IT NE**X**T

FOR THE NEXT GENERATION OF CIOs

CAN
WOMEN
WIN?

Ground realities have changed, but more importantly, it is the self-belief of women that has seen a sea change. More and more women now believe it is now up to them to take charge, even though a perfect level playing field is still some time away.

Diversity is neither about intent nor about a set of policies

> Organizations should not look at diversity and inclusion as a separate program. Rather, it should be built into the vision and mission of the organization

Shyamanuja Das

For centuries, workplaces have been of men, by men, for men. As women's education changed and more and more women joined the workforce, things started changing slowly.

Sensitization about diversity and inclusion has catalyzed the change for better in recent years. Progressive organizations have adopted women-friendly policies. But unfortunately, all discourses about diversity and inclusion in organizations are still laden with the intent and specific policies towards this. Outcomes, if they are ever discussed, are all about number of women employees, and once in a while about number of women in senior positions.

In short, the workplaces of today have lot more *of* women, but they are, by and large, still *for* men—because they are *by* men. And that means, the journey is nowhere near its end.

And it is not because of any grand conspiracy against women by men. It is because of a simple reason: Diversity is not a specific strategy and a set of actions. It is a broader change. As one of the women IT leaders, quoted in our cover story says, "Culture eats strategy for breakfast." Unless broader cultural change happens, things will NOT change the way we intend. And that requires sensitization, more than big strategy, even if backed by sincere intention.

Take, for example, a middle level manager who is planning his project team. If he knowingly excludes a woman who he knows will go on maternity leave, it is not because he is a misogynist, but because he wants to get his work done in the shortest possible time, with minimum resources. That cannot be held against him as an individual. The organization must step up and create an environment in which the metrics of his performance automatically take this into account.

This is just a small example. There are many such situations.

In fact, there are enough policies today in larger organizations. As our women IT leaders say, today the tasks at organizational levels are three fold. One, women must believe they can take charge and should proactively grab opportunities and talk about their success. Two, a vibrant women mentor-mentee environment should be created. Three, organizations should not look at diversity and inclusion as a separate program. Rather, it should be built into the vision and mission of the organization.

In addition, there is one societal change without which none of these will work out. That is—we men must change. ∎

Content

■ COVER STORY | PAGE 06

CAN
WOMEN
WIN?

Ground realities have changed, but more importantly, it is the self-belief of women that has seen a sea change. More and more women now believe it is now up to them to take charge, even though a perfect level playing field is still some time away.

IT NEXT
ITNEXT.IN

Cover Design:
BAIJU NV

Please recycle this magazine and remove inserts before recycling

99 GROUP

EXTRA Curricular

An accomplished musician who is proving that tech and art make for a tuneful jugalbandi

Striking The Right Note

NEXT100 Winner 2015, **Arindam Sarma,** GM - IT, SVBTC, shares his passion for music and numerous singing performances

Besides being an IT professional, I am a performing vocal artist with proficiency in most musical streams like classical (vocal), light music like ghazal, bhajan, modern songs, folk songs, etc. I am one of the few male artists representing the Indore Gharana of Hindustani Classical Vocal Music today and am blessed with a very tuneful voice that fluently moves between three octaves and has been praised by eminent musicians many times. I started learning music at a tender age under the guidance of my uncle, Sri Aurobinda Sarma. I feel proud that I got the opportunity to learn from eminent musicians of Bengal like Acharyya Usharanjan Mukherjee, Pandit Kamal Bandopadhyay,

Acharyya Jayanta Bose for classical music and Sri Biman Mukherjee, Sri Jatileshwar Mukhopadhyay, Sri Subhendu Maity for light music. Apart from regular routine activities, I practise music out of my enormous love and passion for it.

From my schooldays, I have participated in numerous music competitions and won quite a few awards, including: 1979-80: Winner of Challenge Trophy in West Bengal Music Competition; 1989-90: Winner of the Dover Lane Talent Search Award in Thumri; 1984 to 1988: Winner of a number of 1st & 2nd prizes in the Inter-College Music Competition, etc.

Now I get very little time beyond my profession to do stage performances. Yer, I've managed to participatre in many classical as well as light music and ghazal shows like Swami Vivekananda's Ancestral House - 2015 & 2016; Karmakar Smriti Music Conference - Sonarpur - 2015; Krishnachandra Smriti Samsad - Baruipur - 2011; Uttarpara Sangeet Chakra - Uttarpara– 2009; Ustad Alla Rakha Khan Sahib Barsi Celebration - Kolkata - 2007, 2008; Suraranga Sangeet Sammelan - Kolkata - 2006, 2007; among other ∎

As told to Dipanjan Mitra, Team ITNEXT

Arindam Sarma

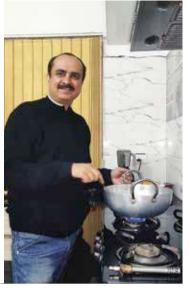Arindam Sarma is GM - IT at SVBTC and NEXT100 Winner, 2015. He had earlier served in companies like Albert David, Tirumala Seven Hills and Dholai Tea Co. He completed his PGDBM (Honors), Systems Management from NIIT - Calcutta and BSc, Pure Science from Calcutta University.

Snapshot

Cooking is a stress buster as the mundane acts of chopping, crushing, rolling, frying, etc., divert attention from the nagging problems of everyday life. In addition, it is the way to bind the family

Creating A Culinary Legacy In Modern Times

NEXT100 Winner 2018, **Kuldeep Dangi,** DGM - IT, KPL International, shares his immense passion for cooking

have numerous hobbies like reading and travelling, especially going to Goa to view the amazing sunset. However, nowadays, I'm extremely passionate about cooking!

So, what exactly made me interested in cooking?

Well, sometimes, I feel stressed either after a stressful day at the office or due to some other circumstances in life.

Earlier to cope up with my stress, I tried many things like watching movies or TV for long hours, extra eating, reading books, etc.

"Per jo maja vegetables cut kerne mein aaya, utna kisi or cheej mein nahi aaya!"

Because slicing, chopping, mashing, crushing, rolling, frying, etc., are all common actions used during cooking that divert attention from stress and provide an outlet to vent everyday frustrations in the most effective way. These aspects of cooking did indeed helped me a lot and cooking provides me with just the perfect 'stress-buster'.

In the beginning, I prepared easy-to-cook dishes like omelette, bread sandwich, tea, etc. After that, I tried a more difficult dish, 'Kadai Paneer'. Well, let me provide an 'interesting' glimpse of what exactly happened when I first prepared this dish...

I took the printout of the recipe and started making the dish accordingly but there was a misprint due to which instead of adding 3/4 spoons of Garam Masala, I added 3-4 spoons in it. The result: My mouth-watering dish turned into a disaster as it got bitter in taste!

Bitter got better and it was a blessing in disguise as I got a cooking partner who is none other than my better half, my wife, Sonia. Thereafter, we tried many dishes but my favourite among all of them is 'Paneer Tikka' and 'Veg Biryani'. I have to admit my culinary skills got better by the day and thanks to my dear wife for constantly motivating me to keep trying and never giving up!

Hence, while cooking, the key thing I learnt was 'Cooking is one of the greatest gifts you can give to those you love'. It brings smiles on the faces of my daughter, Charvi and my son, Akarsh, which makes me feel happy and relaxed and aim for even bigger, better delicacies. ■

As told to Dipanjan Mitra, Team ITNEXT

Kuldeep Dangi

Kuldeep Dangi is DGM - IT at KPL International and a NEXT100 Winner of 2018. He had earlier served in companies like Kanoria Chemicals & Industries and Samtel Teletube

Snapshot

Electronics. He completed his MTech in IT, MCA, PG Diploma in Computer Applications and Bachelors in Mathematics.

CAN WOMEN WIN?

Ground realities have changed, but more importantly, it is the self-belief of women that has seen a sea change. More and more women now believe it is up to them to take charge, even though a perfect level playing field is still some time away.

According to Monster's *Salary Index Survey 2019* released a year back, women in India earn 19% less than men. The gap was 20% a year before.

In a 2018 study, Georgetown University Center on Education and the Workforce came with a similar number. It said for every one dollar earned by men, women earned 81 cents—that is the same as what India had, albeit a year later.

The Georgetown University study, somewhat allegorically titled, Women Can't Win, found that despite making educational gains and pursuing high-wage majors, women still earn less than men.

You could blame society, gender ratio in educational institutes and a whole lot of other things to reason why the men-women ratio in business is so skewed. But what explains the wage gap between women—who make it and fight all societal odds to stay put in their jobs and perform—and men?

In short, that is the issue. Not wage differential per se: that is the manifestation of a bigger issue—that of women competing as equals with men, and winning.

And be in no doubt. We have enough logic and examples to show that on an individual comparison basis, there is no issue. But if in the collective, it becomes an issue, the problem lies with the system.

"Why women can't win?"

Let's ignore, for a moment, what has happened historically. Are things too different today? Let's look at the gender ratio of NEXT100—India's only award for next generation IT leaders—the future CIOs.

Over the ten years of its existence, NEXT100 has produced 1000 winners. Precisely 52 of them are women. That is a little more than 5%. That is the ratio of winners in the next generation.

In the first five years, the ratio was a meagre 4%. In the next five, it has increased slightly to 6.4%, with continuous rise in last three years to reach 8 winners in 2019.

Yes, just eight out of 100 winners are women.

