ITNEXT

FOR THE NEXT GENERATION OF CIOs

WOMEN IN ENTERPRISE IT

THE CHALLENGES THAT STILL EXIST...

Despite a significant improvement in organizations' attitude towards making the workplace more women friendly, there are still few women in enterprise IT, fewer still in leadership positions.

So, what exactly are the challenges? And why the solution lies in a community-led approach...

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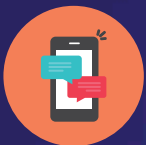# Here is your chance to become a Digit certified tech influencer

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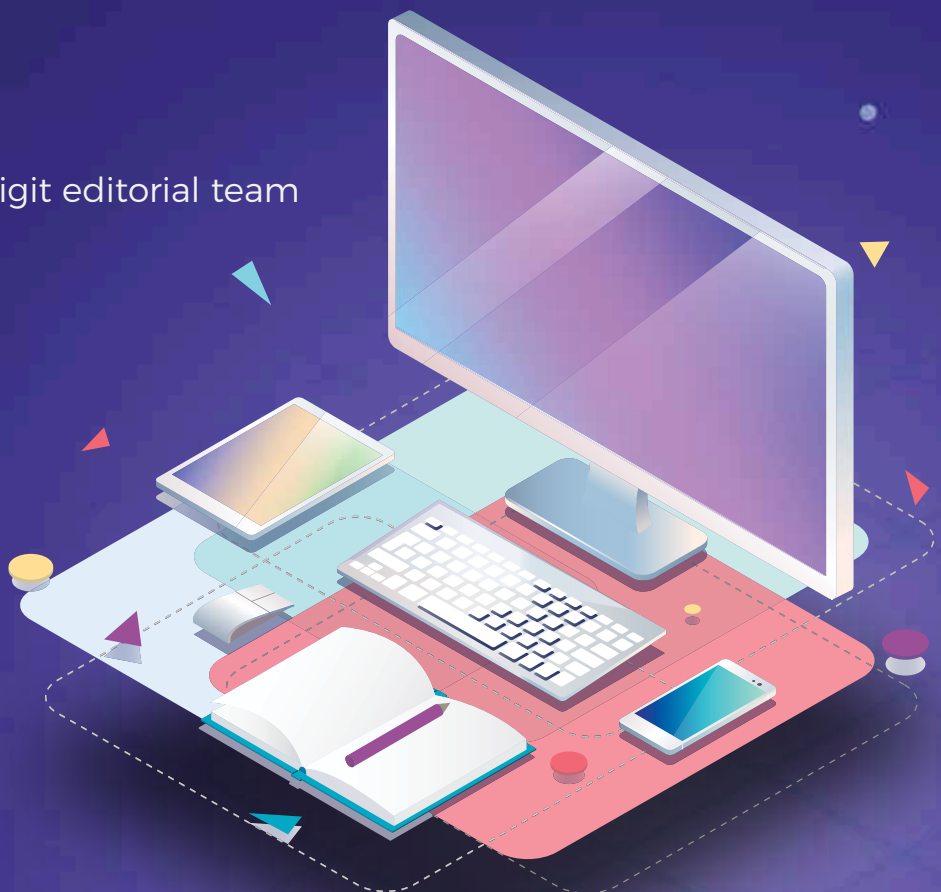
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Women in Enterprise IT: Are we barking up the wrong tree?

India's much more visible IT companies, which spend crores on promoting their brand image as employers of choice, are a far bigger reason than any existing gender bias in organizations for lack of enough women in enterprise IT

Shyamanuja Das

I do not need to quote any stats to convince you that there are so few women in enterprise IT in India, even though many of the Fortune 500 CIOs are women. In fact, we ran a story four years back that every one out of six Fortune 500 CIOs was a woman!

When we try to discuss this issue – lack of enough women in enterprise IT – what we get to listen are the gender bias in organizations, women's familiar responsibilities taking better of them, women not projecting themselves despite achieving and other similar arguments that have dominated this discourse for years.

And be under no illusion. Despite things changing a bit in recent years, all these reasonings are true.

Just that they do not adequately explain the dearth of enough women enterprise IT professionals. If they are true, how come we see so many women in HR, marketing, PR and other such functions? Are women particularly wary of technology. By no means. How do you explain the fact that India's global IT industry, with much more travel and instability, employs probably the highest percentage of women among its workplace? More than one in three IT industry employees in India is a woman.

There must be some other reason. And unless you know the exact problem, you can never hope to solve it.

In an eye-opening panel discussion, we had on the Women's Day this year, almost all panelists, women CIOs, agreed that gender bias in organizations, is, by and large, a thing of the past. While they did agree that women do not talk about their achievements, which could be a hindrance to their growth, what almost all of them pointed to, is a problem that rarely gets discussed: very few women apply for the positions. Some of them vividly described how they had to go out of their way to get some women in the team, without success.

Sorry gender warriors, the reason is not exactly to do with gender. India's much more visible IT companies, which spend crores on promoting their brand image as employers of choice, are a far bigger reason than any existing bias in organizations.

If this problem has to be tackled head on, then the solution should lie in promoting enterprise IT as a great opportunity for women, which I sincerely feel, is better for women, with their natural multi-tasking capabilities. It would also suit them better, as the job role is far more important and stable, if not as well-defined as the IT industry job roles.

No marks for guessing on whom lies the onus for making this happen – the women enterprise IT leaders themselves. Admittedly, with numbers nowhere near an IT company numbers, this cannot be done at a single organizational level. But it can be done at the community level. Our panelists have agreed to work together. We, with the NEXT100 platform, would assist in whatever manner possible. ∎

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WOMEN IN ENTERPRISE IT

THE REAL CHALLENGE

It is not the traditionally blamed gender-bias that is the top challenge for organizations wanting to employ more women in enterprise IT. Rather, it is attracting more women employees, thanks to the tough competition it faces from the huge Indian IT industry.

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EXTRA *Curricular*

The immense joy of shooting with DSLRs is incomparable

I picked up a camera at a very young age, and it started with the camera film on it giving 30-36 snaps in a single roll. The sheer joy of waiting for the print to see the results was unparalleled. Today, I own 02 DSLR's Konica and Canon cameras with a variety of lenses, tripods and other peripherals. These two are extremely close to my heart as I had always longed to buy one. It was certainly a dream come true when I did.

The joy of clicking photos from all angles, archiving it and then seeing my work after days, months and years brings heavenly joy to me. My adventures with the camera took me across India and outside.

Many feel photography is not an art and it's easy to flood photos into our mobiles through back/front cameras, where with a single click even a novice can get an astounding picture with the help of technology. But I still find immense joy in shooting with DSLRs.

Photos immortalize the things I care about. Whether it is a family shoot, travel shoot, nature shoot or random shoot, I capture all precious moments through my lens.

Whenever I flip through my photo album (physical) or on my laptop, all the memories are refreshed and that momentary flashback gives goosebumps. It is sheer nostalgia that cannot be explained in words. It is a completely surreal feeling.

I still feel that there is a lot to learn. So, in the near future, I truly want to take some time out from the daily hectic work hours and devote some genuine quality time towards learning camera and photography tricks on various online platforms such as YouTube.

Afterall, I just can't let go of my burning passion! ∎

As told to Dipanjan Mitra, Team ITNEXT

Seizing The Moments

NEXT100 Winner 2018 **Firoz Ansari,** Global Manager - IT, Enphase Energy shares his immense love for photography and fine moments which he spent using his camera to full extent, besides his eagerness to keep learning more...

"Photography is an austere and blazing poetry of the real."
– Ansel Adams
"The photo that you took with your camera is the imagination you want to create with reality."
– Scott Lorenzo

Firoz Ansari

Firoz Ansari is Global Manager - IT at Enphase Energy. He has been a NEXT100 Winner in 2018. Earlier, Ansari was associated with esteemed companies like

Canon India, IBM, Wipro Infotech, etc. He completed his Executive Post Graduate Program in IT Management & Analytics from IIM-Kozhikode.

'The Beautiful Game'

NEXT100 Winner 2018 **Subhasish Roy,** IT Director - Global Data & Analytics, Stryker shares his immense passion for football and highlights his playing moments...

I have always been a fan of football. Coming from the state of West Bengal, football is in my blood. I grew up watching the league football in Kolkata. Football matches between East Bengal and Mohun Bagan are one of my best childhood memories. I actively played the sport throughout my school and university days.

A tough game brings out the best whether it is on the field or in the office

However, after that, I could not continue playing the sport actively though I have always followed it closely. Over the years, I gained weight; at one point I was 97kg. In the summer of 2015, I decided to follow my passion again. I reduced almost 20kg of weight. I started playing football again, this time with my office colleagues. I joined the Stryker football team. Though the players were much younger to me, I was able to match up to their stamina as well as speed.

Over the years, I have adjusted my game. Playing any sport is more like a marathon than a sprint. I realized that to play the game for a longer time in my life, I need to maintain my fitness. So, I jog regularly and do fitness training every morning. This has also helped me a lot in managing my stress level. Football is a game that teaches you many things in life. It teaches teamwork, coordination, reading the situation quikly and reacting to it. Most importantly, it teaches you that age is just a number and what is important is that one should follow his/her passion.

I would like to share one incident that happened recently. In one match against a very formidable team, I was goal keeping and we were ahead by a very slim margin. The opponent team's forward line was quite strong. That day I saved 10 powerful shots, with full dive in almost 4 instances. I realized that when one's back is pushed hard against the wall, then only their true talents come to play and at times one can really do wonders. It is very similar in corporate world as well. A person's potential comes out only when they are put in a tough situation.

I look forward to playing the game for a long time. I enjoy the game and am glad I'm following my passion. My son also plays the game professionally and we exchange lot sof ideas about the game. My best compliment was from him when he said, 'Baba, I'm so proud when I see you play like this'. ■

As told to Dipanjan Mitra, Team ITNEXT

Subhasish Roy

Snapshot

Subhasish Roy is IT Director - Global Data & Analytics at Stryker. He has been a NEXT100 Winner in 2018. He is leading global teams. He is the DevOps owner of key

Analytics products within Stryker. Subhasish has completed his BTech in Radiophysics and Electronics Engineering from University of Calcutta.

WOMEN IN ENTERPRISE IT

THE REAL CHALLENGE

It is not the traditionally blamed gender-bias that is the top challenge for organizations wanting to employ more women in enterprise IT. Rather, it is attracting more women employees, thanks to the tough competition it faces from the huge Indian IT industry.

By Shyamanuja Das

On International Women's Day on March 8 this year, there were quite a few discussions, events and celebrations planned around women IT leaders. We, at CIO&Leader, hosted one. While this trend in recent years of highlighting women's role and celebrating them in corporate India is a welcome change, it does not take away from the stark reality. That is, it would be difficult to count even two dozen of women CIOs in India. Percentage calculation may mean little, but just for the record, lest we may be accused of selective presentation, it is surely less than 2%. Maybe less.

We do not have the stats to show how many women actually are in enterprise IT—in all levels. But two of the women IT leaders, out of four who participated in our discussion on March 8, lamented that they had no women in their teams. And they represented fairly large companies.

"I don't get too many applications from women at all. So, very little choice about whom to hire," says Nirita Bose, Senior Vice President and CIO, Axis Mutual Fund. Agrees Shobhana Lele, CIO of Bombay Dyeing. "Even for hiring just one woman in the team, I struggled a lot," she says. Other women CIOs too agree that the problem starts in getting enough women applicants. "We waited for a month, we still couldn't find women candidates," adds Pooja Chatrath, CIO, Cryoviva Biotech.

And here, we are not talking of women in leadership positions; or even in senior middle-level positions. We are talking at all levels. Just getting applications from women is a huge issue.

Compare this to the 34% women representation in the IT industry's workforce. That is not just huge compared to the enterprise IT's share of women, that is arguably the best across industries in India.

Considering that the input to both these streams, IT industry and enterprise IT, is the same—engineering graduates and MCAs—it seems perplexing to see the huge contrast.

It may not be that much of a mystery.

A retired HR head of a large IT company (a woman herself), who does not want to be named, attributes it to two reasons.

The first, she says, is the more global nature of IT industry. Globally, services industries, including IT, are large employers of women. And since Indian IT industry is

more globally integrated and had to compete with established players in the developed markets, they adopted their practices quickly.

