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IT NEXT
ERATION OF CIOs

WFH, The New Normal & Security First

Why the IT fraternity has little choice but to take the security challenges head on

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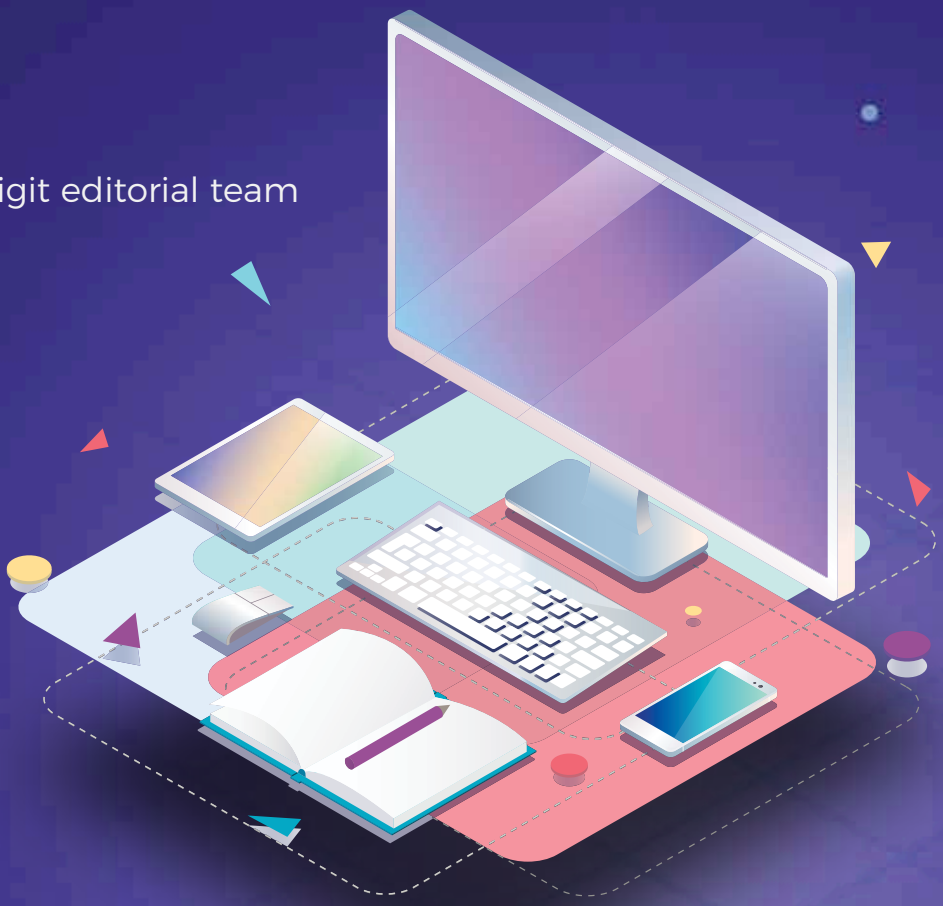

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The New Secure X

While a secure X remains the Holy Grail of the IT manager, it throws itself as a big opportunity for the tech vendors. But simple tweak-ins in narratives is not a sincere approach to meet that challenge—though many have started doing that

Shyamanuja Das

Recently, I was talking to CIOs of quite a few non-services companies. I say non-services because many of them do not like to be identified as 'manufacturing' business—quite rightly so. They included process manufacturing companies, pharma, FMCG, consumer durables, and automotive, among others.

I was asking them about the reaction to COVID-19 emergency and was not specifically probing them about security. But I noticed many of them talking about secure network, secure cloud, secure services and so on. When probed specifically about their enterprise security, most of them kept it aside as a separate topic. To them, it meant a specific set of solutions and practices.

In short, they clearly distinguished between security and secure. For them, enterprise security meant a few things that anyway they needed to do to secure their systems. But whenever they got something as a service, in this XaaS era, they expected it to come 'secured'. In short, if they were being sold a service—network or cloud or anything else—they expected the onus of making it secure lay with the service provider.

That, per se, is not a new expectation. It has been there since long. The only difference is that earlier, buying of these services were more discreet. Today, in a multi-cloud, hybrid environment, with multi-vendor management and monitoring tools—sometimes even that management outsourced as a service, with security outsourced to yet another vendor, a lot of SaaS subscriptions, and maybe with some business processes, heavily integrated with technology, too outsourced, the environment is far more complex.

But that everything should come pre-secured is a valid expectation, whatever its realisticity quotient is, especially for companies where security is not such a well-developed, separate function, as in businesses like telecom, banking, insurance, online retail and IT/ITES services.

It is not that vendors do not realize the problem. But most of them claim far more than they can deliver. It is not that they falter on SLAs or deliverables. But they only address a part of the problem while claiming that it is the solution to the whole problem.

In the post-pandemic era, as many companies go for some fundamental changes in business models, many will leverage technology far more than they do. And security will remain a big challenge on the way.

Our cover story dwells upon the challenge. While a secure X remains the Holy Grail of the IT manager, it throws itself as a big opportunity for the tech vendors. But simple tweak-ins in narratives is not a sincere approach to meet that challenge—though many have started doing that.

Let's see who comes out with a new solution. Will it be a new company altogether?

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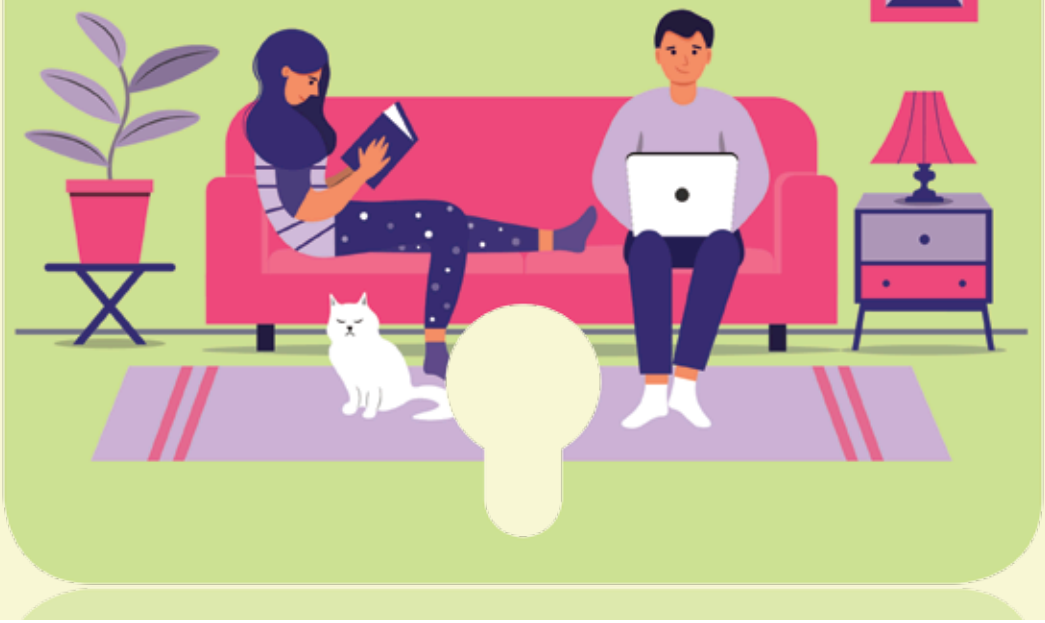

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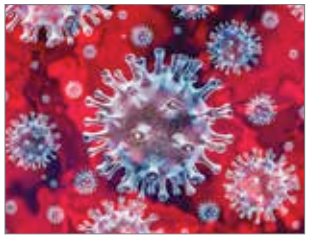

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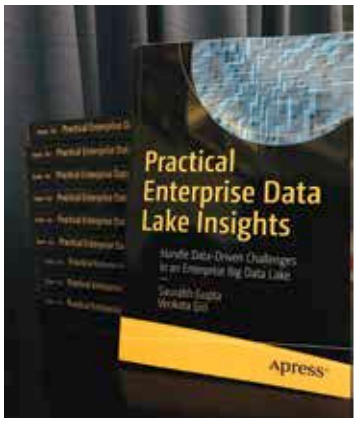


Story-telling and writing provide the emotional release and deepen human understanding.

Living Life In A Story

NEXT100 Winner 2018 **Saurabh Gupta,** General Manager - Data Science & Analytics, Michelin shares his immense passion for writing, story-telling and inspiring others...

I believe writing is a medium to see through an author's imagination, passion, and emotions with words. The true hobby is to connect with fascinating and amazing people that inspires me every time I write. Our childhood upbringing builds the credit history of our character and depicts the person we are. Hailing from the city of Nawabs – Lucknow, my backdrop was full of stories – mythological, moralistic, and character-driven. No matter how hushed I may feel now, storytelling with emotions always fascinated me.

Back in 2005, I had an amateur experience to work as defense psychology practitioner and instructor for an SSB training academy in Lucknow. While assessing the Thematic Apperception Test, which uses picture-based storytelling to peep into one's psych, my mentor JB Mall remarked that my stories were observational, full of expressions, and were character-driven.

After stepping into the industry of technology, my talks and writing became more technical. In 2012, I decided to formally publish my technical library as a book. Packt publishers were generous enough to publish "Oracle Advanced PL/SQL Developer Professional Guide" in a span of 6 months. I revised this version and re-published with Packt again in 2016. Most recently, I co-authored a book on big data lakes ("Practical Enterprise Data Lake Insights") along with V.Giri. A press published our work in 2018. I feel accomplished and satisfied to see all my books decently relevant even today. The greatest gift one could give an author is accepting his work and giving feedback, sincerely from the heart.

From being a defense instructor to an author to a technologist, a lot has really happened over hobby. I narrate some great fiction stories to my daughter. This 'beyond the book' affair builds memories through actions and outcomes and most importantly, we all enjoy them as a family. I try coaching people whom I mentor through the experiences that I had or I'm aware of and connect with a takeaway that can help them grow and make an impact in their careers.

I am an avid blogger and tech columnist. ■

As told to Dipanjan Mitra, Team ITNEXT

Saurabh Gupta *Snapshot*

Saurabh Gupta is General Manager - Data Science & Analytics at Michelin. He has been a NEXT100 Winner in 2018. Saurabh had also served in companies like Oracle, ABB and Syntel. He completed his MTech in Data & Analytics and BE in Electronics & Communication. He is an Oracle Certified Professional (OCP) as well as a Scrum Master from Scrum Alliance.

Gardening is a physical activity that gives immense pleasure and peace of mind.

Onto A Green Future...

NEXT100 Winner 2018 **Rajavali IC,** Assistant Vice President - IT, JSW Severfield Structures shares his immense passion for agriculture and his experience of gardening in a metro city.

My family belongs to an agricultural background and I used to be involved in routine farm work since childhood. Hence, my passion developed for agriculture and gardening. We had dry land and the crops depended entirely on rainwater. But I always dreamt to have an irrigation facility on my land. The dream got fulfilled with collective effort from my family. We cultivated various seasonal crops like sugarcane, wheat, groundnut, onions and vegetables, etc.

