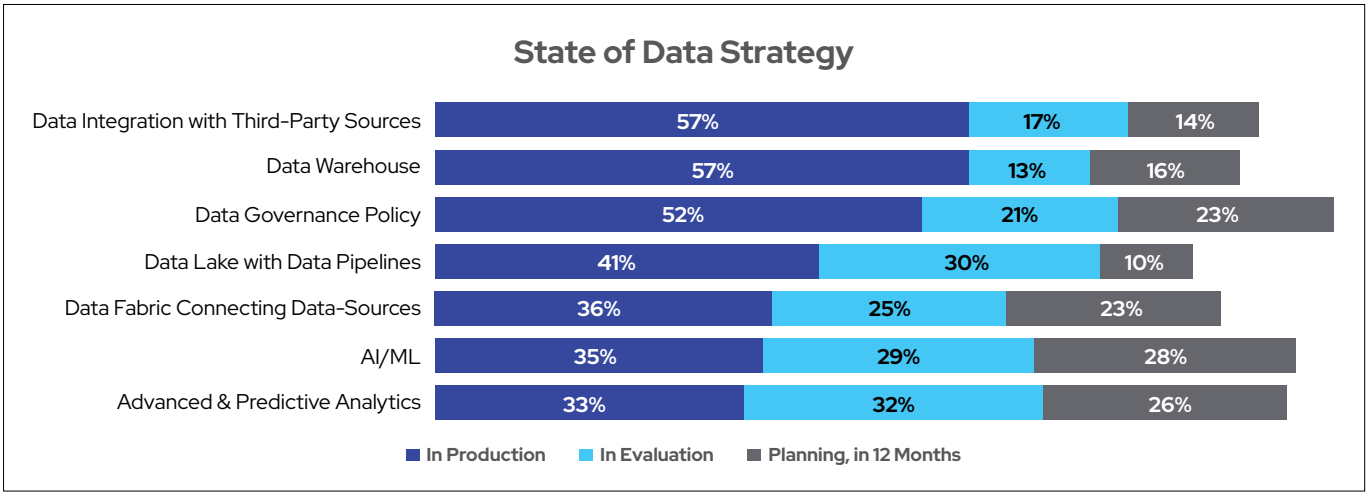
embracing best practices in data governance and management (40%) with advanced adopters (6%) positioning data management as an opportunity to create a differentiation with high-quality data, and enhanced security and privacy compliance, all of which foster trust in data-driven initiatives.

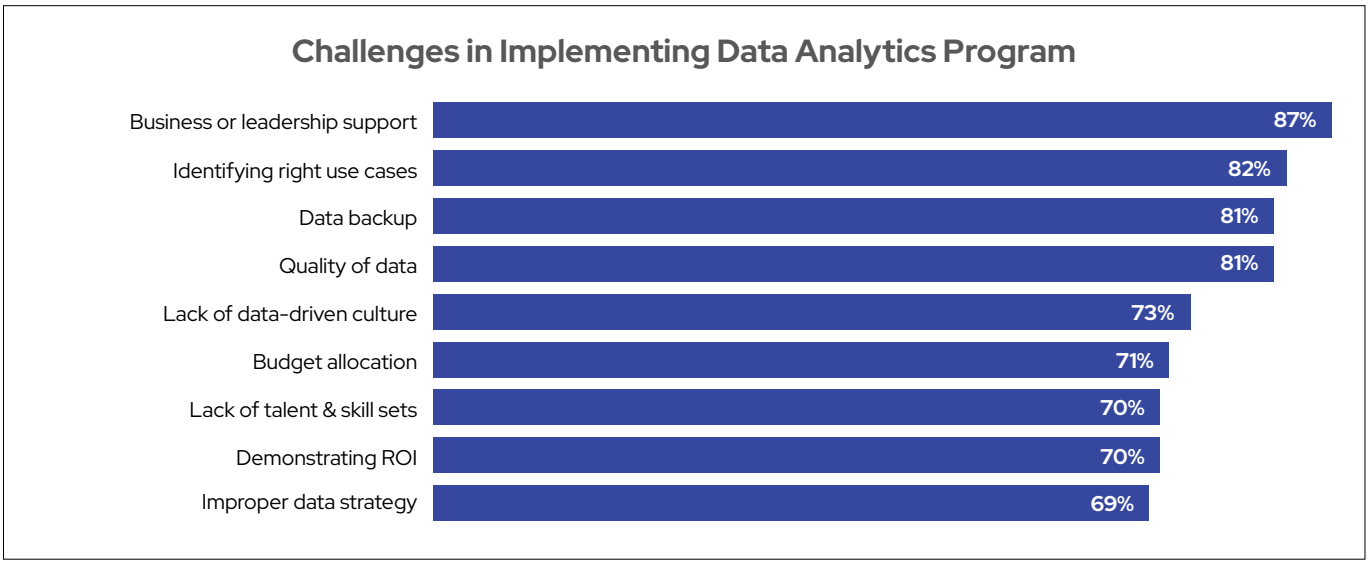
Embracing best practices in data engineering and DataOps (36%) in a proactive manner enables to creation of differentiation (6%). This proactiveness has empowered businesses to use analytics in a systematic manner (37%) for differentiated business impact (10%). A differentiated data strategy leverages data in innovative ways to gain a competitive advantage, drive growth, and deliver value to customers and stakeholders. It calls for prolific data usage wherein insight-driven decision-making is embedded in the organizational culture. This is at the mature stage for 28% of respondents.

Data strategy trends in Indian companies: In practice, Indian companies demonstrate a high level of maturity in data strategy, with 57% implementing data warehouses and integrating with third-party data sources. This systematic approach to data architecture supports structured querying and analysis. The widespread adoption of data warehouses indicates prolific data usage by business analysts, facilitating AI/ML projects (35%) and advanced analytics (33%). Interestingly, respondents show a preference for AI/ML investments over predictive analytics, possibly considering the latter as a subset. The emergence of data lakes with data pipelines in enterprises reflects a growing focus on harnessing unstructured data.

Challenges in robust data strategy implementation: A significant challenge in implementing a robust data strategy, identified by 87% of respondents, is securing leadership support and business participation. Resistance to changes in data collection, management, and utilization may stem from concerns about workflow disruption or a lack of understanding of the benefits of a data-driven approach.