In an area like enterprise IT, where numbers are not high, this is precisely what we need to debate—why women cannot win, despite a lot of change.

What exactly are the issues?

We spoke to NEXT100 winners themselves to figure out what they think are the real issues and solutions. While they specifically talk about enterprise IT, most of the reasons apply well to any profession—maybe expect for a few where women do dominate, such as public relations, HR and teaching.

While these women IT leaders touch upon a wide spectrum of challenges, issues and possible solutions, four underlying themes come out—two major challenges that still exist and two possible solutions, as articulated by them.

The Challenges

While we have come a long way in the diversity path, some challenges do remain. These are the two most important ones identified by the NEXT100 winners.

> 66
> **A lot of women leave their jobs to spend more time with their family**
> — **Pratibha Monga,** *Group Manager, LG, CNS India* and **NEXT100 Winner 2019**
> 99

Societal expectations & stereotypes still exist. Despite women's education and professional successes of some women, the broad societal expectations still exist, proving once again that it is not an individual woman's issue; it is a system issue and that system includes society as well and not just the corporate environment.

"A lot of women leave their jobs to spend more time with their family," says Pratibha Monga, Group Manager, LG, CNS India and NEXT100 winner 2019.

The society has not moved at the same pace as the workplace, rue many.

"In the last thirty years, women have made more progress in the workforce than at home, as at home, the rate at which men share household responsibilities is increasing very slowly," Neha Misra, Global Program Manager, GE Transportation and NEXT100 Winner 2019 puts it succinctly.

"Family plays a critical role here and a more open-minded family environment definitely helps women make progress at the workplace," says Meetali Sharma, Coroporate Risk, Compliance & Information Security Leader, SDG Software India and NEXT100 winner 2016.

"Women are often asked how they manage family along with work, a question that their male counterparts are rarely asked," says Shweta Srivastava, Chief Information Security Officer, Paul Merchants and NEXT100 Winner 2018.

Adds Misra, "We don't hear men asking for advice on how to combine a marriage and a career."

So, all talks of level playing field goes for a toss. Even if you manage to create a level playing field within an organization, the onus of "combining the marriage with career" or "managing family with work" is on women.

Well, it is somewhat understandable that these things change slowly. But potentially more

> ## A climate of systematic bias, a working culture that excludes women is at the centre of the problem. Broader cultural changes are also needed
> — **Saritha Kaza,** *Deputy General Manager - IT, Toshiba Transmission & Distribution Systems (India),* **NEXT100 Winner 2010**

dangerous is the stereotyping. Says Misra, "Men are continually applauded for being ambitious and powerful and successful, but women who display these same traits often pay a social penalty. The gender stereotypes introduced in childhood are reinforced throughout our lives."

The issue is not new. But concrete action on this front—which is beyond the ability of an individual enterprise—has to evolve from wider consultations.

Flexi-hours & hiring more women cannot lead to diversity. As compared to say just 10 years back, organizations are doing much more to promote diversity. Some specific initiatives have become popular, as they are easier to do, measurable, and are often easy to demonstrate to the outside world, as they get good media space.

Not to say that they are not real issues. They have gone a long way in making the workplaces and workplace culture far more suitable for women than ever before—which, over the centuries, have evolved according to the needs/habits of men.

But they by themselves do not ensure diversity.

"Diversity policy should not just be a number that can be published in the annual report — it should effectively address the bias against women at the workplace and it should start at the top," says Priya Dar, Head - Digital Strategy & Innovation, Amway India Enterprises and NEXT100 Winner 2016.

Take Women's Day, for example. We are flooded with requests for carrying quotes from CEOs and senior leaders about diversity and there's a lot of boasting about how many women are hired from campuses.

"Diversity hiring is not the answer. It just increases the number of women and nothing else

> ## We don't hear men asking for advice on how to combine a marriage and a career
> — **Neha Misra,** *Global Program Manager, GE Transportation,* **NEXT100 Winner 2019**

– if the policies are not conducive to us, we will move on," says Dar.

It is important to remove the bias that exists—and that is the result of male domination for centuries.

"A climate of systematic bias, a working culture that excludes women is at the centre of the problem. Broader cultural changes are also needed," says Saritha Kaza, Deputy General Manager - IT, Toshiba Transmission & Distribution Systems (India) and NEXT100 winner 2010.

Agrees Sharma of SDG Software India, "Gender bias needs to be done away with by providing equal responsibility and salary to men and women."

That brings us to something this story started with: wage gap that still exists between men and women. That is surely not because of family expectations or anything like that. Till the gap remains, it can hardly be called a level playing field, flexi-hours and extra maternity leave notwithstanding. "Pay gap between male and female workers is an important factor, which discourages women from excelling in any field," says Srivastava of Paul Merchants.

While some organizations have consciously tried to promote diversity, by taking a number of distinct steps, often they fail to change things at the ground level. As Dar of Amway India says, "culture eats strategy for breakfast."

The Solutions

So, what will make women win? Or rather, making them go for the win. Most women IT leaders agree on two

> **Diversity hiring is not the answer. It just increases the number of women and nothing else – if the policies are not conducive to us, we will move on**
>
> — **Priya Dar,** Head - Digital Strategy & Innovation, Amway India Enterprises, **NEXT100 Winner 2016**

Nothing succeeds like showing them it is possible—or rather, it has been possible.

Women at top: they inspire and influence. Most of the women leaders agree on one thing: There is nothing quite like having more women at the top. They not just serve as role models, but could actively work to remove the inherent system biases.

Right from attracting more women to an area to show the path to the top, women performers can contribute in many ways as role models.

"In enterprise IT, women role models and their achievements should be widely discussed and publicized to attract more women into this area," says Kaza of Toshiba Transmission & Distribution.

No. of Women Winners in NEXT100: Down The Years

She says, not just as role models, a few women at the top can make others far more confident.

"For example, have at least one woman on every interview panel. A female panellist can help female applicants feel included," she illustrates.

Agrees Neelima Sharma, Digital Officer, Hindustan Zinc and NEXT100 winner 2017, "More women in leadership roles will make them (women) feel more motivated."

"These forerunners will play the role model for many qualified women and will certainly inspire a lot more women to opt for tech as a career option," says Srivastava of Paul Merchants.

In fact, Misra of GE Transportation goes a step further when she lists fewer women in leadership roles as a gap. "Lack of women as role models in leadership positions in the industry is a challenge," she says.

She is quite unequivocal in identifying that as a reason for the bias or discrimination in the system. "Since there are already a fewer number of women in leadership roles, it is not possible for the junior women to get enough support," she reasons.

'It is upto us now'. While unambiguously stating that there is a societal and organizational bias, many women now exude a sense of confidence that with all that has been done by organizations so far and the changing outlook, it is probably time for women to influence and move ahead like never before.

This is a voice that we are hearing for the first time from senior women leaders. While it is true that many young women starting their career are confident and often reject this talk of diversity and intervention by organizations, interpreting it as women being treated as 'somewhat inferior", most women in middle and senior levels do recognize

> ### More women in leadership roles will make them (women) feel more motivated
>
> — **Neelima Sharma,** *Digital Officer, Hindustan Zinc,* **NEXT100 Winner 2017**

> ### Pay gap between males and females is an important factor, which discourages women to excel in the field
>
> — **Shweta Srivastava,** *Chief Information Security Officer, Paul Merchants,* **NEXT100 Winner 2018**

the gap as real. That is because the challenges manifest themselves as they go up the ladder—be it their own needs of balancing work with more family responsibility or simply encountering challenge in delivering managerial duties in a male-dominated workplace.

But we hear some no-nonsense voices from these women IT leaders.

"As women, we continuously underestimate ourselves and hold back when it comes to applying for a challenging job or taking risks in careers. Taking initiative pays off. Even managers with good intentions may not notice hesitations, hence taking risks, choosing growth, challenging ourselves, and asking for opportunities are important elements for managing careers irrespective of gender," says Misra of GE Transportation, her voice exuding the confidence that now women know what to do, beyond trying to fight for the needs.

"Women do want to express more but most of the times, they cannot," says Kavita Sood, Quality Assurance Manager, Girikon and NEXT100 winner 2019.

Apart from expressing themselves, they need some softer skills too.

"Enterprise IT demands not only multiple technical skills but also various other skills like negotiation, cross functional teams management, networking, frequent travel, etc. There are obviously less choices and more constraints for women and naturally, this deters many women from choosing this as a preferred career and has resulted in the low numbers of women currently in Enterprise IT roles," says Kaza of Toshiba Transmission & Distribution, quite matter-of-factly.

It is Meetali Sharma of SDG Software who is most outspoken about making the point.

"While no one can deny that challenges do exist for women and women leaders have a responsibility to see that it becomes smoother for the younger lot, it is also true that we cannot just keep complaining. Women must take charge," she says.

She adds that beyond biases, there are certain 'limitations' that exist within women. "Few women like to talk about their achievement. Sometimes, we think men just take too many breaks to go for a smoke and hang around. But I have seen, they often discuss work—and most creatively at that. I am not saying we should ape them but we cannot take a theoretical approach to work. These things are important too" she says.

A typical problem that more than one point to is the taboo associated with a man and woman getting more personal. That is never questioned between two men or two women. For example, a hard conflict in the course of work between a manager and the subordinate is forgotten over a drink in the evening. Few women managers can do that; fewer subordinates would even think of going for such a sitting.