When I moved to the city for higher education, I used to visit the nearby garden to spend some quality time and have a peaceful mind. After my education, I moved to Bangalore in search of livelihood. Since Bangalore is the garden city, I often visited Lalbagh and Cubbon Park, Ulsoor Lake, and enjoyed the beauty of the green surroundings.

In a metro city like Bangalore, it is highly unimaginable to think of having your own garden, but I had a dream to develop a well-managed garden with varieties of plants, flowers, vegetables, and fruits growing in it. My dream came true when I joined my dream company, JSW Group. There was plenty of open space in front of my apartment and backyard area.

Since I had prior agricultural experience, it did not take much time for me to convert the open area into a garden and now I have a well-managed garden full of greenery and I am getting fresh air. Of course, it took a few years to develop the garden into the desired beautiful shape. It required a lot of patience, starting from planting seeds to fruit development.

My daily routine is to spend at least one hour in the garden for various activities like ploughing, watering, cutting and trimming and cleaning, etc. Nowadays, I do not have to purchase vegetables like coriander leaves, lemon, chilly, brinjal and flowers and seasonal fruits like papaya, apples, etc.

I often visit my native place and along with my father, work in the fields on crop cultivation, watering, guiding laborers and helping farmers to transport their crop to APMC yard for sale, etc.

Every year, we take a family vacation and spend most of the time in hilly areas like Ooty, Coorg, Munnar, Bandipur forest, etc.

After my retirement, I plan to go back to my native place and engage in agricultural work reliving with immense pleasure my childhood memories.

I wish all to engage in at least one or the other physical activity to maintain good health. ■

As told to Dipanjan Mitra, Team ITNEXT

Rajavali IC

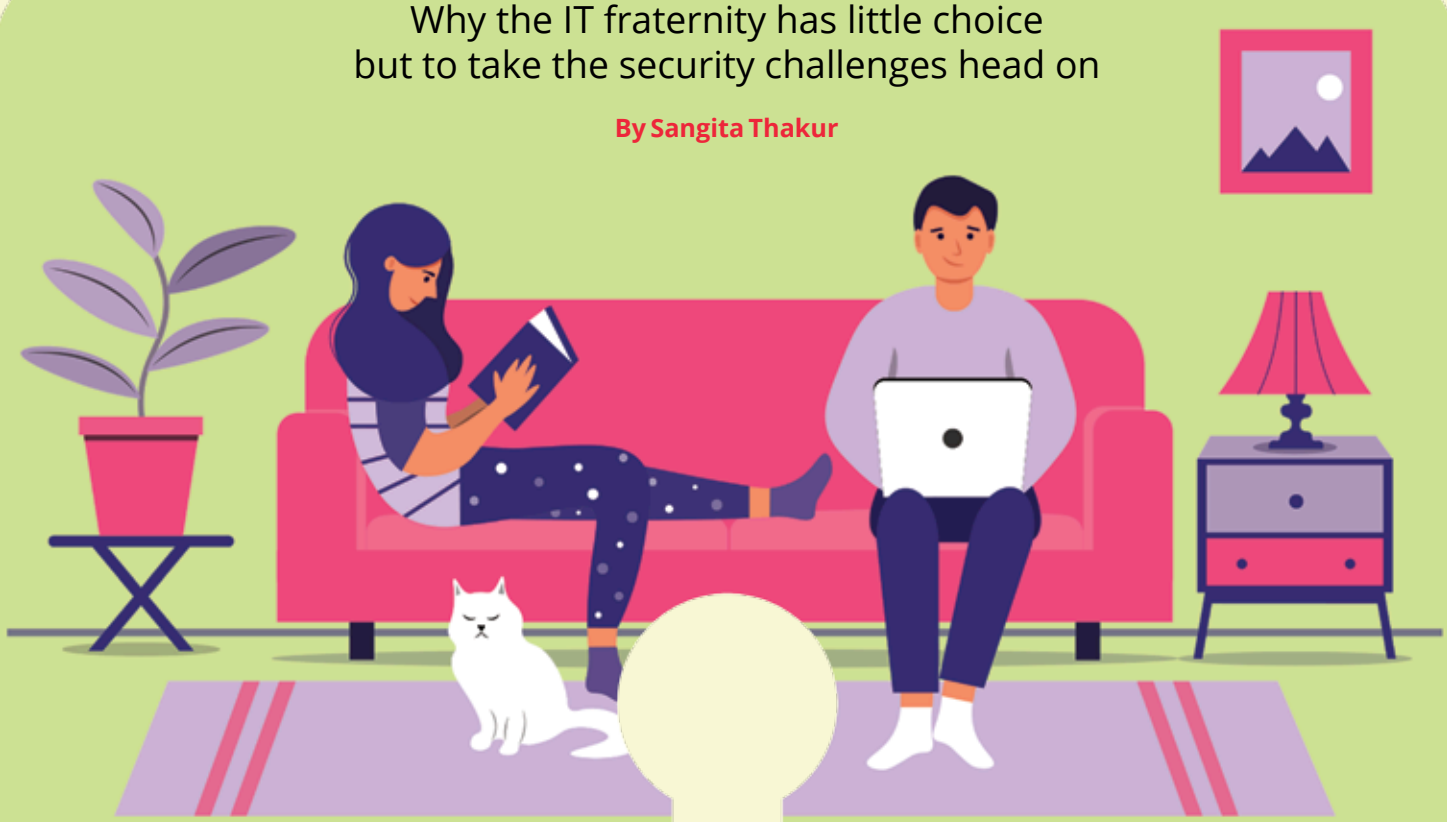
Snapshot

Rajavali IC is Assistant Vice President - IT at JSW Severfield Structures. He has been a NEXT100 Winner in 2018. Rajavali had also served in companies like Doosan Infracore, HCL Comnet and Softbrands (India). He completed his Masters in Management Studies and MSc in IT. He holds a certification in ITIL.

WFH, The New Normal & Security First

Why the IT fraternity has little choice but to take the security challenges head on

By Sangita Thakur



Finally, in India, as elsewhere in the world, governments are giving in to the demands of a ravaged economy and have opted for staggered opening. India's Lockdown 5.0 that kicked off on June 1 is certainly different from the previous versions. What is also different is the sentiment of the people. Workplaces are opening with a lot of mandated and self-mandated precautions in place to safeguard employee health. But the sentiments of white-collar and blue-collar workers at best remains cautious. Those who have been working from home are requesting an extension to continue so. Organizations too are hesitant to call them back. Lockdown or no lockdown, the workplace seems to have changed forever – becoming online and remote. As WFH becomes the new normal, there are security challenges. Based on the various surveys that have been published on the security concerns arising from the remote working environment and the fact that many are thinking of moving at least a large part of the workforce to a WFH regime permanently, it is not an either-or situation. The security has to be tackled head on.

Preparing for a new work order

IT leaders, it seems, had foreseen this eventuality. In a Citrix survey that polled more than 3,700 IT leaders in seven countries at the end of May, more than three-quarters said they were expecting a majority of workers to be reluctant to return to the office as it was. Expecting this shift in workers' demands for more flexible ways of work even after the pandemic, 62% said they are expediting their move to the cloud. If we needed any further proof that WFH is here to stay, take a look at these finding from the survey – 62% of respondents are exploring downsizing physical infrastructure and transitioning to a cloud model; 42% are anticipating they will need to introduce digital workplace platforms and 44% are looking to public cloud services to facilitate long-term remote working.

COVID-19 put to test IT teams across industries as the continuity of the business became dependent on their speed and skill to deliver digital work environments. To their credit, IT leaders held their own under the spotlight and succeeded in making this challenging switch. But the time to sit on these laurels is not now.

Challenging times ahead

Facilitating work from home for entire workforces was surprisingly easy for the majority of IT leaders, especially as most had put in place technology that enabled them to collaborate in the WFH environment. For others though it was not a cakewalk in the absence of a business continuity plan that supports WFH for the entire workforce and it was challenging to make the switch.

The pandemic heightened the concerns around security and COVID-19 was the litmus test – testing the security control and policy of organizations. Information security has become the top challenge in the pandemic, giving sleepless nights to 'WFH warriors' – the IT teams. Adding to the concerns is the spike in employees installing unsanc-

tioned software, and unscheduled virtual personal network (VPN) shutdowns; issues that need to be tackled urgently.

Ensuring security of home network of employees scattered across geographies is not an easy task especially as ransomware, phishing and social engineering attacks have seen a spike. IT teams also need to keep remote systems configured securely and compliant. For many top IT brass, their inability to secure employees' home office environments, manage the diverse devices connected to corporate networks and gain visibility into remote assets and systems have become stressful in the backdrop of rising incidents of security breach. As early as April, 63% of IT leaders polled by Tripwire had reported spike in COVID-19 related attacks.

In most of the studies around WFH security so far, securing network access is consistently a top concern for IT teams, as is the security around personal devices. Enterprises are also concerned about securing access to SaaS apps and cite malware and unauthorized user access as the top threat vectors.

Various reports show that many organizations are yet to take steps to implement security measures to protect their data in the remote work environment. Pressured to ensure business continuity, many just accelerated the migration of user workflows and applications to the cloud without deploying the requisite cloud security solutions. With 84% organizations likely to continue WFH, as per a report; the absence of adequate security around remote work capabilities is a ready recipe for disaster.

Businesses are still struggling to adjust to the new normal, says the Bitglass' 2020 Remote Work Report. The analysis carried out in partnership with a leading cybersecurity community, surveyed IT leaders to understand how their organizations have adjusted to the new normal, how prepared businesses were for the sudden shift, what actions they are taking in cybersecurity, and what their top security concerns are now. Alarmingly, 41% of the organizations in the survey have not taken any steps to expand secure access for the remote workforce, and 50% are facing challenges in implementing it due to lack of proper equipment. With 65% of organizations enabling personal devices to access managed applications, the fragile security infrastructure is a huge concern.

Rising attacks on corporate cloud accounts in WFH

Remote working environment led to increased use of cloud services and collaboration tools by enterprises. A research study, titled 'Cloud Adoption & Risk Report – Work-from-Home Edition' published by McAfee in May finds there is a direct correlation between this and the increase in cyberattacks targeting the cloud during the pandemic. The report says, worldwide, between January and April, there have been significant and potentially long-lasting trends that include an increase in the use of cloud services, access from unmanaged devices and the rise of cloud-native threats.

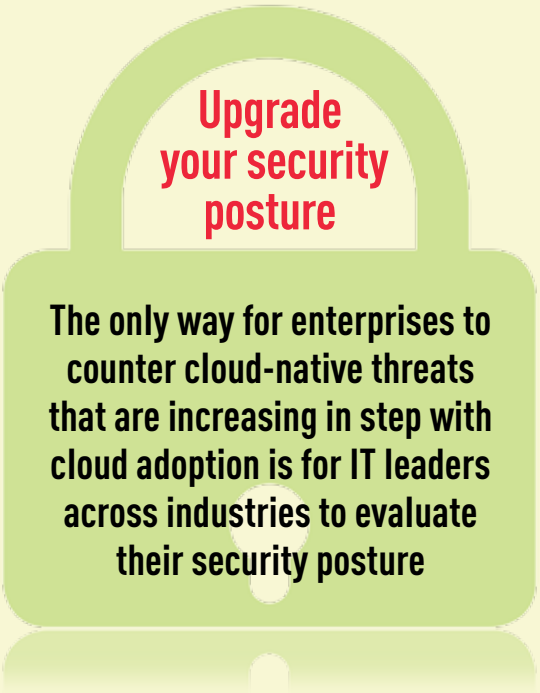
In the period under study, the overall enterprise adoption of cloud services rose by 50%. Industries, such as manufacturing and financial services that typically rely on legacy on-premises applications, networking and security more than others, were also forced to adopt cloud services to enable WFH. As IT teams raced to enable online collaboration of teams in the WFH environment, use of cloud collaboration tools increased by up to 600%. The education sector was the biggest adopter of collaboration tools as classes went online and remote.