Establishing a data-driven culture requires leadership backing and active employee involvement at all levels. Overcoming resistance to foster a data-centric mindset can be challenging. Identifying the right use cases (82%) is crucial to showcase benefits and gain support. The quality of data (81%) is vital for decisive action and gaining a competitive advantage.





Data quality directly impacts decision-making effectiveness and the success of new business initiatives. Ensuring good quality data involves sourcing from multiple channels, implementing a governance strategy, and safeguarding data privacy through anonymizing techniques, all requiring meticulous implementation.

Securing Digital Transformation: Focus on Employee Education and Re-Skilling

Indian businesses and government organizations face a surge in cyber-attacks, driven by digitalization and hacking for activism, politics, and military objectives.

Phishing, ransomware, and malware attacks are plaguing Indian businesses, causing financial and reputational damage. The evolving threat landscape, ransomware-as-a-service, and a shortage of skilled cybersecurity professionals compound the cybersecurity challenge.

To address these issues, businesses are enhancing education, implementing advanced systems, and deploying monitoring tools. Training and upskilling in-house teams, partnering with service providers, and adopting defense strategies like penetration testing and security audits are becoming common practices.

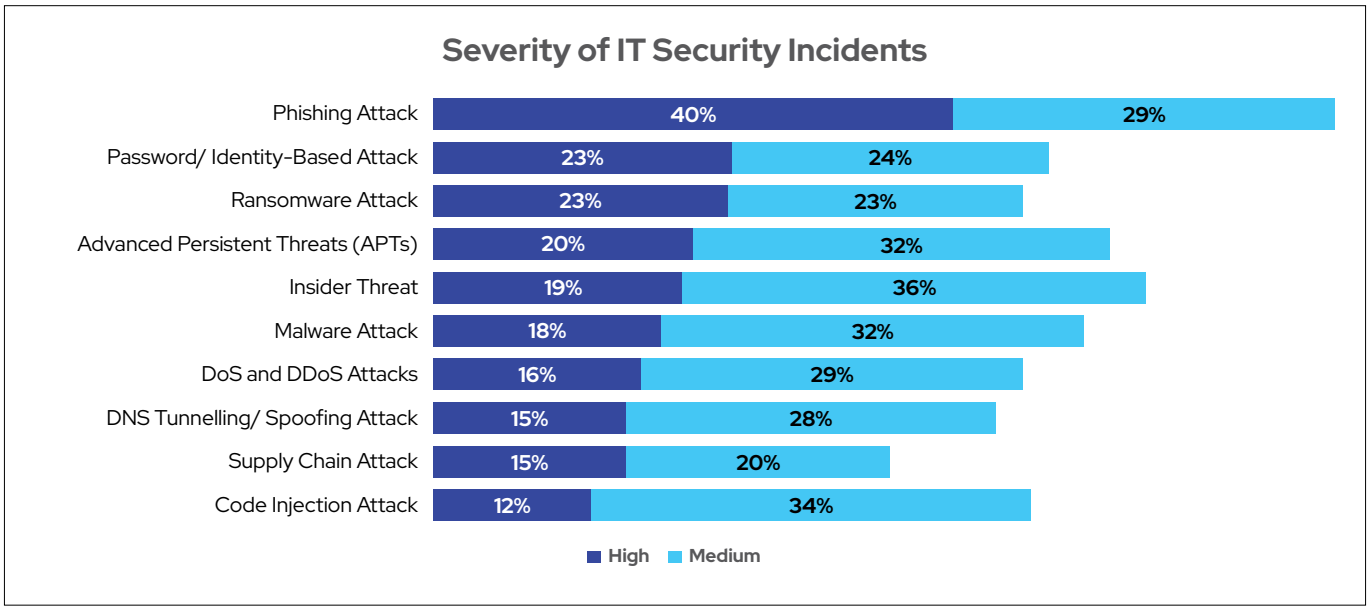
The security fabric is strengthened by embedding security into the organizational culture. Employees play a crucial role, and embracing cloud best practices is key to effective cybersecurity. The shared responsibility in cloud security involves managing access and employing security-by-design architectures, emphasizing a deny-by-default approach as a best practice.

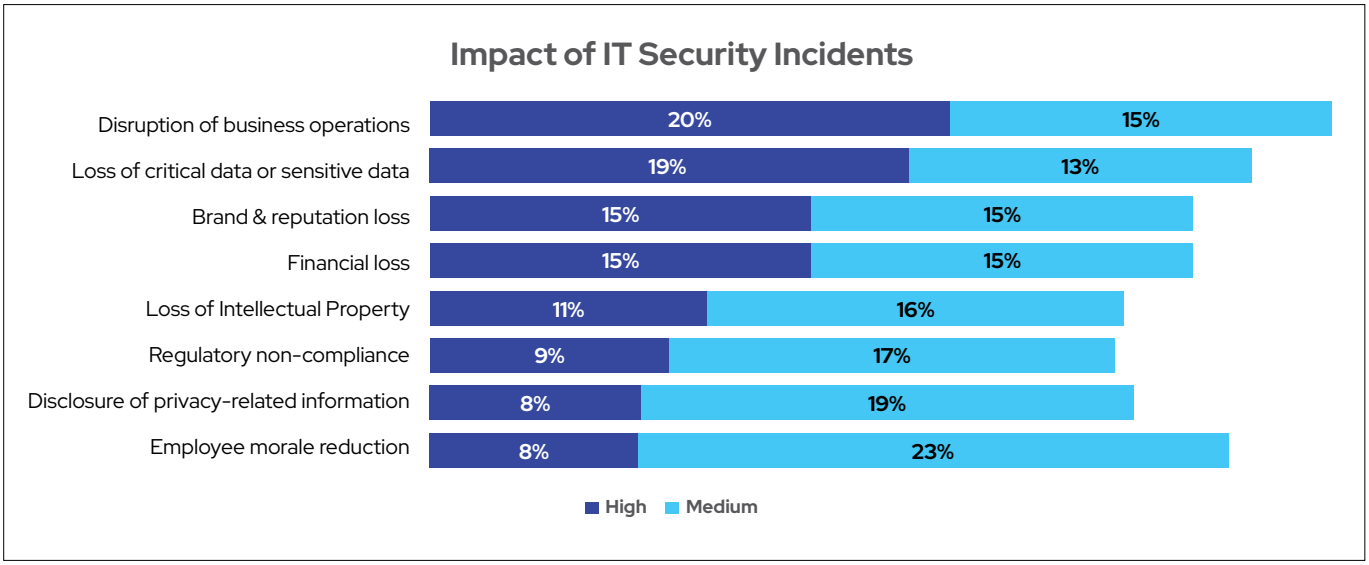
Severity of IT security incidents: According to the survey findings, Phishing has been identified as the most severe form of security incident by 40% of respondents. Ransomware attacks are prevalent but not as rampant. People continue to be the weakest link in the cyber security chain. Hackers employ social engineering tactics to trick employees with innovative techniques that appear genuine and lure them into clicking on malicious links, sharing confidential information, and inadvertently allowing access. Despite training and awareness programs employees continue to walk into traps. About 36% of respondents have attributed insider threats as the cause of security incidents with moderate severity. Careless employees who do not adhere to company policies or bypass company security measures for convenience often cause security breaches.

