8 Emerging Leadership Traits for CIOs in 2022

How the pandemic-led disruption has changed expectations from CIOs and why that warrants a different leadership style! PG 12
LAUNCHING

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
As we have entered 2022, the pandemic situation seems to be easing out a bit. However, with the experience of last two years, we can never be too sure.

And that is why something like leadership become very, very important for the custodians of technology—the primary tool for not just managing change and transformation, but also uncertainties.

Our cover story this time focuses on the new leadership traits needed in the wake of this shift induced by COVID.

I must make some clarifications, however.

Some of these leadership traits (along with associated challenges) are not exactly new. Just that in the context of the new expectations from CIOs, they have become far more relevant. Who would argue that communication or ability to inspire and motivate are not an important trait for a leader, at any time? Just that as the CIOs’ importance within the organizational scheme increases, these traits become absolute must-haves and not just good-to-haves.

Similarly, there are other skills and traits which may not have been most essential traits earlier but have become important for CIOs in the last few years. The pandemic has just accelerated the need to have those traits. For example, positive intervention by CIO has not been a traditional expectation from him/her. But as more and more organizations look at technology as a differentiator, they look proactively for emerging technologies such as AI and Blockchain to find their use cases in their businesses. That puts the responsibilities on the CIO to show the organization what is possible by leveraging these technologies. The pandemic has just widened the base of such businesses that are looking proactively to use technology. And hence we think it has become a basic requisite for most CIOs.

Then, there are completely new needs. While we all have celebrated the acceleration of digitization, many of those digitization decisions were taken keeping urgency and not importance or perfection of execution in mind. Yes, they served their purpose in the short run by allowing the business to run, instead of bringing the operations to a halt. But they may not be scalable. Or they may not be sustainable in terms of their cost, as things become normal. What to do about them? In some cases, it may require more investments and scrapping of the investments in some others, in the short run. For a good CIO, it is not too difficult to figure that out. The challenge is convincing the seniors and peers about the need for these readjustments when everything is perceived to be running fine. That requires the CIO to be a skilful negotiator too.

The importance we attach to leadership and management issues is evident from the fact that our last cover story too was on such an issue – succession planning. Expect a lot more around this in the coming months.
12-19 | 8 Emerging Leadership Traits for CIOs in 2022

How the pandemic-led disruption has changed expectations from CIOs and why that warrants a different leadership style!
AROUND THE TECH
04-11
Strong Demand Seen For IT Services In 3QFY22

SILLY POINT
20-21
Spotlight: Quantum
By Akash Jain

SPECIAL FEATURE
22-25
CIO Movements In 2021

SPONSORED FEATURE
26-27
"We Have Entered India At Just The Right Time"
By Surajit Chatterjee

INSIGHT
28-32
Could India Be A Major FinTech Innovator?

33-34
Transformation Driven By New-Age Tech At A Strategic Inflection Point

37-38
Enabling Enterprise Data Privacy And Security With Big Data
India 4th most spammed country

Scam calls in India have reduced from 9% to 1.4% and some of the common scams in the country remain the ever-popular KYC & OTP related frauds, according to the fifth edition of the annual Global Spam Report launched by Truecaller – a global study on how spam and scam affect all of us. The report identified 184.5 billion calls and 586 billion messages. Of those, 37.8 billion spam calls were identified and blocked while 182 billion messages were identified and blocked. India has moved up in the rankings from 9th to 4th position.

E-commerce shines in various parameters like Pick up time, Queue Time and Abandonment Rates, stated a study undertaken by Ozon etel. The report dwells on some of the areas where the call centre excelled this year as well as some areas where they struggled. Some of the parameters that call centres excelled in this year are – outbound calls – a lot of calls dial to busy lines or go unanswered. The average connection rate this year saw a drastic uptick, i.e., 47% as compared to 38% in 2020.

Call centers respond better In 2021

The cybersecurity services and product industry have combined revenue of USD 9.85 Bn in 2021 and grew at a CAGR of 40% in the last two years, stated ‘India Cybersecurity Industry Report – Services & Product Growth Story’ report released by Data Security Council of India. The report showcases the capabilities of the Indian cybersecurity Services and Startups and the continuous innovation in products and services to serve customers in India and globally. The services industry grew from USD 4.3 Bn in 2019 to USD 8.48 Bn in 2021.

Indian cybersecurity revenue rises in 2021

DT & talent, biggest IT challenges

Keeping up with digital transformation (32%) and keeping talent in technical roles (26%) are the two biggest challenges organizations face today, reveals the new study by Ivanti. The study found that IT departments are viewed as critical to an organization’s growth and business strategy by 61% of respondents. However, despite this high level of support for the IT department 72% of respondents reported losing team members.

App publishers see growth in 2021

More than 900 publishers worldwide anticipate passing this important milestone on the App Store and Google Play in 2021, up close to 91 percent of the 2016 total from 475, according to the Sensor Tower report. The number of iOS publishers alone will cross this mark to 581, up 87 percent from 310 in 2016. Google Play will see a similar trajectory, growing to 325 million-dollar publishers for the first time from 165 in 2016 to 325 this year. This represents an increase of 97 percent, outpacing the App Store’s performance in this regard by more than 6 percentage points.

NotLegit Azure Bug

In a statement, Microsoft’s Security Response Center (MSRC) has confirmed a NotLegit bug in the Azure cloud that may have exposed the data of several of its users. Microsoft’s validation came after the research division of cloud security vendor Wiz, an 18-month-old Israeli security startup, detected an insecure default behavior in the Azure App Service (aka Azure Web Apps). The bug exposed the source code of customer applications written in PHP, Python, Ruby, or Node, deployed using “Local Git”. Microsoft did not explicitly mention that the vulnerability has been exploited.
Bengaluru is a top diverse AI talent hotspot

India’s technology capital Bengaluru has been ranked as one of the top 5 cities globally with the most prominent AI talent pools worldwide by The Fletcher School at Tufts University. Bengaluru has eclipsed Los Angeles, London, Beijing, Chicago, and Washington in this rating. While Bengaluru was ranked fifth for diversity among AI workers, India’s garden city has the second-largest AI talent pool in the world. The Fletcher School used its TIDE framework

Healthcare, vax supply chain at hacking risk

Critical infrastructure will continue to face significant security challenges next year, including everything from energy and financial services to education and healthcare, according to a new report. The pandemic has shown that cyber-criminals are willing to exploit the crisis to attack critical infrastructures like healthcare and the vaccine supply chain. According to researchers from Barracuda Networks, healthcare organisations must understand the three steps of ransomware protection.

Urban Indians embrace smarter homes in 2022

The pandemic transformed our digital lives as millions stayed home for work, learning and fun, and homes in urban India embraced several Internet of Things (IoT) devices in the last 18-20 months that are only set to grow in 2022. The Indian home automation market size was valued at USD 179 billion in 2018 and is expected to reach USD 13.5 billion by 2026,

Security incidents connected to ransomware

At Kaspersky, IR is handled by the Global Response Emergency Team (GERT) and is reserved for mid-size to large organizations. From January to November 2021, nearly every second security incident handled by GERT was connected to ransomware (nearly 50% of all IR requests)—an increase of nearly 12 percentage points when compared to 2020, according to Kaspersky’s Story of the Year: Ransomware in the Headlines. Ransomware operators have refined their arsenal, focusing on fewer attacks against large-scale organizations, and an entire underground ecosystem has appeared to support ransomware gangs’ efforts.

Maintaining trust key challenge

Data security, confidentiality, integrity, and availability are now key issues for all organizations, as is imperative to use data ethically while complying with a complex web of industry and regional regulations and by 2023, 80% of APEJ organizations will increase security compliance automation investment by 15% to ensure all policies and regulations are met consistently, according to the report shared by IDC.

Logistics robots market growing

The global logistics robot market is expected to register a CAGR of 21.3% growth in terms of value to reach USD 18.58 billion by 2026, up from USD 15.28 billion in 2019, according to the latest study by Reports and Data. The trigger for this growth is the rapid growth of the e-commerce sector, primarily driven by advancement in internet penetration and a rising preference for online shopping. The last few years have witnessed increased adoption of logistics robots.

Strong Demand Seen for IT Services In 3QFY22

Strong demand is seen for IT services in the third quarter of FY22, said Motilal Oswal Financial Services (MOFSL). The brokerage house said that it expects a strong median revenue growth during the period under review. The PAT (profit after tax) growth is expected to come in at 6.2 per cent in 3QFY22 for the brokerage house’s ‘IT Services’ coverage universe. The strong demand environment is expected to continue in 3QFY22, with tier II players again outgrowing tier I companies within our coverage universe. Besides, tier I companies should deliver revenue growth in the 3.2 to 4.8%.

Deployment of IoT-based medical devices

Smart hospitals will deploy over 3,850 connected Internet of Medical Things (IoMT) devices, amounting to 7.4 million devices globally by 2026, according to a study. The study by Juniper Research showed that the global figure represents total growth of 231% over 2021 when 3.2 million devices were deployed. The concept of the IoMT involves healthcare providers leveraging connected devices such as remote monitoring sensors and surgical robotics to improve patient care, staff productivity, and operational efficiency. The research identified smart hospitals in the US and China as leading the global adoption of IoMT devices.
Over 2K hacked via signature verification

A new campaign exploited Microsoft’s digital signature verification to steal user credentials and sensitive information of over 2,000 victims in 111 countries, including India, and counting, a report said on Wednesday. The malware has claimed 2,170 unique victims in 111 countries, with India being the third most affected with 140 cases, according to Israel-based cybersecurity company Check Point. The top two targets were USA and Canada with 864 and 305 cases respectively, according to Check Point researcher Golan Cohen. Most victims reside in the US, followed by Canada and India.

Cyber security market to reach USD 366.10 Bn by 2028

The global cyber security market size is anticipated to reach USD 366.10 billion by 2028 and exhibit a CAGR of 12.0% during the forecast period. The surging number of e-commerce platforms and the growing integration of machine learning, internet-of-things (IoT), and cloud are expected to boost the market’s growth. Fortune Business Insights™ has presented this information in its report titled, “Cyber Security Market, 2021-2028”. The market size stood at USD 153.16 billion in 2020 and is expected to reach USD 165.78 billion in 2021. Increasing government investments in internet security are anticipated to stimulate market growth.

Data of over 1.1 Mn customers stolen

More than 1.1 million online accounts compromised in cyberattacks at 17 well-known companies, announced Attorney General James. Without revealing the names James released a “Business Guide for Credential Stuffing Attacks” that details the attacks — which involve repeated, automated attempts to access online accounts using usernames and passwords stolen from other online services — and how businesses can protect themselves. Credential stuffing has quickly become one of the top attack vectors online. Virtually every website and app use passwords as a means of authenticating its users.