"But the more important reason," she says, "is compulsion."

"Indian IT services industry competes on scale. They want numbers. Their hiring targets are tougher than sales targets. Can they afford to ignore half the population?" she questions.

She says this need for scale 'forced' (and she emphasizes on that) the IT industry to go all out to hire women and make whatever was needed to make the workplace suitable for them. As IT industry soon caught the fantasy of engineering graduates, they succeeded in attracting younger workforce, including women.

Competition for talent

The pool from which the IT industry hires—engineering graduates and MCAs mostly—is the same pool that enterprise IT looks at for its entry-level positions.

But the similarity ends there.

The IT industry hires in huge numbers. Most of the IT services companies in India are strongly identified with technology. And because of the criticality of scale and speed of hiring to their business, IT services firms go for huge campus hiring drives. To top it all, there is high-pitch employee targeted marketing. Anyone who has been to IT hubs like Bengaluru, Pune and Hyderabad has seen the huge hoardings with brand reinforce-

ment and social messaging that IT companies place throughout the cities.

Enterprise IT is a study in contrast. The numbers are low. Often, many computer science or electronics students do not want to be identified with an old economy company. Hardly any company goes to campus for hiring. Overall, the visibility is low.

That is the first set of disadvantage that enterprise IT hiring starts with. In fact, as a CIO quipped, India's success in global IT is the biggest challenge for hiring IT talent by others.

Beyond the visibility contrast, there are a lot of things that are very different between the two, in the eyes of the potential employee, especially from women's point of view.

"Women tend to go for easy jobs in order to balance work and home life," says Meetali Sharma, Head - Risk, Compliance & IT, SDG Software India. By 'easy', she clarifies, it is 'well-defined' jobs. You do not have to be an HR expert to know that IT services industry, with its factory model, offers far more 'well-defined' jobs for its employees. On the contrary, in a small team supporting a real business directly, an enterprise IT person, right from day one, has to take on the responsibilities that requires understanding of business and is not purely metric-driven.

Switching jobs too is easier. An IT services worker is identified with her technology and software skills. Since most services companies work on those few skills, switching from one to another is easier. On the other hand, in an enterprise IT job, a good employee is identified with the responsibilities that she has handled and the business understanding that she has. And that varies from industry to industry, company to company.

When it comes to women, the reasons to switch jobs are like their male counterparts. Better salary, better work environment, new challenge....but they have two more reasons: working closer to home. Many women do not find it stressful to do more difficult jobs. They would rather put all their energy on work than in commuting. And especially, if you are using public transport in India, the challenges are of different proportion. Second, however politically incorrect it sounds, is marriage. In an internal study a large BPO company had done a few years back, the number one reason for switching jobs for women was marriage.

But a little analysis would show that the situation reverses completely after 10 years of working. Women—or men for that matter—want stability and growth in responsibilities and positions, not just money. The project-driven, scale-based IT

Enterprise IT is a study in contrast. The numbers are low. Often, many computer science or electronics students do not want to be identified with an old economy company. Hardly any company goes to campus for hiring

industry often looks for low-cost resources. In a new project, unless you switch to a project management role—which are few—you will essentially be doing the same things; maybe slightly better. But the responsibility, financial expectations changes on part of the individual. And actually experience, barring some exceptions, becomes a liability, rather than an asset. It is just the reverse in enterprise IT.

Same with location choice. While in the initial career, moving across cities is not an issue, in the latter career, it becomes a big challenge, with so much family constraints—for both men and women. But more for women. Because a man leaving the family and staying in a different place to work may be not very common but there are enough examples. For women, that is an exceptional situation.

In short, while IT services jobs are a better attraction for women in the beginning of the career—both for the money, glamor, brand names as well as for some real priorities—the same is not true as the other familial responsibilities increase.

The onus is on the enterprise IT community to drive home this point—among younger women, students and early career professionals.

This cannot be done at the company level. While some companies do have a gender diversity target, it is across the organization and it is difficult to expect that it will reflect in diversity in the enterprise IT function as well.

This is something that the enterprise IT women leaders must collectively take up as a goal. In the discussion organized by CIO&Leader, women IT leaders admitted that mentoring of younger women IT professionals cannot be done at the company level and acknowledged the need to do it collectively at the community level. The same applies for attracting women to the area as well. As identified by the group unanimously, the biggest challenge is not having enough women interested in enterprise IT. That is a more fundamental problem and must be taken up on a priory basis. And must be taken up collectively.

Pandemic as a great leveller

COVID-19 has most definitely shown the value of actual work and not commuting to office. In a way, it has addressed one of the biggest concerns of women. Apart from working from home, it has also driven the value of flexible working. Both these make a stronger case for what women professionals desired. The false notion about the value of many non-essential layers associated with work

In short, while IT services jobs are a better attraction for women in the beginning of the career—both for the money, glamor, brand names as well as for some real priorities—the same is not true as the other familial responsibilities

has been completely exposed by the pandemic. If at all, with the energy not getting wasted on commuting, the productivity levels have shown tremendous improvement.

"Although the pandemic and lockdowns have been very tough on us, it has come as a blessing in disguise for working women. Its "now or never", there will be no better time like this which can offer a flexible work environment along with rewards," says Sharma.

Not only has it made organizations realize that work does not always require physical presence, it has also shown the family members the importance of work that women do. Says Chatrath, "The families have realized the amount of pressure on women. WFH has shown them how they're juggling their lives every day." This itself is a great positive fallout in a country like India, where many blame the societal attitude as a greater barrier than organizational biases against women.

Sums up Sharma, "This is the perfect time for women to accelerate their career and pave their own path."

If they can effectively do that, we will see the biggest positive for Indian businesses that has come out of the COVID-19 disruption—arguably far more than even digitization. That is because it will not just impact businesses, it will impact the economy and society as well.

It is up to women leaders to grab the opportunity and create a better tomorrow, not just for fellow women professionals—but for all of us. ■

'THERE IS LITTLE GENDER BIAS OR STEREOTYPES NOW, YET VERY FEW WOMEN COME FORWARD FOR ENTERPRISE IT ROLES'

I n a panel discussion, organized by CIO&Leader, on the International Women's Day on 8th of March, the participating women IT leaders deliberated on the challenges for women in enterprise IT. The discussion, moderated by Vandana Chauhan, Associate Director - Enterprise Technology, 9.9 Group, busted many myths, while agreeing on some actionables.

The IT leaders who participated in the discussion included Nirita Bose , Senior Vice president, Axis Mutual Fund; Pooja Chatrath, CIO, Cryoviva Biotech; ShobhanaLele, CIO, Bombay Dyeing; and Meetali Sharma, Head - Risk, Compliance & IT, SDG Software India. They were joined by Shyamanuja Das, Editorial Director, CIO&Leader.

We provide excerpts from the discussion.

Vandana Chauhan: About 34% of the Indian IT industry workforce is women, one of the highest across industries. Yet, when it comes to Enterprise Technology, the number is surprisingly low. The number of women CIOs is even less. While efforts are underway globally to close the gender imbalance in technology leadership, the future is not looking too different, with only about 4%-5% NEXT100 winners being women. NEXT100 is 9.9 Group's 11-year-old program for identifying future CIOs.

What are the reasons? What needs to be done to attract more women to Enterprise Technology? How can we help them to get into leadership roles?

Nirita Bose: I don't get too many applications from women at all. Almost 95% of the applications are men. I have very little choice about whom I'm going to hire because women don't even apply.

I have been around for very long. In the last five years, we have been witnessing some changes in attitudes, when it comes to facilitating things for women. There are women who step up. In the middle management roles, we have been seeing women taking up enterprise IT roles. I cannot exactly verbalize the issues that women face – possibly, one of them is long hours because IT has irregular working hours and it is also not always a routine job. Those emergencies can also be very disruptive in anybody's life, especially for women, there are certain things that women dread. Typically, these could be the reasons why women do not apply. We do not have gender stereotypes anymore. We eagerly look out for women to the extent that if we have a woman and a man competing for the same job and both are equally positioned to take on the role for diversity reason, we encourage the women candidate. We've also seen women go on maternity leaves and then take on leadership roles. During the pandemic, women have been a lot more productive. I stay in Mumbai and commuting long hours to work and back is another issue So,women, have actually started to become more productive with the travel out of the way. They're able to spend time with their families, children and do the household duties as well. Traditionally, we still have this mindset and

> **When you're new to the industry, there's immense passion but slowly with newer responsibilities, that zeal is lost at both the employers and the employees' end.**
>
> **MEETALI SHARMA**

women have a much heavier role at home.

Vandana: Meetali, what is your take?
Meetali Sharma: I agree with Nirita. Very few women apply. In the last five years, gender bias is slowly fading. Balance out the ratio. Organizations are proactively making policies flexible for women. We want to bring in more women in the workforce. However, the cultural shift is yet to happen, when it comes to women coming forward, speaking out. Women tend to go for easy jobs in order to balance work and home life. They are reluctant to take up jobs and roles, such as C-suite level profiles because there's additional responsibility on your shoulders being at that position. Education wise, we are at the same level but the willingness to move ahead is our responsibility as women. When you're new to the industry, there's immense passion but slowly with newer responsibilities, that zeal is lost from both the employers and the employees' end.

Vandana: As per Trust Radius' 2021 global report, 57% of women in tech feel burned out at work this year, compared to 36% of men. What are the challenges that exist for women working in corporates, in technology, and in Enterprise Technology in particular? With the pandemic making work from home, flexi working a normal in the workplace, has the equation changed for women?
Pooja Chatrath: The situation after the pandemic has become better. Women at the mid-management level – balancing work and the household become a challenge which leads to women quitting their jobs. The kind of responsibilities on a woman's shoulder and the kind of response that is required from a woman in the industry. After the pandemic, it has changed for women – families have realized the amount of pressure on women. Working from home has shown everyone how they're juggling their lives. Time on travel have reduced greatly, WFH has provided a sense of flexibility as a working par-

ent. Now we have more agile and effective ways of communicating with colleagues. The pandemic has brought in that and further helped women be in a better place.

Vandana: **What are your thoughts on gender bias at workplace?**
Shobhana Lele: I haven't faced biases or stereotypes. I've been lucky to have mentors who have encouraged me to take up leadership positions. I haven't witnessed women being purposely pulled down for being women and not being able to take on leadership positions.

When we were hiring for senior positions, we weren't able to find women candidates. I was looking actively because currently I'm the only woman on my team. One of the reasons is that the lack of confidence in women to take up leadership positions. Many questions arise, how would one tackle an entire boardroom full of men along with the responsibility of the familial duties and running a household. Possibly the fear and mental blocks that exist restrict women from taking the next steps. We need to mentor more women and ensure they gain that confidence to take up the opportunities.

Vandana: **Do gender stereotypes still exist in the corporate sector, especially the technology sector? Progress has no gender, yet why women's progress is viewed from a gendered lens. Why is this so and how can we change the perspective of employers and management? Nirita, what is your take on this?**
Nirita: In Axis Bank, we have women-friendly policies along with maternity leaves plus a two-year sabbatical during which individuals can preserve their seniority. While being reinstated post the maternity leaves, I'm not sure how progress is viewed in a gendered lens. We have 15-20% representation of women in the organization. Progressive organizations want to tap into opportunities to hire and retain women. I wouldn't agree with the gendered view of looking at progress.

Vandana: **Today when you recruit women in your team, what are the expectations from women technologists?**
Meetali: Firstly, we receive very few applications from women. We often ask women why they want to join our organization – the vari-

> **Progressive organizations want to tap into opportunities to hire and retain women. I wouldn't agree with the gendered view of looking at progress.**
>
> **NIRITA BOSE**

ous factors at play are the pay scale, and working hours but the most important question we ask is that what will keep them happy. It is imperative to meet the candidate's expectations and give wings to their aspirations. Their comfort level is pertinent, as a manager it is my responsibility to understand what my employees need.

Pooja: There was a point in time where we had no women on my team. We wished to employ more female employees. We introduced flexi-hours to enable and incentivize women. The exercise was in vain as we did not receive any female candidates. I always remind my male counterparts that we should mentor women employees in the organizations. Women tend to give their 100%, whether it's applying for a job or a C-suite position. We are also conditioned to believe that women won't excel if selected. A woman would think a thousand times and build a checklist in adherence to the job description while a man would apply for the job without meeting half the requirements on the job description. So there's definitely a lack of confidence in that aspect. I ensure that within my company, I try to provide preference to female employees.

