CIO & LEADER

CIO SUCCESSION PLANNING

Why it matters and what to do about it...?

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Succession planning is arguably the single most neglected area in global organizations. According to a study by Deloitte published three years back, while 86% CEOs thought leadership succession planning is an urgent or important priority, only 15% believed they did that well—so much was the gap between intent and actual practice.

The only difference between succession planning for CEO and that for CIO is that the former is at least discussed; the latter is not even discussed. Our cover story on succession planning in this issue looks at what ails CIO succession planning, what are some of the challenges and how it can be effectively done, along with some ideas.

The story, written by yours truly, is based on a research among about 70 CIOs, followed by a thorough discussion on the subject by a few top CIOs.

One thing that comes out clearly is that there is very little succession planning for CIOs in Indian organizations. That itself is not surprising, considering the data I have quoted above. It is a neglected area when it comes to CEOs’ successors globally, more so in India. So, for CIOs, which till recently were considered cost-center heads, it is almost non-existent.

The reason it has become more important in the last two years is that the expectations from and the role of CIO have changed drastically in the last two years. So, they are no more an outsider service provider who can be allowed to operate from a distance. The more digital technologies are ingrained with the business, the more important it becomes for organizations to have a long-term digital vision, if not a fixed plan. That requires an insider – at least someone who has spent some time in the organization and understands both the business and culture of the organization – to take the reins of technology and digitization in an organization—and I emphasize on the following without breaking continuity.

That is not as easy as it looks to some of you. But at the same time, it is not as tough as it looks to some of you. It must be taken head on.

There are many reasons why CIOs alone may not be able to do an effective succession planning. With all earnestness, they could end up choosing successors like themselves. We do not have to be geniuses to figure out that the CIO in 2030 will be a completely different executive than the CIO today.

While technology and business changes are given, it is the changing expectations from CIO that will fundamentally be very different from what it is today. As the Deloitte study noted, succession planning is a long-term discipline in a short-term world. And it has to be considered like that.

In our survey, 63% of CIOs surveyed said that CIOs need to be trained with a capsule program designed specifically for CIOs. And a few lamented that it does not exist. Maybe, it should be a community goal. Because there is no success, as Drucker said, without a successor.
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The pandemic seems to have compelled organizations to revisit their IT priorities and align them with today’s digital economy. There has been a greater consensus on the role of new-age technologies such as analytics, AI, and ML to accelerate digital transformation initiatives and accomplish tangible business outcomes. Technology leaders reflected these sentiments in a research report commissioned by Teradata. In India, 84% expressed apprehensions that not being cloud-ready could be a significant barrier to digital transformation efforts.

IIT-B alumnus develop AIoT-enabled car

What looked like science fiction only a few decades ago now will soon be a reality as Mumbai-based automobile-as-a-service company Autonomous Intelligence Motors Private Limited (AIMPL) is all geared up to hit the Indian roads with its path-breaking artificial intelligence-of-things (AIoT) powered autonomous hatchback car. The company will launch its ultramodern about crewless or driverless petrol and diesel hatchback variants in March 2022.

**Poor CX costing businesses**

Nearly all consumers in India (96%) said they were dissatisfied with their experiences as customers in 2021, according to the Qualtrics 2022 Global Consumer Trends report launched recently. This could be costing businesses up to USD 216 billion in India, with a third of respondents saying they have cut spending after a poor customer experience. Customer service support was the most common area consumers wanted businesses to improve, followed by prices and fees. Three-quarters of respondents said businesses need to care more about them (74%) and get better at listening to their feedback (72%).

**Cyber fightback in 2022**

Global cybersecurity firm, Trend Micro, has predicted that global organizations will emerge more alert and better prepared in 2022 thanks to a comprehensive, proactive, cloud-first approach to mitigating cyber risk. Research, foresight, and automation are critical for organizations to manage risk and secure their workforce. Trend Micro blocked 40.9 billion email threats, malicious files and malicious URLs for customers in the first half of 2021 alone.

**DE-CIX predicts 4 trends for 2022**

Reliable and fail-safe Internet connections with the lowest possible latency are increasingly important in the ongoing pandemic that calls for increased digitalisation. Here, a significant role is played by Internet Exchanges (IXs). They guarantee a smooth, secure, and fast exchange of data packets between networks of any size, ranging from city carriers to streaming providers and cloud service providers. Dr. Thomas King, CTO at DE-CIX, an internet exchange service provider has identified 4 trends that will shape the connected world.

**Five tech-trends that will help retail growth**

2021 witnessed disruptions in retail, with businesses optimizing their inventory and supply chain to ensure their fulfillment was immediate. They further evolved and added fulfilment centres, in their premises, to cater to new consumer needs like BOPIS (buy online and pick up in-store) or BORIS (Buy online and return in-store), curbside pick-up and same-day delivery. Five trends from GOFRUGAL that will help retailers accelerate their growth are: technology for omni-channel retailing; Q-commerce; cloud, and AI and ML and CX imperative.
Trust lessens in legacy vendors

CrowdStrike, Inc. recently announced the release of the 2021 CrowdStrike Global Security Attitude Survey, conducted by independent research firm Vanson Bourne. The report highlights ransomware payout demands and extortion fees are massively increasing, while trust in legacy IT vendors has dipped. Customers are facing a crisis of trust in legacy vendors as software supply chain attacks continue to present challenges.

Severe security breach by 2025

At least 30% of critical infrastructure organizations will experience a security breach by 2025, which will most likely result in the halting of an operations- or mission-critical cyber-physical system, according to Gartner. Currently, critical infrastructure security has become a primary concern for governments across the globe, including the U.S., the U.K, EU, Canada and Australia. The reports showed that 38% of respondents are expected to increase spending on operational technology (OT) security.

Outdated cybersecurity tech

Over a third of cybersecurity technologies used by Indian organizations are outdated, according to a recent study published by Cisco. Study titled “Security Outcomes Study Volume 2” states that 37% of cybersecurity technologies used by companies in India are considered outdated by their security and privacy professionals. 33% of respondents considered their cybersecurity infrastructure unreliable and 49% stated that it is complex.

India’s software market revenues grow

The India software market is estimated to surpass USD 8.2 billion by the end of the calendar year 2021, according to the International Data Corporation (IDC) Worldwide Semiannual Software Tracker 1H21 (January-June). India software market was pegged at USD 4.0 billion in 1H21, registering a growth of 15.9% year-over-year. India accounted for a share of 18.3% of the overall Asia-Pacific excluding Japan and China region software market during 1H21. Collaborative applications, engineering, content workflow & management, CRM, and ERM applications are leading the software segment in terms of revenue, as per estimates.

Indian SaaS investment to rise 170% YoY

The Indian Software as a Service (SaaS) landscape continues to mature rapidly, with more companies reaching larger scale and driving heightened investor interest. SaaS investment in India is forecast to reach USD 4.5 billion in 2021, up 170% from USD 17 billion in 2020, while Indian SaaS companies are poised to reach USD 30 billion in revenue by 2025, capturing around 8% of the global SaaS market.

Robot density nearly doubled

The use of industrial robots in factories around the world is accelerating at a high rate: 126 robots per 10,000 employees is the new average of global robot density in the manufacturing industries – nearly double the number five years ago (2015: 66 units), according to the 2021 World Robot Report. The development of robot density in China is the most dynamic worldwide: Due to the significant growth of robot installations, the density rate rose from 49 units in 2015 to 246 units in 2020. Today, China’s robot density ranks 9th globally. The Republic of Korea has held this position since 2010.

PSU banks on IT recruitment spree

Even as the strike call given by bank employees against the ‘proposed’ privatization of some public sector banks (PSBs) today have hit the headlines, what has somehow escaped the attention of media and the larger community is how most of the PSBs are racing to go digital by stepping up their recruitment of technology manpower, arguably the best indicator of their digital plans. A lot of public sector banks – including some of the names that are making the rounds as being candidates for privatization – have come out with advertisements for hiring large number of tech people at different levels.

Log4j, the superbug

An open source software maintained by a group of volunteer programmers as part of the nonprofit Apache Software Foundation and a key Java-logging framework, Log4j exploits has started from December 1st. Since then, warnings have been issued by several national cyber security agencies. The vulnerability is in Java-based software known as ”Log4j” that large organizations, including some of the world’s biggest tech firms, use to log information in their applications. Tech giants have moved to address the bug.
Data Protection Bill 2021

The joint parliamentary committee (JPC) has released a reworked version of the much awaited data protection bill 2019, now called the “Data Protection Act of 2021” (2021 Bill). The bill was tabled in both the houses of parliament on December 16th, after the widest possible consultations has changed fundamentally, including the title of the bill from Personal Data Protection Bill to Data Protection Bill. Certain other deviations such as the recommendations that social media intermediaries could become publishers in certain circumstances and a few aspects of data localisation norms change the original structure of the bill substantially. Nasscom and the Data Security Council of India (DSCI) welcomed the revised bill.

30-fold increase in DDoS attacks

There has been a 30-fold increase in distributed denial-of-service (DDoS) cyber attacks in India in October, compared to the volume recorded in the previous month, according to a report. Cybersecurity analysts at Tata Communications found that while the attacks started with a few targeted broadband providers in early October, the pattern evolved and by the end of the month, attacks targeted multiple broadband providers simultaneously. Most such attacks were designed to flood an ISP network.

Data governance programs critical

66% of data and analytics professionals experienced improved data quality as a “leading benefit” when implementing data governance programs, a trend that rises to a staggering 83% for organizations that already have a mature data governance framework in place. With 75% of respondents also acknowledging that data quality is their organization’s “top concern,” reveals the reports on Trends in Data Governance and Data Quality Programs. The report by Precisely, in collaboration with Drexel University’s LeBow College of Business (LeBow), provides insights into the potential rewards for organizations starting to build data governance programs.

AI/ML most critical tech skills

Artificial Intelligence/Machine Learning (AI/ML) will be the most critical technology skill that Indian organizations plan to acquire in the next six months, according to IDC’s report. The report provides an overview of Indian organizations’ skill development plans in the near future and skill development goals.