69% Cos embrace quantum computing

Quantum computing has become a priority, as 74% agree that those who fail to adopt quantum computing will fall behind, states a new global study “The First Annual Report on Enterprise Quantum Computing Adoption,” authorized by Zapta Computing. Quantum is moving past the planning stage.

ML most likely technology in next 2–3 years

68% of chief technical officers (CTOs) have implemented machine learning at their company, reported research from STX Next. Machine learning is, by far, the most popular AI subset to be implemented; 68.3% of all CTOs who participated in the survey told us that machine learning has been applied in their company or organization. There is a significant jump to the second-most common AI area: Natural Language Processing which has been implemented by 24.5%. Over half said their company employs at least one person to work in AI/ML/Data Science.

452,000 mobile robot shipments in 2022

As a total of 45,000 cobots and 452,000 mobile robots are expected to be shipped in 2022, a 65% and 51% Y-o-Y growth, end users are expected to benefit from the tighter integration, identifies ABI research in its new whitepaper 70 Technology Trends That Will—and Will Not—Shape 2022. Manufacturers need a range of capabilities to deploy digital twins, including CAD modeling, connectivity, cloud computing, IIoT software platforms, remote monitoring, hardware for shop floor workers (tablets, AR glasses), physics-based simulation, ML, and systems integration.

Oil & Gas sector invests USD 15.6bn in digital

Oil & Gas firms face a myriad of operational, commercial, and existential threats, according to global technology intelligence firm ABI Research. Oil & Gas firms are turning to digitalization to combat these threats and will spend USD15.6 billion on digital technologies in 2030. Investments in digitalization can help analyze a pipeline’s condition, prepare for fluctuations in prices for oil and gas, aid action plans. etc.

2022 Will See Increasing AI Role In Augmented And Virtual Reality

Artificial intelligence will play an increasing role in augmented and virtual reality in 2022, according to a new analysis from ABI Research. More than 20 million active users will leverage artificial intelligence for augmented reality usage in 2022. Enterprises have been leaning into artificial intelligence to extract the maximum value from hardware, platforms, and services.
Coal Ministry launches portal

The Central Government has launched a portal, Koyla Darpan, to share key performance indicators (KPIs) related to the Coal Sector. To start with, the portal has data on Coal/Lignite Production, Coal/Lignite offtake, exploration data, Central Sector schemes, status of coal stock in thermal power plants, infrastructure projects, allocation of blocks, monitoring of major coal mines (of CIL), and coal price. The portal is accessible through the website of Ministry of Coal (https://coal.gov.in) and can be directly accessed at https://coaldashboard.cmpdi.co.in/.

Odisha launches portal for farmer producers

Odisha has launched a dedicated web portal for farmer producer organizations (fpoodisha.nic.in). This is aimed at providing a digital platform to access information and extend single-window services to all the state FPOs. The Director of Horticulture has associated with Bill and Melinda Gates Foundation (BMGF) to strengthen the FPOs in accessing remunerative markets, convergence with schemes and implementing a digital governance system for the performance measurement of FPOs. More than 450 FPOs in have been registered.

Sebi launches Saaṛthi mobile app to create investor awareness

Capital market regulator Sebi has launched its mobile App, Saaṛthi, to create awareness among investors about the basic concepts in trading. It aims to create awareness about basic concepts of securities market, KYC process, trading and settlement, mutual funds, recent market developments, investor grievances redressal mechanism, etc. The App is available in Hindi and English for both Android and iOS phones.

Haryana launches portal for free treatment to poor

Haryana has launched a portal for providing free treatment to poor patients in private hospitals that have been allotted land by Haryana Shehri Vikas Pradhikaran (HSVP) in various urban estates. These hospitals are required to maintain real-time data records of patients belonging from BPL or Class IV employees of Haryana Government who are being given treatment on concessional rates. They can upload all necessary details along with bills and other supporting documents on the portal.

Urban Forest Park app in Telangana

The Telangana forest department has launched a mobile app to provide useful information about Urban Forest Parks. It aims to facilitate the visitors to plan their visits to the parks better and journey. The app provides information on entry ticket fee, special features of the parks, distance from the app user, route app, etc. Initially, the app is providing information about 39 parks developed under HMDA, Medchal, Ranga Reddy and Hyderabad limits.

Haryana launches portal for B2B trade between India’s NE, Bangladesh

A portal to facilitate business between Bangladeshi and Indian traders, especially of the northeast region of India, has been launched. The portal contains a database of exporters and importers of northeast India and Bangladesh and is expected to facilitate collaboration between buyers and sellers of the two countries.
B2B spending in India to grow

The total business-to-business spending in India is forecast to rise by 10.3% in 2022. The spending of India’s businesses is growing three times faster than its peers in other countries in the third quarter of last year, according to a study. The total B2B spend for India rose 9.4% in Q3 2021 on a year-on-year basis, as per the India Business Spend Indicator (IBSI) report by American Express, India and Invest India in partnership with CEBR.

M2P Fintech raises USD 56 million

Financial infrastructure provider M2P Fintech has raised USD 56 million led by New York-based global private equity firm Insight Partners. Last year the company was in talks to raise the fresh funding, which would almost double its valuation to USD 600 million in a few months, said reports. The startup provides API infrastructure which enables businesses to embed financial products and counts more than 500 fintechs, banks and other financial institutions as its clients.

Pixis raises USD 100 million in funding

California-based technology company Pixis (formerly known as Pyxis One) has raised USD 100 million (INR 743.8 crore) in funding in a round led by SoftBank Vision Fund 2, reports said. The round also saw participation from new investor General Atlantic, and existing investors Celesta Capital, Premji Invest, and Chiratae Ventures. The startup provides codeless AI infrastructure to enable customers to scale accurate data-driven marketing.

B2B services rental platform Settlrs raises USD 1 million

B2B services rental platform Settlrs has raised USD 1 million from a group of investors led by Canbank Ventures. Incubated at the Indian Institute of Management, Bangalore, the Bengaluru-based startup provides furniture, home appliances, fitness equipment and IT infrastructure to startups and co-living spaces on a lease basis. The company may foray into the B2C space, per reports.

USD 10 million funding for silver jewellery startup

Bengaluru-based silver jewellery startup Giva has raised USD 10 million (INR 74.5 crore) in a Series-A funding round led by Sixth Sense Ventures, A91 Partners and other investors such as India Quotient, Grand Anicut Angel Fund and Founder’s Bank Capital, per reports. The infusion is expected to help the company bolster its product development, introduce new categories, expand online and offline channels, as well as tap overseas markets.

INR 100 crore funding for BigHaat Agro

Investors led by JM Financial Private Equity are leading a INR 100 crore funding in Bengaluru-based agritech firm BigHaat Agro, reports said. Japanese investor Beyond Next Ventures, which led BigHaat’s previous round in August 2020, also participated in the fundraise. The startup founded in 2015 by Sateesh Nukala, Sachin Nandwana and Kiran Vunnam, functions on a direct-to-farmer model and is leveraging science, data and technology.

Crypto startup gets funding

Reports said, Stader Labs, a cryptocurrency staking management platform, has raised USD 12.5 million in a funding round led by Three Arrows Capital, pushing its valuation to USD 450 million. The company had a valuation of USD 50 million when it had raised its seed round in October last year. Founded in April 2021 by Gajjala, Dheeraj Borra, and Sidhartha Doddipalli, the startup is a cryptocurrency staking management platform that is building decentralised financial protocols and applications for efficient stake management on public blockchain networks.

Business automation tools maker gets funding

SaaS Labs, which builds business automation tools for sales and support teams worldwide, has raised USD 42 million (about INR 312 crore) in a funding round led by Sequoia Capital India. The Series B funding round also saw participation from existing investors Base 10 Partners and Eight Roads Venture. This is the first institutional capital raising by the bootstrapped startup, which operates out of India and the Philippines. The startup was launched in 2016 and develops products for sales, support and marketing teams as well as contact centres to enhance productivity.
AMIT DHAWAN has been appointed as CISO & DPO at Quantiphi. Dhawan moves from Birlasoft where he served in the same capacity.

MANOJ SONI has been appointed as CTO at Sarovar Hotels & Resorts. Before this new appointment, Soni was involved in IT Project Management Consultation.

AMIT PAL SINGH has been appointed CTO at Mercer | Mettl. Singh joins from HighWire Press where he served as SVP - Platform Solutions.

PAWAN SATYAWALI has been promoted to CIO at Tata Consumer Products. Before this, Satyawali was VP - Infrastructure, Security & QSR Technology at Tata Consumer Products.

SACHIN ARORA has been appointed as CISO at Digital Convergence Technologies. Previously, Arora was Virtual CIO & Founder of ProServIT. He has been a NextCSO winner in 2017.

ANAND THAKUR has joined as CTO at Reliance Retail. Thakur moves from Elara Group (Housing, PropTiger & Makaan) where he served as the Group CTO.

MANOJ KURUVANTHODY has joined as CISO at Tredence. Immediately prior to this, Kuruvanthody was AVP & Head - Cyber Security Strategy & Governance at Infosys.

PAWAN SATYAWALI has been promoted to CIO at Tata Consumer Products.

UPKAR SINGH has joined as VP - IT at RMSI. Singh joins from FIS where he was Director - IT. He has been a NEXT100 winner in 2016.
INDUSTRY MOVEMENTS

AVINASH JOSHI has been appointed as India CEO by NTT.
Joshi joins from IBM where he held several leadership positions and served for more than 18 years.

MITISH CHITNAVIS has joined iValue Infosolutions as its CTO.
Previously, Chitnavis has held leadership roles in companies like Binary Spectrum, Obopay, Electronic Data Systems and Mphasis.

AMIT A PRADHAN is now Director - India, SAARC & Japan at Mandiant.
In his prior role at Mandiant, Pradhan was Director - India & SAARC. He has also been a NextCSO jury member in 2018.

PRABHAKAR APPANA has been appointed Senior Vice President & Global Head of AWS Business Unit at HCL Technologies.
Immediately prior to this, Appana was Managing Director - Cloud Business Lead at Accenture.

ANANT PADMANABHAN has been appointed Managing Director of T-Systems ICT India.
Before this, Padmanabhan was Global Head - Digital Enabler and Head - SI Delivery at T-Systems India.

RAJ A. KAPOOR, Founder & CEO of India Blockchain Alliance, has joined 5ire Network as India Strategy Lead.
Kapoor is an Advisory at several blockchain companies.

SANTHOSH VISWANATHAN has taken up a new role as Managing Director - Sales, Marketing & Communications Group (SMG) for Intel India.
In his prior role at Intel, Viswanathan was Managing Director for Southeast Asia, and Australia/New Zealand in the Asia Pacific and Japan region.