During the period, threat events from external actors increased by 630%. The main target of these external attacks were collaboration services and were large-scale attempts to access cloud accounts with stolen credentials. Companies can heave a sigh of relief that there was no rise in insider threats during the pandemic, which indicates that employees can be trusted to work in virtual offices. However, access to the cloud by unmanaged personal devices doubled, adding to the challenges of security professionals.

The findings underline the need for IT leaders to develop new security delivery models in the distributed WFH environment. IT leaders have displayed exemplary courage to overcome the restrictions placed by the pandemic on businesses. Unfortunately, for the bad actors the pandemic generated WFH environment has presented a ready opportunity to exploit. The sudden uptick in cloud adoption without commensurate security measures has created a fertile environment for attacks.

Time to strengthen those firewalls

On-boarding to a remote workplace was perhaps the easier part. Ensuring that WFH continues smoothly and securely is the real challenge. Gauging the future needs, some IT leaders are revving up the digital engines to implement solutions for the long haul and to tackle the challenges that the new regime has thrown open.



The focus needs to shift from enabling remote working to implementing secure remote working capabilities. The only way for enterprises to counter cloud-native threats that are increasing in step with cloud adoption is for IT leaders across industries to evaluate their security posture. Measures to protect against account takeover and data exfiltration must be the priority. IT leaders must look at implementing cloud-native security solutions with the ability to manage remotely for detection and prevention of external attacks and data loss from the cloud and from the use of unmanaged devices.

Given the critical nature of financial institutions, the security teams seem to be ahead of the curve in securing their companies. The Financial Services Information Sharing and Analysis Center (FS-ISAC), an industry consortium dedicated to reducing cyber risk in the global financial system, reports that 75% of cybersecurity professionals representing financial institutions around the world made dramatic changes to their firm's cybersecurity programs to cope with the rapid shift to remote work. FS-ISAC had polled 871 cybersecurity professionals from financial institutions around the world at its Virtual Summit on May 19.

As threats mount, this must become the norm for all enterprises that have sizable workforce working from remote offices.

Security-first model: Need of the hour

The patchwork approach to cybersecurity adopted for the lockdown period will not help in the long-term remote working environment. The legacy datasecurity approaches are at best piecemeal and make the task harder. As the third-annual Oracle and KPMG 'Cloud Threat Report 2020' that studied 750 cybersecurity and IT professionals across the globe found, a patchwork approach to data security, misconfigured services and confusion around new cloud security models have created a crisis of confidence among IT leaders. The report found 78% of organizations use more than 50 discrete cybersecurity products to address security issues and 37% use more than 100 cybersecurity products. Organizations that discovered misconfigured cloud services experienced 10 or more data loss incidents in the last year. In 59% of organizations, employees with privileged cloud accounts have had those credentials compromised by a spear phishing attack.

Make security your DNA

In the new norm, IT teams need to work with cloud service providers to build a security-first culture. Organizations will need to build a team of skilled IT security professionals...

Security must be part of the cultural DNA of the business to be able to address increasing data security concerns and trust issues. In the new norm, IT teams need to work with cloud service providers to build a security-first culture. Organizations will need to build a team of skilled IT security professionals, while constantly improving processes and technologies to mitigate threats as cloud consumption grows creating new blind spots. Reactive responses to a cybersecurity incident may help save a situation, but it will not secure the vulnerabilities. Organization-wide security policies will have to be enforced covering expanded remote workforces as organizations upgrade to enterprise-grade security. ■

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Locked But Not Down

Are we ready to take up the upcoming challenges in Indian manufacturing?

By Vipul Anand

Lockdown is the word we never thought would suddenly become so popular in our corporate and social lives. There is hardly anyone across the world who has not heard this word now and is probably not experiencing the same.

However, when it comes to the IT fraternity, we can say they are "locked but not down." The kind of demands and workloads which suddenly came up to the IT fraternity, be it the CIOs/ IT Heads, their IT teams or OEMs and partners was humongous and hats off to the efforts made by them to facilitate WFH (Work from Home), business continuity and audio video and ERP connects, etc.

This has indeed brought up many new challenges and learnings and therefore there is a need to revisit the thoughts and approach our corporates have towards the IT function.

It is now clear that IT is not only a business-centric support function but is a must-have business need and therefore organizations have to revisit their technology landscape and have to plan to ensure that they have the right technologies, tools, processes and people to facilitate the new norms of running their business in the days to come. This would require them to peep outside their own organizations and hire the right

While the national lockdown provided us the most important thing we all wanted, that is time; there is a need to learn, unlearn and relearn to handle the new norms and collaborate

tech partners to come and help them revisit and redesign and re-implement their IT setups to cater to the business needs.

We have been talking about the suitability of technology tools to the organization needs and the need to ensure that the business users are trained to use the tech-tools and the fact that you should always test and keep your Business Continuity Planning (BCP) and workloads ready for high volume use – all this has become evident in the recent times and will have to be further ensured and strengthened in the days to come.

India is a land of rich cultural heritage, hardworking, educated, English-speaking young population with innovation and creativity embedded in them, all this is going to come up to help rescue the situation to overcome the business needs post-Covid times. As is being talked about, India is poised to become a strong manufacturing base to cater to the world's upcoming demands and it is being forecasted that Indian corporates will have to rise up to cater to these demands and technology induction will become the must-have part of erecting a strong manufacturing base.

However, the irony of the situation is that India is dependent on external world when it comes to tech products – look at any area of technology, whether it is in communications and networking products or ERP or products from Microsoft, Google and the likes, etc. While all these OEMs aspire to have Indian customers to cater to their revenue targets, there is now a need that Indians should focus on innovation and design, produce world-class tech products and manufacture them to help us become self-reliant in our tech needs.

Our government is well focused and supportive on this. The recent reward scheme announced to create an Indian audio-video conferencing product and multiple other government promotions and schemes are part of motivation efforts our government is making to wake up Indian tech folks to help execute these challenges.

Also the new normal post-Covid will require us all to induct technology solutions like hybrid cloud, apps modernization, containers, smart cities, smart communities, device form factor change, quantum computing and Artificial Intelligence (AI) and Big Data in various domains and therefore Indian tech folks have to be ready to raise the bar on putting their collaborative efforts to make our industry tech-heavy on all this.

While the national lockdown to contain the spread of coronavirus provided us the most important thing we all wanted, that is time; there is a need to learn, unlearn and relearn to be ready to handle the new norms and to collaborate with each other to form startups and communities to help cater to the upcoming tech demands.

Almost all big tech OEMs and partners we interact with are more interested to find out about the new demands as also the execution skills and innovation being displayed by startups and most of them already has a startup ecosystem in place. The need of the hour is to capitalize on this industry need and be ready to act and display our execution capability.

It is evident that in the immediate time to come, India will find huge opportunities to grow and execute in the space of manufacturing and tech demands and therefore lockdown should be utilized to strategize and plan our capabilities to help cater to these demands of our corporates and society now and in the times to come. ■

The author is Domain Leader - Hi-tech IT & Tech at Praxis Global Alliance

Adaptability Is The Key To Face This Challenging Situation

These challenging times will help you separate partners—who can stand with you in this lean period—from vendors

By Chander Khanduja

There is no denying that the COVID-19 pandemic—the way it came and impacted our daily lives, business and economy—is unprecedented; we have never seen something like that in our lifetime.

But responding effectively to a challenge is not necessarily dependent on how big or new the challenge is or whether you have successfully anticipated how it would impact you. Rather, it depends on how adaptive you are.

As Darwin said, it is not the most powerful—but those who can adapt to change effectively—would survive.

Adaptability is in the DNA of the CIOs. Experienced CIOs have seen and faced many such challenges in the past, whether it was Y2K or natural disasters.

You cannot foresee and plan exact details for each such possible scenario, but you can make yourself so adaptive that you can quickly adapt to new situations.

So, it didn't take long for most CIOs to respond to the unique, unprecedented challenging situation in the wake of COVID-19.

It was a question of survival for many businesses. More importantly, it was a question of survival of our lives, our economy. Imagine if the logistics companies or pharma companies or essential goods manufacturers would have stopped their operations! It is technology that kept them—and the country—running.

Getting everyone remotely connected was the first basic challenge and various options of collaboration platforms like MS Teams, Zoom, Google Meet and WebEx were put to use. Security is the key issue once everyone is connected. Remote monitoring, filtering, restricted access management were all part of the CIOs' plans to ensure smooth transition of work from office to work from home.

There is much discussion around if CIOs' roles have changed post-COVID. I don't think the role per se has changed but challenges have surely increased. Value of digitization is realized now across sectors and expectation is for faster solutions. The main challenge which CIOs have is to do more with lesser budgets as all industries are facing challenges of business growth. So smarter CIOs, like a smart housewife, have to make a dish with whatever is available in the kitchen. Cloud and remote connectivity are two pillars for any ongoing digital journey which has to be planned by IT departments.