94% Indian workers ready to work remotely

Atlassian Corporation Plc (NASDAQ: TEAM), a leading provider of team collaboration and productivity software and the maker of Jira, Confluence, and Trello products, has today announced the launch of a global study into the nuances of modern work and in particular changing attitudes and expectations from workers over the past year. According to Atlassian’s second annual ‘Reworking Work’ study, more than any country surveyed, Indian workers have adapted their remote workspaces over the last year.

Cybersecurity, AI, automation to rule IT in 2022

The role of IT has expanded significantly over the last two years, with organizations forced to rethink and revamp the way they work. Going forward, there will be a renewed emphasis on leveraging technological advances to tackle business challenges presented by remote workforces. Following the pandemic, hybrid work will be an expectation if not the norm at most organizations across the world. That means cybersecurity, AI, automation, and analytics will play increasingly significant roles in the efforts to support remote work.

Global Cos will be more alert in 2022

Research, foresight, and automation are critical for organizations to manage risk and secure their workforce. Trend Micro blocked 40.9 billion email threats, malicious files and malicious URLs for customers in the first half of 2021 alone—a 47% year-over-year increase. Trend Micro researchers predict that threat actors in 2022 will focus ransomware attacks on cloud and datacenter workloads and exposed services.

Cloud dependence increases

An overwhelming 97% of Indian companies increased their reliance on cloud solutions as a result of the COVID-19 pandemic, according to ManageEngine’s 2021 Digital Readiness Survey. The study also revealed a significant rise in the utilization of business analytics and artificial intelligence over the last two years. ManageEngine commissioned Dimensional Research to conduct the 2021 Digital Readiness Survey.
**DATA PROTECTION BILL TABLED IN PARLIAMENT**

Data Protection Bill (2021), based on a revised draft of the Personal Data Protection Bill, 2019, has been presented on both the houses of the government. A major change in the bill is inclusion of regulations for non-personal data.

**ANDHRA TO SELL CINEMA TICKETS THROUGH GOVT PORTAL**

Andhra Pradesh has made it mandatory for all cinema theatres including single screen cinema as well as multi-screen multiplexes, to sell their movie tickets through a government-run online booking portal. Andhra Pradesh is the first state in the country to try this. The idea behind the decision is to help moviegoers and help prevent evasion of GST. The online ticketing system will be operated by the Andhra Pradesh State Film, Television and Theatre Development Corporation and will enable people to book tickets by dialling a number, on the web, on a mobile phone app, or SMS.

**JHARKHAND LAUNCHES APP FOR BUDGET SUGGESTION**

Jharkhand has launched a mobile app, Hamar Apan Budget. Prepared by the state finance department, this will allow the general public to share their valuable suggestions for the 2022-23 budget. The citizens can use the link, https://finance.jharkhand.gov.in/budgetvichar, to register themselves on the portal. The public can also give suggestions through Twitter, Facebook, WhatsApp and e-mail.

**GOVT LAUNCHES DEMARCATION OF FORESET LAND RIGHTS FOR LANDLESS INDIGENOUS PEOPLE**

Union Minister for Rural Development and Panchayati Raj Giriraj Singh has launched the National Generic Document Registration System (NGDRS) and Banadhikar App. The app is a GPS-based mobile app for the demarcation of forest land rights for the landless indigenous people under the Forest Rights Act. Tripura became the first state in India to introduce the Banadhikar App.

**UIDAI TO COOPERATE WITH WORLD BANK AND UN TO DEVELOP GLOBAL IDENTITY STANDARDS**

The Unique Identification Authority of India (UIDAI) is planning to collaborate with the World Bank and the United Nations to develop international identity standards based on Aadhaar model. “This (Universal Global Identity System) is something we are very actively working upon. We have got queries from many countries, both in our neighbourhood — Asia and across the world. Some countries have already adopted the kind of architecture we have used, and others are keen to do that,” revealed Saurabh Garg, Chief Executive Officer, UIDAI, while speaking at a conference on digital money, organized by the Payments Council of India, according to media reports.

**DELHI POLICE LAUNCHES E-LEARNING INITIATIVE FOR YOUTH**

Delhi Police Commissioner has launched an e-learning initiative to educate and impart skill training to school dropouts hailing from weaker sections of the society. The initiative, called Unnati, has been launched in the Southwest district. The platform provides training, counselling and placement to trainees. Both live sessions and recordings will be available on the platform.

**LOKPAL ONLINE INAUGURATED**

Chairperson, Lokpal of India, Justice Pinaki Chandra Ghose has inaugurated a digital Platform for management of complaints. LokpalOnline, as the system is known as, can be accessed by all citizens of India at http://lokpalonline.gov.in. They can use it to file complaints from anywhere. Important features of this digital platform include anytime, anywhere complaint filing, information to the complainant about action on complaint at every stage through e-mails and SMS, facility to complainant to ascertain status of complaint at any time, identity of the complaint is kept confidential, facility for direct upload of reports by CVC, CBI and other inquiry agencies, reminders to inquiry agencies through e-mails and SMS, and generation of analytical reports as per requirement.
Byju’s in talks to go public via SPAC route
Byju’s could be looking at going public and is in advanced talks regarding the same, say reports. This could happen through a merger with one of Churchill Capital’s special-purpose acquisition companies (SPAC). It is also evaluating a domestic listing in the second half of calendar year 2022. India’s current regulations do not allow companies headquartered in the country to go public through conventional initial public offerings in the US.

Atomberg Technologies has announced a USD20 million fundraise
Consumer products-focused Atomberg Technologies has announced a USD20 million fundraise for a new manufacturing facility, in a round led by Jungle Ventures, said reports. The round, which takes the overall funds raised by the city-headquartered company to USD45 million since inception in 2012, also saw participation from Inflexor Ventures, and existing investors A91 Partners and angel investor Ramakant Sharma.

PlanetSpark bags USD13.5 million in funding
PlanetSpark, an edtech startup, has raised USD13.5 million in a Series B funding round led by Prime Venture Partners and other angel investors, media reports said. The company will use the funding for product development, hiring senior leadership and for global expansion. Other investors who participated in the round include Binny Bansal, Deep Kalra, Ashish Gupta, Gokul Rajaram and Shirish Nadkarni.

Cars24 zooms to USD3B valuation
Cars24, the popular online platform for selling used cars, is in advanced stages of talks to close a USD250-300-million funding round led by its existing investor Falcon Edge, per reports. If the round goes through, the startup valuation is likely to increase to USD3-3.3 billion, up from USD1.84 billion in September when it closed a USD450 million financing from SoftBank Vision Fund II, Falcon Edge and Yuri Milner’s DST Global.

Venture Catalysts bets big on Indian startups
Early-stage startup investor Venture Catalysts plans to invest USD108 million in around 300 startups in 2022, media reports. The Venture Catalysts group closed as many as 207 deals in 2021 and invested in 178 unique startups. Venture Catalysts’ investments this year include BluSmart, Dukaan, Klub, Melorra, Kala Gato, Mitron TV, Rage Coffee, Power Gummies, Coutloot, Prescinto, Resolve AI, Toch, Zingbus, RoundLabs, and Stage.

ShareChat’s parent firm raises USD266 mn
Mohalla Tech, the parent firm of Moj and ShareChat, has raised USD266 million as part of its Series G round at a valuation of USD37 billion, said media reports. The company has now raised over USD1.177 billion across eight fundraising rounds, including USD913 million in three rounds this year. It counts Tiger Global, Snap, Twitter and Lightspeed Ventures among its investors. The round led by Alkeon Capital also included new and existing investors. The funding will help build capabilities.

Ola raises a USD500 million loan
Ride-hailing company Ola, which is Bengaluru-based, has raised a USD500 million loan from international institutional investors, said reports. The SoftBank Group-backed startup is prepping to make its stock market debut next year. The proposed loan issuance got a staggering response from investors with interest and a commitment of about USD1.5 billion, said reports.

Record USD6.8 billion pumped into Indian startups in November
Investments by private equity (PE) and venture capital (VC) funds in November stood at USD6.8 billion across 102 deals, a record for the month, says a report by industry lobby IVCA and consultancy EY. In the year-ago period, such high-risk investors had infused USD3.9 billion, while in October 2021, the total investments stood at USD131 billion, the monthly data showed. Overall investments in the first 11 months of the year touched USD72.6 billion, which is 53% higher than the all-time high for a year, achieved in 2020, the report said. In November, the activity was led by USD2.4 billion of investments into startups and exits by PE companies in nine initial public offerings, the report said.
ABHINAV SRIVASTAVA has joined as CIO at Diamler India Commercial Vehicles. Srivastava moves from Piaggio Vehicles where he served as Head - IT & Digital Transformation, Data & Analytics, Intelligent Automation.

AKHIL VERMA has joined as CISO at Paytm Money. Immediately prior to this, Verma was CISO at Airtel Payments Bank.

MANINDER SINGH GREWAL has joined as Chief Data & Analytics Officer at mPokket. Grewal moves from Anheuser-Busch InBev where he served as Global Director of Analytics.

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

PINAK CHAKRABORTY has been appointed CIO at Airtel Payments Bank. Chakraborty moves from PayMaya where he served as Head of Product Engineering - Consumer & Market.

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

RANJAN REVANDKAR has been appointed CISO at HDB Financial Services. Revandkar joins from Sun Pharma where he was Head of Information Security.

Sandeep gupta has joined as Chief Digital & Information Officer at Cairn Oil & Gas. Immediately prior to this, Gupta was Director & Head - Digital CoE at Kearney.
**Industry Movements**

- **Girish Rao** has joined as CEO of Innovecture. Previously, Rao was Vice President – Operations & Business Development at TalenciaGlobal (Business Unit of Pratian Technologies).

- **AVIGYAN DAS** has been appointed Senior Managing Director at FTI Consulting. Immediately prior to this, Das was Associate Managing Director at Exiger.

- **ANAND ESWARAN** has joined Veeam Software as its CEO. Eswaran was earlier President & COO of RingCentral.

- **Nigel Ng** has been appointed Vice President - Sales (APJ) at Tenable. Nigel joins from RSA Security where he was Vice President of Worldwide Sales.