RAJESH MANI has taken up a new role at Mastercard as Head of India Tech Hub.
Previously, Mani was Mastercard’s Country Manager for Sri Lanka & Maldives.

AMIT A PRADHAN is now Director - India, SAARC & Japan at Mandiant.
In his prior role at Mandiant, Pradhan was Director - India & SAARC. He has also been a NextCSO jury member in 2018.

MITISH CHITNAVIS has joined iValue Infosolutions as its CTO.
Previously, Chitnavis has held leadership roles in companies like Binary Spectrum, Obopay, Electronic Data Systems and Mphasis.

PRABHAKAR APPANA has been appointed Senior Vice President & Global Head of AWS Business Unit at HCL Technologies.
Immediately prior to this, Appana was Managing Director - Cloud Business Lead at Accenture.

ANANT PADMANABHAN has been appointed Managing Director of T-Systems ICT India.
Before this, Padmanabhan was Global Head - Digital Enabler and Head - SI Delivery at T-Systems India.

RAJ A. KAPOOR, Founder & CEO of India Blockchain Alliance, has joined 5ire Network as India Strategy Lead.
Kapoor is an Advisory at several blockchain companies.

SANTHOSH VISWANATHAN has taken up a new role as Managing Director - Sales, Marketing & Communications Group (SMG) for Intel India.
In his prior role at Intel, Viswanathan was Managing Director for Southeast Asia, and Australia/New Zealand in the Asia Pacific and Japan region.

AMIT A PRADHAN is now Director - India, SAARC & Japan at Mandiant.
In his prior role at Mandiant, Pradhan was Director - India & SAARC. He has also been a NextCSO jury member in 2018.

MITISH CHITNAVIS has joined iValue Infosolutions as its CTO.
Previously, Chitnavis has held leadership roles in companies like Binary Spectrum, Obopay, Electronic Data Systems and Mphasis.

PRABHAKAR APPANA has been appointed Senior Vice President & Global Head of AWS Business Unit at HCL Technologies.
Immediately prior to this, Appana was Managing Director - Cloud Business Lead at Accenture.

ANANT PADMANABHAN has been appointed Managing Director of T-Systems ICT India.
Before this, Padmanabhan was Global Head - Digital Enabler and Head - SI Delivery at T-Systems India.

RAJ A. KAPOOR, Founder & CEO of India Blockchain Alliance, has joined 5ire Network as India Strategy Lead.
Kapoor is an Advisory at several blockchain companies.

SANTHOSH VISWANATHAN has taken up a new role as Managing Director - Sales, Marketing & Communications Group (SMG) for Intel India.
In his prior role at Intel, Viswanathan was Managing Director for Southeast Asia, and Australia/New Zealand in the Asia Pacific and Japan region.

AMIT A PRADHAN is now Director - India, SAARC & Japan at Mandiant.
In his prior role at Mandiant, Pradhan was Director - India & SAARC. He has also been a NextCSO jury member in 2018.

MITISH CHITNAVIS has joined iValue Infosolutions as its CTO.
Previously, Chitnavis has held leadership roles in companies like Binary Spectrum, Obopay, Electronic Data Systems and Mphasis.

PRABHAKAR APPANA has been appointed Senior Vice President & Global Head of AWS Business Unit at HCL Technologies.
Immediately prior to this, Appana was Managing Director - Cloud Business Lead at Accenture.

ANANT PADMANABHAN has been appointed Managing Director of T-Systems ICT India.
Before this, Padmanabhan was Global Head - Digital Enabler and Head - SI Delivery at T-Systems India.

RAJ A. KAPOOR, Founder & CEO of India Blockchain Alliance, has joined 5ire Network as India Strategy Lead.
Kapoor is an Advisory at several blockchain companies.

SANTHOSH VISWANATHAN has taken up a new role as Managing Director - Sales, Marketing & Communications Group (SMG) for Intel India.
In his prior role at Intel, Viswanathan was Managing Director for Southeast Asia, and Australia/New Zealand in the Asia Pacific and Japan region.

AMIT A PRADHAN is now Director - India, SAARC & Japan at Mandiant.
In his prior role at Mandiant, Pradhan was Director - India & SAARC. He has also been a NextCSO jury member in 2018.

MITISH CHITNAVIS has joined iValue Infosolutions as its CTO.
Previously, Chitnavis has held leadership roles in companies like Binary Spectrum, Obopay, Electronic Data Systems and Mphasis.

PRABHAKAR APPANA has been appointed Senior Vice President & Global Head of AWS Business Unit at HCL Technologies.
Immediately prior to this, Appana was Managing Director - Cloud Business Lead at Accenture.

ANANT PADMANABHAN has been appointed Managing Director of T-Systems ICT India.
Before this, Padmanabhan was Global Head - Digital Enabler and Head - SI Delivery at T-Systems India.

RAJ A. KAPOOR, Founder & CEO of India Blockchain Alliance, has joined 5ire Network as India Strategy Lead.
Kapoor is an Advisory at several blockchain companies.

SANTHOSH VISWANATHAN has taken up a new role as Managing Director - Sales, Marketing & Communications Group (SMG) for Intel India.
In his prior role at Intel, Viswanathan was Managing Director for Southeast Asia, and Australia/New Zealand in the Asia Pacific and Japan region.
So, where will apartment dwellers charge their EVs?

As governments across the world are giving a push to electrical vehicles, a major question looming large for urban city dwellers, specifically in the multitude of high-rises is – where will they charge their electric vehicles if they buy one? Those with private houses and garages have the space to charge EVs but what about others. As we talk of smart homes, it is imperative that we also start conversations on smart apartments with chargers built into parking lots. Charging spots in parking lots and other plug-friendly street spots must be built into smart city plans and on highways. The biggest deterrent to large scale EV adoption is the fear that EV owners would be stranded mid-street with electricity that gives them life in short supply for stretches. The only way to transform smoggy cities’ vehicles into electric ones is to promote them with the assurance of easy availability of charging docks.

Balding? Take heart. A cure may be on its way!

A big fallout of COVID has been falling hair. The evils of urban lifestyle compounded by pollution have meant many urbanites are already struggling to save their thinning pate. The frustration of losing their crowning glory has had many wanting to pull out the remaining strands in sheer frustration.

While this has come as a windfall for the hair clinics providing dubious treatments, some good news is coming up. So, take heart folks and hold on to your hairy tales.

Reports suggest several startups in the biotechnology space have set their biologists to look for a solution to the age-old problem of baldness, applying the latest advances in genetic engineering. They are creating new hair-forming cells that could restore your ability to grow hair.

Researchers are developing techniques to grow human hair cells in labs and on animals. dNovo, a startup seems to have come up with a concrete result as reported in the media and has successfully sprouted a dense clump of human hair on a mouse. This has been achieved by a transplant of human hair stem cells.

The company claims to produce the components of hair follicles by genetically “reprogramming” ordinary cells, like blood or fat cells.

While this is in the lab stage, there is hope technology would do what genetics failed us at – keep our head full of hair.

META’S NEW LEARNING ALGORITHM CAN TEACH AI TO MULTI-TASK

Artificial Intelligence is not human intelligence, but with the work Meta is doing, AI may soon become capable of multitasking, just like us. The current AI technology can identify objects in photos and in words but it can’t do both at the same time. This is because certain AI models are adept at doing one thing or the other but not both at the same time. The reason for this is that AI models learn different skills with different techniques. Therefore, as of now, we do not have a general-purpose AI that can adapt and multitask.

Meta is all set to change that with its team of researchers developing a single algorithm that can train a neural network to do multiple things at the same time – recognise images, text or speech.

Soon, giving an AI multiple skills would not be hard work and this could open many doorways.
8 Emerging Leadership Traits for CIOs in 2022

How the pandemic-led disruption has changed expectations from CIOs and why that warrants a different leadership style!

By Jotinder Singh
During one of my recent conversations, a former CIO of a multinational manufacturing company admitted that he was never aware during his entire career that many of his subordinates and team members were scared to approach him for sharing new ideas or even initiating a candid discussion. After his superannuation, he was reluctantly made aware of this leadership flaw by a few of his former colleagues. And the revelation was startling for him! Because he considered himself a friendly and approachable leader during his tenure as a CIO and believed that he took conscious efforts to make people feel comfortable while talking to him.

Well, then what went wrong?
Understandably, our perceptions about ourselves can be vastly different from reality at times. But in this case, according to Syed Naqvi, Managing Partner, Heads Global, a global advisory and executive search firm, the problem perhaps lies somewhere else. It could be a lack of solid communication skills, his inability to build trust and openness among his colleagues and peers, a significant gap between modern and conventional thought processes, or a rigid hierarchy-based structure prevalent within the organization.

While this gap in the skillsets or processes may have still not significantly squeezed the organization’s growth in the years before the pandemic, the consequences of such CIO leadership gaps can be very harsh in the current testing times, where technology elevates strategy.

"As we have experienced in the last two years, the pandemic has brought people closer to technology. Pandemic has been seen as an accelerator to digital technology globally. About 60-70% of the CIOs and CTOs designated leaders are quite conventional in their approach. They hold the position because they have risen from the rank and have been in the system for long enough. They are facing the heat from the young and nimble tech-savvy organizations," Naqvi elaborates.

To thrive in the vastly different digital world and avoid situations like above, CIOs need to tweak

"About 60-70% of the CIOs and CTOs designated leaders are quite conventional in their approach. They hold the position because they have risen from the rank and have been in the system for long enough. They are facing the heat from the young and nimble tech-savvy organizations."

Syed Naqvi
Managing Partner, Heads Global
their leadership style significantly that can help them drive more experimentation, innovation, and learning to increase business value in these transformative times and make businesses future-proof.

Based on our deliberations with senior technology and hiring leaders, here are the eight emerging leadership traits that CIOs must embrace to succeed in 2022 and beyond.

1. More resilient

In 2022 and beyond, as organizations move toward accelerating their growth agenda while defining new ways of working, the actions taken by CIOs will influence people and processes throughout the organization.

The boardroom spotlight is on CIOs to guide, influence, and inspire organizations to stay resilient and accomplish productivity marvels even during adversity. Organizations expect CIOs to steady the ship while integrating core business and IT operations to build a resilient enterprise in the new normal.

COVID-19 is a humanitarian tragedy of an unprecedented level and a watershed event in all aspects. The recurring waves of the pandemic have added more layers of complexities due to the frequently changing customer and employee expectations. The past two years have been demanding from an emotional, financial, and health perspective. As employees, customers and organizations look to rebound from the pandemic in the year ahead, CIOs need to improve their adaptability levels, stay empathetic, have compassion, and think from the continuously evolving perspectives so that they can take action for the future.