There is a surge in the storage of video with more than 14% of respondents registering more than 100 percent growth.

Sometimes disgruntled employees' resort to malicious activities including stealing or deleting data, selling or exposing data with an intent to harm the organization. Ransomware attacks have been severe among 22% and moderately severe among another 22% of respondents, indicating ransomware is a major source of threat to Indian businesses.

Impact of security incident: The most widespread impact of security breaches includes disruption to business operations (27%); loss of critical/sensitive data (19%); financial loss and affecting the brand and reputation (15%). What stands out as a deeper impact of data breach is that it affects the morale of employees (23% have indicated it as an





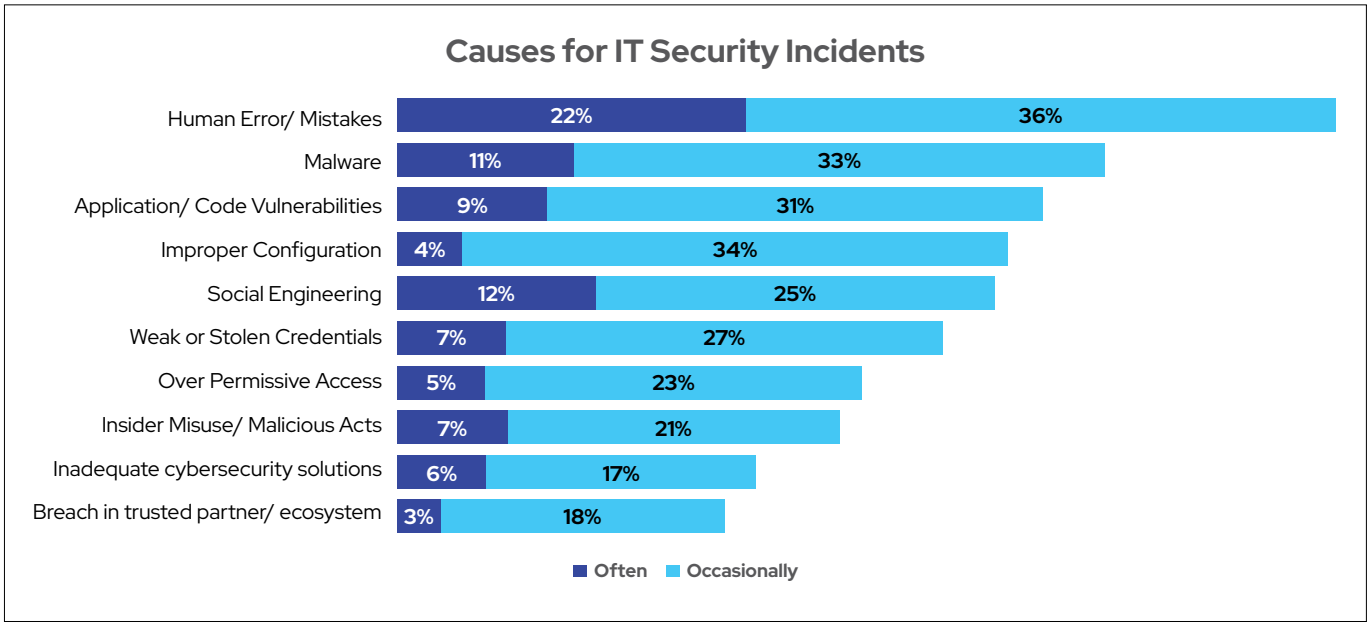
impact with a medium degree). This becomes a red flag because when a setback percolates to employees it has a ripple effect on the efforts and enthusiasm people bring to the workplace including the quality of service to customers.

Root causes of data breaches: The primary causes of data breaches often stem from human vulnerabilities, emphasizing the adage that man is the weakest link in cybersecurity. Despite advanced tools, human error (22%), social engineering leading to employee mistakes (12%), and occasional misconfigurations (34%) remain top contributors.

The lack of skills and understanding of cloud technologies is a significant factor behind human errors and misconfigurations. Unlike traditional settings, where a perimeter-based approach sufficed, the shift to remote work, mobility, and cloud popularity necessitates modern security management approaches.

In the context of cloud security, a shared responsibility model emerges. Customers are tasked with configuring access to resources, while the cloud provider ensures the physical security of the data center, along with the underlying networking and infrastructure resources.

Key IT security challenges: The foremost challenge in cloud security, identified by 32% of respondents, is the dependence on platform providers. Organizations face difficulties in maintaining control and visibility into underlying measures and configurations, limiting their ability to implement customized security controls aligned with specific requirements and industry regulations.