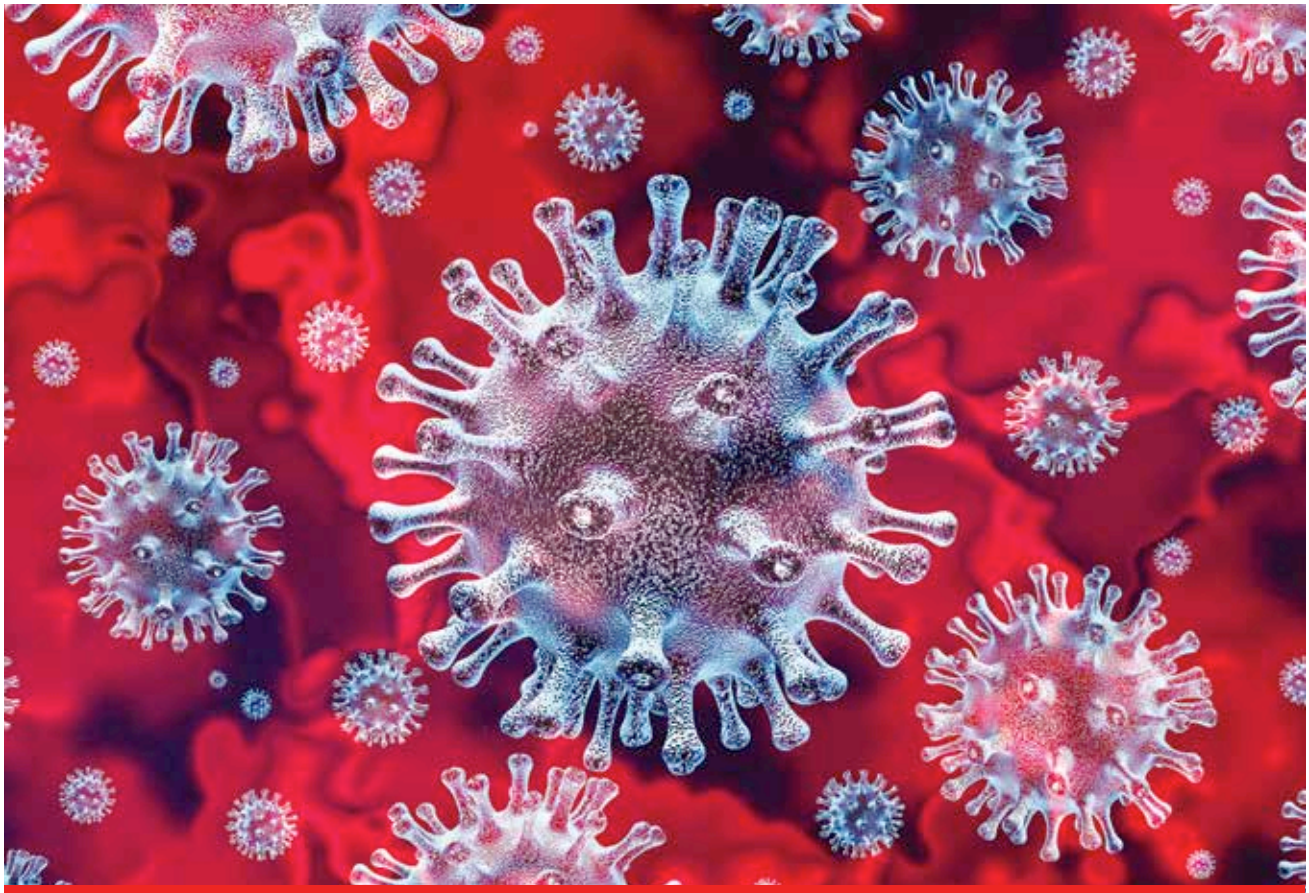
Today, we see many vendors claiming to have all the solutions for BCP, post-COVID world and so on. But I feel it is time to test the commitment

Today, we see many vendors claiming to have all the solutions for Business Continuity Planning (BCP), post-COVID world and so on. But I feel it is time to test the commitment. Most vendors have called themselves partners.

The word partner will be put to test now. You will realize in this situation who are your vendors and who are your partners. Companies invested in technologies and keeping in view expected growth, platforms were ramped up. Now the challenge is: are your partners/vendors ready to support you in ramping down for the lean period?

Now, the challenge is that most of the partners will try to offer freebies but the task of all CIOs across industries is to help in reducing operating cost. Hence, the concern is that if a partner acts like a vendor, many digital platforms which are not financially viable presently will be phased out and they will be replaced by low cost options. Hopefully, good sense will prevail in large ERP, Cloud, Connectivity providers to ensure they have long-term strategic relationships as part of their vision. ■

The author is CIO at Luminous Power Technologies



Preserving Business Continuity During Coronavirus Pandemic

Organizations need to test continuity plans and 'what-if' scenarios, have a ready-to-implement incident response plan and take a 'Zero Trust' approach

By Nikhil Taneja

As coronavirus outbreaks continue to spread worldwide, consumers and businesses are turning to the internet for their personal and business needs. In our heavily digital world, this is a logical next step – after all, we can work from home and have everything from groceries to medicines delivered to our doorsteps.

Indeed, we're seeing a sharp increase in online commerce. In China, for example, as people are stuck at home waiting out the pandemic, delivery companies are struggling with surges in orders. As per CNBC, "about 20,000 delivery people were manning an average of more than 400,000 orders a day from takeout platforms, Meituan and Elema."

This presents a logistical nightmare for manufacturers and delivery services...and offers a tremendous opportunity for hackers to disrupt countries' entire logistics industries and economies.

A Dangerous Domino Effect

Coronavirus is changing how the global economy operates. As people's behaviors shift and businesses implement remote work policies, the ensuing online traffic surges create big problems. Namely, online systems' availability and performance are taking a hit, and threat actors are opportunistically launching cyber-attacks.

As Digi day reported, businesses are under extreme pressure to fulfill online orders, which threaten 'to upend their e-commerce operations"; in February, executives from Proctor & Gamble told shareholders that the virus-related demands are putting significant pressure on its e-commerce business.

Now, heap cyber threats – like ransomware, DDoS attacks, and malware – on top of buckling e-commerce platforms and strained supply chains, and we have a recipe for disaster.

Heed the Lesson from Down Under

Even under the best of circumstances, when systems are working as they should, load balancing and application delivery performance are challenging. Throw in a large-scale attack, like the one Toll sustained, and the ripple effects are far-ranging and long lasting. The increasing sophistication and resources of threat actors can overwhelm an IT organization despite all their best intentions.

Under today's emergent conditions, such attacks on critical infrastructure can downright cripple an economy and even threaten the well-being of large swaths of the population.

Prepare for the Worst

It's always a good idea to be as prepared as possible. Even in the throes of an unanticipated crisis like coronavirus, there are steps that organizations can—and should!—take to preserve business continuity. For example:

- **Assume it is going to happen to you**. Better to prevent and mitigate than react in the midst of crisis. The cost to remedy and the impact to future business – reputation and revenue loss, and broken trust are truly best avoided.
- **Test continuity plans and 'what-if' scenarios.** Perform a dry run with the organization working remotely to prepare and adapt.
- Have an incident response plan ready to implement.
- **Don't go it alone.** In planning or responding to a cyber threat, call in the experts to partner with your organization.

Taking a 'Zero Trust' approach is absolutely critical; organizations simply can't rely only on human behavior to protect their networks and data, especially when facing the perfect storm of a global pandemic and opportunistic threat actors

And – I can't emphasize this enough – taking a 'Zero Trust' approach is absolutely critical; organizations simply can't rely only on human behavior to protect their networks and data, especially when facing the perfect storm of a global pandemic and opportunistic threat actors.

Perhaps at no time in history has the availability, resiliency and integrity of our online systems been more critically important to society. It's not too far a stretch to declare that lives may depend on it.

Stay safe, wash your hands and remember every second counts. ■

The author is Managing Director - India, SAARC & Middle East, Radware

Giving Law A Digital Edge

Advanced legal research tools are reducing lawyer workload and helping streamline legal processes

By Karan Kalia

When a lay person thinks about lawyers, the image that comes to their mind is of a black coat arguing his case vociferously in a court of law. However, argument or making a case in front of a judge is just a fraction of a lawyer's job. What lies behind that one appearance in court is a humongous amount of research, analysis, fact-finding and sifting piles of case histories to find precedents that resonate with his/her argument. Legal research is an indispensable part of lawyers' jobs and is fundamentally important to their success. Not just practicing lawyers, research is the central tenet of the job of consultants as well. Understandably, conducting impeccable research is the most time-consuming component of legal processes. Often, newspaper reports tell us the story of judges lambasting counsels for preparing half-baked cases. Most such instances of ill-prepared lawyers have their origins in ineffective research.

Inefficient research is a drag on legal processes

Not only does inefficient research eat up into valuable time, it also escalates the costs. When research is largely manual or based on inefficient digital tools or databases, it also impacts profitability of law firms. In a survey on 'Adapting to the Changing Legal Landscape' conducted across 163 law firms in Australia and New Zealand in 2016, respondents were asked about what were the key process challenges at their firm. While 41% said manual processes, another 37% cited inefficient processes as major challenges. Similarly, 28% also cited outdated and old-fashioned processes as a challenge. A highly competitive legal space and increased pressure on law research-

ers has in recent years generated a greater demand for better legal tech solutions to make research more efficient and smoother. Streamlining legal research through efficient technology backed solutions is therefore a critical need cutting across the legal spectrum. With research work consuming a lot of time and energy of lawyers, new age digital technology is now focusing on simplifying legal research and making it easier and more effective using advances ushered in by artificial intelligence and machine learning.

Giving legal research a digital reboot

In a survey conducted among attorneys in the US by The Research Intelligence Group, law firm associates said they spent nearly a third of their working hours conducting legal research, or about 15 hours per week on average. Much of this research was said to be conducted online using a variety of sources. Indian researchers also spend considerable amounts of time in research. While digitization has served to make a large amount of court documents and case histories available online, there is still much scope of encouraging use of advanced AI-based search engines that dramatically improve efficiency of research and improve productivity.

Advanced legal research tools cutting research time and cost

Among the most basic requirements while conducting legal research are availability of digitized database, finding the leading cases governing the issues in question, thoroughly studying the statutes and regulations governing the subject and studying commentaries or interpretations of those laws in previous judgments. Since the advent of computer technology, lawyers and other legal researchers have increasingly turned to digitize the core areas of their work. However, searching digital databases for relevant inputs, case histories and case laws remains a major challenge as traditional search engines do not have the capacity to understand wider legal requirements based on keywords.

Advanced AI-based legal research tools are fast emerging as the panacea for this problem and helping researchers reduce workload and save precious time and costs by delivering more relevant search results based on keywords. A study conducted by the attorneys of the US National Legal Research Group found that switching to an AI backed solution saved an average lawyer 132–210 hours of legal research per year. AI-based legal search engines help lawyers find any case by simply typing the case citation, party name, judge name or anything as free text which is part of the case to get favorable results.

Another critical ingredient to any case research is case law which is the sum total of all the past legal decisions given out by courts based on the interpretation of existing laws and regulations. Knowledge of case law is essential as it contains legal precedents upon which lawyers can build their case. Nonetheless, getting to this information can seem like an arduous and time-consuming task especially when the data they are referring to is unstructured and complex. Utilization of machine learning in legal search engines allows users to get Issues, facts, decisions, reasoning's, arguments as well as case findings pertaining to their case. It also enables the user to take specific portions of judgments which they want to specifically analyze and study.

Advanced AI-based legal research tools are fast emerging as the panacea for this problem, helping researchers reduce workload and save precious time and costs

Visual Depictions and Infographics to boost readiness

It is very well known that visuals leave an everlasting impression on the human mind when it comes to learning and memorizing as they are easier to recall and associate with when one has to summon the information at will or as in the case of lawyers during trial. Data analysis of cases is easier with visuals as they present statistics in pictorial as well as graphical form. The use of histograms, pie charts as well as tables organizes the information of overruled, distinguished, followed and relied upon case laws in relevant figures that are easy to refer to and understand ■

The author is Founder, LegitQuest

Leap Into The Future: COVID-19 Crisis Is Forcing Organizations To Reinvent Themselves

Adaptability remains the key to survival and organizations that display quick adaptability are the ones that will succeed in staying afloat over the long term

By Dr. Vivek Bindra

Till as early as February, most companies were busy planning their long-term business strategies, setting ambitious growth targets and launching new products. However, an unforeseen force majeure event has brought all those ambitious plans and targets to a naught. The sudden turn of events unleashed by a global disease outbreak has forced organizations to hit a pause and reset button. While uncertainty prevails over what the future would entail, what is clear is that it would be starkly different from the world we have known. Until a vaccine is made available to counter the virus, the requirements of social distancing and the need for restricted movement will have to remain in place, even if blanket lockdowns are removed.