For CIOs, it was tough, in 2019, to imagine that technology would be at the core of solving this global health crisis, and the CIO would be at the forefront of managing the health crisis. "Each of the three waves in the last two years brought its own set of challenges for CIO to navigate. While wave one was to ensure business continuity by supporting employees working away from the workplace, wave two was to institutionalize the new way of working. Finally, wave three various prioritized initiatives for technology transformation beyond COVID-19," says Rajiv Sikka, Group CIO, Medanta Hospitals.

"Because of the distinct nature of the role in an enterprise, the CIO is involved in most functional areas. The last two years have witnessed many crisis scenarios in which the CIO role as a cross-functional business leader has been established. Changes in technologies and expectations from technologies are never new, but this transformation of the CIO from technology to business would be the New Normal and would continue to stay," Sikka adds.

In such times, highly resilient leaders can handle anxiety, ambiguity, and impediments well to overcome new challenges and deliver exceptional results by motivating people and spreading positivity even during a crisis.

According to an EY report titled, Resilient enterprise: A CIOs point of view, CIOs should be ready for new, critical, and unexpected demand for technology services as the enterprise pivots to get ahead of the crisis. EY observes that the current situation forces industries to reinvent themselves for virtual and remote customer engagement rapidly.

"It is a familiar journey — most companies have been on the path of digital transformation already and will recognize this shift as a similar, yet more abrupt, change to their business model," the report notes.

As articulated precisely by Natarajan Radhakrishnan, President & Global CIO, Hinduja Global Solutions (HGS), "CIOs of today need to be 'Zen Masters' with multiple skills. Technical skills are essential, but they must also have business, people, and change management skills. CIOs must involve strategic thinking in every decision they make because the company is no longer there. Today, they need to be Exceptional leaders who are both highly knowledgeable and well versed in the technical, business, and support areas. Not just knowing what to do, but knowing how to do it, and doing it with excellence and efficiency."

"CIOs of today need to be 'Zen Masters' with multiple skills. Technical skills are essential, but they must also have business, people, and change management skills. CIOs must involve strategic thinking in every decision they make because the company is no longer how it used to be."

Natarajan Radhakrishnan
President & Global CIO, Hinduja Global Solutions (HGS)
A Seat at the Executive Board’s table for CIOs would be imperative for businesses to stay relevant in the future. Empowerment and ownership would help them anchor the short and long-term organizational goals.

Dhiren Savla
CIO, VFS Global

3. Agile, flexible, and problem solver

The upheaval has significantly impacted how people and organizations operate, collaborate, and make decisions. Work-from-home, for instance, became a mainstream paradigm overnight from being considered an alternative...
or a privilege earlier within many organizations.

In these tumultuous times, there may not be straight ‘right’ or ‘wrong’ answers. You have to make decisions depending on the situation and context, constantly changing. What might be a good idea last month may not be relevant today. That’s the speed at which things are shaping.

In such a scenario, exemplifying an agile and flexible mindset enables people and teams to think from a relevancy perspective and build future-proof and more impactful solutions that can help improve revenues and speed to delivery.

“Earlier, it was command and control (C&C) and now more connection and collaboration. The C&C exists, but the connotation has changed. This means that for any leadership position, what businesses are looking for very clearly is agility in the individual. How flexible and out of the box is he? How innovative is he? The whole criteria for performance have changed 360-degree today,” states Syed Naqvi of Heads Global.

Agile leaders look at fiascos as an opportunity to learn and create innovative and transformative solutions. Employees expect modern CIOs as leaders who listen to people, encourage them to share their thoughts, experiment with new ideas, and remain lenient if things don’t work out as planned. “Today’s CIOs need to significantly enhance their learning quotient, collaboration skills, and team management efforts. In these uncertain times, CIOs need to constantly think and identify the best ways to build an ecosystem which can enable them to respond and address issues without delay,” states Vijay Sethi, Chairman (Advisory Board), MentorKart & Former CIO & CHRO, Hero MotoCorp.

A heavy-handed approach and demanding tangible results or ROI quickly from all technology implementations or processes can destroy the possibility of developing an exceptional product or service. Dhiren Savla, CIO, VFS Global, emphasized the criticality of short-term planning while organizations may continue to focus on the long-term needs of the business in these uncertain times. “Nearly two years of frequent lockdowns and disruptions made businesses look at long-term forecasts. But given the uncertainties witnessed in the past few months and the wake of a new variant, I believe short-term planning is equally essential. Therefore, agility must be a key part of business strategy.”

By leveraging data-intensive technologies, they are better equipped to make informed and focused decisions for the short and long-term.

“I have believed in creating an IT foundation that keeps the organization ahead of time and future-ready. Therefore, a seat at the Executive Board’s table for CIOs would be imperative for businesses to stay relevant in the future. Empowerment and ownership would help them anchor the short and long-term organizational goals. CIOs’ ability to align business strategies and application of technology in overachieving goals would be key,” Savla adds.

4. Great collaborator

Leaders drive the behavior of an organization. As we are in the middle of a major global health crisis, enterprises need to uphold the momentum of their IT modernization efforts while also prepping themselves for any adversity.

Any deployments around the emerging tech such as IoT or AI-enabled automation, for instance, are intricate in nature and need robust collaboration efforts between several departments across an organization. No longer can an enterprise succeed with a traditional siloed IT approach. In addition, having buy-in from all stakeholders and C-suite peers is also critical. The modern CIOs need to be intuitive, responsive, exceptional listeners, transparent and approachable. They should be open to collaboration internally and externally to achieve outstanding business outcomes and listen to understand and not necessarily respond. That’s the only

"CIOs need to align and work closely with businesses to deliver tailor-made solutions which will enable the new normal. As such, communicating well with their employees and business become a key requisite for success."

Joy Kurian
Group CTO, Quess Corp.
way to convert the new normal position into a winning place.

"It is critical to understand how technology will be useful for your organization. You can’t use the same yardsticks for different businesses. Your business goals should be aligned with the technology. In such a setup, it becomes paramount for technology leaders to have a collaborative mindset and how the needs of employees and customers can be fulfilled by the technology they adopt. A new-age CIO needs to hold regular meetings with C-level peers to understand how the business is growing what challenges management is facing," says Sendil Kumar Venkatesan, CTO, Shriram Capital.

Effective collaboration will enable them to determine which technologies need to be built and outsourced after considering workforce and competency considerations. Accomplishing a collaborative mindset is easier said than done. CIOs need to strengthen their relationship-building skills and focus on helping others succeed when others are in need.

A collaborative mindset creates a win-win situation for both IT heads and businesses. With all technology efforts to deliver exceptional customer experiences, a collaborative leader ensures that internal employees, back office, and engineers have the necessary tools and technologies to do their jobs effectively. After all, it’s the happy employees responsible for customer delight.

CIO should be approachable to discuss how leveraging a particular tech business can be more impactful.

5. Skillful negotiator

The modern-day CIO is a change leader responsible for spearheading business results in the interest of the strategic directives of his organization.

According to Gartner’s CIO Resolution 2022 report, as the IT decision-makers face competing and ever-shifting challenges in the year ahead, they need to move smartly and decisively and work as a hostage negotiator to hammer out priorities with their executive peers. To accomplish that, they need to be active listeners, mindful of and intentional with their body language, maintain eye contact, and avoid judgment. Most importantly, they need to prioritize developing rapport with their peers and teams by building mutual understanding and making necessary cultural cues and context adjustments.

"To convince the management, technology leaders should have the ability and skills to influence the management to tell them what is needed and why it is needed," says Venkatesan of Shriram Capital.

Agrees, Natarajan Radhakrishnan of HGS, "On the business side, CIOs must have tremendous knowledge and understanding of the marketplace. On the people side, earlier talent was highly local, but today the geographical boundaries are diminished thanks to remote working. The location of the candidate doesn’t matter anymore. Change management is the most crucial skill of the CIO today. They need to get buy-in from all their stakeholders, which means CIOs need to convince them with rational and emotional arguments."

6. Inspiring and trusting

Trust is the essential ingredient and trait that leaders should focus on in these unknown times. Trust is fostered and built among stakeholders along multiple dimensions: physical, emotional, financial, and emotional. In its

"As a leader, CIO has to show empathy and flexibility to accommodate the team who is working in a distressed situation. With the volatility in the ecosystem, the CIO needs to wear multiple hats, such as chief learner, chief inspirer, chief innovator, and chief crisis manager, to facilitate the rest of the group to keep getting better and better as things change."
"Today's CIOs need to significantly enhance their learning quotient, collaboration skills, and team management efforts. In these uncertain times, CIOs need to constantly think and identify the best ways to build an ecosystem which can enable them to respond and address issues without delay."

Vijay Sethi
Chairman (Advisory Board), MentorKart & Former CIO & CHRO, Hero MotoCorp

"Technology leaders should have a collaborative mindset to gauge how the needs of employees and customers can be fulfilled by the technology they adopt. A new-age CIO needs to hold regular meetings with C-level peers to understand how the business is growing what challenges management is facing"  

Sendil Kumar Venkatesan
CTO, Shriram Capital

report, titled The essence of resilient leadership – business recovery from COVID-19, Deloitte notes that trust starts at the human, interpersonal level. "COVID-19 has heightened stakeholder sensitivity across these four dimensions, which offers greater opportunities to act to build – or lose – trust. For instance, trust may be built among employees when leaders thoughtfully consider how to reengage the employees in the office, or when they go to great length to preserve as many jobs as possible, rather than just preserving profits," it mentions.

The customers and employees will be cautious and anxious given the market uncertainties. The modern CIOs should not follow conventional bureaucratic practices and take proactive steps to forge a more change-ready culture and inspire their teams by taking actions that demonstrate empathy, transparency, and accountability while dealing with unique and unparalleled situations. Your efforts should explain how technology can help in driving stakeholder-focused outcomes.

"Technology is uncomplicated here and is just an enabler, but as a leader, we have to go beyond basics. We have to focus on what matters, and, in my view, it is the team. The leader has to establish a conducive environment of trust and confidence where the team can work. As a leader, CIO has to show empathy and flexibility to accommodate the team who is working in a distressed situation," says Rajiv Sikka of Medanta Hospitals.

7. Positive intervenor

A good problem solver requires a clear definition of the problem. A CIO needs to thoroughly understand the organization's business processes to comprehend that problem well. That explains the recent emphasis on understanding business.

Today—and that has got underlined during and after the pandemic—the expectation from technology is more. It is beyond solving a defined, well-understood problem. Application of technology is a strategic business differentiator, and hence the CEO is always looking to be the first to create value for
their company through newer and emerging technologies. To remain ahead in what is often described as a ‘use case’ regime, a business must proactively think of using new technology to create value for itself.

It is expected that the CIO would introduce these new technologies to the business ahead of the competition. That means they would be the Chief Innovation Officers and Chief Intervention Officers of their organizations.