- **O.H. Kwon** has been promoted to Senior Vice President & President of Qualcomm Asia Pacific. Before this, Kwon was Vice President & President of Qualcomm Korea.

- **SoJung Lee** has joined as President - APAC at TeamViewer. Before joining TeamViewer, Lee was Vice President - APAC & China at SolarWinds.

- **Joginder Rana** has now taken up the role of Vice Chairman & Managing Director at CASHe. Rana was earlier Managing Director & CEO of Baroda Global Shared Services.

- **Prabh Simran Singh** has been appointed CEO of Twin Health. Singh moves from Hotstar where he was EVP & Head of Subscriptions.

- **Anand Eswaran** has joined Veeam Software as its CEO. Eswaran was earlier President & COO of RingCentral.
Ready for robot nanny?
Think again

Robots are invading every area of our personal and public lives. Experts fear that robotics companies may adopt the same route as broadcasters and online game manufacturers who do not take the responsibility for the damage caused to children when exposed to television or online gaming for too long with detrimental effects. Even as robotics companies shirk liability for any damage to children, parents realizing the benefits and affordances offered by the robots will adopt them to ease their parenting duties. It is also expected that robot manufacturers will undersell the artificial intelligence (AI) and interactive capacities of their robots, to escape issues and market them as toys, surveillance devices, and household utilities. To camouflage their capacities, they may be brightly colored and designed so as to appeal to parents and children. And just like television broadcasters, robots will also carry disclaimers, such as parental/adult supervision and disclaimers is advised as this device is not a toy. Any accidents thereof will make headlines but will be forgotten as yesterday’s news fuelled by the fact that humans would begin to rely on these robotic nannies to ease their parental burden. Not a very rosy picture though.

UNSAFE METAVERSE, ALREADY!

This is not a good bit of news for half of the population – women. It appears we may be carrying our “sick men” to the metaverse too.

While the world was abuzz with the news of Meta opening up access to its virtual-reality social media platform, Horizon Worlds, and from what is flowing in it appears to be a fun and wholesome platform what with the offer of up to 20 avatars getting together to explore, hang out, and build within the virtual space, all at once – a disturbing piece of news surfaced. A beta tester reported being groped by a stranger on Horizon Worlds. Meta’s response was that she should have used a tool called “Safe Zone” that’s part of a suite of safety features and is like a protective bubble for users that they can activate when feeling threatened. It is like a protective shield within which no one can touch a user, talk to them, or interact with them until they signal for the Safe Zone to be lifted. However, reports say it is not the first time a user has been groped in VR. Unfortunately, they predict it will not be the last. The bottom line is that companies launching meta universe must also have solid safety mechanisms in place.

Parental control may be passé for tech-savvy kids

Many parents the world over are embattled in bitter mind games with their kids who are tech savvier than them. Much thanks to the pandemic, as human lives shifted largely online, for children what with online classes and entertainment to keep them engaged, a severe fallout has been their increased engagement on social media platforms that have exposed them to unsavory content and threat from online predators. All device manufacturers offer parental control features, while social media platforms have their own ways to ostensibly prevent children from joining them. But as children learn to master the medium, these parental controls have become putty in their hands and there has ensued a battle of wits between many parents and their offspring to wrest the control of their devices. All to no avail. Parents are now looking for answers from the manufacturers, who for now are playing possum.
CIO SUCCESSION PLANNING

Why it matters and what to do about it...

By Shyamanuja Das

“Great leaders create more leaders.”
Between January to December 2021, CIO&Leader reported 73 new enterprise CIO appointments in India. Out of those, 66 were hired from outside the organization. Only seven (that is less than 10%) were promoted or moved to the role from within the organization. The companies included moderately sized single product companies to large, diversified businesses, new generation firms to far older manufacturing behemoths.

What does this indicate?
“It very clearly indicates that those organizations did not find anybody within their organization who can take up the CIO role. That is a very sad state,” says Vijay Sethi, Chairman of MentorKart and erstwhile CIO of Hero MotoCorp, who also held the portfolio of Human Resources and Corporate Social Responsibility at his last company.

Sethi laments that ‘CIOs themselves are not grooming their successors’, while adding in the same breath that grooming IT leadership is not the responsibility of CIOs alone. "The organization is equally responsible,” he adds.

But is appointment of an outsider always an indicator of lack of suitable candidates internally? After all, organizations do often go for outsiders – like leaders from different verticals – purely for getting fresh ideas and newer perspective.

That does not seem to be a convincing argument, considering that in about half (32) of the 66 companies who recruited CIOs from outside the company, hired them from the same industry. A few more came from similar industries.

That there is very little effort towards creating next line of leadership becomes evident when you look at the structure of the CIO organization. In a survey conducted by CIO&Leader in August 2021 covering more than 70 CIOs, only 2% CIOs said that they have only one direct report. About 5% more said they have two to three direct reports.

“While many MNCs in India do plan for leadership succession for all senior positions, very few Indian companies do. They don’t do that for any position at any level. Some even don’t have a succession plan in place for CEOs or MDs. Maybe, it is a cultural issue.”

Atanu Pramanic, Joint President and CIO, Hindalco Industries

— The Light in the Heart, Roy T Bennett
in the team. In other words, as many as 93% CIOs have more than three people reporting directly to him/her. In as many as 47% cases, the direct reports are more than five.

In such a scenario, it is natural to expect that the direct reports are technology specialists and there is little planning to groom a succession leadership line.

What ails succession planning?
While only 2% CIOs said they have one direct report, in the same survey, almost one-third CIOs claimed they have a clear No 2. That is not entirely impossible. In many organizations, the senior-most in the IT team—a specialist with a functional responsibility such as security or applications – is the designated No 2.

Such a No 2, in most cases, is a standby for the operational tasks of CIO, in his/her absence. “He is one that the senior leadership can call if there is a problem in IT, when the CIO is not available. So, he is there for convenience and not really as a next line leader,” quips a vice president, himself such a No 2, in a large consumer products company, who does not wish to be named. To be fair to his CIO and his company, he is actually a designated No 2, and that is clearly communicated to the rest of the team, though a few others report to the CIO directly. In the absence of CIO, he takes certain operational decisions. In many companies, there is no designated No 2.

In some companies, where there is a genuine No 2, in charge of the entire technology operations, often the person is too preoccupied with the operations. Neither the person nor the CIO finds it important to make his/her time available for getting involved with business decision making and interacting with other departments at a strategic level, because ‘he is too important’ for the present responsibility that he is handling.

Atanu Pramanic, Joint President and CIO, Hindalco Industries, points to a new trend that is becoming prevalent these days. “There is an executive CIO and there is a head of IT. The two roles are separate. While the CIO interacts with business and takes business decisions regarding IT, the head of IT manages the nut-and-bolt of the tech operations,” he elaborates.

That kind of arrangement has its own advantage in terms of a smoother day-to-day management of IT while freeing the CIO to spend

Why tapping the talents from India’s world-class IT industry is not a bad idea!
India has a world class offshore IT and business services industry. This is an industry that thinks and lives technology. Being in services, most of the senior business managers in this industry have an opportunity to work with large user organizations across the globe, especially in the US and Europe. As partners, they often work with internal IT teams and the CIO – sometimes, even other CXOs – to think strategic solutions for their clients, leveraging technology. This combination gives them the requisite skills expected from a new age CIO, who has to think like a business leader.

While there are examples of CIOs in Indian organizations from IT services industry, Indian businesses have still not woken up to the potential of finding the right technology leaders in this industry.

What makes senior leaders from IT industry great CIO material are the following expertise/experience:

• Their thorough understanding of various technologies, their application, and the emerging technology landscape
• Their ability to think in terms of business value that technology creates, as they often plan technology roadmap for their clients and do execute them for all clients
• Their practical insights of execution; both in terms of project management and technology implementation solving complex problems of the best organizations in the world
• Their understanding of basic business dynamics of a business organization, based on their rich experience across multiple verticals and often multiple geographies
• Ability to work under tight SLAs and the experience in handling P&L
• They could bring in a rich outside-in/fresh perspective to technology management in a large user organization
• They have the right balance of global insights on one hand and the understanding of Indian business culture on the other
• Being part of service organizations, they have a thorough understanding of technology and product offerings of all major global IT product companies

These make them great candidates for the CIO role in an enterprise.

However, a word of caution. They still need to understand the organization culture to be fully effective. So, they must be hired before a year or two in order to help them understand the organizational culture and make trusted relationships before being given the responsibility as the CIO.
time on business issues, but it does not make succession planning any easier. While that model, by itself, is not a hindrance to succession planning for CIO, a manager, who is not groomed to be a leader, irrespective of whether she is No 2 or not, cannot seamlessly take on CIO’s responsibility, which is essentially a corporate leadership role.

One thing is for sure. An internal candidate, to be considered suitable for the role, must not just be good at technology or understand the organization, he/she must be groomed to be the leader, which is lacking today.

“The moment you move from N-2 to the CXO level, while you still wear the technology hat, you have to get into a leadership perspective. That is where most of the planning fail. You have to know when you are there, how you behave as a leader, how you interact with other CXOs, how you think about business value of IT, not the technology value” says Sethi.

Pramanic blames two factors on this lack of succession planning. The first factor, he says, is the relatively late realization by Indian companies about the value of IT. “Indian companies have realized very late in the day that IT can be an enabler. Earlier, it was just a cost center. So, it occupied relatively less importance in the strategic plans.” This, he says could be a reason why planning for leadership succession planning in IT may not have been in the agenda.

The second issue that he points out is a deeper cultural issue with Indian companies. “Why only CIO,” he asks, “while many MNCs in India do plan for leadership succession for all senior positions, very few Indian companies do. They don’t do that for any position at any level. Some even don’t have a succession plan in place for CEOs or MDs. Maybe, it is a cultural issue.”

“Maybe, it is some kind of insecurity,” he adds.

And that brings us to the issue of CIO’s insecurity that has long been discussed by the next-in-line managers informally. In fact, the very question was posed by a delegate to the CIOs in a panel discussion on succession planning, as part of the annual CIO&Leader Conference in September 2021. He asked if this ‘insecurity’ was the reason behind CIOs shying away from planning their successor. Does the CIO see the potential successor as a risk for himself?