Vandana: How can we, as leaders, encourage more women to join Enterprise Technology? What are some of the initiatives that organizations can take to encourage participation?
Shobhana: We need to have programs for women circle wherein they can mentor and be mentored. The organizations can contribute in this sphere. Rather than keeping it centric to the organization, the circles should be wider - women tech circles – where we can help and support fellow women in the industry. We would have access to women who are seeking the positions and also ready to employ women in various positions within the organizations. We need to bring about a societal and cultural change in order to encourage women to join the workforce.

Vandana: Shyamanuja, you have heard our women IT leaders. Do you have any comments or observations?
Shyamanuja Das: Not enough applications. So, the problem lies in the beginning. Maybe, the big IT industry which looks for simi-

> We need to mentor more women and ensure they gain that confidence to take up the opportunities.
>
> **SHOBHANA LELE**

lar employees is the reason. So, maybe we need to tell them why enterprise IT is a good career option for them. Numbers are so small here. So, collaboration across the industry would help. First few years in the IT industry are rosy but slowly the opportunities get restricted. It is just the reverse in enterprise IT. We must get that message across.

Vandana: What is your message to younger women IT professionals?
Nirita: Be prepared to do long hours. Don't restrict yourselves. Sky's the limit.

Meetali: You have to bring about the change. No one else will do that for you. Set goals. Pursue them relentlessly. Achieve.

Pooja: Create support systems - at work, at home. Choose your fights carefully. Not all fights are worthy enough. Fight only for the high goals.

Shobhana: Trust yourself. Get out of the guilt. A good career does not mean compromising your duties towards family. Be the change agent yourself.

Vandana: Thank you for the pearls of wisdom. Shyamanuja, if you would like to add.
Shyamanuja: I cannot, of course, advise. They have got it from the best possible people already. But I will just emphasize that as you have realized, like mentoring, even attracting women to this area, is a collective work. And women like you must come forward to make it happen. Today, the awareness about this opportunity, that is enterprise IT, is very low as compared to say one of India's most successful industry, IT industry, which competes for such talent. You have no option but to collaborate. We, with our NEXT100 platform, can offer whatever help would be required.

Vandana: Thank you all for taking time off to participate in the discussion. Wish you again on the occasion of International Women's Day. ■

> WFH has provided a sense of flexibility as a working parent. Now we have more agile and effective ways of communicating with colleagues. The pandemic has brought in that and further helped women be in a better place.
>
> **POOJA CHATRATH**

A POST PANDEMIC WORKPLACE MODEL:

WHAT IT MEANS FOR WOMEN?

Reflections of a woman technology leader on how the pandemic has created new opportunity for working women...

By Meetali Sharma

Ever since the onset of the COVID-19 pandemic, the circumstances for working women related to work and living have changed drastically. Lockdowns and work from home scenarios have added to their share of responsibilities since not only do they have to look after the increased demand from family members but also balance it with the increased availability demanded by their employers. Due to unavailability of house help during lockdowns, additional responsibilities of daily household chores and child care have come into the picture. This has led to tremendous stress as there is little or no time left for personal care. There is a strong feeling of being overwhelmed with work (both office and home) amongst a lot of working women due to the drastic changes in their daily routine.

However, though all this may sound to be very negative and stressful, it surely opens up a lot more opportunities for women in the post pandemic workplace. More and more organizations are adopting to the remote working culture rather than working from office. This provides flexibility for women to choose their work timings as well as where to work from. Organizations are moving towards providing flexible work model to employees. The commute time required between office and home can be completely reduced, giving extra time for managing all the responsibilities.

The post pandemic workplace model also promises to remove or minimize gender bias at work. Generally, very few women tend to make it to the Boardroom as they fear that they may not be able to take up the additional responsibilities that come with the role and strike a work-life balance. But, with the new model, this seems to be possible and can be very favorable, especially for women, as they get to work remotely with acceptance from their employer. In the past, a woman request-

More and more organizations are adopting to the remote working culture rather than working from office. This provides flexibility for women ...

ing for flexible work timing to manage work-life balance was not welcomed by the employer, however, with the current pandemic situation, the perception has changed completely and the remote working culture is now becoming the New Normal. There is a different sense of respect that the employer has developed for remote working employees (especially women) than earlier since they now understand better the challenges that come accompanied with remote working. The increased sense of empathy and trust towards

There is a different sense of respect that the employer has developed for remote working employees (especially women) than earlier since they now understand better the challenges that come with remote working

female employees is surely an advantage for all working women.

Since face-to-face meetings have been reduced considerably, performance evaluation in the post pandemic workplace model has shifted from being the "boss's favorite" to being "goal-oriented" and "metrics-driven". It again opens doors of opportunity for women to prove their mettle by delivering results efficiently and effectively. They also get the option to negotiate better through their performance as this new workplace will reduce favoritism big time.

To conclude, I would like to mention that it also becomes the responsibility of women to now become vocal and ask what they need. If they need help at home, they should reach out to their spouse or extended family members for support. Similarly, at workplace, they should reach out to the relevant stakeholders (colleagues, managers, teams, and HR who can help in clearing the obstacles being faced by them and help them in their path to success.

In a nutshell, I personally feel that although the pandemic and lockdowns have been very tough to handle and manage, yet COVID-19 has come as a blessing in disguise for working women. It's "now or never", there will be no better time like this which can offer a flexible work environment along with rewards. All in all, this is the perfect time for women to accelerate their career and pave their own path. ■

The author is Head - Risk, Compliance & Information Security at SDG Software India

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2021 Cybersecurity Priorities For CISOs Across Verticals

CISOs need to be aware of threats targeting Government, Retail, Financial Services and Healthcare sectors and the solutions they need to implement for securing their assets in 2021

By Rajesh Maurya

2020 was a very memorable year, largely due to the global COVID-19 pandemic which continues to have rippling effects. Among the ripples are significant shifts in technology usage and a surge in remote working—a reality that comes with new security concerns for CISOs. Organizations across industries faced numerous security challenges as the nature of work suddenly and unexpectedly shifted. CISOs were forced to rapidly pivot their security strategies across the infrastructure, from the endpoint, enterprise data center, WAN, or cloud edges, and make real-time decisions that would impact their organization over the course of 2020.

Reflecting on cybersecurity outcomes here is a look at the threat targeting Government, Retail, Financial Services and Healthcare sectors and the solutions that CISOs need to implement for securing their assets in 2021.

Government & PSUs

Government and PSUs have always been a high value target for malicious actors and the surge in remote work in 2020 only exacerbated this further. The remote teleworker's IT environment, online collaboration platforms, and connectivity will continue to be targeted by both criminal and nation state (APT) actors.

More government services and data became accessible online as a result of the COVID pandemic this will likely bring more Denial-of-Service activity directed against these digital assets, with a trend towards multiple simultaneous small attacks intended to stay below the threshold of automated response. Ransomware in the public sector is a serious concern that needs to be addressed as the digital assets and services of most Government agencies are 'crown jewel' assets in terms of the sensitivity and quantity of data they contain. CISOs will need to prioritize solutions such as Zero Trust Access, automated endpoint security, and

Ransomware in the public sector is a serious concern that needs to be addressed as the digital assets and services of most Government agencies are 'crown jewel' assets...

employee awareness to counter this range of threats, and to ensure that solutions such as software defined networking and multi-cloud services are implemented securely.

Retail

In 2020, online retail boomed with contactless business and a more mature cloud strategy quickly became essential for retail organizations looking to thrive in the face of unexpected challenges and changing consumer behavior. In 2021, we will continue to see organizations relying on these approaches and, as they do, security must continue be a top priority. Cybercriminals are always looking for new opportunities to exploit vulnerabilities and retail has always been a prime target for financially motivated attacks. These campaigns were especially successful in 2020 as threat actors capitalized

on the ongoing disruption and rapid technology adoption being undertaken by retailers. It became apparent early on that thoughtful planning and investments made in technology platforms before the events of 2020 created much greater opportunity to survive and thrive in the new dynamic environment retailers found themselves in.

Going into 2021, retailers will look to expand on these investments while creating efficiencies and cost-saving opportunities along the way. Secure SD-WAN, coupled with flexible and adaptive security solutions that are easy to manage, will help reduce overall network complexity while ensuring high performance and "always on" availability of applications and customer facing technologies. Expanding 5G usage will only further highlight the necessity for robust and secure connectivity. Zero Trust

As financial institutions remain under threat of constant attack, they will need to look at flexible and agile solutions to enable IT and security...

Access, when integrated with the existing security fabric, will help businesses identify risk in their environments and successfully and securely scale to meet changing customer demands and business needs. As digital innovation shows no signs of slowing down, retailers will likewise need to streamline security operations through automation-focused technologies such as SOAR and manage the impact of the cyber skills shortage by augmenting with AI-enabled services to help keep up with the influx of data and alerts due to rapid multi-cloud and IoT adoption.

Financial Services

Like organizations across verticals, financial services organizations had to pivot largely to remote work in 2020 and digital services became more important than ever before. This, of course, brought on new opportunities for cybercriminals to exploit weak points in the security infrastructure of financial institutions to gain access to highly targeted and lucrative data. These trends will likely continue in the new year, which is why CISOs need to be taking a hard look at their strategies to identify any potential security gaps.

As financial institutions remain under threat of constant attack, they will need to look at flexible and agile solutions to enable IT and security to scale and adapt without compromising security and performance. Since we expect to see an increased reliance on the cloud as digital services continue, maintaining visibility and control across their cloud, on-prem, and hybrid environments will be pivotal. It will require a broad suite of security tools that cover the entire attack surface including all users, applications, and devices, on and off the network with Zero Trust Access tools that are integrated to reduce the complexity of managing multiple solutions and vendors. In addition, centralized management of security, including automation of workflows with security orchestration, automation, and response (SOAR), automated endpoint protection, and threat intelligence sharing will be key for protection, detection, and response to security incidents.

Healthcare

2020 brought a slew of new security challenges to healthcare. As healthcare, pharmaceutical, and life sciences organizations pivoted to deal with the COVID-19 pandemic by transitioning to telehealth services, creating temporary remote COVID-19 testing sites, and developing and manufacturing vaccines, security teams struggled to ensure security, performance, and compliance—among other things. Many organizations had to revamp their security infrastructure to support these remote users as cybercriminals seized the opportunity to exploit the global health crisis.

These attacks will not end in 2021, and healthcare CISOs need to be prepared to address these concerns, as well as anything else that 2021 throws at us. Healthcare organizations' quick response to COVID-19 challenges leveraged cloud technology, secure mobile workforce enablement, and virtual patient platforms at an accelerated rate that demonstrated healthcare organizations can more quickly and effectively enable digital transformation to solve healthcare, life sciences, and pharmaceutical business challenges in the future. In addition, these same organizations have been targeted and impacted by a 75% increase in ransomware threats that will continue to rise in 2021 requiring organizations to invest in key security programs (SD-WAN, Edge Compute, Cloud Security, and Security Operations) to reduce organization risk and ensure compliance. ■

The author is Regional Vice President, India & SAARC, Fortinet

Gaming And Attack Surfaces: What You Need To Know

There are 3 attack surfaces that can take your game offline: gaming server surface, gaming lobby surface and in-game surface

By Nikhil Taneja

Gaming is a hot, profitable industry – now more than ever, since the pandemic has driven people to consume more streaming content. It's why botters, manipulators and cybercriminals will go above and beyond to disrupt online gaming services and impact the multiplayer experience.

Normally, DDoS attacks inflict damage by impacting service availability. However, in gaming there is another unique value to DDoS: it is being used to create an unfair advantage to one or more players by slowing down others and kicking out competitors from gaming rooms. The entire gaming arena could be DDoS attacked from different surfaces, leaving players frustrated and potentially leading to a severe impact on the brand reputation.

In recent months, we have witnessed more and more UDP, in-

session, low volume floods targeting the online gaming industry, which even led a number of famous online tournaments to be canceled or postponed.