Three skills are required for this. First and foremost, the CIO must have a good view of the emerging technology landscape, not just mature technologies. Two, CIOs must understand the industry and market dynamics of the business they operate in—that is not just a micro, process view but also a macro view.

Three, they must be a first learner and must find ways of combining these two to quickly apply new technologies to their business, which will give them an edge over competitors and sometimes allow them some time to experiment and fail. Sometimes, that may mean working with and learning from start-ups in their industry and other industries.

This requires the CIO to think on white canvass, not only when they are given a well-defined problem to solve. Apart from skills, it requires a mindset change too.

8. Coach, mentor, and talent builder

Upskilling the workforce in sync with new tools would be a critical goal in every technology roadmap. Many technology leaders saw these challenges while adapting to hybrid work models. In 2022, they are expected to play a crucial role in sourcing and identifying new talent for their businesses and need to ensure new tools and systems to reskill and upskill people and make them ready for future needs.

“This is just the beginning of an inspirational journey wherein a tech leader would have to take a larger responsibility of becoming the overarching link holding businesses together,” says Savla of VIS Global.

There is much focus from companies on leveraging technologies such as automation that can help enhance processes, reduce dependencies, improve supply chains, and, of course, the R&D part. And because of the extensive digitalization and change, the talent part has also been impacted hugely. “This continuous transition and transformation require today’s CIOs to have the ability to translate change management effectively. They need to understand their talent’s fluctuating needs and challenges and address their learning requirements based on the new technology environment. The focus should be on customized coaching sessions on new processes,” says Sandeep Balooja, Founder & Managing Partner, S&L Consultants, and former Executive Chairman, Mando Automotive.

According to Rajiv Sikka, in these volatile times, it has become far more critical for CIOs to focus on talent development while also ensuring that they have a second-in-command for the team to do some heavy lifting and forge an enduring relationship with the business. This, according to Sikka, will help CIO to release their bandwidth and focus on big-ticket things like board agenda items.

“Earlier, the term CIO used to resonate with Career Is Over. With the volatility in the ecosystem, the CIO needs to wear multiple hats, such as chief learner, chief inspirer, chief innovator, and chief crisis manager, to inspire the rest of the group to act better as things change. It is not humanly possible for CIO to be the expert of a vast area of influence or to be present everywhere,” Rajiv Sikka recapitulates.
With this month’s column, we start a 12-part series called Navigator MasterClass, wherein we will find our way through the myths and realities of one Bleeding Edge technology each month; in terms of where it truly stands at the time of writing, and its business applications - implemented, being attempted, or speculative. Rest assured that this will NOT be an educational initiative. We will, however, spend a few lines to set up common understanding of the technology.

The technology for this month is Quantum Computing (QC). Like any emerging technology (or even a concept), there is a lot of hype without real understanding in the early days. If one was to Google “Quantum Computing”, the 2 billion+ results can be broadly classified into five categories:

- Quantum made easy
- Why is Quantum so difficult to understand?
- Quantum for IT departments
- Particle Physics theory
- Applications (under development or being speculated/planned)

The reason Quantum Computing is so difficult to explain or understand is that it is based on the esoteric science of Quantum Physics. And that is nowhere as easy to learn or even teach as the Mathematical models used in Classical Computing. What we will do now is understand the challenges and why it may be more than a few years before QC goes mainstream. We will also look at some business applications being planned/built as we speak/read/write.

Most of us know that QC uses Qubits, which are bits that exist in multiple states simultaneously (as against the classical computing bit that can be either “0” or “1” only. In popular literature(!) this concept
called Superposition, is defined as being in “0” and “1” simultaneously. In reality, Superposition is a ‘complex linear combination’, that assigns amplitudes to “0” and “1”. And through interactions, it leads to ‘destructive’ or ‘constructive’ interference; until it is destroyed (“0”), or it survives (“1”). The whole world of QC algorithms is based around crafting and sequencing of constructive and destructive interference.

Also, QC is good when the problem at hand shows ‘scaling behavior’; i.e., each step leads to an exponential growth in subsequent steps. So, it is not the challenge of computing all possible moves in chess (which supercomputers can do today), but it is the challenge of the traveling salesman problem or the Chinese postman problem.

What does all this mean for Business and its IT? First of all, there are no metrics to measure the progress of QC research. Most big-name research organizations are focused on number of Qubits. While this is important, it is the Gate Errors that are being ignored except perhaps by Google’s Sycamore and USTC in China. The potential of QC can be realized only with minimal gate errors; this can only be done by the classical techniques of repetition, replication, and redundancy. This error correction will use up some Qubits as gatekeepers; until we know what that will take, there is no telling what power is available.

Another challenge that will keep QC some time away from business is of ‘Decoherence’. A slightest vibration/sound/light turns a Qubit into a good old bit. So systems engineering is looking at solutions like special environment of near zero temperature or of absolute vacuum. Once this is stabilized, cloud computing will bring QC to business world.

The third challenge is one of QC industry’s own creation; that of race to ‘Quantum Supremacy’. This essentially requires that QC does a mathematic- cal calculation that is beyond the reach of most powerful supercomputer. This has not been achieved yet; the task being made more difficult by super- computing advancing on its own (thus making this goal a moving target).

Before we look at ongoing Business IT work using QC, let us understand that QC will not replace classical computing, i.e., the mobile phone will not start using Qubits instead of bits. In fact, for many applications, QC will be slower than classical computing. QC will be used in cases that demonstrate Scaling Behavior that we talked about earlier.

MIT Technology Review lists two types of applications of QC, the first being “simulating the behavior of matter down to molecular level”. Volkswagen and Daimler are looking to analyze EV batteries through simulation to improve performance. Pharmaceutical industry is looking at understanding compounds better to create new drugs. The second type of applications will be of Optimization. Airbus is looking at fuel-efficient ascent and descent paths, and Volkswagen is offering a service to reroute buses and taxis to minimize city traffic congestion.

Harvard Business Review adds to this list with three new possibilities. First is Accelerated AI and Machine Learning (for example, Netflix’s recommendation engine). The second is unstructured search, useful (for example) in microbiology for insights into genetic disorders or epidemics management.

The third type is Factoring replacement. This is interesting because today, all passwords, encryptions use a technique called Factoring; and QC can break every password and encryption on this planet in mere seconds. This has spurred a whole new field of study called ‘postquantum cryptography’. And by the way, if this does come into being, all the data in this world will need to be re-encrypted and the new infrastructure (if required) to support it will need to be set up!

McKinsey has opined that two sidebars of QC may see business use very soon. They are Q Sensing (QS) and Q Communication (QComm). QS provides more acute measures and has obvious multiple uses from bio- imaging to navigation to environment monitoring to geographical surveys, etc. QComm will help in better encryption and in signal amplification.

So, there is hype, excitement, and confusion; all at the same time. But the research money going into QC is very large. And the governments are joining the race. In addition to US and China competing for supremacy, two other examples are:

- World Economic Forum has set up a “Global Future Council on Quantum Computing”
- Indian government has committed INR 8,000 crores to QC research and set up “National Mission on Quantum Technology and Application” (NM-QTA)

The best way forward for today’s IT leaders is to keep an eye on progress (a breakthrough can cut short the time, just like it did for AI), and to start thinking about which of their business applications can use QC (prepare for the breakthrough).
**CIO MOVEMENTS IN 2021**

### JANUARY 2021

- **BHAVESH GANDHI** was appointed SVP, Chief Digital & Information Officer at Aarti Industries. Immediately prior to this, he was CIO - Pharma at Piramal Enterprises where he served for more than five years. Gandhi won the NEXT100 award in 2015.

- **CHAITANYA WAGH** was appointed as the CTO (India) at Scotiabank. Before joining Scotiabank, he was Group CTO at JM Financial, an organization where he served for more than a decade.

- **GAURAV SHARMA** joined Poonawalla Fincorp as Group CTO. Immediately prior to this, Sharma was CTO at L&T Financial Services.

- **AGNIDIPTA SARKAR** joined as Group CISO of Biocon. Immediately prior to this, he was the Director of Cybersecurity at CMS IT Services.

- **NITIN ROHILLA** was appointed as CIO at Adani Power. Immediately prior to this, he was Vice President at Adani Electricity.

- **PRADIPT KAPOOR** joined Bharti Airtel as CIO. He takes over from Harmeen Mehta. Kapoor was previously associated with A.P. Moller-Maersk as Vice President & Global Head of Products & Solutions Engineering.

- **HARMIT SINGH MALHOTRA** was appointed CTO at Enterr10 Television. He moved from Republic World where he served as GM - IT & IS (Broadcast & Corporate).

- **SUDIPTO BARMAN** was appointed Group CIO at Dixcy Textiles. He moved from DCM Shriram where he worked as Head of IT Applications.

- **KUNAL MEHTA** joined Fabindia Overseas as Group CTO. Before joining Fabindia, Mehta was Head of IT at Raymond.

- **RUPESH NAIR** joined as CIO - Natural Resources at Adani Group. He moved from JCB India where he led IT strategy and digital transformation initiatives for more than 6 years.

- **SHARAD GOKLANI** was appointed as President & CTO at AU Small Finance Bank. He joined from Equitas Small Finance Bank where he served as the EVP & CTO.

- **YAGNESH PARikh** joined as Group CTO of AK Capital Services. Most recently, he served as the Chief Technology & Digital Officer and an advisor at ICICI Securities.

### FEBRUARY 2021

- **NARENDRA AGRAWAL** joined as Global CIO of Dabur India. He moved from HUL where he was IT Head, Nutrition & Sales.

- **ROHIT AMBOSTA** joined as the CIO of Sharekhan. He moved from Angel Broking where he served as the CIO & Assistant Director for more than 5 years.

- **VISHAL SINGH** was appointed CTO at Clix Capital. Previously, he served as the CTO at Suryoday Small Finance Bank.

- **SHARAD GOKLANI** was appointed as Group CTO of AK Capital Services. Most recently, he served as the Chief Technology & Digital Officer and an advisor at ICICI Securities.
ANNAPURNA VISHWANATHAN was appointed CIO at Cummins India. She joined from Hindustan Coca-Cola Beverages where she was the Head of Digital.

KHIZAR MOHAMMED Momin was appointed as EVP & CTO at Indian School Finance Company. Previously, he was VP & Head - IT at Toyota Financial Services India. Momin has been a NEXT100 winner in 2016.

TARUN VIJH joined as President & CIO of Wagh Bakri Tea Group. He moved from Haldiram Snacks where he was Head of IT.

MANOJ KUMAR was appointed as Group CIO at Oman-based Ray International Group. He moved from APL Apollo Group where he was Head-IT & CIO. Manoj has been a NEXT100 winner in 2011.