Vijay Sethi answers in affirmative. “I tend to agree with this observation. Many a times, leaders do not focus on creating next line leadership because they are too scared of their own job.”

Anjani Kumar, CIO, Strides Pharma, a comparatively younger CIO, agrees only partially. “I have seen this. So, I will not say that this does not exist. It comes to how secure you are in the organization; how confident you are yourself as a leader,” he says.

“If I prepare the next leader, I might be kicked out of the job. All these things do play a role,” he says illustrating the mindset of some CIOs.

But he is quick to clarify that there are many CIOs and other leaders who do create the next line of leadership, sometimes to grow themselves further such as taking a group CIO role or a newer role.

That is true. Many of the good leaders among CIOs are given additional responsibility in some organizations. Sethi himself was given HR and CSR to handle in his previous company. Maruti Suzuki CIO Rajesh Uppal too is responsible for HR in his company. In IT-ITES companies, it is common to see CIOs taking up frontline business responsibilities with P&L, in addition to their CIO roles.

With technology getting more aligned with business, the opportunities will hopefully grow for the CIO—reducing any possible insecurity or lack of confidence. That, in turn, could help change this mindset of staying away from creating next line leadership.

But that is not the only major challenge. One broader issue that becomes a major hindrance is the lack of enough good talent for enterprise IT positions.

“In IT industry, you get to work for clients in different verticals. And while your one foot is in technology, all you are thinking about is clients’ business. What are their exact pain points? What are they aspiring? What are they thinking at a particular time?”

Vinod Bhat
CIO, Tata SIA Airlines (Vistara)
In a way, it is peculiar to India. Because of their size and influence, Indian offshore IT services companies are more attractive destinations for young Indian IT talent. Before this wave of digitization started sweeping the Indian enterprise users last 5-6 years back (and which accelerated during the pandemic time), the growth opportunity – often equated by young workforce, with the opportunity to learn and work on new technologies – in enterprise IT was much slower compared to IT industry. Also, brands like Infosys, TCS, Wipro, as well as those like Google, IBM and Microsoft who recruit in thousands, are far better known among the young. So, enterprise IT struggles to get good talent. The lack of realization of the importance of IT and digital in business by the top management just aggravates the issue. Instead of trying to hire all round managers, technology savvy managers, they try to compete for the same tech talent recruited by the IT industry and clearly lose out to the latter, that offer much more to these youngsters – like opportunity to work on new technologies, money, foreign travel, things that are on the priority list for them.

However, the IT industry can also be a potential hiring ground for the potential CIO.

**Why internal grooming is important?**

With digitization of most businesses – consumer services to heavy manufacturing – digital technologies are getting more and more ingrained into the business. Earlier, technology came as a solution to a business problem, after the business problem was defined. Now, technology is being proactively applied to business for creating new opportunities and preventing problems as well as solving them as and when they happen.

In this scenario, there is a need for the technology managers to be conversant with not just business of an organization, but also its culture. An internal candidate for any leadership position has an upper hand when it comes to understanding organization culture. Earlier, technology was a bit isolated from the rest of business, as it was more an inhouse supplier. With that changing and technology moving hand to hand with business, a CIO who is an insider has a better understanding of organizational culture. This aspect becomes far more important when an organization is going through a transformation, leveraging digital. Hence, an internal CIO is a bigger need today than it was in the past.

It does not mean that organizations cannot hire from outside, for availability of better talent or getting a fresh thinking. But such a manager should be able to spend some time to understand the culture to effectively play a role in organizational transformation.

“The CIO does not need to be a veteran in that company. But he/she should have spent some time – anywhere between a year to two – to understand how things work in the organization,” says a chief digital officer of a manufacturing company. Many organizations have unrealistic expectations from a newcomer. Other organizations do realize this handicap but still choose to allow that time to the newcomer to

“**The fear that if I prepare the next leader, I might be kicked out of the job—is real. But there are CIOs who do prepare next line of leadership.**”

Anjani Kumar
CIO, Strides Pharma

“In most of the companies that I have worked in, a large part of the career progression responsibility is given to the individuals themselves. They have to show that hunger. That is one ingredient that the superior has to look for.”

Sanjay Prasad
CIO, RPSG CESC
understand the organizational culture. The challenge is there because a new CIO joins after/almost at the same time that the older one leaves. So, he/she has to take the decisions from Day One.

A groomed internal candidate, even if she is just a year old in the organization, has a hang of both the technology setup in the organization and the organizational culture.

It also helps organizations retain talent. “If the managers know that they can be the CIO, they are far more motivated. Else, they do leave and join smaller companies as CIOs for their career growth,” says Sethi.

**Whose responsibility is it?**

Whose responsibility is it to groom the future IT leadership?

Of course, it begins with the IT managers themselves. “In most of the companies that I have worked in, a large part of the career progression responsibility is given to the individuals themselves. They have to show that hunger. That is one ingredient that the superior has to look for,” says Sanjay Prasad, CIO, RPSG CESC.

But he does not discount the role of CIO in grooming his successor: “In typical appraisal processes, while many of these things can be looked at, they are rarely looked at in order to meet the deadlines, etc.,” he says.

Prasad reveals that he actually spends a lot of time with the -1 and -2 level managers about what they want to do in the future - in both functional and technology areas – in the rundown to the appraisal. “That gives me a lot of confidence in picking out the right guy for the right responsibility,” he says.

“If this step is not taken, you will later regret that I have not left a good legacy behind,” he adds.

But the entire debate we see around succession planning for CIOs is around that issue itself. In other words: are CIOs doing enough to ‘leave a good legacy behind’?

Vijay Sethi rejects the idea that succession planning in IT is the job of only CIOs.

In fact, he outlines a danger. “With all good intention, left to himself, a CIO will choose someone like himself, because he will see from his view. When it is at organizational level, that bias (however unintentional it is) can be avoided, as organization will look at it from a broader perspective,” he says.

“It starts with the organization culture. Are they wanting to groom their own leaders? We know there are lots of organizations in India which are considered leadership factories,” he says.

One such company is TCS, especially considering the CIOs that it has supplied to various organizations, both inside and outside the Tata Group. There are at least 6-7 serving CIOs in various companies in India who have come from TCS, though they were not trained to be CIOs. So, what makes the organization produce so many leaders that others find particularly suitable for CIO role?

Says Vinod Bhat, CIO of Tata SIA Airlines (Vistara), who was with TCS as a business leader before joining Vistara as a CIO, “You get to work for clients in different verticals. And while your one foot is in technology, all you are thinking about is clients’ business. What are their exact pain points? What are they aspiring? What are they thinking at a particular time?”

“Not only does it give a thorough understanding of the clients’ business, the job requires you to think how technology can bring the best value for their business. Not just that, you put your neck in the line to deliver that through technology,” he adds.

“While technology understanding is a given, a new age CIO has to have four qualities. One, he must believe in continuous improvements, without getting too attached to what he has developed; two, he must think about business value of technology or applications of technology and not just technology; three, he must be customer-centric, be it internal or external customers and finally, he should have trusted relationships within the organizations.”

Rajiv Sikka
CIO, Medanta Hospitals
Isn’t that what a CIO is supposed to do? While TCS may be in an advantageous position because of its nature of business, how can other organizations do it? The answer is good, old training – just that the focus has to be on leadership programs and not just on technology, soft skills or even strategy workshops, though all of these are important components.

Training to create CIOs

Before getting into ‘grooming CIOs’, one must answer the question: what makes a good CIO? Rajiv Sikka, CIO, Medanta Hospitals, puts it very succinctly, “While technology understanding is a given, a new age CIO has to have four qualities. One, he must believe in continuous improvements, without getting too attached to what he has developed; two, he must think about business value of technology or applications of technology and not just technology; three, he must be customer-centric, be it internal or external customers and finally, he should have trusted relationships within the organizations.”

Except for the second one, which requires a CIO to understand technology, all others are qualities of a good leader.

That is what Vijay Sethi reiterates. “When you talk of creating a future CIO, you are talking of creating a leader who can think like a leader, act like a leader—not just a good technology manager,” he says.

In fact, that is the difference between the next level IT managers and CIOs. It is not about experience and maturity. A CIO is a leader first. And that gives a cue to where to start – training CIOs through leadership programs.

“Yes, forget for a moment whether it is CIO or any CXO. Let us talk of a leader. How is a leader groomed? Take Tatas. They have dedicated leadership institutes. These institutes are benchmarked against best of the best – in terms of content, in terms of faculty, in terms of training. I feel that plays a huge role,” says Bhat of Vistara.

Tatas are not alone. Today, Infosys, Mahindra, Wipro, Hindustan Unilever and many other organizations have similar programs.

If grooming a CIO is mostly about grooming a leader – at least that is the big gap area – then, isn’t the same leadership training model suitable for future CIOs?

The broader CIO community agrees on the importance of training. As much as 98% of 70 plus CIOs polled in a survey in August 2021, said training is required to prepare CIOs, in contrast to only 2% who believed on-the-job learning is enough. As much as 21% believe training is most crucial to create good CIOs.

When asked what kind of training is most important for the -1 and -2 levels to make them prepare better for CIO’s position, most CIOs believe business and strategy skills (56%), leadership skills (44%), and understanding of business value propositions of emerging technologies (42%) are the most important training needs at this level.

It is not just the ‘what’, but the ‘how’ that is
equally – arguably more – important. When asked about how these trainings would be most effective to create CIOs, almost two-thirds (63%) of CIOs said what is needed is an integrated capsule training program for the CIOs. About 19% of CIOs believed that workshops with fellow IT professionals from other companies, from time to time will help them better.

Pramanic agrees with the need for an integrated capsule program, while lamenting the non-availability of such a program. Anjani Kumar of Strides Pharma points out the success rate of the only program to identify future CIOs, NEXT100, could give a cue. NEXT100 is a 12-year-old program by CIO&Leader’s sister publication, IT NEXT that, through the help of community (senior CIOs), identifies 100 IT managers who have the potential to be the CIOs every year.

One important difference with organizational leadership programs that most CIOs have implicitly pointed to is to have these training programs (at least partially) at the inter-organizational level.