There are 3 attack surfaces that can take your game offline:

Gaming Server Surface

Similar to every resource on the internet, gaming servers are also bound to bandwidth and hardware resource limitation. As powerful as it may be, once attacked, the game infrastructure can be saturated as any other network/CPU-operated environment. The gaming server is the pivotal connection between the user and the gaming company/platform and hence, it must always be available, always online.

No matter if it resides in the public cloud or legacy data center, companies must protect their gaming servers against DDoS and other compromising attacks and ensure their constant high-availability and to provide the best user experience.

Gaming Lobby Surface

Such a unique, multi-layered architecture can cause a real headache for a security team. Lobby room protection, over UDP or TCP, can be hard to monitor and even harder to detect attacks because in most cases, they are low volume, resource exhausting attacks that won't ring any alarm bells.

In addition, the authentication and initial login are, in most cases, encrypted. In general, encrypting the game authentication stream is mandatory in order to maintain data confidentiality and integrity. However, this also poses a problem as middle boxes are blind to the data stream. This inability to process the actual data might cause false positive or false negative detection where the server's DDoS protection is based on traffic volume only.

On the other hand, decrypting all traffic might result in higher latency, negatively impacting the user experience in multi-player games.

Since the SSL/TLS problem is a big issue, many times security teams are left with a big problem that keeps them from doing their job properly.

Companies need to monitor the regular usage of their lobby room, whether encrypted or not, focusing on the number of legitimate requests and their source IPs, so they can identify abnormal activities and

In-Game Surface

Protecting the in-game session is a hard skill to master. Security teams need to continually learn the normal distribution of UDP packets in the session itself in order to identify and block attacks, which makes the in-game attack surface lucrative for manipulators and hackers.

As UDP is all about speed, learning the normal distribution of online games can be an almost impossible task to perform manually. Gaming companies need to know to look for this in-session DDoS attack that can cause a game to crash or manipulate the integrity of the game itself. There is nothing players hate more than an unfair advantage that makes them lose the game and getting a network DDoS warning message.

Recommendations to protect your titles

Gaming companies are exposed in three dimensions and must stay on a constant alert and monitor each one of them for each of their titles. Security teams need to be able to identify attacks automatically, whether encrypted or not, when they start and have the right solution to block the attack while allowing legitimate users to play the game with no added latency. When working manually or with rate limiting technologies, security teams need to choose between impacting the user experience and overlooking the potential threats. ■

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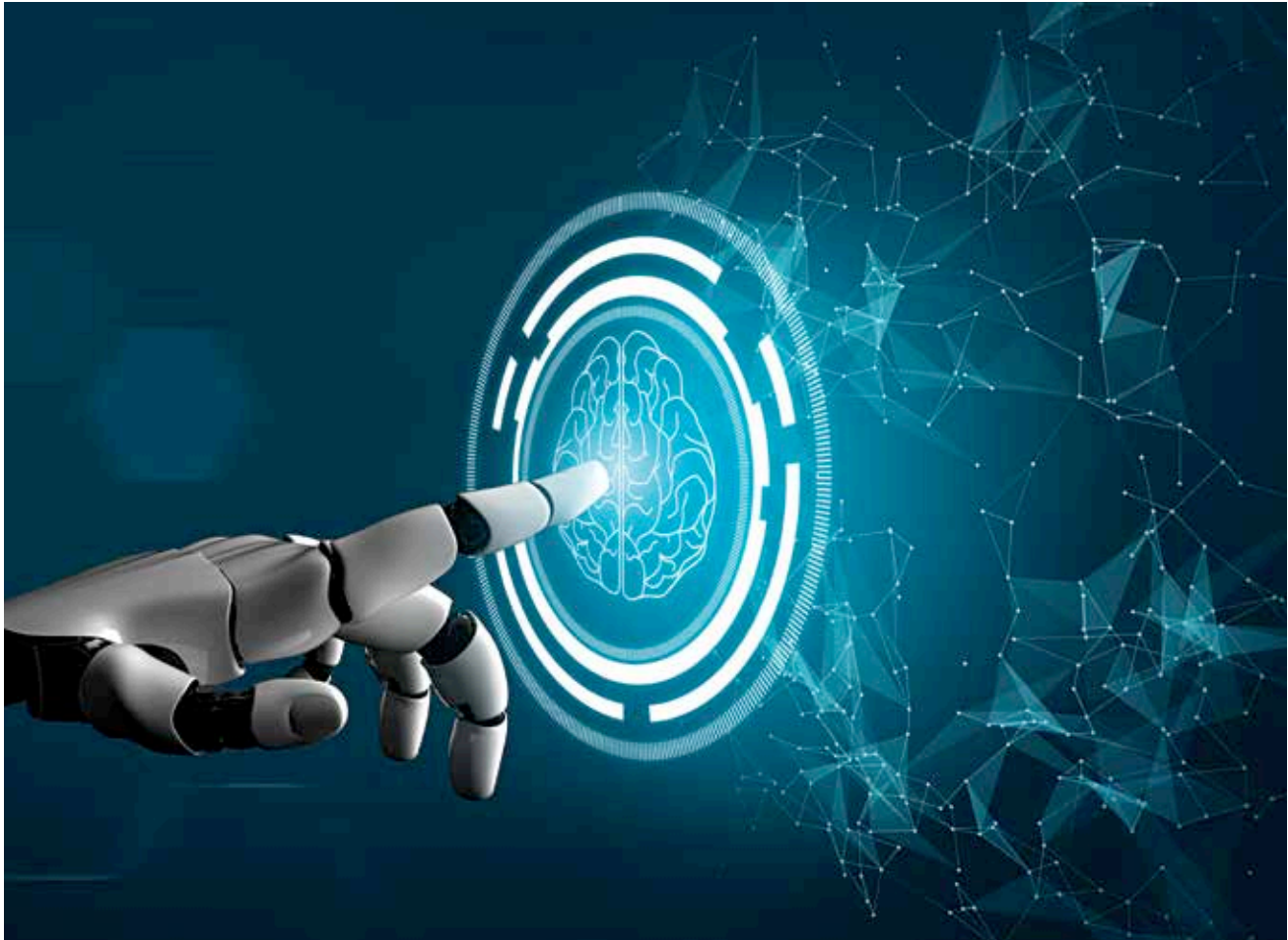
Technology Will Reshape The Business Landscape

The coming year will be the year of innovation that further propels acceleration of digital transformation and automation

By Mankiran Chowhan

2020 has been a difficult year for the industry with everyone slowly trying to adjust to the new reality. The pivot to remote work has created newfound visibility for digitalization and enough positive sentiment from the broader organization to support

reinvention of their digital foundations. The coming year will be the year of innovation that further propels acceleration of digital transformation and automation.

A few perspectives and predictions related to technology for 2021 are as follows:

1. **Automation will become essential, not extra and will accelerate the pace of digitalization:** Many companies were in the early or mid-stages of digital transformation when the pandemic struck. They pivoted and sped up that transformation to address

unprecedented global disruption and customer needs, and now they will be expected to continue operating within this new context. Digitalization is expected to be directed majorly towards improving employee experience. According to a Gallup study, employers who focus on employee engagement realize 17% higher productivity, 21% higher profitability and 4.3x increase in earnings per share. One big part of this is to provide the employees with automation solutions and mobile tools that can improve the overall productivity and experience of the employees leading to better retention for the organization.

2. **Demand for AI will become more mainstream:** As businesses will continue to maintain hybrid remote-working models and anticipate other potential disruptions in 2021 and beyond, the role of

automation and AI use cases in the workplace will grow. These may include enabling efficient day-to-day communications between knowledge workers doing their jobs from home and automating invoicing and expenses to keep valued partners paid and to preserve budgets. More businesses will lean on AI algorithms to make decisions to support real-time financial transparency in order to meet the business needs brought on by the pandemic. This includes managing spending in near real-time to improve budget management and liquidity, increasing compliance and eliminating errors, and maximizing profitability.

There will be broader use of AI and ML to add intelligence to applications and eliminate manual processes to give firms a much-needed competitive boost by improving their productivity. A recent SAP Concur-commissioned

study, for instance, found that as much as 36% of employees in India submit expenses manually by filling out a form and enclosing physical receipts. Firms can save considerable money each year – and improve employee satisfaction and experience– by automating their finance and administration processes. The need to optimize processes, consolidate assets and reduce costs will further kick demand for AI into overdrive for more back-office operations in areas, such as Accounts Payable (AP) and Accounts Receivable (AR).

3. **Blockchain and Robotic Process Automation (RPA) would drive the future:** An increasing number of organizations are already aiming to automate their processes while ensuring proper tracking and secure capturing of all business transaction. In the times ahead, accountants using spreadsheets will be replaced by technology that does 90% of the work without human intervention and in the next five years, many transactions will be handled automatically, streamlining workflow management, such as expense approvals, invoices and reimbursements. Blockchain and RPA have emerged as disruptive technologies that can help the companies in transforming their existing models while increasing revenues and reducing costs. In the coming year, we expect the adoption of these technologies to further grow with organizations utilizing a combination of blockchain and RPA. While RPA would be able to automate the repetitive and manual tasks, interact with systems to process data, bring in flexibility and reduce operational risks, blockchain would be crucial for improving audit management, secure payments, recording business transactions for automated decision making and creating immutable records for reliability.

4. **Data will move from an analytical to predictive decision-making tool:** In the coming year, many

In the times ahead, accountants using spreadsheets will be replaced by technology that does 90% of the work without human intervention and in the next five years, many transactions will be handled automatically

more organizations will start to realize the potential of their financial data to intelligently guide business decisions and leverage it to reach even greater levels of success. As operations become largely automated, finance will double down on business insights and service. According to an SAP Concur commissioned research done by Vanson Bourne, 98% finance leaders believe it is important to have total control over spend management. Organizations with good visibility into their spending are better equipped to identify cost saving opportunities, enforce higher levels of compliance and meet financial reporting requirements. They need to be able to isolate trends and patterns that bring down compliance, so that they can strengthen their policies to increase control.

There will be an uptake in the use of intelligent spend management (ISM) solutions that would help the finance department in automating monotonous and menial tasks and support consolidation of finance data and information from multiple sources enabling the CFOs in gaining a holistic picture. This implementation and adoption of technology would help the finance leaders in managing budgets better and identifying the priority areas to redirect monies.

5. **"Super Apps" Adoption:** With the pandemic in play, super apps are dominating mobile commerce and communications in India and are already reaching critical mass among consumers. True to its name, a super app is the number of apps within a single seamless experience. They tend to start as messaging or payment apps that merge and grow to include ride-hailing, dining, social media, health tracking, games, common business applications, and more. In India, it's becoming easier to use super apps like Paytm, Amazon, PhonePe, Zomato, etc. This means, any vendor who wants to create a seamless experience for mobile

customers, especially providers of transportation, dining, travel, etc. needs to keep a close tab on this promising trend.

6. **Mobile & Cloud Technologies will be baseline expectations:** Higher-value work requires cross-functional collaboration among business executives, technology teams, and finance strategists. Technology like mobile or cloud solutions will simplify things – example using a mobile to take pictures of the receipts and complete the request on their laptops or mobile devices that will speed up the process for employee, simplify things for your approvers and make it easier for you to track these unexpected expenditure.

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7. **Technology will re-shape the way business travel happens:** In the New Normal, technology will play a major role in transforming the way business travel is done. Consolidation to a single Travel Management Company (TMC) with a robust end-to-end technology platform would help the organizations in delivering the required duty of care to their employees on the road. It can help organizations in enhancing the safety of its employees while simplifying accessibility for different parts of the travel. In the SAP Concur Travel Survey 2020, 40% of Indian business travellers reported real-time updates and alerts on potential travel risks as one of the most important measures for companies to implement for business travel. Machine Learning (ML) along

with predictive analysis can help the organizations in pin-pointing the location of their employees who are on the road. This is essential if any important information needs to be relayed in the case of any emergency incident and help can be made available whenever necessary.

Mobile applications would see wider utilization by organizations too so that travellers can access information regarding their travel on-the-go, stay informed about any changes in schedule and communicate whenever necessary, all in real-time. Although it is unclear when exactly the vaccines come and how long the disbursement will take, there will be emergence of digital health passports, displaying a traveller's vaccine

or negative test status, along with other relevant information, as the transition to the new reality of local and global travel takes place.