NAROTTAM SHARMA was appointed as Group CIO at Mastek. He joined from Sterlite Technologies where he was Head - IT Transformation (CIO & CISO). He has also been a NEXT100 jury member in 2020.

VINOD BHAT joined as the CIO of Vistara. He moved from TCS where he served as the Global Business Head - Consumer Packaged Goods (CPG); UK, Ireland & Europe & Delivery Center Head.

SUNIL PANDEY was appointed CIO at HFCL. Pandey joined from JWIL Infra where he served in the same capacity. He has been a NEXT100 winner in 2017.

SANJAY KOTHA was appointed as Joint President & Chief Digital & Business Transformation Officer (Adani Airports, Adani Ports & Logistics) at Adani Group. Before this, he was Joint President & Group CIO at the same Group. He is also a NEXT100 jury member.

PAVITHRAN AYYALA was appointed as Chief Information & Digital Officer & VP - IT at Neuland Laboratories. Immediately prior to this, Ayyala was Head - Digital Strategy & DXP at Yokogawa India.

POORAAN JAISWAL was appointed Group CTO at Entero Healthcare. Previously, he was CTO of Tribhovandas Bhimji Zaveri.

AJAY BHARWANI joined as Group CIO & Head - Digital Transformation at Writer Corporation. He moved from Lupin where he served as Global Head - IT & Technical Applications.

JIJY OOMMEN joined as CTO of Aavas Financiers. Oommen moved from Kinara Capital where she served in the same capacity. She had served as a NEXT100 jury member in 2012 and 2013.

MADHU MALHOTRA was appointed CTO at Edelweiss General Insurance Co. Malhotra joined from Spectra where she served as Vice President - Technology.

MANDAR PATKAR has been promoted as Director - IT Services at GIA India Laboratory. In his earlier role at the organization, Patkar served as the Head of IT. Patkar won the NEXT100 Award in 2020.

DR. MILIND KULKARNI was appointed as CTO at Vikram Solar. Prior to joining Vikram Solar, Dr. Kulkarni had served in various leadership roles with companies such as Suzlon, Svaagos Technik, GCL Solar Materials, SunEdison and MEMC Electronic Materials.

MARCH 2021

APRIL 2021
ABHIJIT BHALERAO joined Nuvoco Vistas Corp as CIO. Bhalerao moved from Force Motors Group of Companies where he was Head - Group IT.

RAJESH GARG was appointed EVP & CDO, Head of Cybersecurity Practices at Yotta Infrastructure Solutions. Most recently, Garg had served as the CEO & Group CIO at Trident Group India. Garg had served as a NEXT100 jury member for the program’s first five years, that is, from 2010 to 2014.

REEMA JAIN was appointed as the Chief Digital Officer at Vodafone Idea. Jain join from Unilever where she served as the IT Director - Digital Supply Chain.

SHASHWAT SINGH joined boAt as CIO. Immediately prior to this, Singh was Supply Chain Technology Lead at Kimberly-Clark.

ANUP PUROHIT was appointed Global CIO at Wipro. Immediately prior to this, Purohit was CIO at Yes Bank.

BHARADWAJ RALLABANDI has been promoted as CIO - South Asia & North Asia at Johnson & Johnson. Before this, Rallabandi was CIO & Digital Transformation Leader - India at the same company.

MANOJ KUMAR MAUNI was appointed as CTO at Bandhan Bank. Immediately prior to this, Mauni was EVP - IT at Kotak Mahindra Bank.

NITIN MITTAL joined Zee Entertainment Enterprises as President & Group CTO. Immediately prior to this, Mittal was the Founder, CEO & Board Member for SOLV.

SUMIT CHADHA was appointed CIO at India Mortgage Guarantee Corporation. Previously, Chadha was Head of IT at PNB Housing Finance.
RAHUL SHANDILYA was appointed as Group Chief Information & Digital Officer at GMR Group. Previously, Shandilya was President & Group CIO/CISO at Welspun Group. He has been a NEXT100 jury member in 2019.

ABHINAV SRIVASTAVA joined as CIO at Diamler India Commercial Vehicles. Srivastava moved from Piaggio Vehicles where he served as Head - IT & Digital Transformation, Data & Analytics, Intelligent Automation.

ARAVAMUTHAN BALAJI joined as President - IT & Digital at Emcure Pharmaceuticals. Balaji moved from UPL where he served as the Global CIO. He is currently a NEXT100 jury member, having been on the jury panel since 2017.

ANIRUDDHA MEHTA was appointed CIO of Prince Pipes and Fittings. Mehta joined from Alembic Pharmaceuticals where he served as AGM QA - IT, Quality Informatics. He has been a NEXT100 winner in 2017.

MANISH TIWARI was appointed CIO at Fractal. Previously, Tiwari was Senior Vice President & Global CISO at Bharti Airtel.

PRASAD PATIL joined as CTO at NCDEX eMarkets Limited. Previously, Patil was CIO at Arya Infosystems and CTO at JM Baxi. Patil has been a NEXT100 winner in 2012.

SANDEEP GUPTA joined as Chief Digital & Information Officer at Cairn Oil & Gas. Immediately prior to this, Gupta was Director & Head - Digital CoE at Kearney.
"We Have Entered India At Just The Right Time"

Surajit Chatterjee, MD, CapitaLand
India, Data Center Group

With digitization proliferating to the grassroots levels, India is seeing a huge data explosion, creating demand for data center services among India’s businesses.

CapitaLand, which has its stronghold over the APAC and European data center market, has entered the Indian market with some differentiated plans. The group has been present in India since 2005 through Ascendas, the pioneers of IT Parks in India.

With India’s regulatory requirements for data localization giving a huge disruptive boost to the local data center market, CapitaLand is now set to play a major role in catering to the data center market requirements of Hyperscale and large enterprises in the country.

CIO&Leader spoke with Surajit Chatterjee, MD, CapitaLand India, Data Center Group to understand his company’s ambitious plan behind setting up multiple data centers pan India and further shed some light on the industry trends.

How do you see India’s data localization/residency rules, and how has that influenced your decision to enter India?

India will be the next data center hub after Singapore in the APAC region. States are adopting the central government initiatives as a part of the Digital India campaign. To attract investment in their regions and boost the economy, several states have created packages of data center-based incentives, taking cues from development agencies globally.

Other factors that work in favor of data center operators like CapitaLand are:

- Govt of India’s mandate for storage of personal data of all its citizens within the country’s boundaries.
- RBI issued a directive to all payment companies in India to store data locally.
- Government’s digital initiatives like GST, payment gateways, online transactions, citizen interphase, etc. are empowering underline digital infrastructure.

What will be CapitaLand USPs in data center offerings?

CapitaLand has been operating data centers worldwide and has learnt with experience to maintain operational excellence in planning, implementation, maintenance and other day-to-day DC operations. Our data centers are built for resilience, efficiency, security and availability. Some crucial benefits of our well-defined SOP and the operational process are:

- Reduced risk, improved safety, environmental sustainability and increased availability.
- It ensures compliance with corporate governance and local codes.
- Allows us to improve sustainability in operations continuously.
- Ensures that the services provided to our customers always meet their desired requirements.

All services offerings will be with SLA driven services delivery, preemp-
tive support, and customer-centricity. Our data center USPs will be:
- Dedicated data center building with multiple physical security layers
- Power elasticity of each floor/rack
- Built-to-suit wholesale colocation
- Customized, pay-per-use power options
- Network connectivity from multiple diverse fiber paths
- Carrier-neutral facility to ensure high network reliability
- International connectivity redundancy and redundant MMR
- Partnering with Telcos for local loop connectivity
- Centralized Building Management System (BMS)
- Customers can monitor their infrastructure, tickets via a centralized portal
- Operational capability and world-class customer experience

What are CapitaLand go-to-market customer segments?
CapitaLand data center’s objective is to drive 70%-80% revenue stream through the Hyperscale and wholesale segment and 20%-30% revenue stream through the large enterprise segment.

- **Hyperscale** customers are mostly cloud services companies that provide on-demand computing services available to both individuals and companies (IaaS, PaaS, and SaaS)
- **Wholesale** for us is content players and OTT platforms and local ISP companies providing individuals and other companies access to the Internet and other related services such as website building and virtual hosting.

Another important segment is **Large Enterprise**, including verticals like BFSI, Manufacturing, IT-ITES, E-commerce & Retail, Pharmaceuticals and Healthcare.

What are the additional services you provide on top of the infrastructure?
We have a very well-defined services portfolio based on four pillars - SAFE, i.e. Security / Automation / Flexibility and Efficiency.
We will offer:
- **Managed colocation**: Dedicated cluster of racks in colocation space with pay-per-use power configuration
- **Build to suit**: Wholesale colocation
- **Cage set up**: Offers dedicated lockable colocation space with a secure steel cage
- **Cross connects/cloud connects**: Wide range of X connect services for future needs
- **WAR seats**: Offer modern office space which is near the data center area
- **Remote hand support**: Take overall routine technical and infrastructure management tasks for high availability data centers

What about physical security of the data center building?
We give highest priority to the physical safety of our DC buildings. Our data centers will be certified by global agencies on multiple parameters.

Perimeter security with surveillance and multi-layered security
- Dedicated 3m high anti-climb perimeter wall
- K4 rising crash barrier
- Separate entrance for vehicles
- 24/7 manned security control room
- Full authentication & access policy control
- X-Ray scanning of bags, parcels
- Anti-tailgating turnstiles
- 24/7 CCTV system with perimeter monitoring

Similarly, there will be 8 layers of physical security controls in
1) Reception area
2) Two-factor authentication and man-trap to lift lobby
3) Lift access control system
4) Mantrap for data floor entry
5) Secured data center hall with
6) Biometric access control
7) Server hall entry - separated from normal facility functions and circulation
8) Mantrap for shipping/receiving access

What are your expansion plans?
We are thrilled to announce the completion of the land acquisition of our first data center project in Navi Mumbai (Airoli) with a capacity of 90 MW. This major milestone now paves the way for the construction of BTS option for Hyperscalers & managed colocation for large enterprises. The state-of-the-art and fully fitted data center campus is christened, “CapitaLand India’s DC, Navi Mumbai 1”.

Acquiring a suitable land parcel is the first and the most critical milestone for a data center operator, as it sets us on a path to provide world-class services to our customers. We would also be focusing on completing the acquisition of land parcels in Chennai, Hyderabad, Bengaluru and Noida to fulfil our vision of having a strong DC footprint in India. Our data centers will be built for resilience, efficiency, security and availability.
Could India Be A Major FinTech Innovator?

Data-driven Fintech companies are emerging as strong contestants to incumbent banks and financial services. But several challenges need to be addressed to revolutionize the ecosystem truly

By Jatinder Singh
For a long time, traditional banks, primarily built on the premises of physical branches, struggled to capitalize on technology-enabled innovation. The highly regulated banking and finance industry focused on conservative ways to deliver services. Most consumers had to physically visit their banks for tasks such as opening an account, applying for loans, and submitting KYC details. Even with internet-based banking, banks could only harness the surface of digital capabilities.