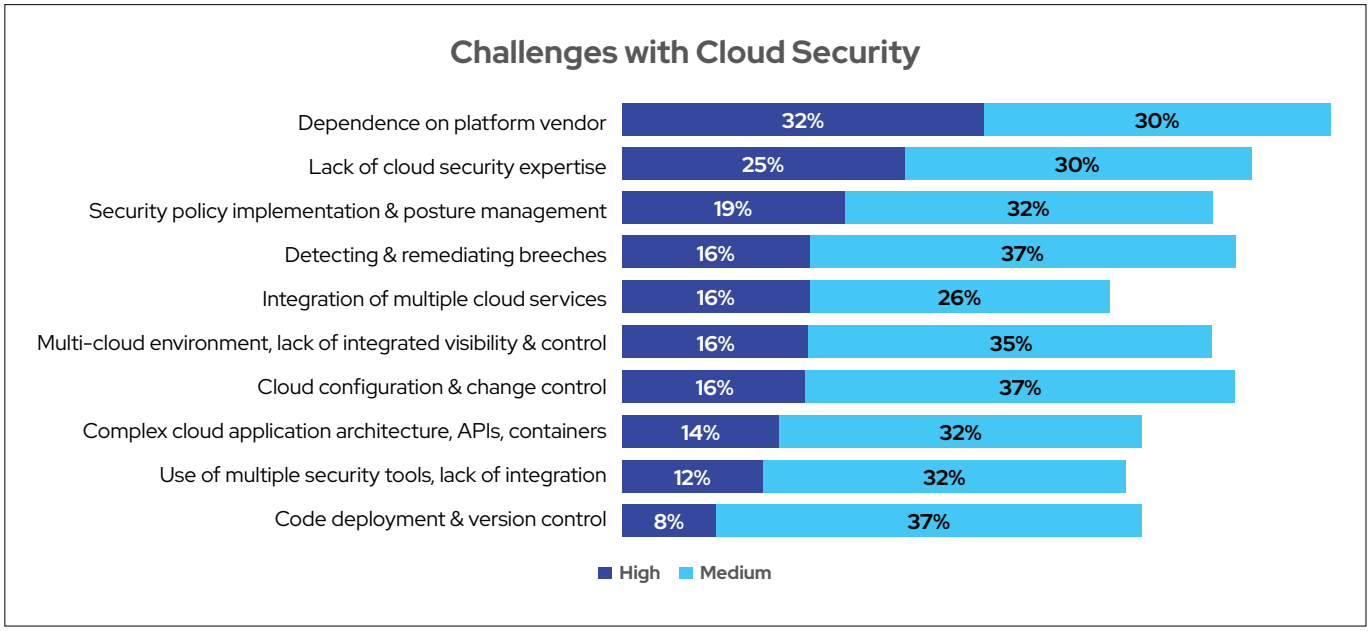


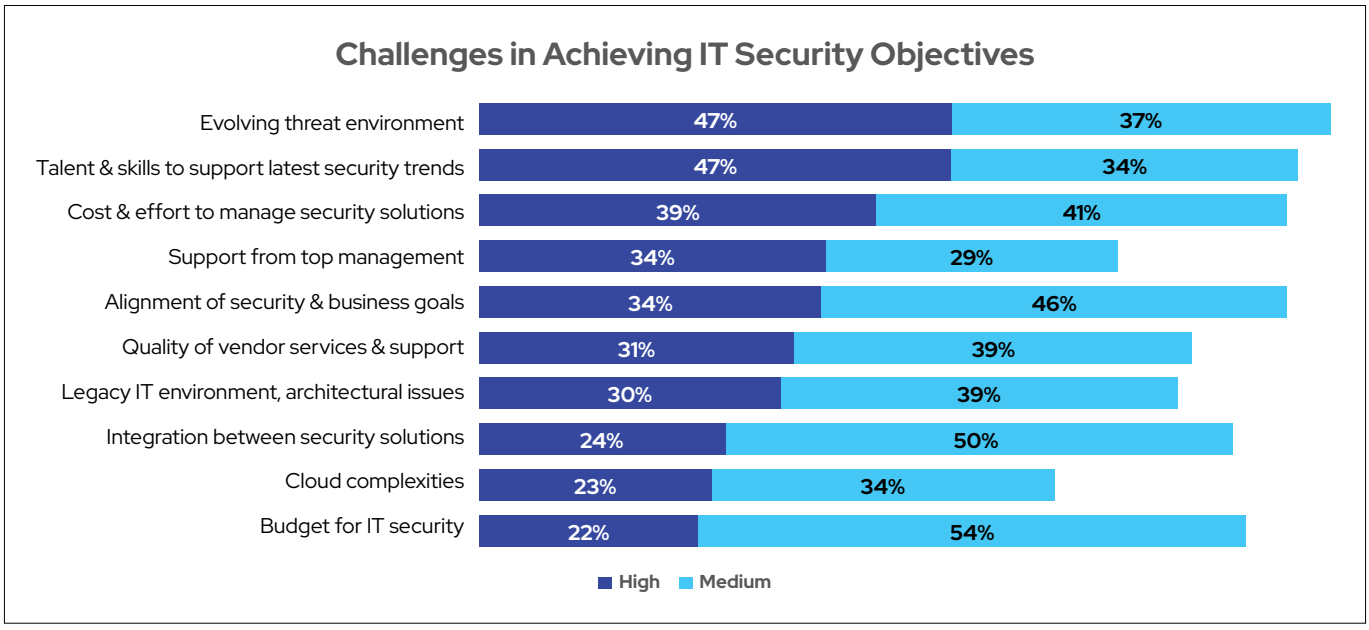
A shortage of cloud security experts (25%) compounds challenges in implementing policies, defining security postures (19%), and handling multi-cloud integration (16%) and configuration (16%).