While the crisis has created unimagined challenges and uncertainty, it has also presented an opportunity to pause, reassess, and develop strategies to help organizations not only survive, but also become more resilient against future uncertain conditions. Each business must take a unique path that goes beyond simple recovery to instead drive reinvention, so you strengthen your business for the near-term while also building a rock-solid foundation for the longer term. ■

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Local Cloud Infrastructure, Seamless Digital Experience And Zero Trust Security Model Among Top Tech Predictions For 2021

Faced with perhaps the most disruptive circumstances of their existence, organizations worldwide realized that they had no greater ally than technology in their quest to ensure some sort of work continuity during the COVID-19 pandemic

By Rajesh Ganesan

Faced with perhaps the most disruptive circumstances of their existence, organizations worldwide realized that they had no greater ally than technology in their quest to ensure some sort of work continuity during the COVID-19 pandemic.

"The Coronavirus vaccines now entering the market are expected to bring relief to businesses soon by paving the way to normalcy," said Rajesh Ganesan, Vice President at ManageEngine, the enterprise IT management division of Zoho Corporation. "But the past year has shown that technology resilience is fundamental to business resilience and that it's better to take steps in that direction now rather than later."

In the spirit of resilience, here's a list of five top tech predictions for 2021 by ManageEngine, compiled after discussions with relevant stakeholders, including business and tech leaders.

#1 Local regulations and cloud infrastructure

With the accelerated cloud adoption, it is inevitable that governments across the world will bring in region-specific regulations to uphold aspects of sovereignty, user privacy, security, culture, policies, and other issues; and this will call for cloud infrastructure to be hosted in every such region to comply with those regulations. Also, specific states within big countries could have their own regulations, and hence businesses should be aware of this factor while choosing cloud providers. When it comes to their data as well as their customers' data, it is imperative for businesses to operate with clarity of regulations and how they apply.

#2 More focus on a seamless digital experience

A seamless digital experience will be an important differentiator for businesses, especially in the post-pandemic era. Hence, they will increasingly invest in digital experience monitoring to relieve bottle-

From a business option to a business imperative, every one of us is on a Zero Trust journey— whether we know it, or not

necks, such as the inability to track employee devices, besides issues in their home network and other cloud-based productivity tools.

Organizations will also strive towards effectively engineering AIOps to contextually monitor and remediate their IT and business logic in order to provide an intuitive user experience. Furthermore, AI-powered and data-informed monitoring tools will be sought out to analyze security risks and increase operational efficiency.

#3 Zero Trust security model will be the new norm

Before COVID-19, Zero Trust was being driven by a need to modernize the information security stack. With the shift to remote work, the traditional perimeter-based security model was rendered obsolete. Digital identity is now a single control point across users, devices, and networks. Zero Trust security models, however, operate with the principle that all network users—internal or external—are considered hostile until proven otherwise. Trust is established through strong authentication to users upon verifying who is requesting access, the context of the request, and sensitivity of the access environment; and each user's behavior is continuously assessed for risk.

It addresses the agile needs of modern organizations and eventually it will become the way any security framework is architected. From a business option to a business imperative, every one of us is on a Zero Trust journey— whether we know it, or not.

#4 Hyper converged infrastructure is ideal for the cloud-era

Having a strong IT framework is a critical factor for businesses to achieve infrastructure efficiency. Hyper converged infrastructure (HCI) consolidates traditional hardware-based infrastructure (compute servers, networking and storage) into virtualized, software-defined environments. This approach is not only a cost-efficient option but also helps simplify the management of these virtualized resources from a single, unified interface.

Considering the impact of the pandemic, many organizations are looking to adopt technologies that can support their digital workspace. Keeping in mind the cost and security related issues associated with public cloud, it may not be the immediate choice for most businesses, making 2021 the year for HCI. And due to its simplified and flexible framework, HCI is ideal for the cloud-era.

#5 Increasing utilization of analytics by non-IT departments

Now that organizations realize the effectiveness of analytics platforms, their usage is expected to penetrate not just IT but other departments that have traditionally not relied on analytics applications. For example, data from HR applications combined with employee performance metrics can be used to measure the influence of employee welfare initiatives on employee productivity.

This focus on analytics brings an interesting dynamic to the way organizations work and also introduces a set of challenges in data governance and maintenance. IT will play a pivotal role in facilitating fine-grained access levels before moving to a higher trust model where individual teams have complete access to all relevant data that is necessary for their efficient functioning. ■

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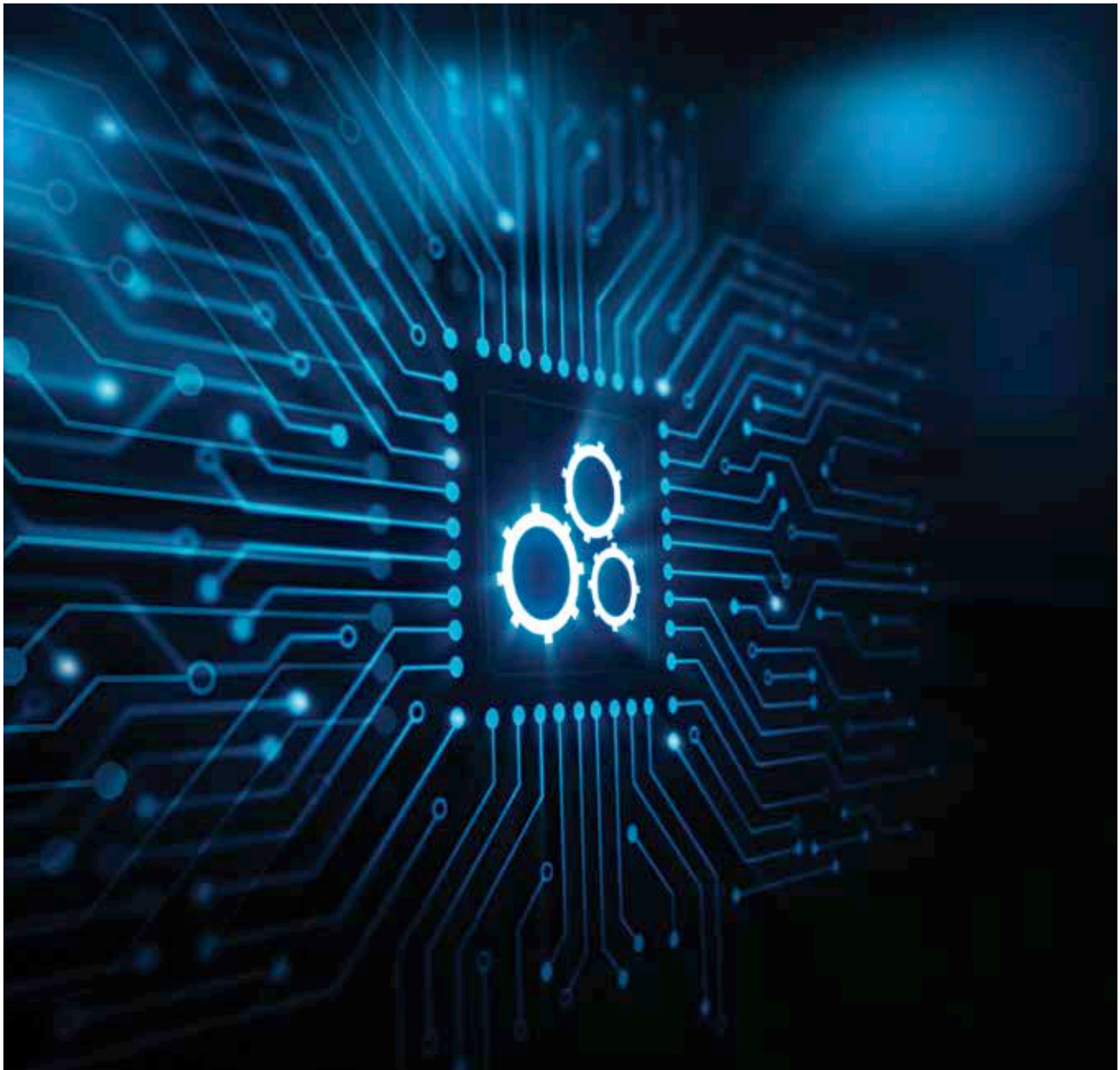
Trends That'll Dominate The Tech Industry In 2021

Machine learning will become democratized in the cloud around data

By Danny Allan

There are key technology trends that businesses will look to take advantage of and prepare for in the year ahead.
They are as follows:

Developers will have more say in technology direction and data strategy of companies

We will see an aggressive "shift to the left" across all industries, where CIO's will depend more on their development teams to guide the technical direction of the company. Historically, development teams have taken a top-down approach to move their data to the cloud, but – as have many things in the world – this changed with the pandemic with the reinforcement of cloud-based environments. In 2021, we'll see DevOps teams continuing to have far more say in the data strategy process, and as a result we'll see a greater increase in the mobility of workloads, correlating with an increase in cloud data management techniques.

A greater focus on protecting and managing work collaboration platform data in the cloud

Distributed workforces were already on an upward trajectory but have been completely kicked into overdrive with the COVID-19 pandemic. With many companies extending work-at-home opportunities through mid-next year, reliance on cloud-based collaboration platforms such as Microsoft Teams and Slack, will only increase. This means even more teams will be looking to harness the power of the cloud to store an influx of data from collaboration platforms. In 2021, this will create more focus, awareness and need for data protection and management for collaboration software.

With the decline of hardware, software-defined models will become more prominent

Appliances will diminish in their attractive as we shift towards soft-ware-defined models. 10 years ago, appliances were these shiny new toys that everyone wanted to get their hands on, however they have not had the staying power we predicted they would. In fact, we've seen a shift towards backup-as-a-service and away from appliances. Remote work in the pandemic had a real impact on how we dealt with hardware in 2020; that will continue into 2021 as software-defined models take center stage.

Machine learning will become democratized in the cloud around data

Already, we are seeing organizations recognize the unlimited opportunities available to them through data they have already collected. Data re-use

how seriously GDPR, CCPA and others needed to be taken. Now that this attention has been received and the awareness is there, the shift will be more towards more consistency of privacy regulations at the federal level.

IT spending will rebound after 2020 – security and hardware will be at the top of the list
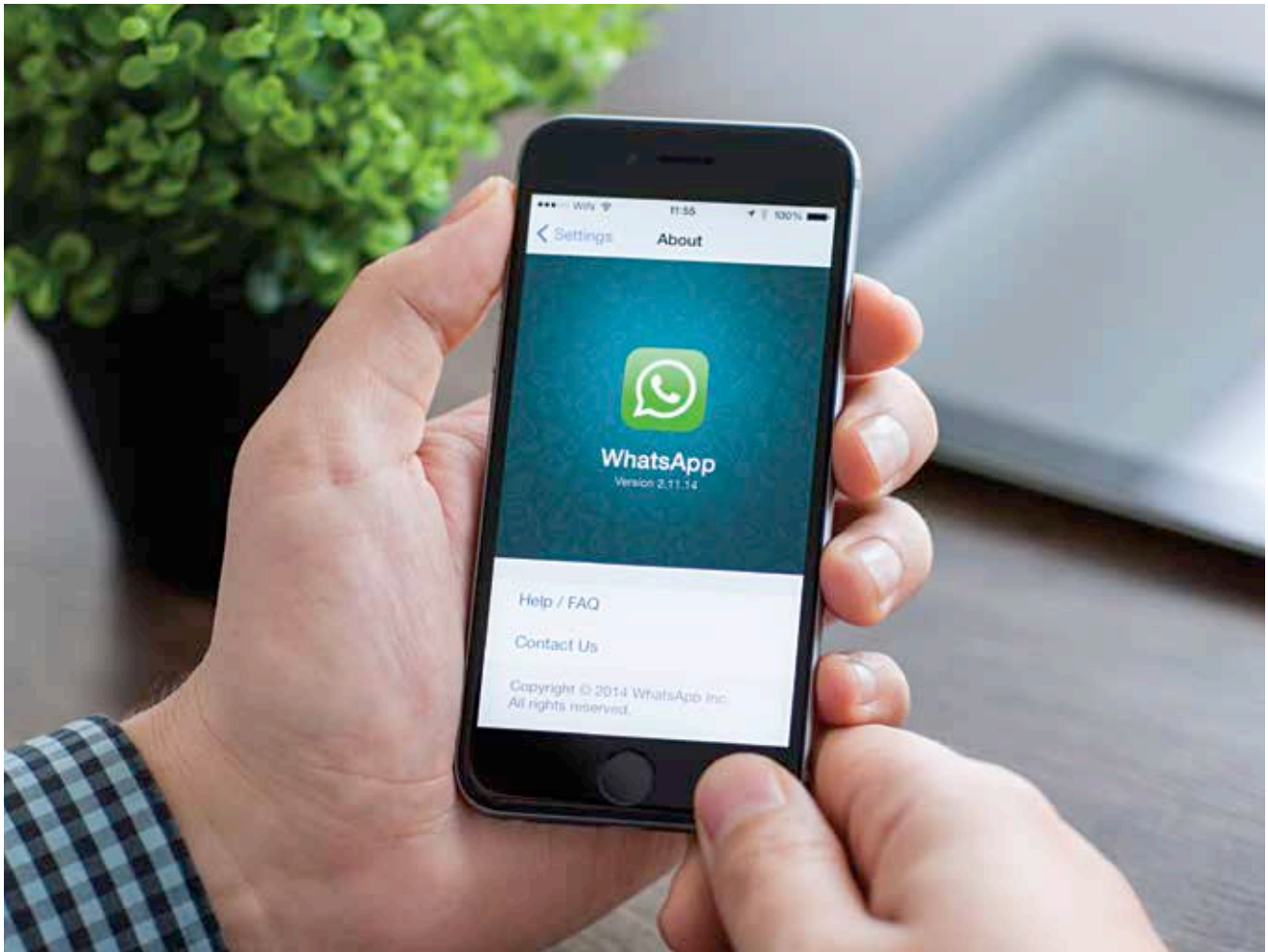
Despite the economic turbulence brought on by the pandemic in 2020, we'll see a five to 10 percent increase in general IT spend in the New Year. Allocations will likely focus most on security, general system modernizations (backup, applications, cloud migrations, etc.) and refreshing hardware. In addition, organizations will take a look at what was on "hold" in