One of the reasons could be being familiar with emerging digital technologies and their business value – a must acquire competence – is best done at a community level.

Apart from that, one other component of the leadership training program that CIOs point out to is how to lead change through technology. With fast changing digital landscape and companies digitizing most part of the business, the CIO has to be at the forefront of proactive change management. And that could be an important part of the leadership program.

But the training could also be beyond a training program. Vinod Bhat of Vistara points to the practice in the Tata Group – and that is true about many other large organizations – is the rotation of every manager with multiple functional departments. While IT managers could be part of functions like finance, marketing, production and sales to understand the business better, it could also be argued that other functional managers could have their stints in IT departments. With the millennials being very comfortable with newer digital technologies, who knows we may see IT leaders emerging from tech savvy non-IT managers as well!

Whichever way they do it, it is time for organizations to be serious about grooming next generation technology leaders, to begin with, grooming a successor for CIO. As CIO’s role becomes more and more important, leadership vacuum can seriously mar a company’s business.

CIO succession planning is no more a good practice. It is an imperative.
Empowering Hybrid Workforce Through Smarter Tech

Businesses worldwide are identifying new ways and harnessing cutting-edge technologies to enable their workforce to accomplish a high level of productivity

By Gaurav Aggarwal
In the last two years, due to the COVID-19 pandemic, most businesses had to shut down their offices and set-up remote working environments for their workforce. But, as the pandemic subsides, everyone is exploring the possibility of a middle path — between going to office regularly and working from home. And that’s how the new hybrid work models are emerging.

All the businesses worldwide are identifying new ways and harnessing cutting-edge technologies to enable their workforce accomplish a high level of productivity.

Metaverse
As we all know, the metaverse is powered by the combination of virtual reality and augmented reality. It is real-time, infinite, persistent, interoperable, and more. The critical feature or the advantage of working in the metaverse is overcoming the challenges you face during remote work. Some challenges and tasks are better solved visually than theoretically, but that’s quite impossible with remote work. Metaverse allows you to work in a virtual environment and interact with coworkers in a much efficient way.

Digital Fluency
Due to the relatively new work from home concept, everyone is exposed to computers and not tech-savvy. That’s why the digital fluency program will enable the workforce to leverage the latest digital toolsets securely.

With the help of the digital fluency program, employees will be more comfortable with working from home as they will not have to face technical problems daily.

Audio and Video enabled Unified Communication
The audio and video-enabled communication channels like Zoom and Microsoft Teams play a very crucial role. Today, they have understood the importance of employees’ needs, and they have several features that can be helpful for employees while attending meetings. Not only audio and video-enabled communication channels but instant messaging tools are equally important because we will not have video meetings all the time.

Secure Home Office
Every employee is going to spend most of their time behind screens doing work. That’s why they need a perfect and secure home office setup. An ideal home office setup should include a monitor, ergonomic keyboard and mouse, and a comfortable desk and chair. If an employee has a secure home office, then the productivity level will increase. A proper office-like setup will motivate the employees to work more effectively.

Remote Access using Virtual Desktop
As in work from home, we don’t have direct access to other computers. That’s why remote access with the help of virtual desktop infra or direct access through app gateways is an essential part of the work from home concept. Remote access using virtual desktop infra can be helpful in situations where someone is not able to rectify any error. In such scenarios, a technical person can help with remote access using virtual desktop infra or app gateways that the company has developed.

Mindfulness tools
One of the most significant downsides of working from home or remote is that people are exposed to excessive screen times and endless online meetings. As a result of that, employees have started to experience a sharp drop in productivity. That’s why businesses need to invest in mindfulness tools. These kinds of tools will help employees to maintain their mental wellness.

Composite AI solutions
To increase employees’ productivity in work from home or remote work environments, composite AI plays a crucial role. With the help of some AI-based tools, we can get real-time data that will show us how much time has been spent on which activities. These tools will guide the employees on whether they should reschedule or decline an invitation to a meeting to focus on other essential tasks.

Activity Driven Apps
As the situation of the covid-19 pandemic is now settling down, many employees want to attempt their office. That’s why businesses should provide a safe return to office platforms. To ensure a safe return to office platforms, companies should conduct contact tracing, and they can also offer office seat booking apps with which employees will be able to book their seats in the office.

Online Team activity
Due to work from home and remote working concepts, the social fabric has been damaged. That’s why businesses should learn and invest in online team activity platforms, where employees can get to know each other and have some sense of bonding. These kinds of online team activity platforms will help businesses to build a more robust social fabric.

—The author is Vice President & Global Lead - Everything on Azure Solution Strategy & GTM at Avanade
Capturing New Opportunities Through Digital Transformation

India’s data price, accessible smartphones, and low-cost, high-speed internet have propelled India’s digital transformation

By Muralidharan VM
**In the 90s**, the liberalization was a proactive step that helped India accelerate its economy and the Information Technology boom. Now the pandemic has a providential opportunity that we must not miss out, and accelerate the pace of transformation through an already robust digitization wave. It is more than a decade of Aadhaar – the biometric digital identity program, and our familiarity with online digital transactions has already put us on a digital-first trajectory.

Thanks, perhaps, to this grasp of digital, Indians clocked a whooping INR 7.71 lakh crore worth of UPI transactions in October this year. Arguably, India’s data price, accessible smartphones, and low-cost, high-speed internet have propelled India's digital transformation. Citizens, businesses, and governments have substantially increased the adoption of digital applications during the last 18 months, making India the second-fastest digital adopter among 17 major digital economies. What does this mean for India’s economy?

**Creating opportunities**

When we embraced digital, we changed the way we consumed information, interacted with brands, and recalibrated how we worked. Sectors like IT and IT-BPM, for their part, adapted to meet the world’s digital transformation needs. And Work-from-Home made it a profitable adoption, with work taking the employees to the country’s remotest corners.

This also increased the pace of upskilling through online courses. Having high-skilled emerging technology talent – and a talent pool that is vigorously investing in upskilling, this sector is estimated to contribute 10% to the country’s GDP by 2025. To put things in perspective, a 1% rise in GDP can create 7,50,000 new jobs. But is this an ambitious goal? No.

An online training provider reported a 200% year-wise growth from 2019 to 2021. Driving this surge was the demand for Data Science, AI, Cloud, Programming, and Analytics courses catalyzed the Fourth Industrial Revolution. To keep up with the pace, corporates have almost doubled their in-house learning investment to create a future-fit talent pool.

Digital transformation catalyzes a shift in business processes, customer expectations, operation models, and employee experience, opening up several avenues for growth.

**Pushing the pedal on Industry 4.0**

It was interesting to witness even traditional sectors boldly embrace digital transformation in the last two years. Burgeoning e-commerce growth stimulated the logistics sector, a tech laggard. Futuristic supply chain solutions will use IoT, sensors, and other digital technologies to assess, track, monitor, and manage end-to-end logistics operations. Automated from start to end, they will help logistics owners improve performance and meet customer expectations.

Financial service was another traditional sector that swiftly scaled the user population through the necessity inflicted on the customers during the pandemic. Often under the impression that digital transformation is distrustful, complex, and expensive, this sector was the opposite of digital-first. The pandemic, however, changed this notion. Contradicting apprehensions that digitization might inconvenience analog-native customers, it brought customers closer. When even everyday activities moved online, chatbots, video KYC, cardless cash withdrawals, tap and pay options improved customer satisfaction during the lockdown.

Digital transformation will help banks enhance their customer experience. Similarly, emerging technologies will unlock value from non-core digital sectors like healthcare, education, energy, and agriculture. Data Science and AI will help these verticals mine actionable insights from data, and create unique, customer-specific journeys.

**The way forward**

Governments are resetting their strategies to enhance citizen experience. Future-fit enterprises are recalibrating their processes to improve stakeholder experience. They’re looking at digital transformation for value creation. Aspiring future-fit enterprises will start looking outside the organization for allies while building on their existing capabilities. Strategic external partners will help enterprises leverage emerging technologies to enhance customer experience, improve productivity, optimize operations, and ultimately increase bottom line growth.

According to NASSCOM, open digital ecosystems will unlock more than USD 700 billion worth of business opportunities for India by 2030. However, the need of the hour is a well-funded digital highway plan to support our technology transition. The United States spends USD 160 billion on digital infrastructure, the UK spends USD 35 billion, and China spends USD 60 billion. India, on the other hand, spends merely USD 13 billion. A concerted effort from private and government institutions will ensure every citizen, village and enterprise, is connected and equipped to reap the benefits of digital transformation.

—The author is Chief Operating Officer, Bahwan CyberTek
How Emerging Technologies Have Fueled The Growth Of The Indian Economy

The Indian economy is influenced by economic and market conditions in other countries, particularly emerging market conditions in Asia

By Piyush Somani
The Indian economy started the decade of 2010s on signs of high growth, fueled by early recovery and limited effects on output from the financial crisis of 2008-09. From a robust growth of 9% in 2010, the economy slowed to a modest growth rate of 4.5% during 2019. The share of sectors contributing to GDP has also changed, with the services sector contributing 49.4% to GDP and the contribution of agriculture and industry sectors falling to 16.0% and 27.3%, respectively, in 2019.

Role of Emerging Technologies
The cloud services market’s growth in India is driven by the increasing adoption of big data, Artificial Intelligence (AI), and the Internet of Things (IoT). IoT connects multiple devices or appliances that need to be connected to the internet, including automation and real-time device control. IoT connected devices such as household appliances, connected cars, and electronics use a cloud-based backend to communicate and store information. AI Technology is being embedded into IT infrastructure to streamline workloads and automate repetitive tasks. Companies use cloud infrastructure to collect, store, process, and analyze the bulk of data required for AI tools and applications. The surging adoption of Big Data in India is also leading to the growth of the cloud services market as cloud infrastructure allows for real-time processing of Big Data.

<table>
<thead>
<tr>
<th>Industry Value/Technology</th>
<th>Global (USD Bn.)</th>
<th>Global (INR Bn.)</th>
<th>India (USD Bn.)</th>
<th>India (INR Bn.)</th>
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<tr>
<td>Internet of Things (IoT)</td>
<td>300</td>
<td>22,287.00</td>
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<td>Artificial Intelligence</td>
<td>29.9</td>
<td>2,218.30</td>
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<td>29.2</td>
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growth, driven primarily by IT/ITes, has increased the demand for data storage space (Data Centers). Besides the growth of these technology markets, the Government of India is also looking to invest INR 3660 crore in establishing an Emerging Technology Innovation Hub.