Shift in Mindset

- These tectonic changes have forced a major churn in organizations across industries. The need to stay relevant in the changing times is propelling a major transformation.
- Companies are preparing for the

new normal by challenging and changing their core organizational behavior, hierarchies and offerings.

- Come to think of it, organizations that were extremely wary of allowing work from home to their employees have suddenly devised functional strategies to make remote working and remote client servicing a reality.
- Companies that were conventionally slow in adopting automation are not vying for co-opting the latest available technologies.

Shifting Business Models

- With most economic activity on hold, many companies have suddenly found their products and services staring at a near zero demand. With their offerings rendered irrelevant, many startups and established companies have been forced to quickly reconfigure their product offerings and transform their business models.
- Given the fact that the current demand comprises only essential items and coronavirus-related equipment, many organizations have shifted to manufacturing PPEs, masks, sanitizers and essential grocery items.
- To cite just one example, Wow! Momo Foods, an organization that runs two Quick Service Restaurant brands has quickly announced the launch of its grocery service 'Wow! Momo Essential Services'. Such business decisions are being made everywhere to stay relevant during the time and keep earning revenues.
- Adaptability remains the key to survival and organizations that display quick adaptability are the ones that will succeed in staying afloat over the long term.

Technological Automation and Robotics come to the fore

- As organizations look to increase efficiency, improve outcomes and optimize costs, they are proactively considering increased adoption of technological automation and robotics. Increased automation helps organizations tide over the shortage of skilled labor while helping decrease manufacturing costs and keep up the cost advantage.
- According to a market research, the global traditional industrial robotics market size is expected to grow from USD 44.6 billion in 2020 to USD 73 billion by 2025. Greater use of automation also allows manufacturers to maintain the norms of social distancing for their workers, paving the way for safer and unhindered production.
- Going forward, we will witness an increase in the adoption of Artificial Intelligence and cloud-based solutions not only in large organizations but also in small and medium-scale enterprises. Increasingly, SaaS, IaaS, and PaaS solutions would be used to improve customer relationship management and enterprise resource management, among other functions.

Within the catastrophe perhaps lies an opportunity and businesses need to rise to this challenge and build and adopt new ways

Remote working to be the New Normal

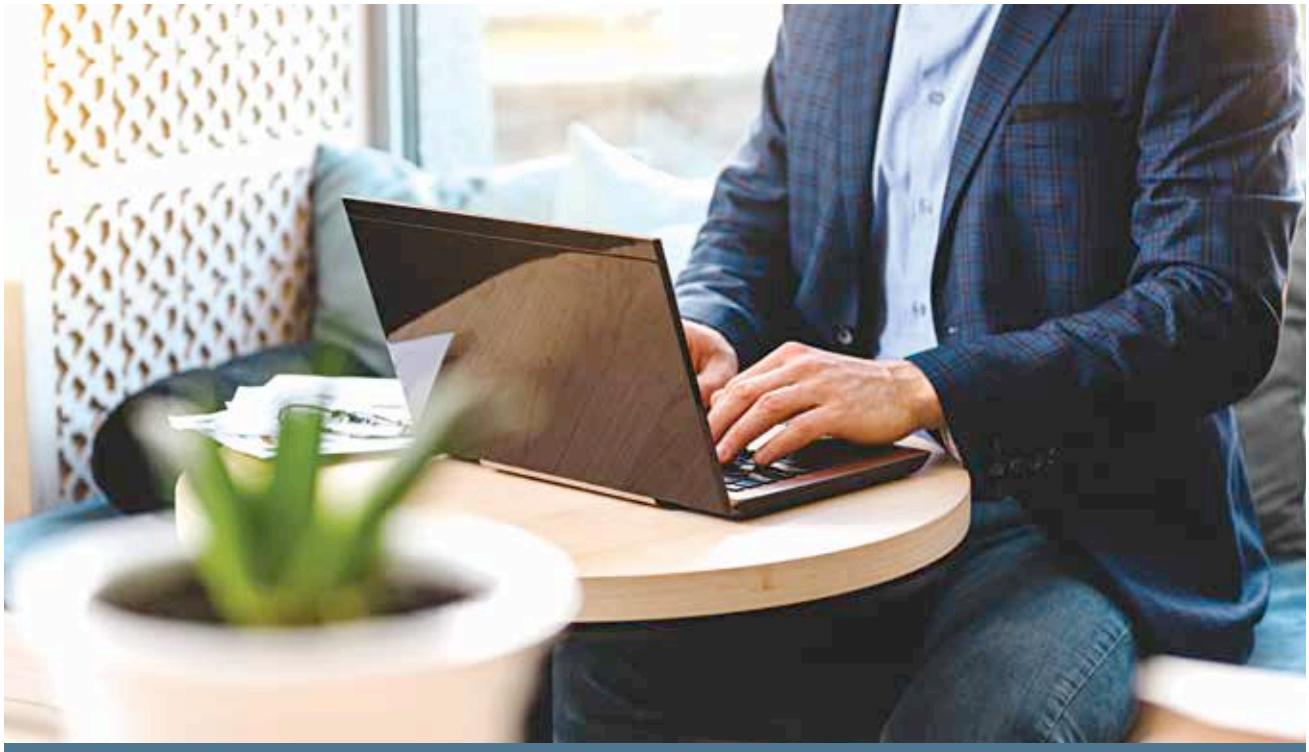
- The pandemic has also revolutionized the way we work as it ushers in a series of behavioral shifts. IT giant, Tata Consultancy Services has announced that it is working on a plan to allow as much as 75% of its workforce to work from home by 2025. This implies that the organization will need just 25% of its workforce to work at the office.
- With the pandemic normalizing work from home, we are likely to witness a greater acceptance of this practice going forward. Organizations will also realize that this arrangement saves costs by reducing the need for office space and other office infrastructure. This will also help reduce the drop-out rate of women from the workforce.
- Remote working is further expanding the scope of remote access to everything and greater security against cyber crimes.
- Increasingly office-less organizations will become common as businesses starting up over the next year will find such a working model viable. A lot of other daily functions have also turned virtual during this pandemic. Be it customer relationship management, client pitching or meetings, we have realized that remote working can be as effective as the conventional mode which was practiced before Corona. It can even be more effective as it increases employee productivity by eliminating the time and hassle of travelling to work daily.

Flattening Hierarchies

- A non-conventional work setting where a bulk of the workforce is operating from home and is connected remotely, will give way to a more democratic work culture than the traditional style of reporting to a manager.
- As employees take collective responsibility of managing the crisis, the need for micro management has evaporated and the managers are increasingly assuming the role of coordinators and partners. This flattening of hierarchies is another cultural shift that is likely to stay even when the pandemic ebbs.

Within the catastrophe perhaps lies an opportunity and businesses need to rise to this challenge and build and adopt new ways of working to sustain in the post-Corona world. ■

The author is Founder & CEO, Bada Business



Future Of Workspaces—Substantial Changes Might Not Take Place

We are comfortable working from home only because we feel certain that it is just a temporary substitute. How comfortable would you be even imagining working remotely forever?

By Rami Reddy

Every humanitarian crisis disrupts the way certain things are carried out and sets precedence for a new order. The Covid-19 public health emergency has changed the way we greet each other, interact with others, learn and work. Working from Home has become the new order during the lockdown. Dining tables turned workstations and we are reinventing ways of managing teams, scheduling the work, using e-infrastructure, ensuring data privacy, etc.

While there are some associated benefits, some challenges could mean that remote working will not be the future of workspaces in India and that the activity returns to normal.

In a webinar snap poll conducted by Gartner, 91% of the attending HR leaders from the Asia/Pacific have reported that lack of technology infrastructure and lack of comfort

with new ways of working are the biggest challenges of working remotely. Based on some articles and research work I have come across recently and from my personal experience, I'm highlighting the key challenges to working from home:

The Human Nature

We are social beings. In a research titled "Does working from home work? Evidence from an experiment", 2/3rd of the control group, who had earlier opted for working from home, has decided to return to office citing concerns over the loneliness of working remotely. Workplaces are more than just working on the spreadsheets. It's the entire culture and values of people we work with. Zoom interactions cannot replace face-to-face conversations, complex team dynamics and collaboration which make work more exciting. Popular journalist Henry Grabar made a point about "Psychological Safety" in 'The Future of Work' webinar. He says that we feel more comfortable while expressing ideas to our co-workers and that the remote communication reduces the psychological safety.

Building strong relationships, maintaining company culture and motivating employees are hard to achieve without physical presence. We are comfortable working from home only because we feel certain that it is only a temporary substitute. How comfortable would you be even imagining working remotely forever?

The struggle with unplugging

Working from home changes the daily schedules drastically among the majority. As per a survey conducted by Buffer, most remote workers struggle with unplugging from their work. Staying logged in way beyond routine work hours has become common. Working for considerably longer hours in isolation can affect the health of an individual. A research report titled "Working anytime, anywhere: The effects on the world of work" by the ILO (International Labour Organization) has data from 15 countries including India and sheds light on risks associated with working remotely. It lists longer working hours, higher work intensity and work-home interference as some of the major concerns. 41% of remote workers felt high stress levels while it was just 25% among those who work from offices. 42% of people who work remotely suffered from insomnia as compared to 29% of people who work from offices.

Working from home changes the daily schedules drastically among the majority...most remote workers struggle with unplugging

The Infrastructure

It is true that majority of the young Indian employees have migrated to cities and live in hostels and other paying guest accommodations. These shared living spaces don't provide a quiet workplace environment and the challenges pertaining to high-speed internet, availability of power-backup, etc., will hamper the productivity.

Data Privacy

Several Indian IT companies deal with sensitive data of their clients varying from financials to health records. These operations are carried out in highly secure workplaces. Working remotely and having access to this data will only increase the data security risk.

Productivity

As per results from the Gartner snap poll, top employee complaint was about their managers concern over their productivity. A research says that face-to-face work teams perform better than virtual ones on creative assignments. Moreover, as stated earlier, distractions and infrastructure challenges could reduce the productivity of many employees while working from home.

Though working remotely has benefits like lower commuting stress, reduced costs of maintaining office spaces, decreased pollution levels, and reduced travel, the challenges listed above might not let the future of workspaces change significantly for many of us. ■

The author is Head - IT, Dr. Reddy's Foundation and NEXT100 Winner 2018

4 Pitfalls That Could Stop Your Endpoint Backup Solution From Being Truly Good Enough

As backup risks and challenges continue to increase, it is important that organizations are mindful of data protection and management

By Bakshish Dutta

As backup risks and challenges continue to increase, it is important that organizations need to ask certain questions with regards to data protection and management. Is your business-critical data fully restored and protected across devices if ransomware strikes? How quickly can you recover the data in case of a device theft? Do you have control over the sensitive data if an employee departs the company? Are you mistakenly relying on cloud-syncing services as your only backup tool? Answers to these questions may help you recognize that your endpoint backup solution might not be truly "good enough."