The ecosystem has changed dramatically with the arrival of new-age fintech or financial technology firms. By leveraging state-of-the-art digital technologies such as artificial intelligence, analytics, machine learning, and blockchain, along with continually iterative processes, these tech-enabled enterprises are coming across as strong contestants to incumbent providers and catalyzing a turnaround.

In 2021, the country has produced 8 Fintech unicorns, attracting a massive number of investments. Even some leading banks and financial companies are also entering into unprecedented collaborations with FinTech startups to launch their digital offerings and expand their customer base. The traditional banks have realized that it is challenging for them to quickly grow and acquire new customers without robust and agile digital banking solutions.

However, it would be interesting to see if these young and dynamic tech-driven apps can create a long-term impact on India’s banking and financial services sector.

Pandemic driven shift
With the arrival of the pandemic, the biggest challenge for conventional banks was to provide services in a contactless and convenient way to their customers. COVID is a contagious disease and could spread through touching paper and by coming in contact with people. The health crisis put severe pressure on conventional banks and their customers overnight with restricted physical access to the trusted bank branches. This was when the demand for new fintech products and services started to witness a massive surge. According to ResearchAndMarkets.com, the fintech market was valued at INR 2.30 Trn in 2020. It is expected to expand at a CAGR of 24.56% between 2021 and 2026 to reach INR 8.35 Trn by 2026. “Increased penetration of the internet and smartphones, and a rise in partnerships between fixed service incumbents and fintech companies propel its growth,” it adds.

“A digital revolution in the financial crisis was the need of the hour. The financial services users and employees were not ready for the pandemic-triggered change. But the outbreak has changed everything, and you need tech-enabled innovations to solve the existing challenges.”

-Harsh Mittal, CTO, CredAvenue

As of 2020, the study says, India has the highest fintech adoption rate (87%) and is the biggest destination for investment deals worldwide. The study says that the market witnessed a 40% rise in digital transactions amid the lockdown. New fintech players such as Lendingkart, Instamojo, Paytm, Policybazaar, Finway, ZestMoney, CredAvenue, and PayMe are building intelligent, agile, and high-responsive digital capabilities to outsmart brick and mortar delivery models and overburdened branch networks.

The evolution of financial technology is helping consumers and investors make quick decisions and push toward broader financial inclusion. “A digital revolution in the financial crisis was the need of the hour. The financial services users and employees were not ready for the pandemic-triggered change. Most of the due diligence and meetings used to happen physically in a traditional scenario. But the outbreak has changed everything, and you need tech-enabled innovations to solve the existing challenges,” says Harsh Mittal, CTO, CredAvenue, a debt platform for enterprises, lenders, and investors.

Digital-first strategy
Fuelled by multiple factors such as demonetization, the government’s promotion of digital payments, Aadhar, and the health crisis, fintech companies witnessed a monumental rise in India in recent times. "During the outbreak, the gaps in traditional banking methodologies became more visible as consumers abruptly transitioned to online and digital channels. The country’s FinTech ecosystem has been seen as an enabler to disrupt the sector and deliver banking services seamlessly even to the underserved and unbanked in semi-urban and rural India,” says Mahesh Shukla, Founder & CEO PayMe India, an instant personal loan platform.

The new fintech entrants have been leveraging data and analytics-based...
technologies to provide an intuitive digital banking experience at a place and time convenient to them. Some of the new regulations set by the Reserve Bank of India (RBI), such as inviting applications from non-banking participants in the lending and payment space to get an Aadhaar e-KYC license, have also strengthened the Indian fintech ecosystem and even enabled legacy banks to acquire new customers through collaboration.

"It has undoubtedly helped onboard new customers at a quick speed and evades fraud. We have implemented a seamless e-KYC process that a customer can instantly complete through our app. We follow stringent tech, assessment, and governance procedures to secure the data on our platform," says Karthikeyan K, Co-Founder & CTO, KreditBee, a unique loan platform that extends credit to self-employed and salaried individuals.

"Every business has realized the importance of technology in the last decade and how future sustainability would be dependent on it. The pandemic just accelerated the adoption curve and made it possible in a few months what otherwise would have taken many more years," says Vikas Garg, Co-Founder, Paytail, a fintech company enabling instant digital finance and easy EMI’s across millions of merchants all over the country.

The new fintech players are also helping micro retailers and entrepreneurs digitize their bookkeeping and transaction records.

"We saw a significant decrease in our digital bookkeeping platform activity, leading to the decline in our active user base by nearly 50% in the 1st phase of lockdown. However, in the unlock phase of COVID-19, we focussed on getting our users back through data-enabled re-engagement campaigns," says Harsh Pokharna, CEO & Co-Founder of OkCredit.

"During the outbreak, the gaps in traditional banking methodologies became more visible as consumers abruptly transitioned to online and digital channels. The country’s FinTech ecosystem has been seen as an enabler to disrupt the sector and deliver banking services seamlessly even to the underserved and unbanked in semi-urban and rural India."

-Mahesh Shukla, Founder & CEO, PayMe India

This bookkeeping app aims to help merchants and small businesses record their transactions digitally for every customer and keep their money trail.

"A massive amount of data (~3M activity data points per day) is generated on our platforms, such as who does business with whom and the activities encompassing sale on Credit, payment, and reminders, among others. We have been leveraging machine learning tools on this data to achieve further growth in our user base, allocate cashback, avert payment frauds, understand our users and requirements better, inform product decisions, and create data-powered features for the users" Pokharna adds.

**Customer-centric innovation is a key**

Technology has enhanced enterprises’ ability to handle catastrophes more efficiently and driven them to provide a seamless customer experience with minimum contact. The innovative financial technology platforms have efficiently replaced cumbersome and paper-intensive processes with digitalized real-time lending and payment solutions.

Cloud, AI, and analytics are helping fintech companies to make data-driven decisions, evaluate creditworthiness, interact with specific products and services and provide personalized customer experience. They primarily rely on third-party data to assess the creditworthiness of prospective customers and leverage specialized algorithms to avert fraud and sieving out likely nonpayers. Collaborating with different banks, investors, and financial institutions, they help match the right creditors/investors with the right customers leveraging data-based insights.

"FinTechs’ ability to create tailored and niche-focused solutions from scratch provides them an edge in the industry. The financial services industry recognizes the combined business impact of digital transformation and customer experience focus, which explains why some of the oldest banking institutions in India and digital-native FinTech companies work alongside each other to offer the best digital customer experience," says The winds of change: Trends shaping India’s FinTech sector, a report by EY.

This essentially helps customers save time, address their pain points, and get the best options for their financial needs.

However, to ensure a steady and dependable experience, they need to innovate continuously to meet different financial needs and concerns. For instance, young millennials’ priority is to have a service provider quickly address their concerns across all touchpoints. In contrast, security and privacy are essential for traditional
customers in any bank interface. So, the personalized aspect of the relationship is a must for growth, and technological interventions should support the same. Agrees, Jyothirlatha B., CTO at Godrej Housing Finance, “One size doesn’t fit all, and the need of the hour to deliver exceptional customer experience is the personalization of products and services by understanding your customer deeply and in real-time.”

“Enterprise need to analyze data and insights, such as customer data and monitoring interactions, and devise strategies to improve customer engagement. For instance, in today’s time, providing an omnichannel experience for the customer at multiple touchpoints helps provide a better customer experience,” she adds.

By harnessing customer analytics, a continuous effort is needed to launch applications and disrupt every aspect of banking from consumer finance, insurance, lending to small and medium-sized businesses, retail banking to large scale lending, and delivering concepts such as buy now pay later (BNPL), managing books, wealth, and digital assets.

“We are using AI/ML/VR at every single processing stage in our enterprise. This analysis is fruitful as it apprises us regarding the financial institutions that would be most suitable for us because we work as a marketplace. So, it analyses which financial institution has a likelihood of getting a particular loan done. The technology of ML is used in our corporation to quicken finding the best-suited organization for our customers to provide loans. For instance, if a particular organization has lent a loan to a specific customer segment in the past, their chances of lending the same kind of loan to the same set of customers get increases,” says Rachit Chawla, CEO & Founder, Finway FSC, a fintech company for loans and financial investments.

During the pandemic, video KYC also saw a significant adoption. Taking a cue from the new-age companies, some private banks, such as Kotak Mahindra and HDFC, also introduced video-based KYC to quickly onboard new customers and other services. Now, many banks are investing significantly in digital technologies and services to meet the changing customer priorities. According to a KPMG report titled COVID19: Impact on the banking sector, the arrival of the pandemic compelled banks, even the most territorial and branch-centric ones, to use channels that have never been their strategic priority.

Key challenges
In 2022, financial technology companies will likely expand their agile capabilities to respond more proactively to consumer needs. For them, the biggest challenge will be to build trust in their platforms and continue to invest in robust data security and governance solutions. While many Millennials and modern consumers have started to use their services, their image of a steady financial service alternative can come under severe scrutiny if any data breaches are witnessed on their platforms.

With technology moving fast in the digital world, there has always been a challenge for security for modern banks and fintech companies. More challenges lie in the organization’s cyber resilience to
reduce the impacts. "This requires proactive monitoring and response to the threats with advanced detection techniques. We have strong security governance of monitoring, protection, and incident management. This enables more visibility into the networks to identify anomalous behaviors to respond quickly, combat threats, and protect sensitive data. We have strong policies and methods for managing user privileges and risk management regime and authentication methods," explains Jyothirlatha B of Godrej Housing Finance.

According to EY, data leaks, platform downtimes, and information theft has become quite rampant in the financial services space and developing a reliable mechanism to protect data needs to be taken up as a top priority by startups. "Players will have to invest deeply in mechanisms to control this risk and comply with regulatory requirements towards data security," adds the study. Other key challenges include lack of financial awareness and getting regulatory maturity quickly.

"More than 70% of the population of India lives in the villages, and the use of these FinTech platforms is largely concentrated in the urban segment. This sector needs to make its way to smaller cities and towns with and through awareness and financial literacy," the study from EY adds.

The way ahead
Banks will implement technology solutions and are likely to leverage the strong tech capabilities of fintech players through collaboration and acquisitions. Technologies such as AI/ML and big data will continue to form the basis of many innovations. Industry experts also expect significant potential for embedded finance due to the rise of India's API-driven banking-as-a-service (BaaS) offerings. In a report titled, Seven technologies shaping the future of fintech, McKinsey states that banks and other financial institutions are tipped to adopt an AI-first mindset that will better prepare them to resist encroachment onto their territory by expanding technology firms. McKinsey estimates that artificial intelligence (AI) can generate up to USD 1 trillion additional value annually for the global banking industry.