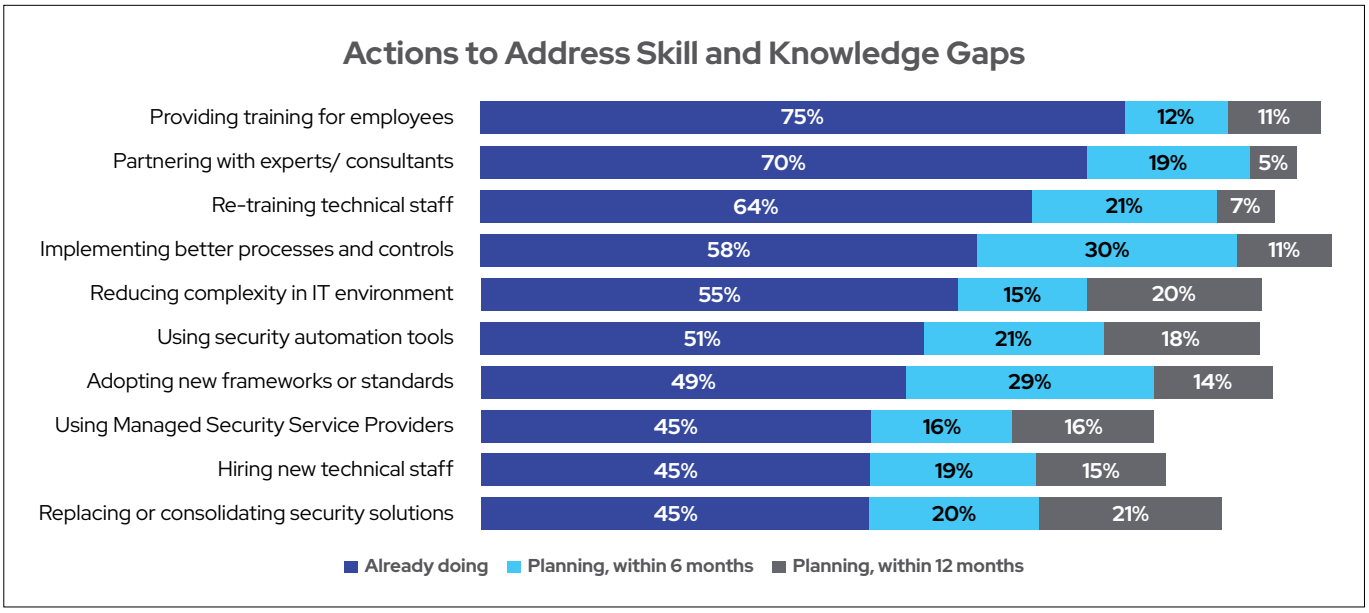
Adding complexity, cloud vendors offer diverse security tools with variations in functionality, ease of use, and integration capabilities. This poses a challenge for organizations utilizing multiple cloud vendors, making it difficult to implement consistent security policies, centralized threat monitoring, and efficient access and controls across systems.

Key hurdles in achieving IT Security: Achieving robust IT security for organizations faces challenges primarily driven by the rapidly evolving threat landscape (47%) and a shortage of skilled professionals (47%). Organizations struggle to keep pace with threat actors employing innovative social engineering, zero-day exploits, and malicious techniques, leading to a rise in sophisticated cyber-attacks, including the widespread use of ransomware-as-a-service.

The resulting complexities increase the cost and effort required to manage security (39%), placing additional pressure on security teams already grappling with budget constraints (54%). The significant implications of costs and budgets highlight the need for continuous investments in capabilities, including training, talent acquisition, and part-







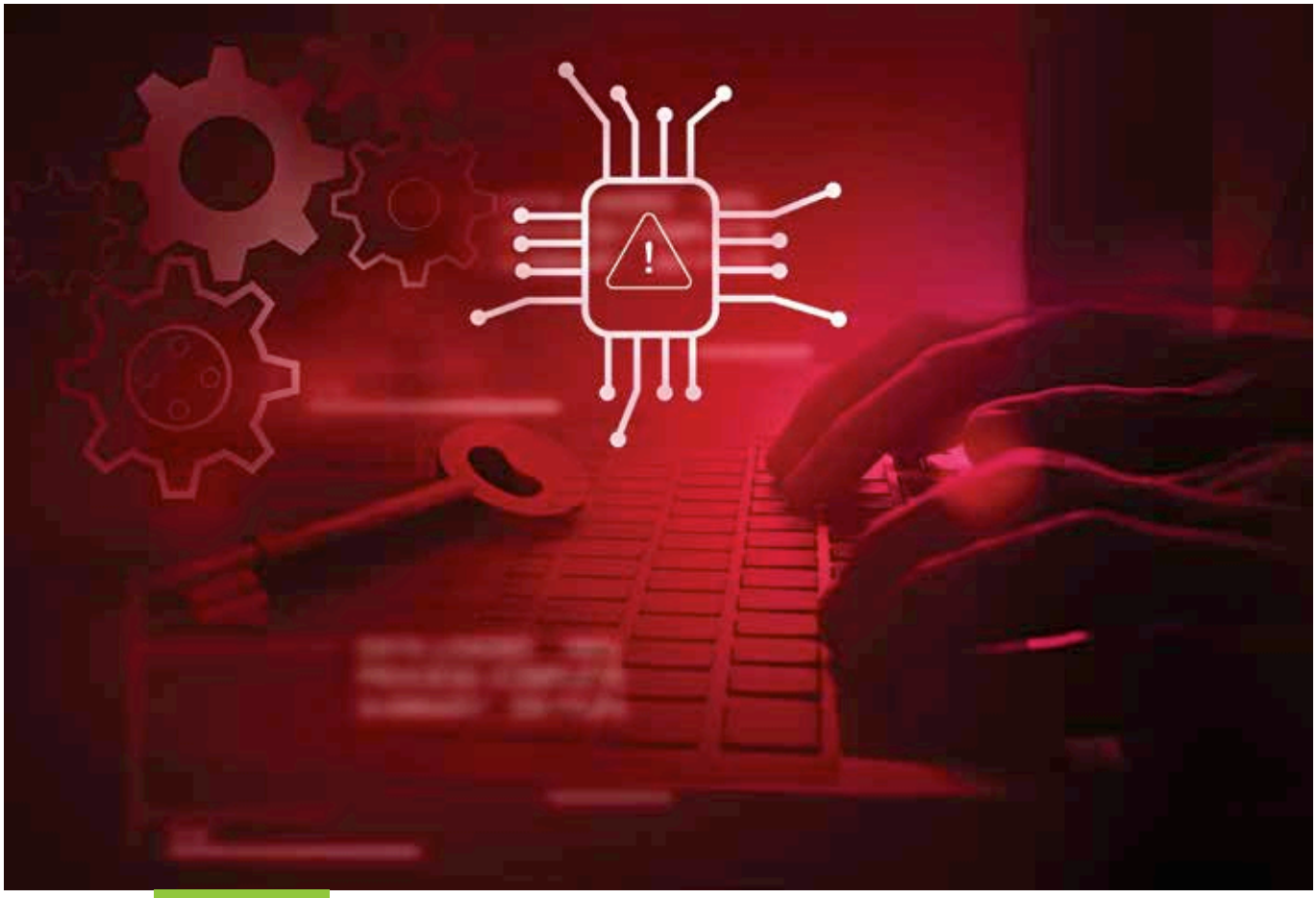
nerships, to stay abreast of evolving technologies, attack techniques, and defense strategies.