> ## Remote work in the pandemic had a real impact on how we dealt with hardware in 2020; that will continue into 2021 as software-defined models take center stage

will be a big trend we see organizations shifting to 2021, with many leveraging the power of machine learning to help them do this. This is still in the emerging stages; however, its adoption will increase as organizations recognize how it can help them analyze and re-use data that they already have. By leveraging machine learning in the cloud, organizations will ultimately become smarter.

Compliance regulation fines won't see an uptick – they're going to continue trending down

Data privacy and privacy regulations will continue to gain traction in 2021. In particular, I predict we will see the first proposed federal regulations around privacy in the New Year. However, compliance fines will continue on the downward trend we saw in 2020. We saw a massive jump in compliance fines in 2019, which solidified

2020 to address IT spend that happens on an annual recurring basis. For example, hardware should be refreshed every three years, and if the pandemic halted an organization's attention to hardware, it's fair to say that will make its way to the top of the list in 2021.

This year, we will also be in the unique position to see an extra boost in IT spend and allocations following the U.S. presidential election. Elections tend to show historic slowdowns in how dollars are allocated, due to the uncertainly of the results and the eventual candidate who will occupy the White House. After November, we'll see dollars funneled in ways that reflect the outcome – similar to how other IT spend will stabilize as we see a true downturn on the pandemic or progress in a vaccine and a return to "normal." ■

The author is CTO at Veeam

Businesses:
The WhatsApp Challenge

Recent changes in WhatsApp privacy policy and its impact on businesses

By Kanishk Gaur

The recent change in the privacy of WhatsApp has been seen as an opportunity and threat by multiple businesses today. However, if the issue is critically analyzed, it highlights a platform providing free business messaging for too long with its investors paying for consumer data storage. When Facebook acquired WhatsApp at a USD 19 billion valuation, the maths surprised many. Multiple subject matter experts believed Facebook had overvalued WhatsApp as a messaging platform, giving other such platforms to close the business due to limited funding or not able to support growth with private equity investments. Facebook, however, looked at WhatsApp differently and had a larger game plan.

Facebook realizes its revenue from the advertisement which sellers can use to target its prospects and customers. So far, the advertisements have been basis consumer searches, likes, subscribes, group members, location and many other attributes. Recent change in WhatsApp privacy policy and reach out to its consumers worldwide to consent to the new policy has been extended beyond Feb 2021 to May 2021. However, a lot of confusion and chaos remained with many known celebrities deciding to put their views on Twitter to move to alternate platforms. While the changes in WhatsApp policy is only for WhatsApp business and WhatsApp API which is standalone product, however, it has overall implication for larger consumers accessing the WhatsApp consumer platform, given the WhatsApp business is used by multiple small and medium businesses and WhatsApp business API can be used by large-scale businesses to interact with their consumers and during the pandemic people have used digital means to buy and sell services, hence WhatsApp and Facebook are two vital platforms to enable it. The most important question is why this new policy and exactly what is WhatsApp going to share with Facebook if WhatsApp does not share this data with Facebook?

WhatsApp launched a standalone business app back in January 2018, which holds small business owners in mind, making it easier for them to communicate with consumers directly and highlight their goods and services. WhatsApp supplemented its launch in August 2018 with Business API which is standalone business in itself to offer consumers professional support, and communication on the popular messaging platform. The business API would allow large businesses to respond faster to their clients via WhatsApp messages, hence keep their inventory up-to-date and sell products through chats.

Since then, millions of people around the world have been connect-

ing safely on WhatsApp with organizations of all sizes, without having to leave their homes. To advance and support optional business messaging features, WhatsApp brings Facebook in the picture and both of these platforms work together in multiple ways.

On October 22, 2020 Facebook clarified that messaging while interacting with business will be different than messaging friend or family. While chats with businesses that use WhatsApp Messenger, WhatsApp Business app or that self-host the WhatsApp Business API to manage and store customer messages themselves are end-to-end encrypted.

However, if a business decides to use a third party vendor to operate the WhatsApp Business API on its behalf, then users must not consider

Facebook ads. WhatsApp specifically distinguishes those discussions with companies that choose to use Facebook hosting services to make communications between the customer and the seller open and keep the customer aware that they are connecting on Facebook with a company's API organization that has chosen to host its chats.

The new e-commerce feature enables companies to get their products viewed right inside WhatsApp with Facebook-branded commerce features such as shops so that users can see what is available to purchase. If a user chooses to interact with shops, their shopping activity such as the types of products they view and purchase can personalize their shopping experience and the ads they see

However, if a business decides to use a third party vendor to operate the WhatsApp Business API on its behalf, then users must not consider communication to be end-to-end encrypted

communication to be end-to-end encrypted, given the business consumer is communicating with has chosen to give a third-party vendor access to those messages.

Since businesses have option to choose third party services providers, Facebook is also one option companies have the choice to make, given Facebook also launched its new hosting services offering.

This means that companies can also use Facebook services to handle customer chats with WhatsApp, answer questions, and submit useful details such as purchase receipts. WhatsApp does not share this information with Facebook, but companies (owners) would, if they wish, be able to use the data for their own marketing purposes, which could include

on Facebook and Instagram. WhatsApp will tell them how their data is being shared with Facebook and what is it used for inside the app as this feature is optional.

Individuals who use both WhatsApp and Facebook can see a Facebook ad with a WhatsApp business icon. With this new policy, WhatsApp makes it clear that this policy is intended to advance and help more companies around the world to share only selected details of their choice with Facebook. But again, user discretion is something WhatsApp has left consumers to follow. A consumer may choose not to interact with WhatsApp business account of a service provider if he/she is contacted or engages with outside WhatsApp. Targeted ads to consumers basis their choices of

interaction with business accounts on WhatsApp has been subjected to a lot of scrutiny and debate, with many pundits calling it violation of privacy, especially in countries still grappling with Data Protection Laws.

India is also once such country where Data Protection Law is still yet to see light of the day. Multiple interaction and deliberation have taken place but a formalized mechanism to implement it, especially around non personal data governance framework, is yet to be finalized. With the pan-

SMBs on Facebook, moved forward to monetize it through digital payments and advertisements. Another key aspect to be analyzed is shutting down of a messaging platform more recently in the month of January due to investors pulling the plug on investments. So ultimately every social media or messaging platform will look at monetizing its consumers through various methods, be it AdWords, targeted advertising or digital payments, else will have to ask users to pay a fee to continue on the platform. In such

End-to-end encryption by platforms such as Signal and Telegram could also lead these platforms to be used in dangerous and harmful ways. With no access to law enforcement agencies, these platforms could turn out to be hub for online and more heinous crime against society. Hence, the potential misuses of these platforms by hacktivists, terrorist, drug operators, and child traffickers must also be understood and addressed through effective monitoring, measures and policies.

Messaging platforms today are also used for online harms especially against vulnerable groups and become an effective tool to spread misinformation to target vulnerable groups. Therefore, metadata interpretation to analyze such trends must be carried by platforms to check spread of misinformation and tackle online harms. More importantly, access provided to law enforcement agencies by these platforms is a key ask which data protection laws of countries must cover to safeguard their population, especially women, children and elderly from online crimes. With many platforms not setting registered offices in India and not cooperating with the Indian Government, their secrecy multiple becomes a barrier to national safety and security. Hence, methods to communicate with security agencies especially in the case of threat to safety and security of citizens must be established by all platforms. A stronger encryption policy, if rolled out by the government in this context, will help establish more trust between government and platforms, and allow data sharing with third parties to be reasonably understood by consumers. Given India's large young vulnerable population, privacy regulators' role becomes more critical and regular monitoring, and audit by such an agency will streamline all issues with respect to privacy, data sharing and third party access to data. ■

Credit: Ink Drop / Shutterstock.com

In a country like India where more than 40 crore users use messaging platforms, will investors in messaging platforms pay?

demic increasing social distancing, consumers' digital interaction has only increased and so has the cost of storage, and management of such data. Since platforms don't charge fee to its users, the question remains, who pays for the platform? Especially in a country like India where more than 40 crore users use messaging platforms, will investors in messaging platforms pay? If yes, but till when? Will an alternate platform on crowd or private equity funding be able to sustain traffic acquired during this period in the longer run without monetizing it? Ultimately every platform will look to monetize its traffic to sustain and not remain crowd or investor funded. Facebook and WhatsApp just took the lead, and through its network of large

scenario, a larger data protection law which governs this space is necessary to make it a level playing field for all businesses looking to thrive online through harnessing data. Regimes of regions and countries who understood this data monetizing strategy of businesses have been able to regulate governance of data but effectiveness of such regulators to call out flaws and monitor breaches effectively still remains. While alternate messaging platforms have hugely found success during the announcement of the WhatsApp privacy policy change, it's their promoters/investors who have blatantly spoken about their privacy and security features but aspects such as access to law enforcement agencies by such platforms remains a key issue.

The author is Founder of India Future Foundation (The views are personal)

Tech's Role In Overcoming 'Friction Points' In Contracting

Modern CLM tools leverage Artificial Intelligence and Machine Learning to take the digitization of the contract management process to the next level and enable advanced analytics and process optimization

By Kanti Prabha

Contracts are the lifeblood of an organization, as they contain the rules of engagement of all commercial relationships - with suppliers, customers, and partners. To realize the maximum value from such relationships, the contracts and the management of these contracts is essential. However, the process through which contracts are designed, created, and managed is far from straightforward. This isn't surprising given that contracts cater to various interests and purposes, with internal (procurement, legal, finance, risk management, sales, etc) and external stakeholders (analysts, customers, suppliers, regulators, etc) involved in the process. As a result, over the years, contracting has been characterized by growing volumes and complexity, with attempts at streamlining the process proving challenging. This has made it difficult to manage and improve contract performance.

While there is a lot of focus today on deploying contract lifecycle management (CLM) technology to optimize the contracting process, tactical application of technology is not going to yield the desired results. For digital strategy to be effective, it must be

based on understanding where the problems are. Research by World Commerce & Contracting and Sirion-Labs shows that there are 40 such problem areas or 'friction points' that cause delays, inefficiencies and lost value across the contracting lifecycle. Many of these can be avoided; and at the very least, their impact could be minimized.