While there are some associated benefits, some challenges could mean

that remote working will not be the future of workspaces in India and that the activity returns to normal.

Let us look at the four main pitfalls that will help you better evaluate your endpoint backup solution.

1. Overlooking risks to business-critical data during employee departures:

There have been several instances when employees leaving an organization may delete, hide, or tamper with important data. Often these risks are overlooked, especially for those who work remotely for the company. If these corrupt activities could have started months prior to the departure, then without a proper backup solution, there is no way to provide comprehensive data protection or conduct thorough data investigations.

2. Neglecting data protection best practices for remote workforces:

During any type of emergency, your organization needs a way to recover the data while keeping productivity on the move. During the current unforeseen situations like the outbreak of the COVID-19 pandemic, more employees are working remotely and using new platforms without understanding remote working best practices around data protection. For instance, someone may accidentally download ransomware on their laptops and unknowingly infect the entire organization, inadvertently expose confidential enterprise or customer data, and unintentionally lose or damage their devices.

3. Undervaluing the impact of ransomware:

Now-a-days, ransomware attacks are getting more sophisticated by the minute and can impact all of your employee devices (across multiple locations) that are left vulnerable without proper endpoint backup. With hackers constantly employing new social engineering strategies and turning this form of intrusion into its own

Many organizations have a risky misconception that cloud-syncing services provide sufficient endpoint backup and restore capabilities for their enterprise data

mature industry, endpoints are particularly at risk. It is important that companies start thinking about incorporating ransomware recovery into your endpoint backup strategy. This way, they will be fully prepared for ransomware — and avoid spending billions.

4. Relying on cloud-syncing services alone for endpoint backup:

Many organizations have a risky misconception that cloud-syncing services provide sufficient endpoint backup and restore capabilities for their enterprise data. However, it exposes the organization to multiple risks like ransomware, device loss, data corruption, insider threats, and liability exposure of not meeting legal hold, eDiscovery, and compliance requirements. Rather than relying on cloud-syncing services alone, a good place to start would be to consider partnering with a third-party endpoint backup solution.

What should be the way forward?

Being mindful of the key pitfalls outlined above has several other benefits besides preparing your organization for the risks and challenges. First, it will help you to satisfy larger business initiatives, such as readiness for eDiscovery and data governance — which will ultimately lead to increased organizational agility and efficiency. Second, partnering with an industry leader to help your IT organization close the gaps in endpoint backup. And third, your business-critical data will be protected no matter where your devices go, without impeding user productivity ■

The author is Country Manager - India & SAARC, Druva

Organizations Will Need To Stay Focused On Improving IT Security In 2020

With the influx of non-traditional workers and their many remote devices, companies will need to make security a priority, as well as implementing solutions to help track and monitor these devices

By Rajesh Ganesan

Thanks to new technologies and new applications of established technologies, the way people work will continue to change in 2020. However, securing these technologies will be high among the list of priorities for organizations. Read on for the security-related trends that will dominate the year ahead.

In 2020, IT departments and organizations as a whole will need to implement a more proactive stance on compliance and understanding of these privileged accounts, as the people with the most credentials and access, often are not the most tuned in or compliant, due to lack of pure understanding or training resources provided by the company's experts – their IT

End Point Protection Will Assume Significance

As the number and types of end point devices rapidly proliferate and become 'smart powered' by software and connectivity, they become critical targets and vectors for external attacks. As the threat landscape evolves to exploit sophisticated capabilities in the endpoints, so must the protection techniques. In 2020, we'll see techniques such as data loss prevention (DLP), which prevents users from leaking critical information intentionally or otherwise, and endpoint detection & response (EDR), which continuously monitors events, detects threats, performs investigation and initiates response all within the endpoint gain prominence.

AI Security Will Be An Important Investment

While AI is all set to grow in adoption across the enterprise, it also brings new threat vectors that can be exploited to cause significant damages. Enterprises would have to understand the AI security trends and the types of possible attacks, besides ensuring that the AI models are free from algorithmic biases. This requires them to make sufficient additional investments to make AI work optimally for them.

Privileged Accounts Users Need Better Education

With the ever-changing IT landscape, those with privileged access credentials are also among those with the highest risk of cyberattacks. In 2020, IT departments and organizations as a whole will need to implement a more proactive stance on compliance and understanding of these privileged accounts, as the people with the most credentials and access, often are not the most tuned in or compliant, due to lack of pure understanding or training resources provided by the company's experts – their IT.

Mobile Applications Must Be Guarded Against Threats

The RSA Quarterly Fraud Report reported that there was a "300% increase in fraud attacks attributed to rogue mobile applications in quarter one of 2019" and in 2020, with the continued increase of mobile and remote devices for both work and personal usage interchangeably, this will be a major concern for businesses, especially for their IT departments. This will become especially apparent when a large application exposes a vulnerability. With the influx of non-traditional workers and their many remote devices, companies will need to make security a priority, as well as implementing solutions to help track and monitor these devices ■

The author is Vice President at ManageEngine

In A Time Of Crisis, A Global Lockdown Needs A Digital Unlocking

Digital applications that enable communication and collaboration are key to enduring the current crisis

By Ivo Ivanov

We are at a very special moment in history right now. Never before in modern times have we seen such a global impact and a global response to a crisis, which largely ignores geopolitical borders.The Covid-19 outbreak and its repercussions have put cities, countries, entire regions on hold. The news each day brings new stories of economic hardship, of fear, and grief, peppered with signs of hope – hope for a cure, for a vaccine, for ways to work and earn a living whilst facing lockdown, hope for the time after the coronavirus has lost its capacity for destruction.

One saving grace of this crisis is that the global digital infrastructure – the terrestrial and mobile networks, the data centers, the undersea cables and the satellite connections that support the global Internet – is by now well enough developed for people in most countries to stay in constant contact despite isolation.

Lockdown does not mean shutdown

This means that, today, lockdown does not necessarily need to mean shutdown.

Where possible, people are finding ways to make the best they can of the situation. Companies have sent their workforce into home office, keeping their staff in employment and their operations running; logistics are being maintained, and retailers have been quick to offer delivery services for those unable to leave their homes; freelancers are seeking creative new ways to make ends meet using digital tools, and communities are looking for ways to support local initiatives.

Digital communication is vital to this. It enables people to stay in contact with loved-ones they can't meet with. It enables children and students of all ages to continue with their education. It helps doctors to – when appropriate – provide consultations and therapy via telemedicine to avoid unnecessary contact. Even the researchers, on whom we have pinned all our hopes for finding a vaccine, are using digital applications to remain in contact and share data in their efforts to understand the virus.

Digital applications are key to enduring the crisis

Digital applications that enable communication and collaboration are key to enduring the current crisis. Globally, we now see a very high demand for digital applications, and these are becoming crucial for enabling business and private life to function, and not only in times of crisis. But even the best application cannot perform if the underlying digital infrastructure is not as solid, resilient, and secure as possible.

Of course, this is even more critical in the current situation, but it also highlights the general trend that, as our economy becomes more global, as our planet becomes home to more and more people, and as more regions need to be enabled in terms of communication, the only answer can be digitalization. Because otherwise it won't scale, and therefore won't work in the long run.

Digitalization – and therefore reliable digital infrastructure – is the only answer

Therefore, one answer to some of the challenges posed by the Covid-19 pandemic– and the modern world in general – is sophisticated digital infrastructure, because this allows the use of smart digital applications and solutions which will make people's lives better. In a globalized world, economic growth and the development of societies in most regions is now based on digital communication and digital services, and these in turn depend on the underlying digital infrastructure.

As a result, the interconnection community – more than ever before – must deliver continuous and high-performance connectivity: everywhere, for everybody, and for everything. This community, and the infrastructure that they build and care for, are just as critical as other critical services in a crisis. It is essential that this digital infrastructure is as global, open (neutral), resilient, scalable and secure as possible, in order to deliver the many and varied services needed by people, institutions, and businesses.

As an element of this crucial digital infrastructure, Internet Exchange Points like DE-CIX are key to improving the quality of performance of digital applications and digital communication – for businesses, for medical facilities, for education, recreation/entertainment and for news and media outlets – for all users, wherever they are. Interconnection services need to allow communication to occur along the shortest route and in the most secure way.

Digital communication on the rise

The global lockdown is having a strong impact on how we interact with each other and how we behave, how we work and how we communicate with each other. As a global operator, DE-CIX's Internet Exchanges on four continents are all recording the same trend: Internet traffic is growing, together with demand for quality. While different regions are at different stages of development, depending on when the Covid-19 infections began to take off in their geographies, the trend is valid from North America to Europe, to the Middle East, and on to the Indian sub-continent.

Three types of Internet traffic in particular have risen substantially: traffic from collaborative communication tools has doubled since the crisis began, as has the traffic from streaming services. This is significant of both

Digital applications that enable communication and collaboration are key to enduring the current crisis... But even the best application cannot perform if the underlying digital infrastructure is not solid...

enterprises and the education sector migrating their activities online. Added to this, we see around a 50% increase in traffic from online gaming. Everywhere, we see a similar demand for reliable digital infrastructure.

Communication behavior will significantly change in the long-term

Even before the current crisis, we were seeing huge investments in new streaming services. But what's happening now, in response to lockdowns around the world, will change the game in many areas of activity. The current transformation of attitudes, processes and systems will continue to echo through the post-Corona era. People are taking the time to keep in touch with their loved-ones on a more regular basis. To value the time they have together, despite the distance.

Many employers are looking into how remote working benefits business continuity and supports their employees to master challenges. But beyond this, decision makers are also beginning to recognize the long-term benefits of a more profound digital transformation. Companies are taking a long, hard look at how they manage their offices, how staff interact, how teams collaborate, what business travel is actually essential, whether meetings can be reconceived to be more productive. They are becoming aware of how the move online can unlock the potential to save money and increase revenues.

This won't only have an effect in the short-term – it will be a game changer for business and private communication behavior, and is likely to lead to even higher usage of digital applications than we would have forecast in the pre-Covid-19 world. This is not to suggest that now everything will be digital only. Rather, that we need to recognize that we have options: processes should be reviewed, and we should learn from this time of crisis how to make our life better in general.

Companies are taking a long, hard look at how they manage their offices, how staff interact, how teams collaborate, what business travel is actually essential, whether meetings can be reconceived to be more productive

While the virus itself currently remains a serious threat, we are all doing what we can towards minimizing its impact, stopping its spread, flattening the curve, and finding a cure. But this crisis can also offer us a chance to re-evaluate, to see things differently. Right now, we are being forced to do that. Let's also take the time to learn to manage tasks more efficiently, operate more prosperously, and discover successful modes of behavior in terms of business and private communication, which we can apply now and in the future.

Meaningful investment decisions should be made in the future

We have to learn from this crisis so that we can make meaningful investment decisions in the future. Digital infrastructure is the enabler of this long-term transformation, and it helps to ease the pain of today's lockdown. The Corona crisis throws into stark relief the regions that have solid, reliable digital infrastructure, and those regions of the globe that remain underserved. The digital divide must be eliminated so that all communities can in future have access to information, access to digital communication tools, and access to digital continent. The Internet industry must take as their mandate the goal of a minimum level of digital infrastructure everywhere.