The Fintech startups will need to make unswerving efforts to embed diversified financial products and service offerings in their apps to become the preferred choice of consumers. Against this backdrop, continuous innovation and modernization in apps for banks and fintech companies will be a key focus area for the CTOs. In 2022, investments in low code and no-code platforms will likely witness a considerable surge to meet the app modernization efforts.

"Technologies like AI and ML are fueling the country’s fintech ecosystem. We have been leveraging data-science tech to achieve further growth in our user base, allocate cashback, avert payment frauds, understand our users requirements better, and inform product decisions."

-Harsh Pokharna
CEO & Co-Founder of OkCredit
Transformation Driven By New-Age Tech At A Strategic Inflection Point

An organization must identify if the change they foresee is strategic or operational and respond accordingly

By Arun Nathani
The global economy is witnessing a massive change cruising in from all sides. Disruptions and dynamics induced by it have impacted the business environment massively. On one side, we have a major uncontrollable shift manifested by the unprecedented global pandemic, and on the other side, we have technology evolutions, such as digital transformation, marking another firm’s footprint over the last few years. And there is more yet to come.

A business enterprise needs to brace up to tackle these revolutions to survive and flourish. Most of the time, the effort must be on piggy-backing on this wave and turning it to the advantage of an organization. However, what we see today in terms of evolution is very similar to the Strategic Inflection Point (SIP). It is characterized by changes from all sides, compelling an organization to adapt to thrive or perish.

Business models across the industries are staring at a massive revolution at the SIP. Many of these changes are dictated by the market forces where the end-customer is becoming more tech-savvy. There is a domino effect, but that seems to be in reverse order of progression, or we could say it’s regressing. Since the customer adopts the new technology and thereby shows a renewed buying behavior, enterprises across the industry have no choice but to embrace a complete business transformation.

Business transformations are seen both at the strategic level and the operational level. Let us look at a real-life example to understand this better.

There are two major types of responses, viz:

- Disruption that impacts day-to-day operations and requires operational response
- The disruption that has a more profound business model level impact and requires a strategic response

Software organization bring innovative software solutions to automate, optimize, and control different business processes in various industries. At this point, their target market faces a disruption that marks a disturbance in the product firm. The intensity and nature of turmoil the target industry or market faces determine the intensity of change for a product firm.

The derivative change witnessed by a product firm due to disruption in its target market determines if it will be an operational change or strategic one. A functional change in a product firm comes from its operating environment, primarily from its product life cycle. These changes are essential operational milestones to which a product firm must respond to enable it to complete its required tenure in the market. It allows a firm to realize its revenue goals connected with the product and the overall business.

A strategic change is a disruption that requires a shift in the business model. The new business age presents a variety of disruptions that may affect the core of a product firm. It needs businesses to relook at their business strategy and adapt to the plans of the New Normal.

The combined forces of these disruptions also help build competitiveness in the business. It enables enterprises to create an edge over their peers in the industry. While a product firm braces up to respond to the change, it must keep business fundamentals intact to stay afloat. The internalization of transformation takes time, and the business revenue and profitability cycles should remain robust in the process.

An enterprise that confronts the forces of change and disruption may need an ecosystem of enablers to ensure that the transition does not affect the high performance that it has been delivering until the change presents itself. For instance, it may need to re-evaluate its partners and stakeholders’ ecosystem to ensure that they are poised to support its response to change.

There are several parameters against which it can evaluate its business environment to ensure it is robust and up to mark to match the transformation velocity. Traditional partners who are used to doing the business in a particular way can seldom brace up. If required, a software product firm must look to rework its partnerships in its enormous interest.

An organization must identify if the change they foresee is strategic or operational and respond accordingly. Moreover, they must build the right partnerships, which will help play the right role. Business leaders must keep the fundamentals of their enterprise in place even while they evolve.

—The author is CEO & MD, Cybage
What CIOs Should Evaluate About Data Sovereignty

The world of data regulation is complex and vast. Here are some critical tips for an effective enterprise data sovereignty strategy

By Brad Rosario
The world of data regulation is complex and vast. Laws often vary from region to region and country to country, governing where companies store data and where that data can reside while in transit.

Given the multiple, sometimes inconsistent array of data regulations, the responsibility for staying current on data sovereignty often falls on the shoulders of IT teams. The stakes for compliance are high. Running afoul of the many regulations or laws can cost companies and individuals money and resources.

Given this, here are a few essential tips about data sovereignty.

- **Know whose rules to follow.** When it comes to data sovereignty, there’s one fundamental consideration: Who has authority over the data? Given diverse and overlapping jurisdictional mandates, this question is not always as straightforward as it seems. But the country in which data is collected is critical. For instance, if you collect data in the U.S., you’ll need to adhere to U.S. laws. If you collect data in India, you’ll need to adhere to Indian government regulations.

- **Ask the right questions.** Privacy and security are two critical factors for responsible stewardship. However, privacy and security protections are not often straightforward. Make sure you understand government regulations in these two areas or find local legal counsel with expertise in privacy law. With data sovereignty, proactive beats reactive. If issues arise, counsel may be well worth the cost.

- **Know what to retain.** Data retention policies are put in place for our protection. However, it’s difficult for lawmakers to stay current with ever-changing technological advances and data usage. Consequently, sovereignty’s practical and legal realities are intertwined, overlapping, and incredibly complex. If you’re unsure of what to keep and for how long, seek expert counsel to ensure your IT policies hold on to the correct information. Aside from understanding more extensive data retention policies, ensure data is kept as safe as possible through encryption.

- **Manage compliance risk.** Other complexities, such as the type of data and the entity storing data, will affect your policies and risk management planning. The more sensitive the data, the more investment you’ll need to make in security and risk management. Even within a single organization, compliance depends on the type of data. For instance, credit card data should be treated differently than anonymized server logs. Non-published public company financial data needs to be treated differently than individual health care records. There are essential distinctions between regional and international laws, and each must be considered.

- **Plan and execute migrations carefully.** Often, laws mandate that organizations store their infrastructure and data within their country’s jurisdiction. These laws often prohibit data storage outside their domain, even for a moment. Therefore, it’s vital to have a plan when moving data from one location to another. Assess your data, clean it up, and know how you’ll move it. Often, this means investing in software that will give you the ability to specify where your data resides while in transit.

- **Educate Others.** Noncompliance can lead to hefty fines, legal action against your organization, or even criminal charges. For this reason, business leaders and managers must understand data sovereignty laws. If you’re an IT professional with an MSP, make sure your clients know the rules, and communicate how you’ll keep your company in compliance. Maintaining and understanding data sovereignty is an ongoing process requiring thought and care. Laws and regulations evolve from region to region, and best practices for keeping data sovereignty compliance include accountability, the establishment of policy, investment in technology, and education.

The tech world changes every day. If you don’t stay current, you and your business can fall behind quickly. With massive amounts of data on the horizon, enterprises must understand their obligations surrounding data sovereignty.

—The author is the Managing Director for the Asia Pacific for BitTitan, a cloud enablement services provider.
Enabling Enterprise Data Privacy And Security With Big Data

Organizations can demonstrate their commitment to securing customer data by leveraging a big data platform compliant with regional, national regulations and critical security and compliance certifications, demonstrating transparency and greater customer privacy.

By Vimal Venkatram
Enterprises rely on insightful customer trends derived from big data every time a user is connected to the internet. Their personal information combined with usage patterns is tracked by mobile phones, laptops, smart TVs, automobile systems, and home appliances like refrigerators and thermostats. The internet-connected devices ecosystem is booming, and the amount of behavioral data being stored and shared is multiplying significantly. A release by IDC on Asia Pacific IoT spending indicated a strong rebound for the industry, expecting to reach USD 288.6 billion in 2021.

Such rapid growth raises concerns about the complexity around data privacy and security and makes it essential for companies to develop a trusted data security framework to prevent customer privacy from being compromised on various platforms.

Integrating data security into the core Businesses of all sizes are leaning towards practical extensive data analysis and IoT to access significant user trends, formulate intelligent solutions to complex business problems and enhance their core operations. Big data collects sensitive information from various data sources worldwide, and unsafe data pipelines or processing methods might leave this information vulnerable in transit or at the start. Hence, it is critical to building data security into the core of cloud operations and not just a peripheral feature.

Enterprises must invest in modern data infrastructure and tools to protect unstructured big data sets and valued data analysis from offline and online invaders. Businesses with the best data security practices safeguard customer data and minimize risk and differentiate themselves from competitors.

Monitoring data closely to detect threats Diverse industries like healthcare, education, telecommunications, media and entertainment, fintech, and e-commerce generate dynamic and unique big data sets, which come with high complexities concerning endpoint security. A unified big data platform integrates data from various sources into a single location making analysis more simple, secure, and risk-free. It empowers analysts to break free from data silos, better manage and structure valuable data points, and resolve security issues arising from disparate and legacy data systems.

Today, it is indispensable for big data and cloud platforms to implement enhanced data governance with automated role-based access controls, ongoing risk assessments, batch deletion processes, and sensitive data de-identification to safeguard customer data. Advanced access control mechanisms allow data sharing without moving or copying it. This prevents data from falling into unauthorized hands and ensures that the suitable viewers have immediate and flexible access to structured data insights.

Improved big data management also enables effective internal and external collaboration while protecting sensitive data in a strictly regulated environment. Further, businesses can rely on big data analytics to benefit from data-minimization where outdated, unnecessary information is separated and deleted to reduce storage risks.

Secure and resilient infrastructure Increased connectivity can lead to high vulnerabilities and possibilities of cyber attackers penetrating an organization’s network. But with a dynamic security framework ingrained into the core services of a data platform, businesses can adapt to complex and evolving big data computational methods, enabling data teams to monitor data in real-time and exercise control when needed. In that way, they are better prepared to resolve issues proactively and accelerate efficiency.

Enabling a security audit framework over the large scale of big data equips an enterprise to avert malicious risks, safeguard personal information with almost zero manual intervention, make user authentication reliable, track unauthorized and suspicious access into the critical data generated by IoT devices, and source real-time insights to empower continuous scaling without violating customer privacy.

Organizations can demonstrate their commitment to securing customer data by leveraging a big data platform compliant with regional, national regulations and critical security and compliance certifications, demonstrating transparency and greater customer privacy. This empowers them to enable trust with a privacy strategy that can safeguard data in a hassle-free manner.

—The author is Country Head of Snowflake India
डिजिट अब हिंदी में

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

www.digit.in/hi
www.facebook.com/digithindi
TO FOLLOW THE LATEST IN TECH, FOLLOW US ON...

digit.in/facebook
डिजिट अब हिंदी में

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

digit.in
NOW IN HINDI

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

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