Examples of 'friction points' & their impact

The end-to-end contracting lifecycle starts with the recognition of a need that can be fulfilled by an external party (a supplier) and ends with the successful completion or closure of that need. To identify the friction points in this process, the contracting process can be broken down into the following 6 phases:

- Phase 1: Evaluation
- Phase 2: Assembly and approval
- Phase 3: Negotiation and approval
- Phase 4: Implementation
- Phase 5: Performance
- Phase 6: Close out/termination

Let's take an example. For the evaluation phase, the quality of requirement definition is an important friction point. This activity involves a lot of stakeholders on both, the buying and selling side working together to broadly shape the scope of the engagement. This is a complex yet critical step. It is imperative that such items are deter-

mined in a timely and accurate manner. If not, it is inevitable that there will be friction points at downstream phases of the contracting process, like disagreements on whether a particular activity is within the scope or not. Great care should be taken during the initial phases of the process, as taking shortcuts here can result in downstream friction points which may have far greater consequences, in terms of both time and cost.

Another critical friction point that organizations often neglect occurs during the contract's progression from negotiation/signature to implementation; this involves the 'handover' of the contract from sales/procurement to contract management upon signature. It is critical that this handover is managed seamlessly to ensure the benefits negotiated in the contract are realized during execution. Clear communication is needed between stakeholders (especially between those setting the contract and those executing it), with clarity over contract ownership and associated accountability. It is not uncommon for activities to be stuck due to disagreements over who is responsible for what. Such disagreements can be within an organization (between departments) or externally between the buyer and seller. Until the issue is resolved (which usually takes time), the corresponding activity is halted delaying the entire process.
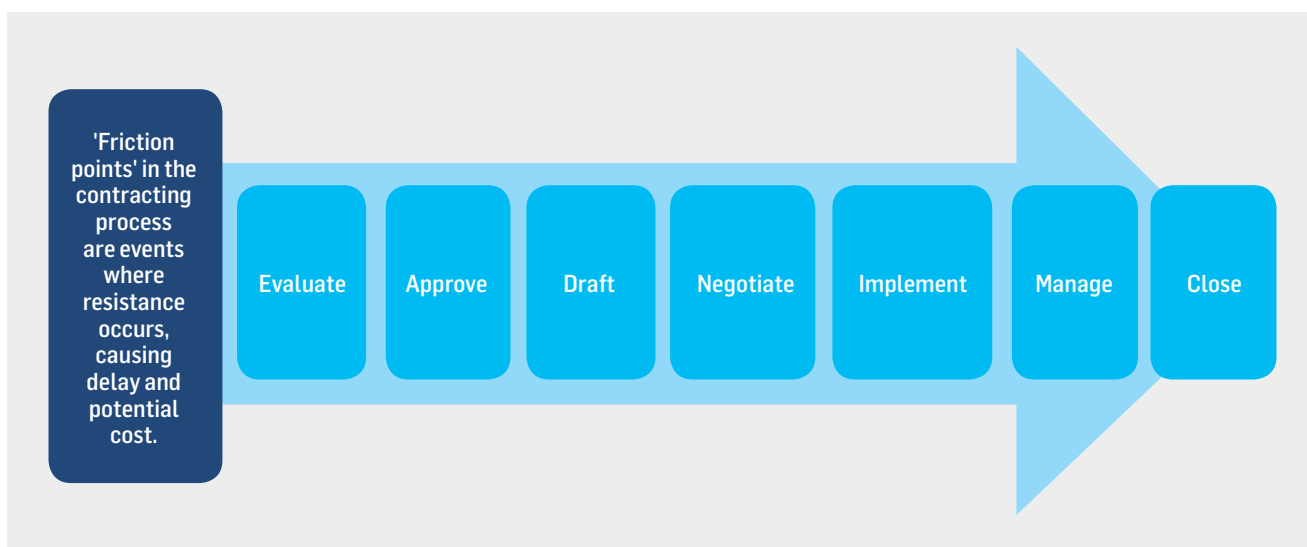
Ensuring a smooth 'handover' is key to realizing desired outcomes during contract implementation.

WorldCC research has shown addressing friction points can help organizations realize added value of upto 12-15% of contractual spend. Having said this, the impact of friction points varies widely. There are a few reasons for this. Some of it has to do with varying efficiency levels in an organization for an equivalent type of contract, i.e. organizations have well-defined processes and automation for a particular type of contract and not another.

Approaches to overcome friction points

As mentioned earlier, friction points are entirely avoidable. Organizations need to adopt a focused approach to identify the root causes of points of friction, observe performance to identify improvement areas, and deploy tools and technology to streamline processes and eliminate friction. CLM tools are helping organizations standardize and automate the contracting process reducing the impact of friction points. Modern CLM tools leverage Artificial Intelligence and Machine Learning to take the digitization of the contract management process to the next level and enable advanced analytics and process optimization.

Equally important as technology is the need for a holistic, integrated

'Friction points' in the contracting process are events where resistance occurs, causing delay and potential cost.

Evaluate | Approve | Draft | Negotiate | Implement | Manage | Close

approach to overcomingfriction points. Far too often organizations have taken a narrow view to eliminate friction at a particular phase of the contracting process. For example, deploying point solutions for automating repository or automated contract negotiations. While this will help reduce the impact of certain friction points, they offer a limited ROI.

Role of AI/ML technology in addressing friction points

Initiatives in Artificial Intelligence and Machine Learning to address friction points have focused on three objectives - efficiency gains, transactional effectiveness, and commercial intelligence. Let us take a deeper look at each of them.

1. **Efficiency gains:** Focusing primarily on pre-award phases. Includes a mix of basic and advanced applications, like automating the back and forth in negotiating and drafting contracts by leveragingautomated playbooks. These applications help reduce time-to-contract by reducing contract review cycle times and automating the creation process.

2. **Transactional effectiveness:** These look beyond the pre-award stage to focus on post-award. Include using AI for ongoing obligation extraction and proactive management to track performance and improve contract implementation. Such activities also include algorithm-based risk management and invoice validation to reduce value leakage.

3. **Commercial intelligence:** This is where the transformative impact of addressing friction points can be realized and entails using contracts as a strategic source of business value. This involves leveraging smart AI-powered clause and template recommendations for greater self-service contracting and includes data mining and modelling to critically analyze the past performance of contracts, terms, etc to identify value optimizationopportunities across contract portfolios. ◼

(This report features insights from the research done by WorldCC and SirionLabs on this topic and is based on executive surveys and interviews across 50+ organizations.)

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Form IV

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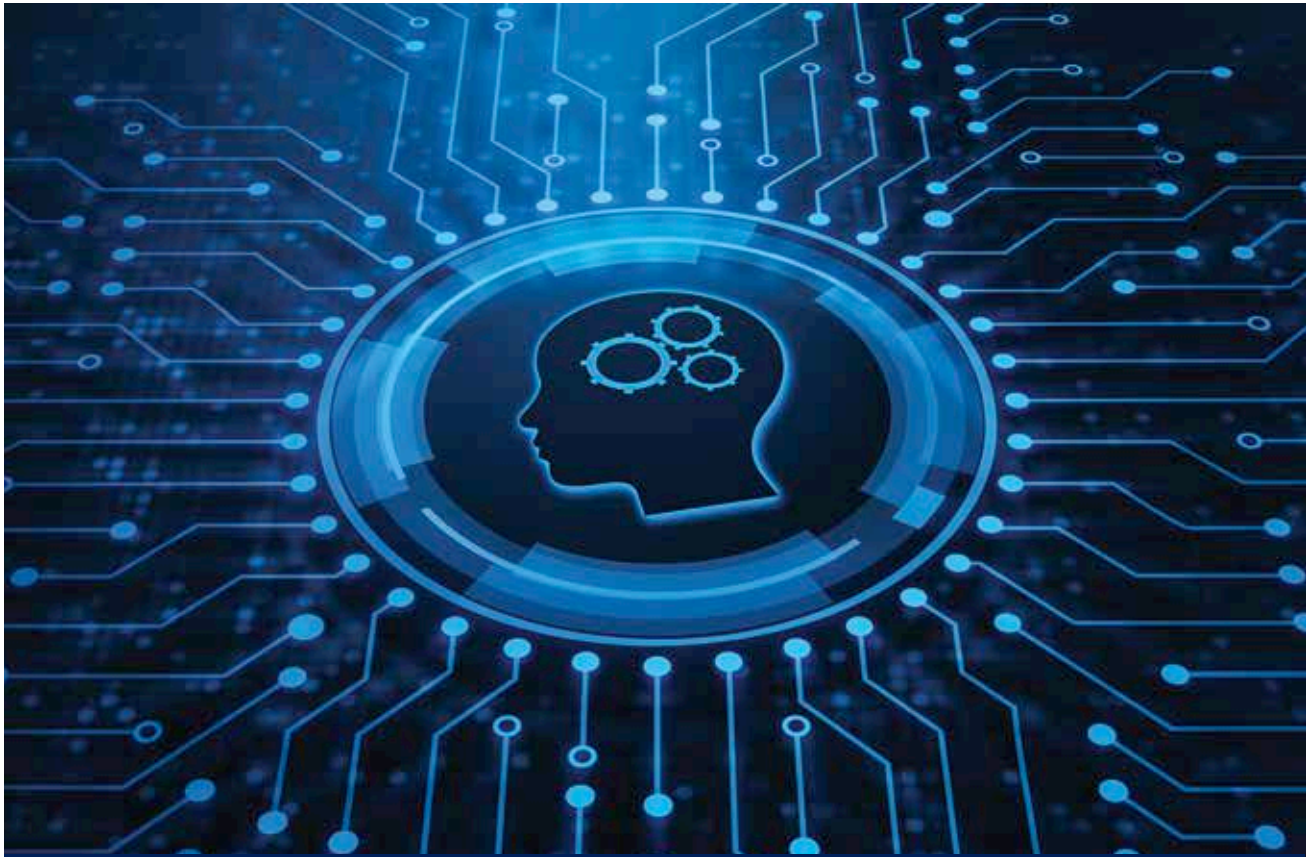
2021 Predictions For The Indian IT Industry

Artificial Intelligence (AI) is undoubtedly one of the biggest tech trends at the moment and during 2021, it will become an even more valuable tool to help us interpret and understand the world around us

By Padmanabhan Iyer

While COVID-19 continues to play out an unprecedented upheaval across the globe, businesses will need to tune up technology to bring some semblance of order to uncertainty, complexity and to rethink and reboot their digital strategies. Some major tech predictions that will help steer through 2021 are highlighted in the following sections.

Artificial Intelligence

Artificial Intelligence (AI) is undoubtedly one of the biggest tech trends at the moment and during 2021, it will become an even more valuable tool to help us interpret and understand the world around us. Customer patterns have changed drastically given the COVID-19 period and will continue well into 2021. This means that machine learning algorithms will

become better informed with more data as well as increasingly sophisticated in the solutions they uncover for us.

Digital Integration: Bridging the physical and digital

As the digitalization trend continues to accelerate, the potential for optimizing processes, making data-driven decisions in real time, and creating new products, services, and business models will be the key that guides an organization's efforts. Realizing the full promise of digital may require integrating systems and data across entire ecosystems. The more data one feeds into a digital ecosystem, the more detailed, dynamic, and valuable the digital initiative becomes.

In the digitisation space, from a vertical perspective, payments & remittances will continue to have accelerated growth. Digital on-boarding has picked up pace in 2020 considering the social distancing required in view of the pandemic. This trend will continue as well. Micro, small and medium enterprises will be the focus area from digitisation perspective.

Automation

The urgency and need for automation technologies, such as Robotic Process Automation (RPA), AI, and machine learning, are stronger now than ever before. And the COVID-19 pandemic has made such automation solutions undeniably urgent. Democratization of automation would make these solutions easily accessible to all and when this concept becomes a reality, organizations will certainly see massive business transformation. Automation often requires extensive human participation and support. Thus, democratization will give companies sufficient access to automating mundane tasks and empower non-tech users. However, every new approach comes with a set of challenges, and the democratization of automation is no different. By developing and following a systematic framework, businesses can address such complexities with ease.

XaaS (Everything-as-a-Service)

As-a-Service (aaS) has already become the standard to turn into a truly digital-native enterprise. The new pattern in the aaS model is Everything-as-a-Service (XaaS) where services delivered will totally dwell on the cloud with virtual access to nearly everything. Tools, for example, the Internet of Things (IoT) and Artificial Intelligence (AI) will play a critical part in building those services or expanding existing services to go beyond the digital-native status quo.