"A woman's own desire and will to succeed, enhance knowledge, take up additional responsibilities and gain visibility in the workplace defines the solution, to a great extent," says Sharma.

"The ball is now in our court," she says with an air of confidence. Women can certainly win. And there can be no better motivator than this one.

Endnote

If women individually are performing as good or as bad as men, but collectively still far behind men in the businesses, it cannot point to anything other than presence of a systemic issue.

And forget not—here we are not even talking of

> **A woman's own desire and will to succeed, enhance knowledge, take up additional responsibilities and gain visibility in the workplace defines the solution, to a great extent**
>
> — **Meetali Sharma,** *Corporate Risk, Compliance & Information Security Leader, SDG Software India,* **NEXT100 Winner 2016**

more women or women's issues but how they can win—and more importantly seem to be winning.

For a start, we should stop debating if intervention is needed. Centuries of domination by one gender makes the system biased, even unintentionally.

Take for example, a junior manager who, more than anything else, is interested in getting his work done with most efficient resource utilization. If he excludes a competent woman executive in a project team because he knows that she will go on a maternity leave anytime, is it gender bias? It is clearly not, on the part of that individual but it is, on the part of the organization, if the organization has not put a system in place that will encourage that manager to still include that woman despite her potential maternity application.

How many organizations today have systems to address that? Very few.

But it should be done in a manner that men do not find intimidating or unfair. More than anything else, that needs sensitization. They need to be told why it is important from a societal, organizational and their own points of view.

One of the newest concerns regarding lack of diversity is a possible bias induced in machines that learn from humans. If there is no diversity, we will carry that bias to the machines. It is a real danger that many technology forecasters warn against.

It may be an irony, but at the end, if machines make us humans think and rethink—that too for a good cause—where is the harm.

Women, men and machines—rest assured, women can win.

> **Women do want to express more but most of the times, they cannot**
>
> — **Kavita Sood,** *Quality Assurance Manager, Girikon,* **NEXT100 Winner 2019**

NEXT100 Women Winners

WINNERS 2010

Aanchal Mishra

Previous Designation:
Senior Program Manager

Previous Company: **Wipro**

Current Designation:
**Vice President & Head of CRM &
Cloud Transformation - Global
Technology Services**

Current Company:
Société Générale

**Pravitha
Vijaykumar**

Previous Designation:
Project Manager

Previous Company:
Dell International Services

Current Designation: **Same**

Current Company:
Same

Shalini Chatwani

Previous Designation:
Freelancer - Pvt. Tutor, Software Trainer

Previous Company:
Professional Access Software

Current Designation: **Private Tutor**

Current Company: **At Home**

Saritha Kaza

Previous Designation:
Senior Manager - IT

Previous Company:
**Toshiba Transmission &
Distribution Systems**

Current Designation:
Deputy General Manager

Current Company: **Same**

Bhavita Saxena

Previous Designation:
Consultant IT Strategy

Previous Company:
Self Employed

Current Designation:
Same

Current Company:
Same

WINNERS 2011

Shobha Shetty

Previous Designation:
Deputy General Manager - IT

Previous Company: **Godrej Properties**

Current Designation: **Vice President - IT**

Current Company: **Runwal Group**

WINNERS 2012

Beena Nayar

Previous Designation: **Head - IT**

Previous Company: **Forbes Marshall**

Current Designation: **Same**

Current Company: **Same**

Dipthi Karnad

Previous Designation:
Senior Manager - IT

Previous Company:
Hypercity Retail

Current Designation:
Business System Analyst

Current Company: **Kaya**

Archana Sinha

Previous Designation:
Senior Manager - IT

Previous Company: **Hypercity Retail**

Current Designation:
General Manager - IT

Current Company:
nuFuture Digital (India)

Kavitha MV

Previous Designation:
Deputy Manager - IT

Previous Company:
Hindustan Aeronautics Ltd

Current Designation: **NA**

Current Company: **NA**

Sunitha A
Previous Designation:
Senior Project Manager - IS & IT
Previous Company: **WeP Solutions**
Current Designation: **General Manager - IT**
Current Company: **Same**

WINNERS 2014

Anjana Mishra
Previous Designation: **Senior Manager - IT**
Previous Company: **Tata Power Delhi Distribution**
Current Designation: **NA**
Current Company: **NA**

Benazir Miller
Previous Designation:
Deputy General Manager - IT
Previous Company: **Shoppers Stop**
Current Designation: **Same**
Current Company: **Same**

Anita Kulkarni
Previous Designation:
Deputy General Manager - IT
Previous Company: **Shapoorji Pallonji**
Current Designation: **NA**
Current Company: **NA**

S Rajani
Previous Designation: Assistant
General Manager - IT HR Automation
Previous Company:
Crompton Greaves
Current Designation: NA
Current Company: NA

Sudha Thorat
Previous Designation:
Senior Manager - IT
Previous Company:
Crompton Greaves
Current Designation: **Same**
Current Company: **Same**

Uma Ramani
Previous Designation: **Senior Vice President - IT**
Previous Company: **IDFC Bank**
Current Designation: **Director - Information Security Group**
Current Company: **Same**

Chhavi Taneja
Previous Designation:
Deputy General Manager - IT
Previous Company: **Samsung Data Systems**
Current Designation:
General Manager - EUS (IT)
Current Company: **NA**

WINNERS 2013

Seema Gaur
Previous Designation:
Joint General Manager
Previous Company: **IFFCO**
Current Designation: **Executive Director - IT**
Current Company: **Same**

Sushma Chopra
Previous Designation:
Senior Manager - IT
Previous Company:
Multi Screen Media
Current Designation:
Head - IT Applications
Current Company:
Sony Pictures Networks

The **10-year old NEXT100** journey has involved eight senior IT leaders as members of the jury

WINNERS 2015

Anvize Rodrigues

Previous Designation:
Associate Vice President

Previous Company:
Ezeego One Travel & Tours

Current Designation:
Director - IT

Current Company: **PerkinElmer India**

Kopal Sarin Raj

Previous Designation:
Global End-to-End Service Delivery Leader

Previous Company: **DuPont India**

Current Designation:
Director of Engineering, APAC, Cloud & IT

Current Company:
Spirent Communications

Ramkumari Iyer

Previous Designation:
Vice President - Infrastructure

Previous Company: **MFX Fairfax**

Current Designation:
Chief Information Security Officer

Current Company: **NA**

Falguni Desai

Previous Designation:
Head - IT

Previous Company:
VFS Global Services

Current Designation:
Senior Vice President - IT

Current Company: **Same**

Minu Thomas

Previous Designation:
Head - Corporate Information Systems

Previous Company:
Synthite Industries

Current Designation:
Vice President - Corporate Information Systems

Current Company: **Same**

Hypercity Retail, BHEL, Crompton Greaves and some other companies have seen multiple women winners

WINNERS 2016

Meetali Sharma

Previous Designation: **Corporate Risk, Compliance & Information Security Leader**
Previous Company: **SDG Software India**
Current Designation: **Same**
Current Company: **Same**

Deepa Prabakar

Previous Designation:
Senior Deputy General Manager - IT

Previous Company:
Bharat Heavy Electricals Limited

Current Designation: **Same**

Current Company: **Same**

Megha Rastogi

Previous Designation:
Senior Manager

Previous Company:
Bharat Heavy Electricals Limited

Current Designation: **Same**

Current Company: **Same**

Pooja Chatrath

Previous Designation: **Assistant Vice President - IT**

Previous Company: **Cryoviva India**

Current Designation:
Chief Information Officer

Current Company: **Same**

Saloni Vijay

Previous Designation: **Deputy General Manager**

Previous Company: **Vodafone**

Current Designation:
General Manager & Central Cluster IT Head

Current Company: **Vodafone Idea**

WINNERS 2017

Archana Goel

Previous Designation:
Senior Manager - IT

Previous Company: **JK Paper**

Current Designation:
Chief Manager - IT

Current Company: **Same**

Neelima Sharma

Previous Designation:
SAP Lead - Operational Modules

Previous Company: **Hindustan Zinc**

Current Designation:
Digital Officer

Current Company: **Same**

Priya Dar

Previous Designation:
General Manager - IT

Previous Company:
Godfrey Phillips India

Current Designation:
Head - Digital Strategy & Innovation

Current Company:
Amway India Enterprises

Swarnali Ghosh

Previous Designation: **Senior Manager - Business Applications**

Previous Company:
Eveready Industries

Current Designation: **Same**

Current Company: **Same**

Sujata Barla

Previous Designation:
Deputy General Manager

Previous Company: **Lupin**

Current Designation: **Chief Digital Officer**

Current Company: **Integrace Health**

There has been a **consistent rise** in the number of women winners in the **last three years**

Supriya Kaul

Previous Designation:
Senior Manager

Previous Company: **Panasonic India**

Current Designation:
Senior Manager

Current Company:
The Boston Consulting Group

Toral Desai

Previous Designation: **Team Lead**

Previous Company: **Atos India**

Current Designation:
Project Manager

Current Company:
L&T Infotech

WINNERS 2018

Abhilasha Kundra

Previous Designation:
Deputy General Manager - IT New Initiatives

Previous Company:
Maruti Suzuki India

Current Designation: **Same**

Current Company: **Same**

Bhakti Tare

Previous Designation:
Deputy General Manager - HO IT

Previous Company:
Larsen and Toubro

Current Designation: **Same**

Current Company: **Same**

Dipti Chhaniara

Previous Designation: **Head - IT**

Previous Company:
Jyothy Laboratories

Current Designation: **Same**

Current Company: **Same**

Reena Shahi

Previous Designation: **Senior Manager - Change Management & Strategic Projects**