Nothing will be the same after Covid-19. Not for humankind itself, not for how we do business or how we (inter)connect in this new decade. This century, like the last century, is presenting us with global challenges. However, these challenges – though of a different nature – can also be transformed by people and businesses. The current global crisis will change our life going forward, and to survive in the present and prepare for the post-Corona future, this global lockdown needs a full digital unlocking. ■

The author is CEO at DE-CIX International

Back To Work: How To Reboot In A Post-Covid World

As lockdowns begin to ease and pressure to restart the economy ramps up, companies will need to balance resilience, adaptability and prediction

The challenge is unprecedented: restoring the economy and livelihoods while managing a very real risk to human life. Going back to work will involve countless unknowns, but the leading companies will need to advance where they can, retreat as soon as they must, and adapt as needed.

As many lockdowns around the world begin to ease, Bain & Company's new research, 'Back to Work: Advance, Retreat, Adapt, Recover', offers a guide for how to think through some of the most critical questions that businesses will face when operating in a radically different environment.

"For most executives, the task at hand will be less like restarting a business and potentially more like starting a business from scratch," said Hernan Saenz, head of Bain & Company's global Performance Improvement practice. "Returning to work will be far more complex than turning the lights back on and restarting operations."

Understanding what demand will look like

Companies will need to face questions that confront every business founder: What are the customer needs that I serve? Where is the demand and how will we configure the business model to meet it? Evaluating the demand side of the equation can offer a starting point to gauge workforce needs and the urgency of returning different groups of workers to their locations of work. From there, setting up Agile teams is the most effective and scalable way to adjust and build resiliency in what could likely be a fast-changing operating environment.

Ensuring the safety of the workforce

Tracking real demand provides companies with a rational way to determine how many people need to return to work and where. But understanding the workforce they need—and who needs to return to a work site—is just the beginning of the supply side of the recovery challenge. The top question every company faces is how to keep those employees safe in a constantly changing environment and how to mitigate the risks they face if they return to work.

Depending on the set up of the workplace – for example customer-facing stores, offices, factories, warehouses, or at customers' homes – the degree of risk will vary greatly. Mitigating risk to workers as they return requires new policies, infrastructure and personal behavioral changes tailored to each type of work site.

"Returning to work will be a moment of truth for leaders, and building trust among employees will be critical," said Karen Harris, managing director of Bain & Company's Macro Trends Group. "Companies will need to think carefully and creatively about the very concrete measures they will take to ensure the safety and physical wellbeing of their workers." ■

TRANSFORMATION

A Sectoral View

How industry value chains can be positively impacted by digital transformation initiatives, especially leveraging big data, IoT and AI

By Saumya Chaki

PART II: ▸INSURANCE ▸HEALTHCARE

The author is Data Platform Solutions Lead at the Services Integration Hub in IBM and has written three books

INSURANCE

Disrupting Insurance – Rise Of The Digital Platform

Insurtech companies are truly disrupting the insurance industry by building digital insurance platforms in collaboration with insurance companies and suppliers

The rise of Insurtech companies is truly disrupting the insurance industry. Technologies like Big Data Analytics, Artificial Intelligence and IoT create numerous opportunities for differentiation in the insurance sector. These technologies not only bring value across the insurance value chain, they also create new products and revenue/operating models. At the core of this disruption, is the rise of the Digital Platform. While the percentage of insurance companies owing the Digital Platform is low (estimated at 12%), insurers are participating as service providers, complementors.

Transforming Insurance with the Digital Platform

Insurtech companies are truly disrupting the insurance industry by building digital insurance platforms in collaboration with insurance companies and suppliers. The paradigm shift from product-centric model in traditional insurance companies to a primarily client centric model has been enabled by the digital insurance platforms that are enabled by technologies like IoT, Big Data Analytics, Blockchain, Artificial Intelligence and Cloud Computing. The digital insurance platform can be envisioned as a marketplace connecting insurance companies, suppliers (like Big Data Analytics, IoT Solution providers), supplementors (adding functionality to the value chain like weather data providers who help provide data based insights to insurance companies and customers) and of course customers. The disruptions cut across the insurance next generation value chain which is shown in the

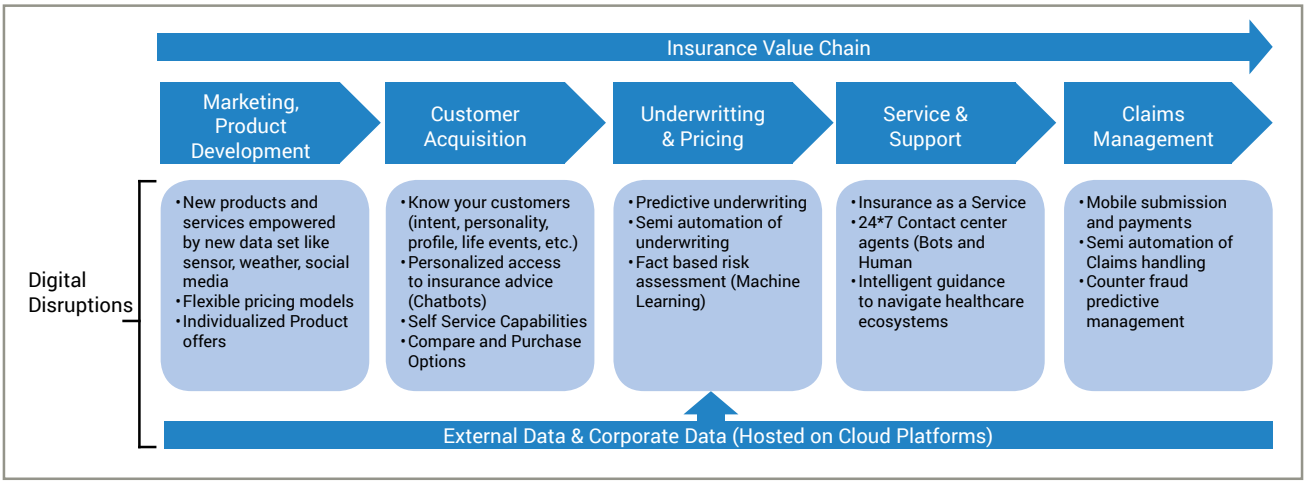


figure above. Let's do a quick review of how these technologies are transforming the insurance industry across its value chain.

Marketing and Product Development

One of the challenges that the insurance industry has continually faced is the relative lack of innovation around products and their features. This is now changing with the rise of Insurtech companies and their ability to leverage new data sets like sensor data from cars, weather data and social media insights about real customer needs and problems. Products can now be customized based on direct interaction with customer through digital channels, thereby creating flexibility around product portfolios and individualized needs of customers can be met. Providing flexibility to the customer to pick and choose the required coverage and service levels also bring flexible pricing models in vogue.

With digital technologies, insurance companies can achieve faster and consistent underwriting and pricing. Deeper risk and pricing insights by combining machine learning...

Customer Acquisition

Traditional methods of customer acquisition are less likely to work and a more proactive approach around engaging with customers is needed through digital channels where in customer behavior, intent, personality, life events are well understood to create opportunities to meet customer demands with the suitable product at the right point in time. Recent industry surveys reveal, personalized product offerings are expected to improve customer experience by about 15%.

Underwriting and Pricing

With digital technologies, insurance companies can achieve faster and consistent underwriting and pricing. Deeper risk and pricing insights by combining machine learning, internal and external data sets, structured and unstructured data. Semi-automation of underwriting process is feasible leveraging machine learning in the underwriting process, whereby if the risk scores are below a certain thresh-

Digital channels have reduced the customer onboarding time as well as created flexible product and pricing models. This also creates a transparent experience for the customer, a key differentiator

old straight through decision making can be invoked. Productivity benefits of 25% can be achieved in the underwriting process bringing cost savings.

Service and Support

One of the key digital transformation initiatives like providing Insurance-as-a-Service is bringing great value to customers. Customers can opt in and opt out, chose riders based on needs in this model. The IaaS model covers the entire value chain from marketing, customer acquisition, customer support and claims management. 24*7 support services provided to customer through bots and human agents.

Claims Management

Claims is another area that is being disrupted by digital technologies. Mobile submissions and payments are a key driver of change along with semi-automation in claims handling. This has resulted in a better customer experience and response time reduction in claims handling and processing costs. Use of AI and Big Data Analytics also helps prevent fraudulent claims.

As is evident from the transformational impact of digital technologies at each stage of the insurance value chain, companies are increasingly looking at leveraging these technologies not only for productivity enhancements, cost optimization but also to create new revenue models based on dynamic product portfolios and pricing models based on customer preferences. The key benefits that digital transformation has provided the insurance industry can be summarized as:

Insurance-as-a-Service

A real-time insight into the customer needs and purchasing patterns. Digital channels have reduced the customer onboarding time as well as created flexible product and pricing models. This also creates a transparent experience for the customer, which is a key differentiator as compared to traditional insurance models.

Cost Optimization

Cost of customer acquisition and servicing have reduced cost associated with traditional insurance models. Faster claims processing through semi-automation has also helped optimize costs.

Customer Satisfaction

With self-service Dashboards and Insurance-as-a-Service, customers have a real-time visibility into their usage of insurance products via-a-vis needs and ability to process payments faster has increased NPS scores. Customers are also using digital channels of information to compare prices of products and make purchase decisions.

Productivity

Automation in underwriting and claims management processes has brought about significant productivity benefits. Underwriters have reported up to 25% productivity benefits from the emergence of digital technologies.

Revenue Enhancements

New products around weather data sets coupled with auto insurance, cyber risk insurance is increasing the revenue growth opportunities for insurance companies. Participating in digital insurance platforms creates an ecosystem of maximizing revenue for new operating models and products.

According to McKinsey, digital platforms will account for USD 60 trillion in revenues by 2025. In India, adoption of digital insurance models is still in infancy and a clear opportunity for insurers to tap into. ■

HEALTHCARE

Digital Healthcare – Transforming Outcomes

Telemedicine, Mobility and Cloud Computing, Big Data Analytics, Virtual Reality (VR), Wearables and IoT and Artificial Intelligence (AI) are 6 key drivers transforming the healthcare industry

We live in truly disruptive times. In our hyper connected world, mobility is the key differentiator for customers. 52% of web browsing happens on mobile devices, and recent statistics show 77% of customers in first world countries book medical appointments online. The use of wearables in daily exercise regimes provide consumers with real-time health data that gives them a feeling of being empowered to take care of their health. Customers are demanding on-demand healthcare and companies like Nomad Health link doctors with hospitals/ medical facilities on a need basis to provide their expertise suited to a typical on-demand consultation.