Open Banking

Open banking is reported to have generated USD 7.29 billion in 2018 and is expected to reach USD 43.15 billion by 2026. Open Banking will become the norm with even emerging markets rolling out regulations. This will fuel innovation in the fintech space addressing the New to Credit segment. Fintech as a service platform

will emerge enabling banking as a service. This trend will be seen across the BFSI segment with multiple use cases that are evolving on a day-to-day basis.

Augmented & Virtual Reality (AR & VR)

AR & VR will evolve with use cases in businesses beyond the entertainment industry. The fact that they can create large simulation environments and the collaboration further with Artificial Intelligence will stimulate innovation. 5G technology will accentuate the use of AR/VR with better user experiences with shorter latencies.

Regulatory Aspects

The enormous growth in the digital space puts equal focus on the regulatory aspects. Firstly, RegTech is gaining importance to ensure compliance is made simple with required analytics in place. This also helps the entities to

Democratization of automation would make automation solutions easily accessible to all and when this becomes a reality, organizations will see business transformation

focus on growing business where RegTech will enable required support for regulatory aspects.

Secondly, there is a growing concern on 'Security & Privacy concerns' that needs to be addressed comprehensively with cybercrime increasing day by day. According to Gartner, by 2023, 65% of the world's population will have its personal data covered under some kind of modern privacy regulations. ■

The author is Managing Director and Global CEO, 3i Infotech

Anticipating Cyberattacks And Going Ahead Of Prediction

We need to anticipate in order to respond effectively. The epitome of cybersecurity maturity comes with anticipation

By Vijendra Katiyar

Imagine a scenario where we can anticipate crimes and stop it before it happens, ensuring a crime-free city. That's the power of anticipation and prediction. In a popular American sci-fi movie 'Minority Report', there is a pre-crime unit – a specialized police department who apprehend criminals based on fore knowledge that they have acquired

from the psychics called precogs. What's interesting is that these precogs have visions that gets displayed on the screen and they come to know– where, when and how a crime is going to get committed.

This is exactly what we need in the cybersecurity space–we need a precog. One that can help us anticipate cyberattacks. Talking about recent

cyberattacks and major breaches there was one common thread, that of, missing information– either system error, misconfiguration, insider threat, vulnerability, or lack of visibility. To further validate this, the recent Data Breach Investigation Report of 2020 from Verizon confirms that in the last four to five years nothing has drastically changed when it comes to tactics

and common methods adopted by hackers for data breaches. According to a research report by Ponemon Institute, the dwell time i.e. mean time to identify and contain the threat is still around 300 days.

If you look from a CISO's perspective, their onus is to protect data in the present and future times, irrespective of where, who or how it's accessed. On one side they have the challenge of protecting the data, on the other side, they are haunted by the Cassandra syndrome, where the users are less aware of cybersecurity. There is also an executive board whose beliefs are closely tied to facts and figures, demanding evidence and ROI related to cybersecurity. Gartner talks about five broad questions which the CISOs should be prepared to answer:

- Are we secure and compliant?
- Why is security so expensive?
- Why can't security move faster?
- Why can't we be a digital company?
- Why can't we have competitive edge from security?

If we can anticipate infrastructure or business technology change, we can tell the board that these are the areas of investment whether its people, process or technology that can help us mitigate the risk. Hence, security can become a part of this business technology fabric which can help us move faster.

In order to achieve this, we have to look at building a framework which can help us anticipate better. Two key aspects should be considered while building this framework – strategy and corresponding execution.

- Building anticipation using global cybersecurity trends and intelligence, for instance, with the help of leading industry cybersecurity analyst reports, looking at past & present cybersecurity incidents or breaches with relevance to the respective industry and using threat prediction report by cybersecurity experts.
- Anticipate technological change adopted by organizations to stay ahead of the curve considering business demands (cloud adoption, IT-OT integration, Work from Anywhere which is the new norm).
- Organizations have started implementing tools and have adopted a framework which can provide more visibility across all the different security layers – endpoint, email, cloud, network or IIoT. Adopting XDR helps to anticipate and respond better across all security layers, which in turn improves the MTTD and MTTR.

We have heard about Gartner's Adaptive Security Architecture-based on risk and trust. Apart from prevention, we also need to pay attention to other aspects – prediction, detection and response. We need to anticipate in order to respond effectively. The epitome of cybersecurity maturity comes with anticipation.

In this context, let's understand how XDR can help anticipate better, providing:

1) **Real-time contextual visibility across multiple security layers:** Endpoint, email, network, cloud, mobile and IIoT.
2) **Timeline and attack visualization:** To know what, when and how.
3) **Correlation:** Events, alerts across multiple technologies (for e.g. email and endpoint and network), also low and high severity events.
4) **Threat modeling framework:** Mapping with MITRE framework for Tactics, Techniques, and Procedures (TTPs) to learn more about adversaries/threat actors.
5) **Automation and integration:** Automation (prioritization of triggers or workbench) in the environment and integration with security exchange and threat intelligence platforms, to complement SIEM/SOAR and send high fidelity alerts and eliminate the noise.
6) **Threat intelligence:** Proactive sweeping of IOC discovered in global cyber-attacks.
7) **Remediation/mitigation:** Remediate and respond with confidence.

A recent report by ESG and commissioned by us, 'The XDR Payoff: Better Security Posture, ESG Research, Sep 2020', talks about the benefits of the organizations who have adopted XDR or organizations with XDR. It says that they are better protected and have suffered half as many successful attacks over the last 12 months. They can anticipate quickly – 2.2X more likely to detect a data breach/successful attack in a few days or less. They are also able to respond completely – 60% less likely to report that attack re-propagation has been an issue. When you have the bigger picture, you can understand the full impact and respond both faster and completely. There are fewer blind spots that allow for a resurgence of attacks. ◼
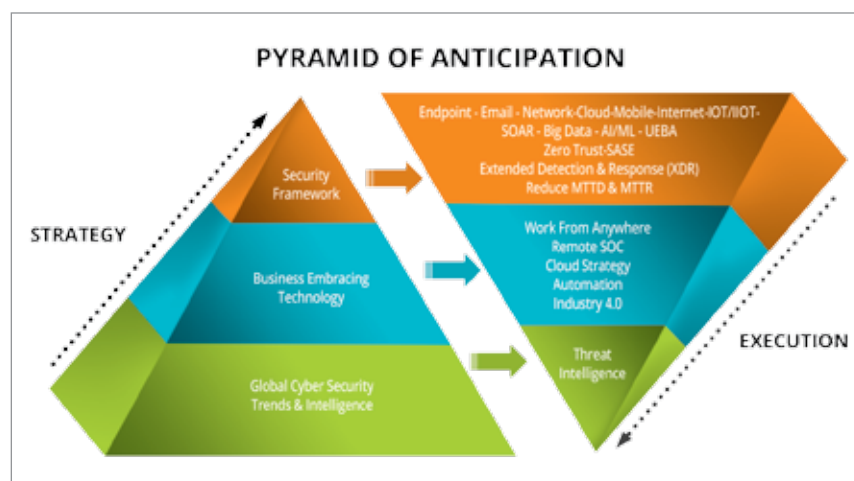
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Future Of Wi-Fi Impacting Global Workplaces & Lifestyles

The spread of advancing Wi-Fi technologies compliments the spread of broadband access technologies that eventually will enable greater accessibility in regions of the globe that currently go without

By IEEE Experts

Wi-Fi has become a term that a majority of people on earth today are familiar with. The one that has progressed towards being the preferred wireless technology enabling the explosion of wirelessly connected devices.

According to theTelecom Ministry data, India's internet consumption increased by 13% during the lockdown. This rise in demand signals a change based on the increased adoption of Work from Home and heightened consumption of the OTT content. Additionally, this increase in demand also captures how data demand from

regular households upsurged in comparison to commercial areas.

While there is a global effort to get ubiquitous wireless connectivity for all, even in its current state, it has a great effect on how our society works, plays, and lives. Perhaps you're the person who has a relative in a different country and is using Wi-Fi to make a

fast, cost-effective video call to stay in touch. Or maybe you're a doctor in a hospital who uses Wi-Fi on your laptop to access patient medical records. Whatever it may be, consumers probably don't realize the impact Wi-Fi has had on our lives because it has faded into the background and is assumed to be ever-present like the air we breathe. Here we look to its future capabilities to enable a hyper-connected world.

Did you know that Wi-Fi is based on IEEE's 802.11 Wireless Local Area Network (WLAN) standard, which lives within its family of 802 Local Area Network standards?

"The IEEE 802.11 standard is continually evolving and expanding to support even higher throughput capabilities, low-latency, enhanced broadcasting, vehicle-to-vehicle capabilities, and enhanced positioning and location capabilities," says IEEE Member Dorothy Stanley. "And we already have work underway looking at sensing applications."

Sensing applications use Wi-Fi and other technologies to sense or pull data and insights from the environment Wi-Fi signals travel through. Common sensing applications are found in fall detection for the elderly, presence detection in homes, offices, and automobiles, location mapping, breathing rate measurement, and even heart rate measurement, all without requiring a device to be attached to the person or thing being sensed. Sensing technology is passive and contactless and is currently one of the newest standardization activities in the 802.11 WLAN Working Group.

Wi-Fi for disaster recovery and response is another example of how we use ubiquitous and easy to use wireless connectivity. As natural disasters across the globe continue to rise, we need to harness the power of technology and Wi-Fi to keep us connected. "In a hurricane or flooding situation, people can take existing Wi-Fi gear and set up a network, and immediately the people in the area

Wi-Fi for disaster recovery and response is another example of how we use ubiquitous and easy to use wireless connectivity. As natural disasters across the globe continue to rise, we need to harness the power of technology

can be connected," said Stanley. While we appreciate what Wi-Fi has enabled today and will continue to in the future, it's also important to recognize that not everyone on earth currently has access. "Based on some recent data, the global online penetration rate is about 57 percent, which means there are still nearly 4 billion people who are not connected to the Internet," explains IEEE member Lei Wang."The IEEE 802.11 based Wi-Fi networks and devices have long played a critical role in connecting people and things, evident by its massive market penetration with well over 10 billion deployed Wi-Fi enabled devices, carrying 55 percent of the global internet traffic. I think there are two important aspects that IEEE 802.11 and Wi-Fi will continue playing a critical role to connect the unconnected: one is cost-effective, the other is availability."

The spread of advancing Wi-Fi technologies compliments the spread of broadband access technologies that eventually will enable greater

accessibility in regions of the globe that currently go without. As broadband access becomes wide-spread and more accessible, the future possibilities enabled by Wi-Fi technology are endless in terms of connection and communication.

The developers of the technical network standards that make up 802.11 have shown tremendous innovation that enables the standards to constantly evolve and have the potential to shepherd the next big innovations that are responsive to the market demand. These engineers ultimately bring their creative innovations enabling ever better connectivity, sensing and who knows what else to every human being and device on earth today.

"New needs and new applications arise, so people come to the 802.11 working group with new ideas and new areas in which to develop the standard," says Stanley. "We are committed to meeting the needs of new markets, new technologies, and new applications." ■

Double Scoop

Two times the revelation

Sumith Sadanand
Manager - IT, JSW Steel

MY FAVOURITE POST-PANDEMIC GETAWAY
Goa

A TECH IDOL WHOM I ADMIRE
N.R. Narayana Murthy

MY FAVORITE SINGER
Sonu Nigam

AN EMERGING TECH WHERE MY MAIN INTEREST LIES
AI/ML

A HOBBY WHICH I'D LIKE TO PURSUE AGAIN
Playing Volleyball

MY PEER IN THE IT COMMUNITY
Muralidhar Sahoo, Program Manager - IT, Conduent

Muralidhar Sahoo
Program Manager - IT, Conduent

MY FAVORITE POLITICIAN
Narendra Modi

A TECH SHOW I LOVE TO LISTEN
Tech Makhni by Rajiv Makhni on Radio Mirchi

MY FAVORITE SPORTSPERSON
Christiano Ronaldo

A WEB COMMUNICATION PLATFORM WHICH I'M USING MOSTLY
MS Teams

AN AUTHOR WHOSE BOOK I READ THE MOST
Peter Drucker