Previous Company:
IndiaFirst Life Insurance Co

Current Designation: **Same**

Current Company: **Same**

Shini Saju

Previous Designation: **Manager**

Previous Company:
JSW Steel

Current Designation: **Same**

Current Company: **Same**

Shweta Srivastava

Previous Designation:
Chief Technology Officer

Previous Company: **Paul Merchants**

Current Designation:
Chief Information Security Officer

Current Company: **Same**

Smita Jain

Previous Designation:
Consultant

Previous Company:
Tata Consultancy Services

Current Designation: **Same**

Current Company: **Same**

The **last five years of NEXT100** have seen a total of **32 women winners**

WINNERS 2019

Anoopa Menon

Previous Designation:
Chief Manager - IT

Previous Company:
Piramal Enterprises

Current Designation: **Same**

Current Company: **Same**

Kavita Sood

Previous Designation:
Quality Assurance Manager

Previous Company: **Girikon**

Current Designation: **Same**

Current Company: **Same**

The **year 2019,** the tenth year of the awards, saw **a record eight women winning** the coveted NEXT100 awards

Mukhthar Begum Mohammed

Previous Designation: **Project Manager**

Previous Company: **Cyient**

Current Designation: **Same**

Current Company: **Same**

Pratibha Monga

Previous Designation:
Group Manager

Previous Company:
LG CNS India

Current Designation: **Same**

Current Company: **Same**

Swapna Sreenivas

Previous Designation:
Senior Manager

Previous Company:
JSW Steel

Current Designation: **Same**

Current Company: **Same**

Neha Misra

Previous Designation: **Global Program Manager**

Previous Company: **GE Transportation**

Current Designation: **Same**

Current Company: **Same**

Pranita Shikhare

Previous Designation: **Assistant Vice President**

Previous Company:
IDFC First Bank

Current Designation: **Same**

Current Company: **Same**

Swati Phalke

Previous Designation: **Services Director - IT**

Previous Company: **Microsoft**

Current Designation: **Same**

Current Company: **Same**

Legal Sector Gets An AI Boost

Machine learning spearheads a silent revolution in the field of law

By Karan Kalia

Artificial intelligence has infiltrated every facet of our life today. Be it smart devices, automated vehicles, chatbots, or even AI powered mental health counselling apps, it is difficult not to spot intelligent machines around you. If you have reached this article through a Google search on law sector, you are using one of the most powerful manifestations of AI in the form of the search engine. According to a mar-

ket research, Artificial intelligence is expected to grow into a USD 190.61 billion market by 2025.

The legal sector is the latest industry to have caught up with the AI revolution which has begun to transform the legal profession in many ways. By mimicking human actions and learning critical knowledge functions, machine learning works to automate a series of manual tasks and legal processes—research, document review, analyzing case laws or precedents.

This automation of time consuming processes is dramatically improving efficiency. Besides saving time and costs, automation is bringing about a major turnaround in the way lawyers perform their roles. With exhausting routine tasks automated, lawyers have more time to focus on more critical functions. Experts believe that greater adoption of AI based tools by lawyers will eventually help reduce costs of legal services for common people.

Let's take a look at some ways in which AI is shaking up the legal sector:
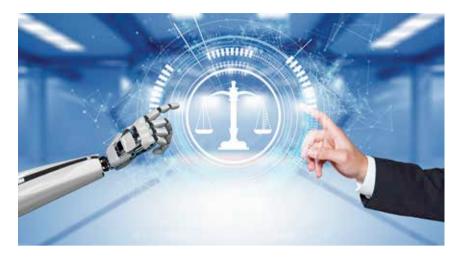
Simplifying Legal Research

Effective legal research is indispensable for legal professionals and is the bedrock of sound legal practice. Legal research involves multiple facets of collecting information that helps lawyers prepare effective arguments in a case. It involves studying laws, legislations, regulations and histories of similar cases and their interpretation. Before the advent of digitization, legal research required lawyers to search and scan for physical copies of legal records. However, digitization has created a major impact on legal research, making it much easier for researchers to scan and search for files.

Not just efficient...

Artificial Intelligence backed research tools have in recent years added another new dimension to this story by giving lawyers intelligent machines that can do much more than throw up search results. New age AI backed legal research tools have the intelligence to understand your query and find out relevant legal records faster. A study conducted by the attorneys of the US National Legal Research Group found that layers using an AI baked search tool finished research projects on an average 24.5% faster than attorneys using traditional legal research. In fact switching to an AI backed app saved an average lawyer 132-210 hours of legal research per year. Similarly, the study also concluded that search results of lawyers using the AI backed research tool were on average 21% more relevant than those doing traditional legal research.

Making case law research easier

Case law is a term used to denote the sum total of all past legal decisions given out by courts through their interpretation of existing laws and regulations. The knowledge of past decisions is as important for lawyers and judges as legislations since they

Predictive coding is a process through which an algorithm is "trained" by a law expert in the art of analyzing documents and ranking them in order of relevance

form legal precedents and help in resolving difficult and conflicting cases in the present.

Researching cases laws has always been an extremely tedious tasks for lawyers. It takes a humongous amount of time and energy to use the raw information, case histories, arguments and judgments available and interpret the same to make it useful for your case. A number of digitized legal databases sought to address this research task but most of them delivered plethora of judgment transcripts verbatim in search results without any value addition. This is something AI based research tools are trying to change by offering value additions such as headnotes or case summaries.
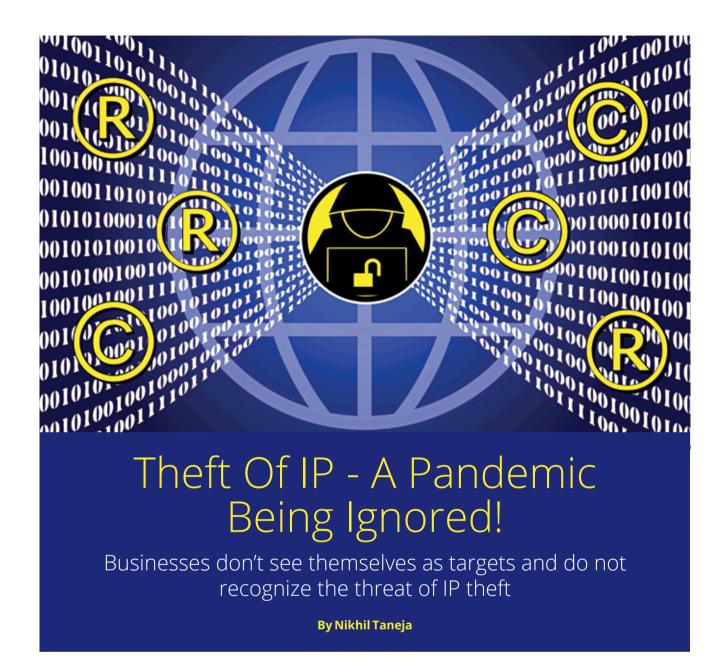
Deep learning and natural language processing are now being used to help users reduce the time in analysing the case law. They also offer options to view the treatment of case law condensed in the form of graphics and receive an augmented analysis of the same.

In the US study cited above, as many as 45% of the attorneys said they would have missed important or critical precedents if they had only

done traditional legal research instead of also using an AI based tool.

Boosting Document Review

As document reviewers for a court or a law firm, lawyers are required to examine hundreds of documents relevant to a pending litigation or investigation and mark them in order of relevance or sensitivity vis a vis the case. When conducted traditionally, this process understandably takes enormous amount of time. AI backed technology is now offering solutions such as predictive coding to speed up this mechanism as well. Predictive coding is a process through which an algorithm is "trained" by a law expert in the art of analyzing documents and ranking them in order of relevance for the purpose of disclosure. Once "trained" the algorithm performs the document review function on its own. In some cases, predictive coding can also be used as a tool to assess the merits of a case in its early stages. When used appropriately, this can result in significant cost and time savings. ▪

The author is Founder, LegitQuest

Theft Of IP - A Pandemic Being Ignored!

Businesses don't see themselves as targets and do not recognize the threat of IP theft

By Nikhil Taneja

Every day we see new head-lines about Coronavirus: Thousands more diagnosed, temperature checks on air-planes, subways and even in grocery stores, the World Health Organization (WHO) holding press conferences to calm global fears and so on. However, very quietly the common flu goes unnoticed. While every headline reminds us that as of February 14, we have seen 60K cases and 1,350 fatalities in China, the com-mon flu has seen 19 million cases and 10,000 deaths in the US this season, as per the CDC.

While this isn't surprising, it does say something about human psychology; we tend to overly fear things that are new and overestimate the risk of scary headlines (that is, Coronavirus) where we have no experience to compare. But at the same time, we underesti-mate the risk of common things we see every day (that is, the flu). Even though people seem much more concerned about Coronavirus, we are much more likely to be affected by the common flu.

Sensationalized or Rational?
There is a strong similarity between today's world health situation and the current behavior of nation state attackers. Just like Coronavirus head-lines, nation state attack headlines are about election meddling: Did the Russians interfere in the 2016 US Presidential election or the 2016 UK Brexit vote? Are the 2020 Presidential elections going to be safe?