Factors Impacting Growth of Emerging Technologies
1. Increase in wireless data subscribers - India’s total number of wireless subscribers has been an overall increase. We have witnessed a significant increase in the proportion of wireless data subscribers concerning the total number of wireless subscribers. The cloud services market in India was undergoing a cloud transition phase, which got accelerated by the perpetuation of COVID-19 in 2020. During the first quarter of 2020, enterprises’ spending on cloud infrastructure increased by ~35%, compared to the fourth quarter of 2019. The adoption of "Work from Home" shift from office set-ups to virtual work generated the urgent need for secure, reliable, scalable, and cost-effective technology services across the country. SaaS has been a huge support for the sudden increase in the mobile workforce in 2020. The Indian cloud infrastructure witnessed a y-o-y growth of around 15% by the end of 2020.

2. Increased mobile and internet penetration - On average, Indians used 13.5 GB of data per month in December 2020, owing to an increase in data subscribers and consumption of mobile-video content. The data consumption is expected to double to 25 GB per month per user by 2025, fueled by the introduction and adoption of 5G, change in working patterns, augmented consumption of mobile-video content led by COVID-19, and affordable pricing. It is also expected that mobile data traffic per month will grow at a CAGR of 23%, from 4.6 exabytes in 2018 to 16 exabytes in 2024.

3. Fast growing OTT market - India is currently amongst the world’s fastest-growing OTT (over-the-top streaming) markets. The high growth of OTT in rural markets is also expected to increase.
Overview of Indian IT/ITES Sector

One of the predominant factors that have resulted in the increasing value contributed by the services sector to the GDP is the IT/ITes sector, which is valued at USD 45 billion (domestic revenue) and USD 150 billion (export revenue) end of Fiscal 2021. As of 2020, India's IT workforce accounts for 4.36 million employees. It is further expected that IT spending in India could reach USD 93 billion in 2021 (7.3% growth year on year) and further increase to USD 98.5 billion in 2022, driven by rapid digitization and the IT industry’s timely move to remote working environments. This helped them to keep up the industry's growth amid the COVID-19 pandemic. It is forecasted that the contribution of the IT industry to India’s GDP will reach 10% by Fiscal 2025. India is one of the largest data generators currently, with a growing young and tech-savvy population. Digital consumption data in India was around 40,000 Petabytes in 2010; it has likely shot up to 2.3 million Petabytes towards the end of 2020, which is twice the global rate, as per a report by ASSOCHAM.

IT Industry Driving India's Economic Growth

In 2020, India ranked 63rd among 190 economies in terms of ease of doing business, ascending 76 positions from its all-time low position of 139 in 2010. India is one of the top offshoring destinations for IT companies worldwide. In FY'2021, India was the 5th highest FDI recipient nation, up from the 8th position in FY’19. Some of the key growth drivers of the IT industry in India are – low cost of operations, supportive govt. policies, availability of skilled workforce, surging demand for IT-related technologies like Cloud Computing, Digital Payments, IoT, developments in Telecom and BFSI, etc. and export demand growth.

The role of cloud and data center Industry

In July 2015, the Government of India flagged off the 'Digital India Program,' with a vision of propelling the efforts to transform India into a digitally empowered society and knowledge economy. Further, it was envisaged that the digital ecosystem could generate an economic value of USD 1 trillion, which would play a crucial role in achieving the USD 5 trillion economy target by 2025. As part of the program, the Government identified 30 digital themes across different sectors such as agriculture, healthcare, education, energy, digital payments, etc. This relies on a 21st century IT/ITES, highlighting opportunities for increased adoption of digital technologies.

The wave of IT adoption led by Cloud Computing has allowed firms to transform the backend operations, resulting in an enhanced value proposition for the customers. Cloud service gives companies of any size access to technological capabilities previously accessible to large enterprises only. In India, the industry has gained momentum with more than 200 Data Centers and more than 10 Cloud operators, targeting an industry market size of USD 3.8 billion in Fiscal 2020.

Key Technologies Shaping the “Digital Transformation of India” in 2020

Source: Industry Articles and Ken Research Analysis

Conclusion

The Indian Economy is also influenced by economic and market conditions in other countries, particularly emerging market conditions in Asia. Emerging technologies & their adoption have grown rapidly with time and have contributed significantly to the Economy. Various government policies and initiatives have driven technology adoption across industries.

—The author is Managing Director & Chairman, ESDS Software Solution
Criminalizing Cybercrime And Raising The Risk For Cyber-Attackers

Dealing with the relentless and mass scale cyber criminal activity against businesses and individuals will be an international effort across both the public and private sectors

By Dave Russell
**Over the past few years, cyber-attacks have become something that the general public is increasingly aware of. However, a perception still exists, indeed, outside the IT industry. These cyber-attacks are just something that happens on the Internet. It isn't easy to relate to and equate the impact of cybercrime on its victims – whether it's an individual who has fallen foul of an online scam or a company that has been forced to pay a ransom to restore its systems. For this reason, it doesn't always seem that cybercrime is viewed or treated like a 'real crime.'**

While we acknowledge that cybercrime is an actual crime, it might be not easy to get on board with for some. The thought of being outraged by a hacker taking down a multinational corporation could seem a bit farfetched. This is possible because of the stereotypes about cybercriminals being painted as disgruntled computer science whiz-kids with nothing better to do than 'stick it to the man.'

Consider that most cyber-attacks are the work of huge, organized, and wealthy crime syndicates. They are highly sophisticated operations to steal money from the business that pays your salary and the government that collects your taxes. Does that sound like a crime?

**Are we guilty of victim-blaming?**

The fact is that cybercrime is an actual crime, and businesses that fall foul of it are victims. They have suffered a crime committed against them. However, the level of sympathy towards organizations that get breached differs from what we give to an individual. If someone tells you they've been hacked, had personal information compromised, and stolen money, your natural reaction probably isn't to say it's their fault. However, cyber breaches are a source of lasting reputational damage to businesses. We tend to assume they did something wrong or acted carelessly. As somebody who has worked in the data protection industry for over 32 years, I would tend to agree with this.

The vast majority of cyber incidents are avoidable due to organizations failing to follow best practices, poor digital hygiene, and/or outdated or unpatched software.

However, is there any other type of crime that focuses almost exclusively on blaming the victim and so little on bringing the criminals to justice? Businesses are viewed as the guilty party rather than victims, and it is accepted that the criminals are unpunishable due to the lack of an agreed global legal framework and justice system. If a criminal from another country travels to the USA, for example, and commits a crime against a business on American soil, there is an entire diplomatic process to ensure this person is brought to justice and the victim is compensated. This isn't the case when it comes to ransomware.

International cooperation is the only way to create an environment where the risks are higher than the rewards for cyber-attackers. The scourge of ransomware accelerated during the pandemic, increasing the appetite of government and business leaders to break the geopolitical impasse that has enabled cybercriminals to run riot.

**Learn self-defense**

In the absence of a justice system that completely protects us from the bad guys, basic human survival instinct demands that we learn to defend ourselves. In the context of cybersecurity, that means focusing on a few fundamentals. Firstly, every enterprise needs a dedicated IT security lead with access to business leaders and the authority to lead the security initiative. You need to have a resource with designated responsibility for cybersecurity and specialize in data protection for smaller businesses. Secondly, businesses need to practice impeccable digital hygiene.

This includes mandatory training for all employees to recognize potential attacks, understand whom to report them to, and understand why this is important. The more people buy into the need for good digital hygiene, the more alert and willing to take the blinkers off they become.

Finally, never pay the ransom. Organizations who pay ransoms feed the ‘easy pay day’ perception, which means cybercriminals keep doing it. As soon as businesses stop paying ransoms, we’ll see a reduction in the popularity of ransomware as an extortion technique. While businesses who suffer cyber-attacks are victims, they are responsible for protecting any data they use, process, and store. Paying off cybercriminals to get systems back online is an unsustainable defense strategy.

As governments become more active in preventing ransomware, we may see businesses involved being investigated and reprimanded by independent regulators.

Dealing with the relentless and mass scale cyber criminal activity against businesses and individuals will be an international effort across both the public and private sectors. While it is important that cybercrime is properly ‘criminalized’ and that the perpetrators are brought to justice, businesses must understand the responsibility they have to their customers and employees to protect any data within their jurisdiction. This can only be done by implementing a Modern Data Protection strategy of effective frontline cybersecurity defenses and a comprehensive data backup and disaster recovery approach.

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*The author is VP - Enterprise Strategy at Veeam*
Need For CXOs To Move From Product To Platform Mindset For Intelligent Business Solutions

Platforms harness the power of multiple revenue streams, pervasive customer insight or data and creators’ possibility to build more layers of innovation on top

By Anupam Kulkarni
Digital platforms have become an absolute must for any business and are no longer a digital native strategy. In the Age of Platforms, the term is almost a buzzword in the industry. Tech giants like Facebook, Apple, Google, and Amazon have redefined business – a platform that is a structure made up of integrated features.

Platforms harness the power of multiple revenue streams, pervasive customer insight or data and creators' possibility to build more layers of innovation on top. Effective platforms are based on technological excellence but cannot exist exclusively in the technical realm. They rely heavily on support and feedback from other parts of the business that are coordinated better through a cross-functional team that defines success metrics and tracks progress. Centralized leadership by the CXO can manage this better by mobilizing the right talent and "product owners" accountable for specific areas.

Need to move from product to platform mindset
Developing a business platform strategy requires slightly different products to help entrepreneurs and managers create and capture value. Companies that focus on building platforms have learned to integrate an ever-widening universe of partners and consumers into their ecosystems. Consumers rather than enterprises drive today's economy—the need for CXOs to focus on consumer-driven platforms matters more than ever. Many products have transformed into software as a service. For instance, Microsoft’s traditional "Windows First" strategy evolved into the "Cloud First or SaaS" model with emerging technologies. The company recognized that transformation was not just a strategy by mindset about the customer experience and sales function.