A misalignment between security and business goals (34%) exacerbates challenges, as organizations may prioritize short-term financial goals, compromising resource allocation for cybersecurity. This often leads to managing outdated security infrastructure and hesitancy to invest in capability building.

Organizations embrace training, partnerships, and automation to bolster Cybersecurity: A majority of organizations (70%) are investing in employee training programs to fortify their first line of defense. These initiatives focus on creating awareness about strong passwords, phishing, secure browsing, and social engineering tactics, fostering a shared responsibility for security and reducing the risk of human error.

Recognizing the global shortfall of 3.4 million cybersecurity experts, organizations (64%) are re-training technical staff to address the skill gap. To cope with the growing demand, 70% of organizations are partnering with external experts to bridge the cybersecurity talent gap.

Additionally, organizations are streamlining internal systems and processes (58%) to enhance security, with a significant number (30%) prioritizing this in the next six months. Automation tools (21%) are being incorporated to add an extra layer of defense, actively monitoring and preventing threats in the immediate future. ■



Stay One Step Ahead of Cyber Threats

Managing vulnerabilities has become increasingly complex and daunting for organizations across the digital spectrum.

By **Amit Chaudhury** | editor@cioandleader.com

In today's rapidly evolving digital landscape, where data breaches and cyber threats loom, the need for robust cybersecurity measures has never been more critical. Among the essential pillars of a robust cybersecurity strategy, vulnerability management is a proactive shield against potential threats. So, what is vulnerability management, and why is it crucial for safeguarding your digital assets? We explain vulnerability management and why it's essential for securing your network.

Vulnerability management isn't just a prevalent term in cybersecurity; it's part of a critical strategy. It includes the methods and tools that help organizations find, assess, prioritize, and fix their sys-

tems and software weaknesses. In a constantly changing digital world of threats, taking a proactive approach to managing vulnerabilities is the foundation of strong cybersecurity.

The challenge of vulnerability management

Managing vulnerabilities has become increasingly complex and daunting for organizations across the digital spectrum. Once considered the bedrock of cybersecurity, legacy approaches now face a barrage of challenges in an ever-evolving threat landscape.

The sheer volume of vulnerabilities, ranging from software weaknesses to configuration errors, can be overwhelming, leading to a challenging prioritization task. Additionally, the traditional method of addressing vulnerabilities through periodic assessments and manual patch deployments is no longer tenable in an era where threats evolve at breakneck speed.

Legacy methods have various issues. They're slow at finding problems, can't see things happening in real-time, and have a hard time dealing with online dangers. All these problems inform us that we must change how we handle vulnerabilities.

Proactive vulnerability management

In the relentless race against cyber threats, the significance of a proactive vulnerability management program cannot be overstated. The modern cybersecurity landscape is a dynamic battlefield where adversaries continuously seek out weaknesses, exploiting vulnerabilities with unprecedented speed and sophistication. Hackers and cybercriminals would need one loophole to execute a cyber attack, whereas you must fix all loopholes to safeguard your organizations.

In this environment, a reactive approach is simply insufficient. Instead, organizations must adopt proactive strategies to stay ahead of the curve, and one such transformative strategy is the "Shift Left" approach.

The "Shift Left" approach, a cornerstone of modern cybersecurity, emphasizes addressing vulnerabilities at the earliest stages of development and deployment. By integrating security practices earlier in the software development lifecycle, vulnerabilities are detected and remediated well before they can mature into significant threats. This proactive shift minimizes the attack surface and enhances the organization's agility and resilience.

Managing vulnerabilities effectively

In this era of heightened cybersecurity threats, organizations that develop applications must recognize that vulnerability management is not just a best practice; it's an ethical and strategic imperative. It resembles a protective shield for customer information, essential ideas, and the digital system. By finding and fixing problems before they become significant issues, these organizations can make things safer, strengthen their security, and maintain people's trust.

The connection between vulnerability management and data breaches is indisputable. Unaddressed vulnerabilities serve as fertile ground for cyberattacks, and the consequences of a data breach can be catastrophic. Beyond financial losses and regulatory fines, data breaches erode trust, tarnish reputations, and result in immeasurable damage to an organization's brand.

Here are key components to consider while evaluating comprehensive vulnerability management solutions:

- **Advanced scanning and assessment:** Assessments should encompass automated and manual testing methodologies to identify applications, networks, and systems vulnerabilities.
- **Real-time threat intelligence:** Integration of real-time threat intelligence feeds, ensuring organizations are constantly updated about emerging threats and vulnerabilities relevant to their environments.
- **Prioritization and risk assessment:** Sophisticated algorithms and risk assessment models to prioritize vulnerabilities based on their severity and potential impact on the organization. This allows businesses to focus on addressing the most critical issues first.
- **Customized solutions:** Every organization is unique, with distinct security requirements. Therefore, the vulnerability management offering should be tailored to the specific needs and goals of the organization.

Conclusion

The journey through the realm of proactive vulnerability management has illuminated its paramount significance in today's rapidly evolving cybersecurity landscape. When we think about how important it is to keep digital assets safe, it's clear that being ready for problems is not just an option; it's a necessity. Security is the base for organizations to become firm, strengthen their protections, and keep what's important safe: data and trust.

The path forward is clear—robust vulnerability management must be prioritized. We encourage organizations to make this strategic commitment, leveraging proactive approaches to security and ensuring they stay one step ahead of cyber threats. By doing so, we can collectively enhance security, protect invaluable data, and foster a digital environment where trust and innovation thrive. The future of cybersecurity is in our hands, and it begins with proactive vulnerability management. ■

—Amit Chaudhury is the Vice President and Practice Head – Cloud and Security of Bharti Airtel.

EVENT REPORT

TPL 2023: A Thrilling Season of Innovation and Excellence

India's premier IT strategy competition saw top CIO-led teams tackle real-world challenges with innovative solutions.

By **CIO&Leader** | editor@cioandleader.com

(from left) Kersi Tavadia, Dr. Prashun Dutta and Dhananjay Tambe

Delegates at the event

Delegates during the case study

The best of India's IT minds gathered at the Jio World Center in BKC, Mumbai, on Wednesday, 6 December 2023, to celebrate innovation, strategy, and camaraderie. The 2023 edition of Technology Premier League (TPL), presented by CIO&Leader in partnership with Microsoft and Kyndryl, was nothing short of spectacular.