Certainly these concerns are very real (as per the FBI, Russian gov-ernment hackers did have a very

sophisticated campaign dedicated to misinformation through social media as well as hacking the email server of the Democratic nominee). And public sentiment now has governments worldwide mobilizing: task forces are bolstering election security, unplugging election infrastructure from the public internet, and in general, hardening their election process against hackers. All of this is being done to both safeguard democracy and calm widespread fears that elections might not be free and fair.

Contrast this with a much bigger state-sponsored hacking initiative, the theft of Intellectual Property (IP) across the enterprise and university research community globally. There are no sensational photos of spies throwing large suitcases filled with patents out of the windows of Fortune50 companies. However, according to the Commission on the Theft of American Intellectual Property, stolen IP from China alone is costing the US economy up to USD 600B annually.

To put this in perspective, this is equivalent to stealing a company of the size of Facebook, every year!

However, even though the FBI has over 1,000 active investigations of IP theft allegedly conducted by China, enterprises are not mobilizing. Businesses don't see themselves as targets and do not recognize the threat. Meanwhile, over 300 universities were penetrated in 2018, targeting research and patents from over 100,000 professors.

Just like people underestimate the flu, businesses and universities globally are chronically underestimating the threat of nation state IP theft. Nation states are stealing IP in green energy, manufacturing, aviation, military, telecom, nuclear energy, hi tech, finance, and healthcare, among other industries.

Sure, Coronavirus and election meddling may scare you, but nation state IP theft can "kill" your business or university. ■

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

Form IV
Statement of ownership and other particulars about the publication, IT NEXT as per Rule 8

A Cloud Migration Checklist

Organizations face key challenges, such as business impact on current functionalities, operational risks, external regulations, technical assessment and organization capabilities before making cloud migration call

By Feroz Khan & Vineet Mehta

I n the current ecosystem, heterogeneous technology landscapes are becoming more and more prevalent due to partial movement of individual applications to cloud to achieve quick success and due to buzz around cloud as a concept.

With applications hosted both on cloud and on-premise, organizations often get into situations where they start struggling with:

■ Flexibility, scalability, reliability and inter-operability of the technology landscape

■ Distributed infrastructure (multiple cloud vendors and on-premise deployment for different applications) which in turn increase failure points

■ Impact speed-to-market for new processes in perceived complex landscape

Since digital is taking the driving seat in crafting new business models, organizations are looking to focus on innovation instead on infrastructure maintenance. This results in the start of new paradigm to consolidate the infrastructure into data center preferably

with a single cloud service provider. But this call is not very straight forward and need thorough consideration and debate on multiple factors to achieve desired results.

Organizations shall consider critical factors before taking cloud migration call. These factors include:
- What are the key challenges in full-scale landscape migration to cloud?
  - E.g., integrations, compatibility, business continuity, timelines, budget, etc.
- What are the critical parameters to choose a cloud partner?
  - E.g., maturity, experience, service, resource availability, etc.
- What are the best practices while migrating applications to cloud?
  - E.g., methodology, timelines, security, etc.
- What will be the impact on timelines and business expectations of ongoing projects?

Typical key challenges organizations face before making cloud migration call are:
- **Business Impact** on current functionalities and any long-term benefits. These concerns/factors can be mitigated by:
- Review of business-critical IT functionalities (Like uptime, latency, etc.) and determine viability of cloud provider dependency
- Choosing right approach for each application (Retain, Retire, Rehost, Replatform, Refactor, Rearchitect)
- Ensuring cloud supplier SLAs include safety margins for performance and security
- Ensuring that backup plan is in place
- **Operational Risks** (Business and IT) also need to be carefully identified and require actions like:
  - Sourcing additional capacity with vendors (will increase costs) during transition phase and align resource requirement with business
  - Planning with flexibility to prevent peaks in resources required
  - Considering shared responsibility model with a cloud service provider

- **External Regulations** regarding data security, privacy, data movement and access require minute details to be considered during evaluation phase itself like:
  - Strong data protection architecture and policies by a cloud service provider
  - Review of data sensitivity with the business and determine viability of cloud for sensitive data and ascertain need of involving a regulatory authority
  - Ensuring that auditing is included in contract
- **Technical Assessment** is the next important challenge that can make

Technical Assessment is the next important challenge that can make or break the objective of the migration decision

or break the objective of the migration decision and require detailed evaluation and validation of the architecture. It includes:
- Architecture validation in line with enterprise architecture and integration viability with other applications
- Security architecture validation as per an organization's security policies
- Detailed business continuity assurance from cloud service providers
- Clearly defined cloud integration strategy to safeguard issues with rigid applications, if any
- Ensure control of access and identity management remain within an organization's control
- **Organization Capabilities** is one area that need focus much earlier

than moving into daily operations mode and need to be built to support end-state architecture which may have single/multiple cloud platforms or a hybrid architecture with some applications residing on-premise:
- Plan staffing and trainings for target architecture including new skillsets
- Plan availability of right tools to steer individual vendor performance across the IT value chain
- Migrate gradually to the cloud and allow time for building capabilities

Once the decision is made to move to cloud as a long-term strategy for supporting business growth, cloud selection of the right cloud partner becomes most critical. Below are the critical parameters which need:

Cautious evaluation to help select a right cloud partner:
- Technical Capabilities including PaaS offerings
  - Out-of-the-Box PaaS services
  - DevOps readiness including automation and monitoring
  - API features and maturity
- Local Deployment
  - Local DC roadmap for public cloud
  - Local/On-site support
  - Commitment to shape/support local regulations
- Security and Business Resilience
  - Security certifications
  - Compliance controls
  - Data encryption
- Cloud Adoption Support
  - Support and commitment during adoption
  - Planning and implementation support
  - Availability and transfer of Knowledge assets
- Integration Capabilities
  - Open Architecture
  - Integration capability and support with other COTS vendors and cloud providers
- Commercial Agreement
  - Strategic alignment and access to cloud roadmap

Create a detailed application specific authentication and authorization including cloud and on-premise access segregation

- Initial investment and cost projections
- Long-term commitment/exclusivity requirements
- Right level of indemnity ensuring SLAs like uptime, availability, etc.
■ Data and analytics capabilities
- Data analytics foundations
- Data operations and Data warehouse
- Advanced capabilities like big data and machine learning

Once a cloud partner is selected, organizations shall structurally plan technical, functional and operational needs to ensure seamless migration to the cloud. Below are few best practices that can be followed:

- **Pre-migration**
- **Pre-migration checks:** Ensure pre-requisites are met and assures compatibilities for cloud journey
- **End-state architecture:** Overall end-state ecosystem definition involving load balancers, firewalls, multiple web-heads, physical and cloud servers, destination server environment covering business, technical, risk and regulatory criteria
- **Security:** Security architecture validation from respective application vendors, CISO, internal risk and regulatory agencies
- **Licensing:** Review current licenses for optimum usage in new deployment in cloud
- **Cloud governance model:** Proactively define operation and support model. Eg. Who will have access to what? How will you grant that access?
- **Capability building:** Build the capability augmentation/build plan (in-house/managed service)
- **Post migration business continuity:** Detailed planning around sustainability and change management post migration
- **Prioritization of applications:** Create a phased migration approach based on application suitability, criticality and priority.
- **Implementation partner:** Identify the right partner with expertise, experience, development and project management experience and best-in-class methodologies
- **Migration**
- **Availability and resilience:** Identify critical business processes and address critical points of failures.
- **Architecture revamp:** Evaluate this opportunity to re-architect applications instead of lift and shift.
- **Network management:** Carefully plan and implement network design to avoid post migration hassles.
- **Phased approach:** Start small and simple to put quick wins on the board.
- **Managed services:** Leverage fully managed services wherever possible and free up your team to focus on innovations.
- **Post-Migration**
- **Access management:** Create a detailed application specific authentication and authorization including cloud and on-premise access segregation.
- **Monitoring:** Prepare a comprehensive monitoring strategy to cover minute aspects of the architecture and business continuity.
- **Support:** Use an appropriate support model during initial phase post migration to ensure stability and business continuity.

Conclusion

Cloud computing is a disruptive technology that is changing IT system's deployment globally because of its perceived cheap, simple and scalable nature. It could further potentially eliminate many support-related issues since there would be no physical infrastructure to maintain. Despite these advantages, organizations shall be ready themselves for socio-technical and legal challenges with well-thought bespoke evaluation of their ecosystem and plan a detailed roadmap. ■

The authors are NEXT100 Winner 2011, Feroz Khan, Partner & AD, The Boston Consulting Group and NEXT100 Winner 2019, Vineet Mehta, Project Leader, The Boston Consulting Group

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

facebook.com/digitgeek

digit.in/facebook

Complexity -
A Big Cybersecurity Issue

Over 96% of cybersecurity fatigue sufferers say that managing a multi-vendor environment is challenging, complexity being the main cause of burnout

igital transformation continues to present itself as an opportunity for IT and security leaders to innovate and gain competitive advantage. But it also carries a tsunami of infrastructure change, which often creates new challenges for security professionals with defeating unknown sophisticated threats looming as a top concern, according to Cisco's sixth annual *CISO Benchmark Report 2020*.

The report surveyed the security posture of 2,800 security professionals from 13 countries around the globe. The report provides 20 cybersecurity considerations for 2020 – gleaned from data analysis of survey results and a panel of Advisory CISOs.