Leaders must rethink the shift from transforming products into services while considering what services instead of products across industries. All companies face limitations when it comes to driving innovation. However, it is possible to expand those limitations with a powerful platform. Innovation is the responsibility of every stakeholder in the company, making it a contribution by partners, users, developers, and other collaborators. Building a platform gives the power to cultivate the whole ecosystem. The development of digital platforms is supported by the third-party API (Application Programming Interface) providers can allow participants to exchange data for developing new services. The main goal of digital platforms is to improve collaboration between end-users and manufacturers to transact with each other. These platforms allow users to exchange various information, such as new products and services and connect the platform's ecosystem. This technology also makes it possible to build a reliable network to add value.

How is the platform strategy beneficial?
Platforms shift knowledge ownership from the owner to the community & personas using the platform. Platforms are built for catering to different personas with different needs, which in turn means aggregation of different data sets. The handling of data of a platform needs to be well thought out, as otherwise the true potential of any platform will be left unexplored. The ability of a platform to break data-sets into bite-size, actionable insights that an enterprise can use to get better, deliver better experience and identify opportunities, binds the entire organization together. The biggest power of a platform is to reduce ‘data’ silos and aggregate data sets which enable cross function/teams valuable insights for successful use-cases.

What is a platform strategy framework?
The digital platform strategy aims to penetrate the online marketplace, focusing on allowing one segment of participants to benefit from the presence or interaction of others. The general assumption is that customers can independently determine their willingness to pay for a service or product. However, platforms can disprove this assumption, as the participation of the user segment on the platform depends on the user’s choice. Developing a business platform strategy requires slightly different products to help entrepreneurs and managers create and capture value.

Digital platform strategies need to align well with the organization’s work across all channels. If they are not well integrated, businesses will often run into problems in the long run. To develop an effective platform strategy with long-term solutions, collecting as much information as possible is essential. Along with this, define goals and criteria from the very beginning. The use of digital platforms in the workplace has become commonplace. Platform strategies, whether practiced individually or jointly, become a strategic imperative. Companies that have yet to make the transition will find it challenging to keep up.

Platform companies move faster than their product-centric traditional counterparts. The CXO needs to dematerialize a traditional ecosystem and aggregate functions on a platform. It has been assumed for a long time that leaders need to commit resource allocation and operations to either product-based or platform-based approaches. However, moving away from the traditional strategy, companies have successfully transitioned from product to platform and have employed a hybrid model.

—The author is CEO & Co-Founder, iauro Systems
Optimizing Organizational Downtime And Empowering Employees In Hybrid Workspaces

A long-term vision is needed to build a robust hybrid workplace strategy for the future

By Rajiv Bhalla
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Ashish, who completed B. Tech in Computer Science during the pandemic, got a dream offer from a Bangalore-based startup. Thanks to efficient collaboration tools, he was on-boarded following a series of interviews and interactions with the HR and top management. As some of his team members are located across the U.S. and India, he opted for a flexible work schedule to ensure he attends pre-scheduled weekly meetings and weekend reviews. With things getting back to normal, the organization asked employees to decide which work model they preferred – on-site or remote, and they unanimously opted for hybrid work.

The hybrid model offers the best of both worlds
Increasingly, employees are choosing the flexibility of working on-site and remotely for parts of the week. The hybrid model is finding favor with a lot of organizations and employees. For digital organizations, the model delivers multiple benefits. Firstly, employees receive the flexibility to work across different schedules, as seen in Ashish’s case, wherein he is required to collaborate with team members in varying time zones. As many IT organizations also have clients abroad, it becomes feasible for them to allocate employees in different shifts and allow them to work from the convenience of their homes. Office visits are reduced to half or one-third of the prior commitment, saving a considerable amount of employees’ time and resources.

A flexible approach creates opportunities to optimize investments and implement innovative ideas across the workspace environment on the business front. For example, the savings in infrastructure, logistics, and utilities realized through remote working can be directed to employee welfare activities like health insurance and holiday programs which will motivate the employees to do better and remain loyal. It will also help reduce attrition and enable cost efficiency across the entire value chain.

Meeting the demands of both models
Employees working from home will also have to fulfill their roles at home; this may lead to conflicts and directly impact productivity. In such an ecosystem, businesses must adopt strategies to optimize employees’ time and manage organizational downtime. Collaboration tools can help organizations in keeping employees engaged and satisfied at work.

Modern collaboration suites open up infinite possibilities for a hybrid model. Meeting, messaging, polls, whiteboards, virtual events, and social networking – all of these can add value to the workspace. With automated, AI-driven features, employers can also get insights into the moods and motivation levels of the employees during meetings and other routine engagements. By understanding employees’ engagement patterns and identifying the pain points at various levels, organizations can devise strategies to improve their well-being and motivate them further. Collaboration tools with multiple language support, intelligent features to combat video fatigue, and advanced background noise elimination technology are among the few that can enhance the overall experience.

Creating and sustaining the long-term vision
Now, with hybrid workspaces becoming a crucial part of the digital culture, organizations need to create and sustain a long-term vision to make it a decade-long reality. With technology laying the foundation of this strategy, organizations need to be prudent in their investments. Adopting the right technology with sufficient room for scalability and flexibility is of paramount importance. Security and data privacy are essential aspects to consider while sharing the organization’s IT assets across the entire employee network, not just domestic but international. Thus, there is a need to build a robust technology platform and customize it with the right tools to facilitate improved collaboration and security. Depending on the nature of work, organizations may have to add custom tools to optimize employees’ time and capabilities. Some examples are integrating a call center software suite for homebound employees and implementing analytics software for marketing/insurance categories.

It is also essential to equip employees with shared facilities, as provided in brick-and-mortar scenarios. Most of the businesses have started allocating special funds to meet these demands. While giving employees monetary incentives for Internet access, PCs, software, and educational apps, the organization should also ensure that employees effectively utilize the funds. Managing and monitoring all resources, including the software and physical assets, is vital to ensure the effective functioning of the hybrid workspace.

—The author is the Managing Director at Barco India
Trend Forecast For 2022: How Will Video Analytics Technology Change The Industry?

Usage of video analytics enables businesses to generate highly actionable data from vast volumes of video and preserve only this information instead of storing several terabytes of video footage generated by the cameras.

By Abhijit Shanbhag

We are living in a world that is increasingly becoming technology dependent for almost every need. With the arrival of CCTV-enabled centralized monitoring, the need to rely exclusively on the deployment of human security personnel was eliminated. And now, video analytics technologies are enabling preventive vigilance as well as quick investigation, identification of criminals and resolution of incidents such as trespassing, burglary. Today, video analytics evolution offers ample scope for global transformation across industry verticals.

There are billions of cameras deployed for surveillance purposes all over the world. Add to it another billions of cameras fitted into the smartphones and other personal devices, and we have a mind-boggling ecosystem that is generating unimaginable volumes of video data every minute. Integration of AI analytics with machine learning is now bringing to fore novel ways of utilizing this video data that stretch far beyond the good old security needs that the CCTVs were expected to meet. Video content analytics is being used in a number of ways in modern smart cities. Traffic and crowd management, video surveillance, retail store management for better customer experience and remote monitoring of contagion patients in healthcare facilities are some of the prime use cases.

However, new trends are rapidly emerging on the block. The video analytics platforms are being embedded with the conventional CCTVs to add abilities such as object and facial identification, analysis of image data captured from videos, and edge analytics at the camera end that eliminate the need to transfer data to the central server for analysis. This results in reduced bandwidth usage and enhanced speed.

Future of video analytics

Analytics is a rapidly evolving technology and with advancement of AI engines, the video data can now be used as a basis for predictive analytics and forecasting future market trends, patterns, and behaviors which help make the surveillance system increasingly intelligent and capable of taking deci-
Video analytics trends indicate that the technology has barely scraped the surface of its potential as well as deployment so far. With further surge in IoT and cybersecurity demand, advanced video content analytics will be adopted at a much faster rate. The eventual merger of advanced video content analytics with cybersecurity tools will open up a whole new vista of opportunities.

Usage of video analytics enables businesses to generate highly actionable data from vast volumes of video and preserve only this information instead of storing several terabytes of video footage generated by the cameras. The likelihood of human error is also reduced when the video AI technology is used to identify different actions, objects and behaviors.

Another rapidly growing aspect of video analytics is in the form of smartphone apps. It is possible to use mobile cameras in sync with video analytics in various processes. In health and fitness, we are witnessing how video analytics is helping people improve their workouts courtesy of motion capture and analysis features.

Video analytics technologies are already being used in various functions such as:

- **Detection and tracking of objects** – Unidentified objects lying at an airport or haphazardly stored items on a store shelf, it is possible to identify and track objects throughout monitored premises through the technology.

- **Motion tracking** – Integrated image sensors, night vision and other tools enable video analytics usage for purposes such as speed tracking of vehicles to intrusion monitoring on perimeters.

- **Facial recognition** – In the arena of security, video analytics has great potential courtesy of facial recognition features. Monitoring of people, spotting unusual behavior as well as identifying criminals from an integrated database are some of the things that can be done. It is due to these advanced features and analytical capabilities that finds utility in various business verticals such as the following.

- **Sports and event management**: Using video analytics in sports has been around for quite a while. Coaches and analysts use video footage of players to understand what they are doing and how a player’s actions are impacting his/her as well as the team’s performance. For instance, monitoring a footballer can help a rival coach to understand his strategy and advise his team to counter it. In event management, the technology can be used to monitor attendees and take steps to enhance their experience.

- **Retail**: Video analytics is proving to be a pot of gold for retailers as it enables generation of crucial insights about customer behavior that regular data analytics isn’t capable of. Creating heat maps of the customers makes shopkeepers identify their best performing and worst performing products and aisles and lead to optimisation and improvement of the customer experience.

- **Healthcare**: Observing patient behavior, perimeter surveillance and monitoring of patient vitals remotely are some of the things that video analytics can facilitate in healthcare. Doctors can safely monitor and advise multiple patients without the need to risk visiting each patient in-person especially in times like these when there is a heightened risk of infections.