The objective of the competition is for every team to analyze a business situation (case study), prepare an IT strategy, and propose an IT project aligned with the organization's business needs. The case studies in this year's TPL were from Manufacturing, Retail, and BFSI verticals.

Championing innovation through real-life challenges

TPL 2023 was not just a typical tech event; it was India's exclusive IT strategy competition. It served as a friendly battlefield where enterprise IT teams led by top CIOs showcased their ingenuity in solv-

ing real-life business challenges using innovative IT solutions. The event tested strategic thinking, teamwork, analytical skills, and problem-solving abilities within set constraints.

The participating teams were provided with different sets of case studies and tasked to present their strategic solutions to address the challenges to an independent jury of luminaries, each with a stellar IT background. The jury, comprising Dr. Prashun Dutta, Management Consultant & Author, ex-CIO, Tata Power Company; Dhananjay Tambe, CEO, C-Edge Technologies, ex-Deputy Managing Director & CIO, State Bank of India; and Kersi Tavadia, Executive Coach & Capital Markets Leader, StatusNeo, ex-CIO, Bombay Stock Exchange, brought a wealth of experience to the table, making the evaluation process exceptional.

The cream of the crop: team eligibility criteria

Each team represented a distinct Indian company, composed of three members led by the CIO (or equivalent) and two other members, all holding managerial or equivalent designations with a minimum of 5 years of full-time work experience. This ensured that only seasoned IT professionals graced the battlefield, ready to face formidable challenges ahead.

The case studies for TPL 2023 were thoughtfully curated from the Manufacturing, Retail, and BFSI verticals, offering diverse challenges that put the participating teams' skills to the ultimate test.

Speakers

TPL 2023 featured the following lineup of speakers who added an extra layer of brilliance to the event:

- Sreekrishnan Ventateswaran, the CTO of Kyndryl India, shared insights into the world of IT innovation.
- Seema Kumar, Director – Azure Infrastructure Solutions at Microsoft, provided a glimpse into the future of technology.

Participating Teams

Nineteen enterprise IT teams from renowned organizations came together to compete in TPL 2023. The list of participating teams is:

- Aditya Birla Textiles
- Aegon Life
- Asian Paints
- Axis Asset Management Company
- Godrej Industries
- IDBI Bank
- Jio Platforms
- Kotak Life
- Kotak Private Banking

↑ Sreekrishnan Ventateswaran, CTO of Kyndryl India

↑ Seema Kumar, Director – Azure Infrastructure Solutions, Microsoft

- L&T Realty
- RBL Bank
- SBI
- SBI General Insurance Company
- SBI Life Insurance Company
- SBI Mutual Fund
- Sony Pictures Networks India
- Supreme Industries
- UPL
- Yes Bank

After two hard-fought rounds that kept everyone on the edge of their seats, the distinguished jury, following careful and intense deliberation, announced the winning teams of Technology Premier League (TPL) 2023.

Victorious Standings

- Winner: Team L&T Realty
- 1st Runner-up: Team UPL
- 2nd Runners-up: Team Kotak Life

As a token of appreciation, all participants were presented with an assured 1 gm, 24k Gold Coin. Acknowledging their outstanding efforts, the 2nd runner-up team members were rewarded with an assured 2 gm, 24k Gold Coin, while the 1st runner-up team members received an assured 3 gm, 24k

↑ Winner: Team L&T Realty

Gold Coin. The winning team members, standing on the pinnacle of success, were honored with an assured 5 gm, 24k Gold Coin.

Beyond the thrilling competition, TPL 2023 unfolded as a grand finale offering intense battles and a platform for unlimited fun and networking opportunities. As the sun set on a day filled with innovation and strategy, participants and attendees exchanged thoughts in a delightful evening of cocktails and dinner. This provided an opportunity to forge new connections and strengthen existing bonds, turning TPL 2023 into an experience that transcended the ordinary.

Conclusion

In conclusion, Technology Premier League 2023 emerged as a superhit, bringing together the best minds in the industry for a memorable event that will resonate for years to come. It showcased the power of innovation and the strength of teamwork and celebrated the brilliance of India's top CIOs and IT leaders. TPL 2023 was more than just an event; it was a resounding testament to the unwavering spirit of progress and excellence! ■

↑ 1st Runner-up: Team UPL

↑ 2nd Runners-up: Team Kotak Life

Securing Ecosystems: Navigating Online Safety and Workplace Connectivity

CIO&Leader, in collaboration with Sify and Fortinet, recently organized roundtables focused on the essential interplay between online safety and workplace connectivity. Dive into the insights that have emerged.

By **CIO&Leader** | editor@cioandleader.com

The three-city roundtable, conducted by CIO&Leader, Sify, and Fortinet, convened some of the most prominent IT leaders and CIOs. The aim was to deliberate and discuss challenges and strategies for achieving a secure online environment while ensuring user-friendly customer and employee experiences. The overarching theme revolved around balancing robust security measures and user convenience, highlighting the importance of enhancing user awareness and knowledge.

The discussions at the Bengaluru and Mumbai editions focused on enabling secure and reliable connectivity for the future workplace, while the Kolkata edition honed in on building a secure ecosystem, emphasizing the delicate equilibrium between convenience and safety online. Notable speakers from diverse domains enriched these discussions with their valuable insights.

Bengaluru and Mumbai editions:

The sessions deliberated on the multifaceted challenges organizations face as they navigate the evolving landscape of remote work and digital connectivity. One major concern centers around enhancing remote employees' user experience and productivity. Achieving optimal application performance and reducing latency pose significant hurdles, demanding strategic solutions to ensure seamless workflow irrespective of geographical locations.

Key highlights and discussion points covered:

- Strategies for enhancing user experience and productivity for remote employees by optimizing application performance and reducing latency.
- Best practices and implementing solutions that enable organizations to scale and secure SD-WAN operations without compromising performance.
- Exploring the integration of Secure Access Service Edge (SASE) with SD-WAN to ensure robust and secure access for a hybrid workforce.
- The most effective methods to detect new attacks are automatically responding and rectifying unauthorized configuration changes.