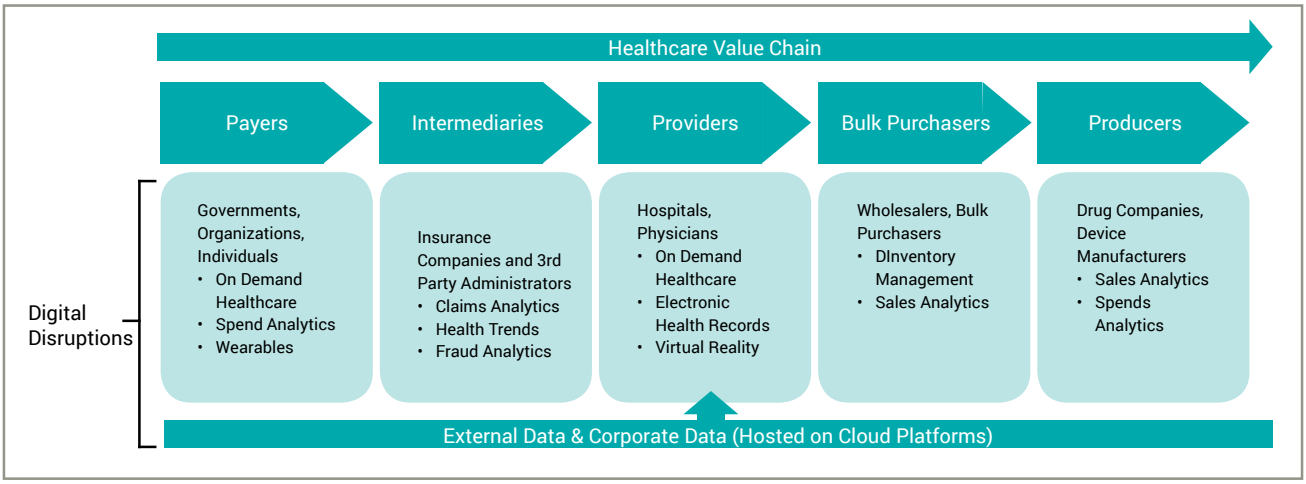
US spent a whopping 3.2 trillion USD on healthcare in 2015 (about 18% of the country's GDP). Experts feel digital transformation of healthcare can save about 300 billion USD each year particularly in the area of chronic diseases. Healthcare providers and participants need to embrace digital disruption to meet these diverse customer needs. To enable the healthcare industry to transform, we identify the key transformation drivers driving disruption in the next section.

Key Transformation Trends in Healthcare

There are 6 key drivers of transformation in the healthcare industry.

1 Telemedicine

Especially in poorer nations with limited spread of healthcare access and connectivity issues, Telemedicine can be a huge transformation agent



both for patients and doctors. It has benefits of saving costs (no travel required) and time (consultations can be managed remotely). Telepresence in the mental health space has also been a huge boost where customers sometimes prefer privacy.

2 Mobility and Cloud Computing

Healthcare industry is slowly moving to an electronic health record model with lesser files and paper bills. Hospitals, clinics, insurance providers are saving patient medical records in the Cloud with patients able to access test results and health records 24*7. The proliferation of mobile devices enables both medical practitioners as well as patients to access information and search data through mobile devices.

3 Big Data Analytics

Big Data is transforming decision-making in healthcare by providing a plethora of aggregated data sets from social media, financial transactions, health records, etc., to derive patterns and unique insights. The key benefits from Big Data Analytics include lower rate of medication errors, demand driven staffing. Pharma companies are analyzing market data to derive product iteration and product budgets. Machine learning algorithms can analyze patterns and identify risk factors and recommend preventive treatment.

4 Virtual Reality (VR)

Doctors use VR simulations to enhance skills or plan complex surgeries. VR technology is being used for pain treatment, anxiety as well as post-traumatic stress disorder. The global virtual and augmented reality in healthcare is expected to touch USD 5.1 billion by 2025.

5 Wearables and IoT

Wearables like heart rate sensors, oximeters (measures amount of oxygen carried in the blood), exercise trackers have transformed the way customers are engaged about their own health parameters. Customers can also share their data sets with health professionals for timely advice on possible health interventions steps.

6 Artificial Intelligence (AI)

AI is being leveraged in key areas like medical imaging, drug discovery and genomics. AI provides pattern recognition which provides patients with personalized ther-apies based on genetics and lifestyle habits. Pharma companies are using machine learning algorithms to shorten the drug development lifecycle.

Let's do a quick review of how these transformative technologies are providing value across the healthcare value chain show in the figure above:

Payers

Healthcare value chains vary between countries, in some instances government is the payer as in the case of National Heath Service (NHS) in UK or in countries like India, the private health systems are more developed and payers tend to be individuals or employers. Digital transformation enables payers (individuals) to have on-demand healthcare, health data from wearables that can drive positive health outcomes. Governments and employers to perform Spend Analytics on the cost of insurance data by diseases or treatment types.

Intermediaries

Next in the value chain are the intermediaries like insurance providers and 3rd party administrators. Intermediaries pay the insurance claims for treatments provided to the individuals by the providers. Intermediaries can leverage digital technologies like Big Data Analytics and Machine learning to derive insights around Claims, Health Trends (Claims by demographic group, age, income trends, geographic location) and perform Fraud Analytics to derive the propensity of fraud as well as detect potential fraudulent transactions.

Providers

Providers like hospitals, clinics are providers of medical diagnostic and treatment services to individuals. Providers are now leveraging the digital technologies to provide valuable

services like on-demand healthcare, Electronic Health Records (EHRs) that provide the complete medical history of patients thereby enabling better preventive care and reducing healthcare costs from unnecessary medical tests. On-demand healthcare provides flexibility to individuals and ability to provide remote patients telemedicine is a great differentiator. Providers can also leverage Big Data Analytics to provide insights about staff utilization, supply chain optimization, health trends, etc.

Wearables enable customers to monitor health parameters in real-time as well as get expert guidance using on-demand healthcare systems

Bulk Purchasers

Bulk purchasers procure drugs and devices in bulk from producers and supply to the providers like hospitals and clinics. Bulk purchases need to constantly monitor the efficiency of their order fulfillment and are leveraging Big Data Analytics to manage inventory and perform sales analytics to understand fast moving items and demand trends.

Producers

Producers are drug companies that design, manufacture and market drugs or medical device manufacturing companies. Drug companies have been leveraging Big Data Analytics and Cloud to analyze data from diverse data sets to measure drug sales (sales analytics) and spends (spends analytics) to help plan better outcomes. Device manufacturing companies perform sales analytics to find the market demand which helps optimize the production plans to meet market demands for devices.

As is evident from the transformational impact of digital technologies at each stage of the healthcare value chain, companies are increasingly looking at leveraging these technologies not only for productivity enhancements, cost optimization but also to meet requirements of the customers. The key benefits that digital transformation has provided the healthcare industry can be summarized as:

Cost Optimization

Optimizing costs by mobility solutions (providing access to EHRs, ability to book online appointments), big data solutions to measure effectiveness of supply chain, spends analytics, inventory management, claims analytics as well as proactively manage fraudulent claims. Telemedicine provides huge cost saving potential (no travel cost for doctors or patients as well as saving time of travel).

Customer Needs

New age customers demand access to EHRs, on-demand healthcare as well as telemedicine facilities to increase access to healthcare services, especially in remote regions. Wearables enable customers to monitor health parameters in real-time as well as get expert guidance using on-demand healthcare systems.

Productivity

Telemedicine provides productivity benefits by saving travel time for doctors. Mobility and automation solutions enhance productivity of healthcare providers as well as payers. On-demand healthcare enhances productivity by increasing the availability of doctors based on demand for certain medical services. Use of robots in Japan to perform routine tasks like fetching items provides productivity benefits.

Compliance

Healthcare is a moderated industry worldwide with numerous compliance requirements which are country-specific. Some countries like Finland have a need for health data archived records to be stored within the country. Cloud solutions provide mechanisms to manage such compliance needs.

Revenue Models and Pricing

The use of wearable data by insurance companies to understand health parameters and lifestyle habits are creating opportunities to create customized products as well as enabling companies to charge prices based on health parameters and lifestyle.

Healthcare and pharma companies are also exploring the potential of Blockchain in transforming the way EHRs are managed. A recent report suggests that the Blockchain market in healthcare could grow to USD 890 million by 2023 ■

Double Scoop

Two times the revelation

Satish Pai

Head - IT, JL Morison India

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MY FAVORITE DRESS

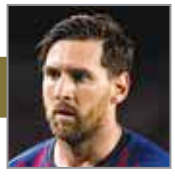
Business Formals

MY PEER IN THE IT COMMUNITY

Bijoy Padmanabhan, Head - IT Applications, Marico

Bijoy Padmanabhan

Head - IT Applications, Marico



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MY FAVORITE AUTHOR

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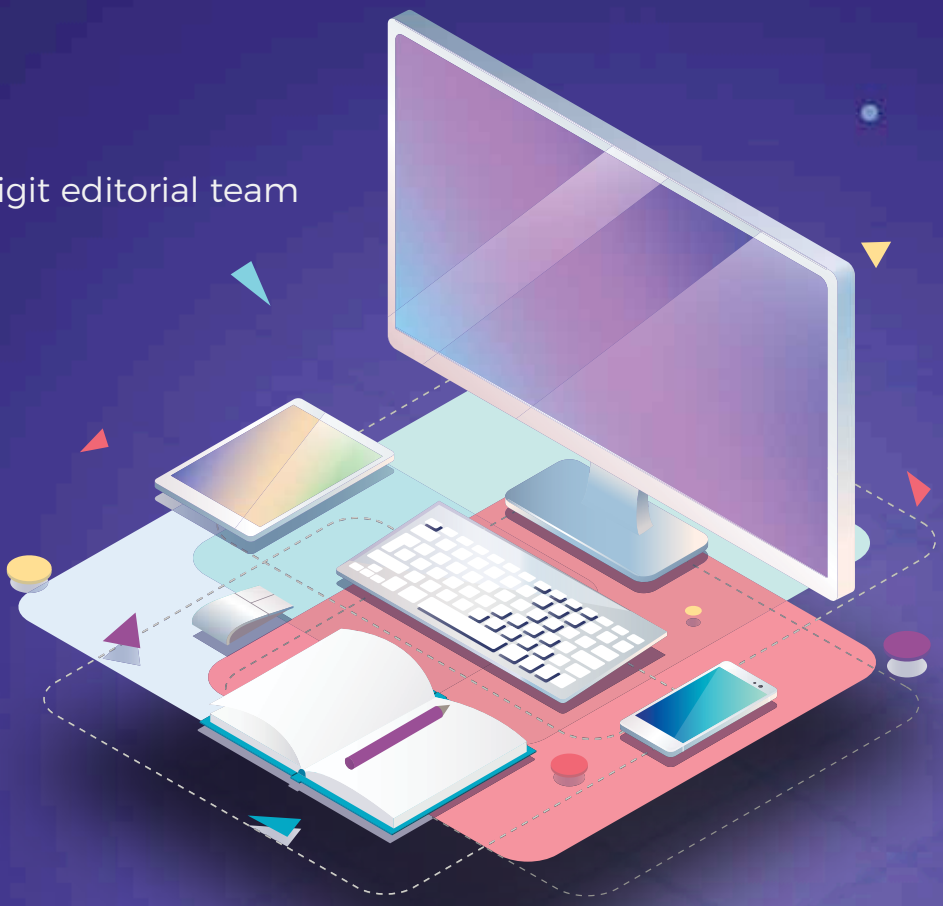

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