There is no doubt that video analytics has now opened the door through which we can overcome human limitations and eliminate human errors. The technology is becoming increasingly responsive and useful with the evolution of video cameras and AI-powered image capture technologies. Trends indicate that video analytics will play a role in almost every aspect of life in 2022 and beyond.

—The author is President and CEO, Graymatics
How AI And ML Can Accelerate Decarbonization In The Chemical Industry?

With more and more focus on climate change, carbon-neutrality, sustainability, going green, and ESG compliances, chemical companies too will step up and realize that the utilization of tech to drive a fruitful balance between productivity and the environment is the only solution.

By Maulik Patel

Industry 4.0 is swiftly making its substantial presence in sectors such as manufacturing, construction, and shipping. Industries and companies are accountable to the environment, to the future generation, and most importantly, to the people of the geography they operate in. With stricter norms for being carbon-neutral, ESG compliant, green process-driven enterprises have turned to new-age technologies such as Artificial Intelligence (AI), Internet of Things (IoT), and data analytics to remain compliant and ensure sustainability.

Chemical companies too, have had a long way from being one of the highest carbon producing industries to announcing 10-year plans of being carbon-neutral or even carbon-zero. To put things in a perspective, industries such as Oil and Natural Gas, Pharmaceuticals, and Chemicals whose core business models are based on producing and processing hydrocarbons have been facing significant challenges to implementing ways to lead the change towards decarbonization. Nonetheless, several companies are now seizing upon the transition to a low-carbon economy as a means to transform not only how they function but also what they offer.

Similarly, several multinational chemical companies have launched transformational initiatives centered upon sustainability. A prominent American chemical giant, for instance, has committed to integrating circular economy principles into its business models; designing 100% of its products and processes using sustainability criteria including the principles of green chemistry; and reducing GHG emissions by 30% by 2030, including sourcing 60% of its electricity from renewable energy.

A transformational shift
While going green, using renewable energy sources is a great leap, one of the most significant contributors to making industries carbon-neutral and accelerating decarbonization has been technol-
Decarbonization involves heavy lifting. Companies pursuing these goals require a transformational shift in the way they operate: From how they source, leverage, consume, and think about energy and feedstocks to how they engage with multiple stakeholders. Moving to this new way also requires a significant financial commitment from investors and governments. With the advancement in technology and tools such as AI, ML, IoT, data analytics, it’s pretty streamlined for businesses to lead the transformational journey.

Some of the ways that technology has played a massive role in accelerating this journey are:

- **Optimized Product cycle using AI and ML:** In the chemical industry, some of the most toxic materials and resources are bundled in the early stages of product development/manufacturing. With effective AI and ML mechanisms and research, companies can opt for manufacturing processes that are cleaner, greener, and sustainable in the long term. In international markets, AI has already made significant breakthroughs. With the invention of cutting-edge processes such as advanced molecules, companies already have started their journey on the decarbonization front.

- **Reduce wastage and maintain high efficiency:** An unintentional event in a Chemical production process often leads to the batch getting wasted and completely scraped off. A common practice for chemical manufacturers is to avoid inefficiencies and craft consistent batches of products. With the development of AI and ML, the whole production is automated, and product consistency is optimal. This increases efficiency and less wastage of chemical compounds, which would eventually account for the carbon footprint in the environment.

- **Use of data analytics to check the carbon-out:** Today, companies are accountable to over a dozen environmental and governmental bodies on account of their pollution and carbon-footprint. Today, with the use of Data analytics and sophisticated ML apps, engineers can keep track of the company’s carbon output on a real-time basis. A higher output variance triggers an alarm, and the whole manufacturing is stopped before the variance can be addressed. Additionally, there are AI-based tools that predict the carbon flow and out in a production process and suggest alternative means of resources that can reduce carbon production considerably.

- **Evolution and breakthroughs in Research and Innovation:** Chemical industry is a production-heavy industry with much scope for permutations and combinations. With ground-breaking research using AI and predictive analysis AI, ML tools computerized permutations and combinations help in advanced research to recognize molecules, generate formulas and ascertain quantity and mixtures of chemicals. This coupled with AI and ML’s ability to process millions of combinations which could lead to a process breakthrough, which will not just be efficient but also help in accelerating decarbonization.

The development of AI, ML, data analytics, and other technologies is happening drastically. However, the adoption of these technologies in the chemical sector has been slow. With more and more focus on climate change, carbon-neutrality, sustainability, going green, and ESG compliances, chemical companies too will step up and realize that the utilization of tech to drive a fruitful balance between productivity and the environment is the only solution.

—The author is CMD, Meghmani Finechem
Prasad Dhumal, VP - IT, DHL Express India, reveals how leveraging data-driven technologies has helped the company improve operational efficiencies and drive user experiences.
Logistics and supply chain management have a pivotal role in any crisis – it helps the smooth availability and supply of essentials, medical supplies and enabling enterprises to trade around the globe.

When the COVID-19 pandemic started, the global logistics players such as DHL Express knew they had their work cut out for them. The responsibility is to keep the global supply chains unbroken while ensuring the safety of customers and their employees during a crisis of such magnitude was never easy.

Several questions needed quick answers and solutions. For instance: How to adapt to the rapidly changing circumstances? How to move the majority of the workforce safely to a home-based work environment? How to get supply chain visibility and ensure contactless deliveries all the time? How to manage procurement and handling of respiratory masks? How to enable employees and customers to trigger an alarm should there be an urgency? And most importantly, how to keep themselves ready for continuous uncertainty and new customer behaviors?

Along with strengthening its physical infrastructure capability, the need was to create an agile ecosystem, uniting technology and social collaboration, to meet the above challenges and help business leaders make quick and meaningful decisions. While DHL Express has been one of the few companies that have leveraged technologies extensively to modernize its IT architectures to meet new-age customer demands, the challenges triggered by the health crisis were unprecedented.

"We felt an urgency to digitalize many of our processes, both for our employees and users, that were manual earlier. Technology interventions were also needed to enable our customers to share their pain points and provide them with minute shipping details to track the same digitally," says Prasad Dhumal, VP - IT, DHL Express India.

Navigating the complexities through effective collaboration

An effective decision-making process requires timely collaboration between users and stakeholders during any crisis. With social-distancing guidelines, leveraging technology becomes critical to keep employees productive and customers informed.

To continue to help its geographically dispersed population connect, it encouraged all its people to use Connect, its internally integrated digital workplace tool, to collaborate and share relevant information, ideas and promote well-being initiatives.

Another key initiative that DHL Express took was to deploy a chatbot with an interactive voice response (IVR) system on the customer front. The analytics-powered IVR enables customers to connect with the associates and share their concerns promptly in real-time. The automated processes also provide customers an option to get on-demand delivery of their shipments.

Dhumal adds that the sudden change in customer preferences also helped it push the adoption of its digital customer solution, MyDHL+ that integrates the functionalities of its 13 different applications. The platform provides 24*7 visibility of goods and inventories booked for shipping through DHL Express. "In challenging times, supply chains need to be more dynamic and flexible. While previously we had just about 30–40% of our customers leveraging this platform, during the crisis, almost 90% of our customers started using it to track their deliveries," Dhumal informs.

DHL Express says it has significantly increased transparency and created a seamless process for its customers to manage shipments and supply chains of all critical deliveries through these digital tools. For instance, its Electronic Shipping Solutions (ESS) enabled customers to digitally manage their booking, shipping, verifications, and customs clearances. "All a customer need is to enter the shipment tracking code, and they will be routed to the relevant customer service team or online tool to advance," explicates Dhumal.

Another tool deployed is an AI-based Advanced Quality Control Center (AQCC) dashboard to monitor shipment movements and flag issues in real-time. With this, DHL keeps a 24*7 track of shipments and their locations, takes instant actions should the shipments are stalled at any point and maps the projected routes to ensure that they reach their destination quickly.

The company also digitized the invoice management system and launched the MyBill tool to help its customers check past bills, download invoice data directly into their financial management tools and systems and raise a query on any invoice in real-time. Dhumal shares that this has simplified its customers’ billing experience and enabled DHL to save customer service team time to answer invoice-related emails and phone calls.

Additionally, to ensure the safety of
its employees and customers. DHL Express also launched an OTP-based non-contact delivery service during the pandemic, which was one of the firsts from an international logistics player in India. Leveraging its on-demand-delivery (ODD) service platform and the global courier application scanners ensured syncing of the deliveries with OTPs and seamless and touchless cross-border deliveries.

The outcome and critical learnings
The new tech initiatives enabled the company to resolve customer queries faster, allow customers to book consignments more quickly, and provide real-time shipment updates. Dhumal elucidates that by leveraging AI, ML, and Robotic Process Automation (RPA), DHL Express has significantly reduced its error rates, automated many processes, such as data cleaning, and improved operational efficiencies.

Since the lockdown restrictions forced it to cut-down on manual movements or operations, the company also used WebEx and ensured there are connected and robotic solutions in its warehouse so that its warehouses can handle more volumes.

In 2020, DHL Express delivered 484 million shipments in total for its customers (B2B and B2C) globally, which was about 9% more per day than in 2019. Leveraging cutting-edge technologies significantly improves [about 20-30%] delivery on time and customs on-time performance of many of its clients.

Knowing the criticality of capturing instant feedback of customers and resolving the same on priority across touchpoints in the digital age, Dhumal shares that the company continues to explore new technologies and ways to create exceptional experiences for its customers.

In light of the recent shifts, the company is also exploring hybrid cloud models across its organization, moving away from its three-decade-old private cloud model. “We are implementing solutions such as Office 365 in all our offices by the end of the year. This will enable our people to share their work effectively on the cloud with automatic backing up of files plan along with better video and chat collaboration through MS Teams with high-end security,” Dhumal discloses.

Dhumal also has some learnings to share. “Over the years, we’ve realized that process transformation is critical for AI, ML automation, or integrating any technology. All our robotics [automation] processes are very efficient today, and we have achieved the results that we wanted them to succeed. It has also enabled us to leverage our talent more efficiently as many of our employees who were busy doing these routine and mundane tasks have been redeployed in more productive places in the same function,” signs off Dhumal.
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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।

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