In today's security landscape, the average company uses more than 20 security technologies. While vendor consolidation is steadily increasing with 86% of organizations using between 1 and 20 vendors, more than 20% feel that managing a multi-vendor environment is very challenging, which has increased by 8% since 2017.

Other notable findings include:

- 42% of respondents are suffering from cybersecurity fatigue, defined as virtually giving up on proactively defending against malicious actors.
- Over 96% of fatigue sufferers saying that managing a multi-vendor environment is challenging, complexity being the main causes of burnout.

To combat complexity, security professionals are increasing investments in automation to simplify and speed up response times in their security ecosystems; using cloud security to improve visibility into their networks; and sustaining collaboration between networking, endpoint and security teams.

"As organizations increasingly embrace digital transformation, CISOs are placing higher priority in adopting new security technologies to reduce exposure against malicious actors and threats. Often, many of these solutions don't integrate, creating substantial complexity in managing their security environment," said Steve Martino, Senior Vice President and Chief Information Security Officer, Cisco. "To address this issue, security professionals will continue steady movement towards vendor consolidation, while increasing reliance on cloud security and automation to strengthen their security posture and reduce the risk of breaches."

The following findings highlight additional CISO challenges and opportunities for improvement:

- **Workload protection for all user and device connections across the network was found extremely challenging** — 41% of the surveyed organizations found data centers were extremely difficult to defend, and 39% said they struggled to secure applications. The most troublesome place to defend data was the public cloud, with 52% finding it very or extremely challenging to secure, and 50% claiming private cloud infrastructure was a top security challenge.
- **Security professionals struggle to secure the growing mobile workforce and ubiquitous personal devices** — More than half (52%) of respondents stated mobile devices are now very or extremely challenging to defend. Adopting zero-trust technologies can help secure managed and unmanaged devices without slowing down employees.

To combat complexity, security professionals are increasing investments in automation to simplify and speed up response times...

- **Adoption of zero-trust technologies to secure access of the network, applications, users, devices and workloads needs to increase** — Only 27% of organizations are currently using multi-factor authentication (MFA), a valuable zero-trust technology to secure the workforce. Survey respondents from the following countries showed the highest MFA adoption rates in this order: USA, China, Italy, India, Germany, and the UK. While micro-segmentation, a zero-trust approach to secure access of workloads, had the least adoption at only 17% of respondents.
- **Breaches due to an unpatched vulnerability caused higher levels of data loss** — A key concern for 2020 is that 46% of organiza-

tions, up from 30% in last year's report, had an incident caused by an unpatched vulnerability. 68% of organizations breached from an unpatched vulnerability suffered losses of 10,000 data records or more last year. In contrast, for those who said they suffered a breach from other causes, only 41% lost 10,000 or more records in the same timeframe.

Security professionals have made positive developments to improve their security posture:

- **Collaboration between network and security teams remains high** — 91% of respondents reported they're very or extremely collaborative.
- **Security practitioners are realizing the benefits of automation for solving their skills shortage problem as they adopt solutions with greater machine learning and artificial intelligence capabilities** — 77% of our survey respondents are planning to increase automation to simplify and speed up response times in their security ecosystems.
- **Cloud security adoption is increasing, improving effectiveness and efficiency** — 86% of respondents say utilizing cloud security increased visibility into their networks.

Recommendations for CISOs:

- Employ a layered defense, which should include MFA, network segmentation, and endpoint protection.
- Gain the highest levels of visibility to bolster data governance, lower risk, and increase compliance.
- Focus on cyber hygiene: shore up defenses, update and patch devices, and conduct drills and training.
- Implement a zero-trust framework to build security maturity.
- To reduce complexity and alert overload, adopt an integrated platform approach when managing multiple security solutions. ■

India Leads APAC Digital Transformation Race

82% of organizations in Asia Pacific (global: 80%) are executing on digital transformation, with increasing emphasis on accelerating speed-to-market

Many organizations are starting to realize the benefits of increased scale and velocity of application deployment in their businesses, according to F5 Networks' *2020 State of Application Services: Asia Pacific Edition Report.* This value, however, can bring significant complexity as organizations maintain legacy infrastructure while increasingly relying on multiple public and private clouds, implement mod-

ern application architectures, and face an evolving and sophisticated threat landscape.

At the same time, organizations are adopting more application services designed to accelerate deployment in public cloud and container-native environments, like service mesh and ingress control. Survey data indicates this trend will accelerate as organizations become proficient in harnessing the data their application ecosystem delivers—creating advanced analytics

capabilities and better business outcomes. Yet, most organizations are still struggling to implement a robust security framework for its applications, focusing on speed to market over security.

"Applications are the most valuable asset driving the Indian economy today. Businesses in India are innovating at speed to deliver secure and frictionless digital experiences that are differentiated and personalized, said Edgar Dias, Managing Director, India

& SAARC, F5 Networks. "This year's report explores the ways application services are an increasingly critical component at each stage of the application lifecycle. From the code that makes up the business logic of an application to the experience on an end user's device, application services ensure businesses can build, deploy, and manage applications across environments securely and at scale."

The report reflects input from nearly 2,600 respondents globally (with over 1,300 respondents from Asia Pacific) across a range of industries, company sizes, and roles. Participants were asked about the challenges and opportunities presented by the ongoing process of digital transformation. Their responses provide a unique view of the trends shaping the application landscape—and how organizations around the world are transforming to meet the ever-changing demands of the digital economy.

Survey Highlights

The survey shows that as companies manage legacy, multi-cloud, hybrid-cloud, and modern architectures to deliver applications, their requirements for app services are also evolving. To address limited skill sets and integration challenges, organizations are choosing open ecosystems that offer standardization. Respondents prize application services that are both secure and easy to use.

The overall key findings for Asia Pacific reveals that the region is on par with their global counterparts in digital transformation, but a deep dive into market findings highlighted nuances across organizations in the region.

Respondents from markets, such as Australia, New Zealand, ASEAN, and India, reported initiating numerous digital transformation projects which included incorporating emerging technologies in their operations. However, responses shared also highlighted that organizations in these markets are facing the challenge of business application sprawl.

On the other hand, markets such as China, Hong Kong, Taiwan, Korea, and Japan, are still in the early stages of implementing digital transformation initiatives with fewer organizations looking to implement certain emerging technologies, such as artificial intelligence, or automating their application Infrastructure.

The report offers an in-depth examination of five key findings:

82% **of organizations in Asia Pacific (global: 80%) are executing on digital transformation, with increasing emphasis on accelerating speed-to-market**
In fact, 90% of respondents in India reported that they have digital transformation projects in place. As organizations progress through digital transformation initiatives, IT and business process optimization initiatives mature. Many organizations have moved beyond the basics of business process automation and are now scaling their digital footprint with cloud, containers, and orchestration. This in turn is driving the creation of new ecosystems and massive growth in API call volumes. For 60% of organizations, applications are essential to the business; with 38% stating that applications support their business and provide competitive advantage.

86% **of organizations in Asia Pacific (global: 87%) are multi-cloud and most still struggle with security**
Organizations are leveraging the public cloud to participate in industry ecosystems, take advantage of cloud-native architectures, and deliver applications at the speed of the business- evidenced by 28% of respondents in Asia Pacific who reported that they will have more than half of their applications in the cloud by the end of 2020.

However, organizations are much less confident in their ability to withstand an application-layer attack

in the public cloud versus an on-premises data center. Across Asia Pacific, 76% of organizations reported the highest skills gap in security. This discrepancy illustrates a growing need for easy-to-deploy solutions that can ensure consistent security across multiple environments.

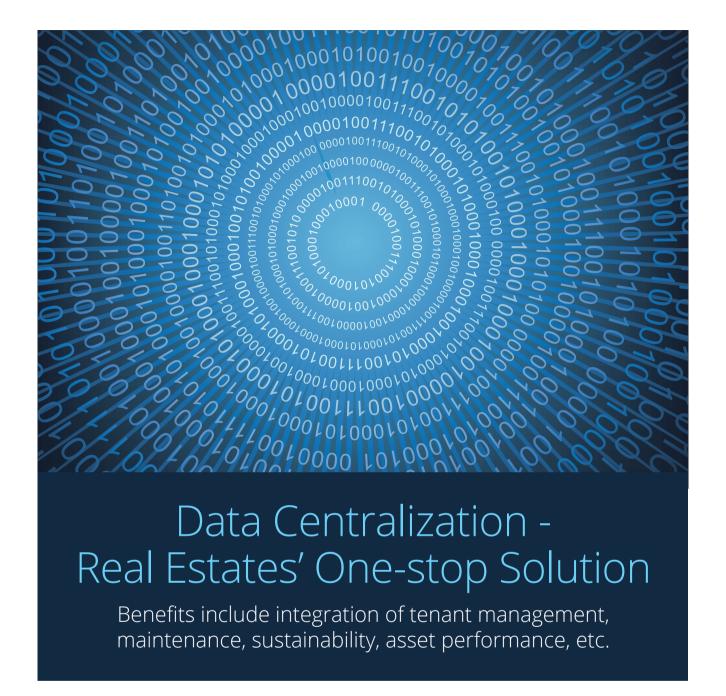71% **of organizations in Asia Pacific (global: 73%) are automating the network to boost efficiency**
Unsurprisingly, given the primary drivers of digital transformation—IT and business process optimization—the majority of organizations are automating the network. Despite challenges, organizations are gaining proficiency and moving toward continuous deployment with more consistent automation across all key pipeline components: app infrastructure, app services, network, and security.