Speakers for the Bengaluru and Mumbai editions included:

Bengaluru

- Mr. Shivanand BK, Vice President & EDA Group Head, Synopsys
- Mr. Blasius Victor Rodrigues, Manager IT, Synopsys
- Mr. Veerendra Kumar, Manager – ICT, We Work
- Mr. Karthigeyan S, Director IT, Whatfix Private Limited
- Mr. Venkatesh PS, Director, Cognizant Technology Solutions
- Mr. Rajesh Agrawal, Manager – IT, Wipro Limited
- Mr. Sushilkumar Nahar, GM, Happiest Minds
- Mr. Asadullah Ansari, Director, Engineering SW, Harman International (India) Private Limited
- Mr. Naveen TN, Chief Technology Officer, Phoenix Systems
- Mr. Siva Sankara Reddy, Senior Director (Technical), National Informatics Centre-NIC
- Naveen Chhabra, CRO (South), Sify Technologies
- Ramanan Chidambaram, Director – Sales (SD-WAN), Fortinet
- Suresh Gummaraju, GM – Managed Network Services, Sify Technologies

The Bengaluru edition of the roundtable was attended by CIOs and IT leaders, including

Mumbai

- Ramanan Chidambaram, Director – Sales (SD-WAN), Fortinet
- Suresh Gummaraju, GM – Managed Network Services, Sify Technologies

- Rakesh Dosi, SVP & Business Head – Network Centric Services, Sify Technologies

The Mumbai edition of the roundtable was attended by CIOs and IT leaders, including:

- Piyush Mistry, Group Head Information Technology, Capital India Finance Limited
- Sudeep Maydeo, Global Head IT and CISO, EPL Limited
- Rudra Biswal, CTO, Arthan Finance Private Limited
- Melwyn Rebeiro, Director, Julius Baer Wealth Advisor Pvt Ltd
- Dhaval Pandya, Corporate CIO, Piramal Enterprises Ltd
- Santosh Gupta, Head IT, Zee Learn Ltd
- Chitranjan Kesari, CIO and IT Head, idemeum India
- Debdas Banerjee, Head IT, Sanathan Textile Limited
- Deepak Keswani, SVP – IT, Yes Bank
- Sandeep Chavan, AVP – IT, Yes Bank
- Vishal Kumar, VP – IT, Yes Bank
- Asif Shaikh, Head IT, Yes Bank
- Rohit Doke, Head IT, Infibeam Avenues Limited
- Prashant N Deshpande, CISO & CDO, Shriram Finance Limited
- Vijay Kumar, DVP IT & Security, Maximus Infoware
- Rupendra Nigam, CIO, Spykar
- Ashok Chitimilla, DVP- Project Delivery, Maximus Infoware
- Bhagwatiprasad Dubey, AVP Information Security, Axis Mutual Fund

Kolkata edition

The session at Kolkata discussed the current security challenges that enterprises are facing in the hybrid workplace environment and how Security Information and Event Management (SIEM) systems tackle them, limiting rapid incident response:

- The challenge around vast amounts of unaggregated security data makes it hard to see what's happening and prioritize threats.
- IT teams need to be more staffed/undertrained due to the cybersecurity skills gap.
- The need to demonstrate compliance takes time away from threat identification and response.

The discussion centers around how Security Information and Event Management (SIEM) solutions can offer crucial threat-detection capabilities, real-time reporting, compliance tools, and long-term log analysis. These aspects enhance businesses' security effectiveness, facilitate faster responses to threats, address suspicious behavior patterns more efficiently, and track/report compliance with industry, governmental regulations, and security standards.

Businesses can achieve rapid and comprehensive analysis by consolidating security event data from various applications and devices. Furthermore, automating repetitive tasks and delegating tasks that once necessitated expert intervention to less experienced staff significantly streamline processes. This increases operational efficiency and ensures a more agile and adaptive response to evolving cybersecurity challenges.

Speakers for the Kolkata roundtable included:

Kolkata

- Riyaz Hussain, AVP – Network Security Engineering – Delivery Cloud Managed Services, Sify Technologies
- Nihar Chakraborty, VP – Sales & COO – East & SAARC Countries, Sify Technologies
- Subramanian Udaiyappan, Director – Advanced Technologies, Fortinet

The Kolkata edition of the roundtable was attended by CIOs and IT leaders, including:

- Mr. Kripadyuti Sarkar, Group CIO, Ambuja Neotia
- Mr. Sameer Khakhar, VP – Information Security, Bandhan Bank
- Mr. Dinesh Naskar, Head – IT, Century Plyboards India
- Mr. Tamal Nag, GM – IT, Ddev Plastiks Industries
- Mr. Surajit Banerjee, Head IT, Emami Paper Mills Limited
- Mr. Biswajit Bag, Head – IT Infra & Security, Exide Industries
- Mr. Arindam Hari, Head-IT, Gainwell Commosales Pvt. Ltd
- Mr. Sanjeev Sinha, President – IT & Digitization, India Power Corporation Limited
- Mr. Dipan Sengupta, Head – IT, PCBL
- Mr. Sanjay Prasad, CIO, RP-SG CESC Power Group
- Mr. Atanu Pramanic, COO & VP – IT, RPSG Ventures
- Mr. Sourav Das, Group – Chief of Digital & IT, Rupa & Company
- Mr. Deepak Sengupta, CIO, Shyam Metalics Group
- Mr. Prakash Tripathi, CIO, Shyam Steel Industries
- Mr. Rajesh Dutta, CIO, Usha Martin

As the roundtables concluded, the insights shared by industry experts and practitioners provide a valuable foundation for shaping resilient, secure, and user-centric IT strategies. ■

डिजिट
अब हिंदी में

देश का सबसे लोकप्रिय और विश्वसनीय टेक्नोलॉजी वेबसाइट डिजिट अब हिंदी में उपलब्ध हैं। नयी हिंदी वेबसाइट आपको टेक्नोलॉजी से जुड़े हर छोटी बड़ी घटनाओ से अवगत रखेगी। साथ में नए हिंदी वेबसाइट पर आपको डिजिट टेस्ट लैब से विस्तृत गैजेट रिव्यु से लेकर टेक सुझाव मिलेंगे। डिजिट जल्द ही और भी अन्य भारतीय भाषाओ में उपलब्ध होगा।

digit.in
NOW IN HINDI

www.digit.in/hi
www.facebook.com/digithindi

डिजिट

MEHENG 12896/13/1/2011-TC DATED18/05/2011

To follow the latest in tech,
follow us on...

facebook.com/digitgeek

digit.in/facebook