68% **of organizations in Asia Pacific (global: 69%) are using 10 or more application services**
As newer cloud-native application architectures mature and scale, a higher percentage of organizations are deploying related app services such as ingress control and service discovery both on premises and in the public cloud. A modern application landscape requires modern app services to support scale, security, and availability requirements.

63% **of organizations in Asia Pacific (global: 63%) still place primary responsibility for app services with IT operations, yet more than half of those surveyed are also moving to DevOps-inspired teams**
Operations and infrastructure teams continue to shoulder primary responsibility for selecting and deploying application services. However, as organizations expand their cloud- and container-native app portfolios, DevOps groups are taking more responsibility for app services. ■

Data Centralization - Real Estates' One-stop Solution

Benefits include integration of tenant management, maintenance, sustainability, asset performance, etc.

40%

of tech investments are being directed into Data: centralization, IoT-driven predictive analytics and portfolio-wide intelligence, according to Facilio's *2020 State of CRE Operations 3.0.* The global study highlights the gaps & trends in Commercial Real Estate industry (CRE)

operations. The report cites Tenant experience, Energy management & Data-driven operations as top priorities for commercial real estate owners in 2020. It also provides predictions on sustained interest in contemporary management models.

The report touches upon the current state of operations and the priorities of CRE owners across the US, Middle East and India markets, and highlights the growing demand for

data-driven operations to drive operational efficiencies and optimization.

Key findings of the report include:

Optimal asset management with automated predictive maintenance:
According to the study, 60% of maintenance cost is spent on hard services. This can be reduced by 20% by leveraging real-time IoT data for predictive maintenance. This will also

ensure unified digital record of inventory, purchase history, renewals, continuously analyze the asset conditions, detect the faults and diagnose them.

Tenant experience is the key:

Satisfactory customer experience is not just the major concern of online shopping, telecom sectors or corporates but also is at the center for real estate industry. 77% of building owners prioritize tenant experience and allocate 39% of their operational findings towards the same. This can be accomplished through a dedicated tenant portal where occupants can communicate their grievances and workplace apps where employees can digitally connect to their physical workplace and personalise their experience within the building.

Driving energy efficiency and sustainability through predictive maintenance:

Buildings account for 70% of the world's electricity consumption and according to the report, CREs are willing to allot 65% OpEx of their budget towards energy enhancements. Piecemeal tools that offer building or system-level energy solutions have lost sheen, as they've been ineffective in meeting the sustainability goals of an enterprise. As governments across the world also strive to bring climate change into control, the onus might be placed on the shoulders of building managers/owners to ensure their facilities comply with government's policies on this regard.

Centralization of data: one stop solution for modern CREs:

The first step to smart buildings is centralizing operational data that can be used for tenant engagement, maintenance, sustainability, asset performance and so on. The industry was sluggish in evolving from paper managed maintenance to a software-driven approach. However, the need and the urge among owners to centralize their data are growing fast. The report says that 40% of tech

investments are directed towards data centralization.

The maintenance cost of assets has seen an increase in US and UAE from 11.8 to 11.9 and 8.8 to 9.2 respectively. However, it has remained the same for India at 0.59.

Benefits of centralization of data:

■ Integrate tenant management, maintenance, sustainability, asset performance, etc.
■ Facilitate customized workflows and manage workspace across regions.
■ Increase in productivity of the occupants because of the collaborative and open-ended workspace.
■ Rise in perceived property value due to premium occupant experience.

"Buildings are a powerhouse of data. The automation-driven upgrade of commercial real estate assets, a few decades ago, which was labeled as CRE 1.0, focused on embedding buildings with hardware that delivered improved services and enhanced performance. The recent adoption of appropriate technologies labeled as CRE 2.0, consisted of CaFM (Computer assisted Facility Management) and other software suites, designed to act as point solutions for

property management, maintenance, energy management, occupant applications, etc. Now with the rise of CRE 3.0 – an innovative new data-driven model in commercial real estate operations, which is making it possible to optimize asset performance and achieve centralized and real-time management, at an enterprise scale", says Prabhu Ramachandran, Founder & CEO, Facilio.

The CRE 3.0 report also reveals that Connected Building portfolios and a coherent end-to-end view of workflows and processes is set to become the norm in 2020, and onwards. In the context of the Middle East, a rise in the number of properties coming to market, the emergence of new segments, regulatory reforms, a Smart City vision and discerning customers are driving a major transformation in the industry. "As we move into a new decade of change and evolution, it is increasingly clear that CREs need to focus on leveraging technology to boost building performance, secure maximum uptime, and provide seamless tenant experience across portfolios. And this report provides an eye-opening look at the current state as well a vision of the transformational impact of data-driven operations", concludes Prabhu. ■

Connected Building portfolios and a coherent end-to-end view of workflows and processes is set to become the norm

Strengthening Enterprise Security Through Zero Trust

Yet, nearly half (47%) of cyber security professionals lack confidence applying a Zero Trust model to their Secure Access architecture

As 72% of organizations plan to implement Zero Trust capabilities in 2020 to mitigate growing cyber risk, nearly half (47%) of cyber security professionals lack confidence applying a Zero Trust model to their Secure Access architecture, according to a joint study by Cybersecurity Insiders and Pulse Secure, titled *2020 Zero Trust Progress*.

The *2020 Zero Trust Progress* study surveyed more than 400 cyber security decision-makers to share how enterprises are implementing Zero Trust security in their organization and reveal key drivers, adoption, technologies, investments and benefits. The report found that Zero Trust access is moving beyond concept to implementation in 2020, but there is a striking confidence divide

among cybersecurity professionals in applying Zero Trust principles.

"The sheer volume of cyberattacks and enormity of data breaches in 2019 has challenged the veracity of secure access defenses, even in well-funded organizations," said Scott Gordon, chief marketing officer at Pulse Secure. "Zero Trust holds the promise of vastly enhanced usability, data protection and governance. However, there is a healthy degree of confusion among cyber security professionals about where and how to implement Zero Trust controls in hybrid IT environment – which is clearly reflected in respondents' split confidence levels."

Of the organizations building out Zero Trust capabilities in 2020, data protection, trust earned through entity verification, and continuous authentication and authorization were cited as the most compelling tenets of Zero Trust. The report also discovered nearly one-third of organizations (30%) are seeking to simplify secure access delivery, including enhancing user experience and optimizing administration and provisioning. Additionally, 53% of respondents plan to move Zero Trust access capabilities to a hybrid IT deployment.

Top Security Concerns Include Vulnerable Mobile and At-Risk Devices, a BYOD and IoT Trend

More than 40% of survey respondents expressed that vulnerable mobile and at-risk devices, insecure partner access, cyberattacks, over privileged employees, and shadow IT risks are top challenges to secure access to applications and resources.

"Digital transformation is ushering in an increase in malware attacks, IoT exposures and data breaches, and this is because it's easier to phish users on mobile devices and take advantage of poorly maintained Internet-connected devices. As a result, orchestrating endpoint visibility, authentication and security enforcement controls are paramount to achieve a Zero Trust posture," said Gordon.

While 45% are concerned with public cloud application access security and 43% of respondents expressed Bring Your Own Device (BYOD) enablement issues, more than 70% of organizations are looking to advance their identity and access management capabilities.

"Secure Access starts with appropriate and well-maintained user provisioning but requires entity authentication and compliance checks to invoke conditional access – regardless if a user is remote or on a corporate network, if the device is personal or corporate-owned, or if the application is internal or in the cloud," said Gordon.

Secure Access for Hybrid IT Driving Demand for Zero Trust

Workforce mobility and hybrid IT models have placed most workloads beyond the shelter of corporate

networks and traditional perimeter defense – which create significant user access and data concerns.

The 2020 Zero Trust Progress study revealed nearly a third of cybersecurity professionals expressed value in applying Zero Trust to address hybrid IT security issues.

"Organizations at all stages of cloud adoption should re-evaluate their access security posture and data privacy requirements as they move applications and resources from on-premises to public and private cloud environments. Applying a Zero Trust model that aligns to hybrid IT migration can allow organizations to

realize utility computing economies while creating a non-disruptive way to implement Zero Trust Network Access (ZTNA) functionality when, where and how they require," said Gordon.

Companies Re-evaluating Current Secure Access Infrastructure

The report highlighted that a quarter of organizations seek to augment their current secure access infrastructure with Software Defined Perimeter (SDP) technology (aka Zero Trust Network Access - ZTNA).

"Organizations interested in exploring ZTNA should seek a solution that works in parallel with a perimeter-based VPN to gain essential operational flexibility for enterprises and service providers supporting data center and multi-cloud environments," said Gordon.

Of the respondents considering SDP, a majority (53%) would require

> More than 40% of survey respondents expressed that vulnerable mobile and at-risk devices, insecure partner access, cyberattacks, over privileged employees, and shadow IT risks are top challenges to secure access to applications and resources

a hybrid IT deployment and quarter (25%) would adopt a SaaS (Software-as-a-Service) implementation.

"Some organizations are hesitant to implement Zero Trust as SaaS because they might have legacy applications that will either delay, or prevent, cloud deployment. Others might have greater data protection obligations, where they are averse to having controls and other sensitive information leaving their premises, or they have a material investment in their datacenter infrastructure that meets their needs," said Holger Schulze, founder and CEO of Cybersecurity Insiders. ◼

Cloud Driving Enterprise IT Vendors' Growth

Microsoft increased its revenue the most in this segment while IBM is not among the top growth achievers

As many as six technology companies increased their enterprise IT revenues by more than USD 10 billion in the last decade. Top eight vendors collectively grew their annual enterprise IT revenues by over USD 200 billion during the decade, according to a research by Synergy Research Group.
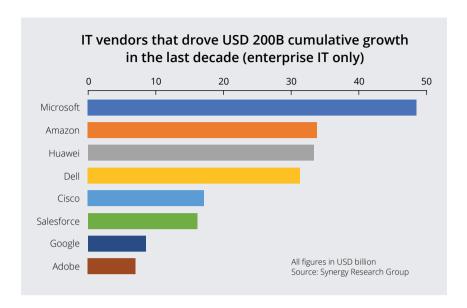
Microsoft was the table topper with its revenue growth in enterprise technology touching almost USD 50 billion. Amazon, Huawei, Dell, Cisco and Salesforce are the other five vendors whose enterprise IT revenues crossed USD 10 billion mark. Google and Adobe also achieved significant growth, though they did not cross that mark.

This Synergy ranking presented here is not a revenue or growth ranking. Rather, it ranks the companies that increased their revenue the most in absolute terms or "those that moved the needle the most in growing the market", as the firm puts it.

Another notable growth story of the decade was the emergence of ODMs manufacturing massive

amounts of hardware on behalf of hyperscale cloud service providers. In aggregate, ODMs are now generating some USD 17 billion from these activities; up from virtually zero ten years ago, says the research.

In aggregate, these eight technology vendors plus ODMs tripled their annual enterprise sector revenues over the decade, reaching USD 320 billion. While most of them acquired companies during the period, the great majority of the revenue increase came from organic growth — the one big exception being Dell whose 2016 acquisition of both EMC and VMware more than doubled its revenues in the enterprise sector.

"In many ways the 2019 enterprise IT market is almost unrecognizable from the one of 2009. Ten years ago Amazon and Google had hardly any presence in the enterprise sector and Salesforce was still in its early days. In 2019 those three collectively generated over USD 60 billion in revenues from enterprises," said John Dinsdale, a Chief Analyst at Synergy Research Group. "In 2009, Microsoft was already one of the biggest sellers of enterprise technology, but over ten years it has grown those revenues by almost 150% to become by far the biggest player in the sector. Huawei has grown dramatically thanks to its booming local market and targeting of new regions and product segments,

IT vendors that drove USD 200B cumulative growth in the last decade (enterprise IT only)

All figures in USD billion
Source: Synergy Research Group

while Dell has absorbed some big name vendors and Cisco has steadily increased its networking and collaboration business lines. We now enter the new decade with a revamped list of major tech companies serving enterprise customers."

According to the research firm, enterprise includes sales to service providers, but excludes consumer-oriented activities and sales of mobile phones, PCs, tablets and other devices.

Cloud all the way
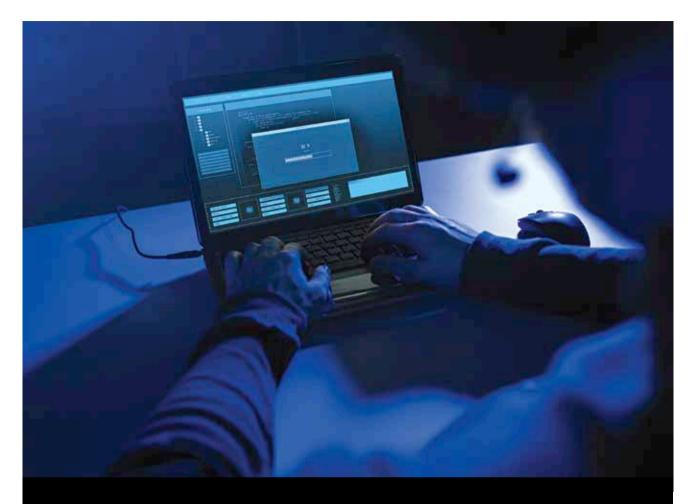The main market segments that supported the growth of these com-

panies were cloud infrastructure services and software (SaaS in particular), and, to a lesser extent, UC collaboration, Ethernet switching and servers, according to Synergy.

A look at the list shows one thing for clear. Except for two companies in the lower part of the stack, all companies play in the infrastructure and platform domain. While Microsoft was back at the top, thanks to its transformation led by Satya Nadella, Amazon and Huawei made strong entry to the big club.

IBM is conspicuous by its absence. HP, of course, split and HPE is, expectedly nowhere.

Within infrastructure, the imprint of cloud is loud and clear. Microsoft, Amazon, Google (whose enterprise offering is all under Google Cloud Platform) are all public cloud service providers while Huawei and Cisco power the private cloud. Salesforce, which is a cloud native software vendor, also managed to find a place while Adobe impressed with its transformation to a cloud-centric provider. Only Dell has a diverse portfolio, as a result of big merger.

The cloud game has just begun. And it is already running away with the market, indicating that cloud has already become the primary model of enterprise IT delivery. ◼

Within infrastructure, the imprint of cloud is loud and clear. Microsoft, Amazon, Google (whose enterprise offering is all under Google Cloud Platform) are all public cloud service providers while Huawei and Cisco power the private cloud. Salesforce, which is a cloud native software vendor, also managed to find a place while Adobe impressed with its transformation...

The Changing Attack Tactics By Cybercriminals

Cybercriminals are honing their ability to design, author and deploy stealth-like attacks with increasing precision, while growing their capabilities to evade detection by sandbox technology

Cybercriminals are using more and more evasive tactics to target businesses and consumers, according to SonicWall's *2020 Cyber Threat Report*. "Cybercriminals are honing their ability to design, author and deploy stealth-like attacks with increasing precision, while growing their capabilities to evade detection by sandbox

technology," said SonicWall President and CEO Bill Conner. "Now more than ever, it's imperative that organizations detect and respond quickly, or run the risk of having to negotiate what's being held at ransom from criminals so embolden they're now negotiating the terms."

Rapid response has proven to be invaluable when stopping the damage caused by

cyber threats to systems, hardware, daily operations and brand reputation. The SonicWall Capture Advanced Threat Protection (ATP) cloud sandbox service discovered nearly 440,000 malware variants in 2019 (1,200 per day), with findings reported to malware repositories two days ahead of public submissions.

With its patent-pending Real-Time Deep Memory Inspection technology, SonicWall identified more than 153,000 never-before-seen malware variants (145% year-over-year increase) — attacks, which traditional sandboxes are subject to miss. SonicWall immediately deploys new malware signatures across all active customer solutions, instantly shielding them from attacks.

The key findings of the report include:

- **Cybercriminals change approach to malware:** 'Spray-and-pray' tactics that once had malware attack numbers soaring have since been abandoned for more targeted and evasive methods aimed at weaker victims. SonicWall recorded 9.9 billion malware attacks, a slight 6% year-over-year decrease.

- **Targeted ransomware attacks cripple victims:** While total ransomware volume (187.9 million) dipped 9% for the year, highly targeted attacks left many state, provincial and local governments paralyzed and took down email communications, websites, telephone lines and even dispatch services.

- **The Internet of Things (IoT) is a treasure trove for cybercriminals:** Bad actors continue to deploy ransomware on ordinary devices, such as smart TVs, electric scooters and smart speakers, to daily necessities like toothbrushes, refrigerators and doorbells. SonicWall Capture Labs threat researchers discovered a moderate 5% increase in IoT malware, with a total volume of 34.3 million attacks in 2019.

- **Cryptojacking continues to crumble:** The volatile shifts and swings of the cryptocurrency market had a

Encrypted threats are still everywhere: Cybercriminals have become reliant upon encrypted threats that evade traditional security control standards, such as firewall appliances that do not have the capability or processing power to detect, inspect and mitigate attacks sent via HTTPs traffic. SonicWall Capture Labs threat researchers recorded 3.7 million malware attacks sent over TLS/SSL traffic, a 27% year-over-year increase that is trending up and expected to climb through the year.

Cybercriminals used new code obfuscation, sandbox detection and bypass techniques, resulting in a multitude of variants and the development of newer and more sophisticated exploit kits using fileless attacks instead of traditional payloads...

direct impact on threat actors' interest to author cryptojacking malware. The dissolution of Coinhive in March 2019 played a major role in the threat vector's decline, plunging the volume of cryptojacking hits to 78% in the second half of the year.

- **Fileless malware targets Microsoft Office/Office 365, PDF documents:** Cybercriminals used new code obfuscation, sandbox detection and bypass techniques, resulting in a multitude of variants and the development of newer and more sophisticated exploit kits using fileless attacks instead of traditional payloads to a disk. While malware decreased 6% globally, SonicWall observed that most new threats masked their exploits within today's most trusted files. In fact, Office (20.3%) and PDFs (17.4%) represent 38% of new threats detected by Capture ATP.

- **Side-channel attacks are evolving:** These vulnerabilities could impact unpatched devices in the future, including everything from security appliances to end-user laptops. Threat actors could potentially issue digital signatures to bypass authentication or digitally sign malicious software. The recent introduction of TPM-FAIL, the next variation of Meltdown/Spectre, Foreshadow, PortSmash, MDS and more, signals criminals' intent to weaponize this method of attack.

- **Attacks over non-standard ports cannot be ignored:** This year's research indicated that more than 19% of malware attacks leveraged non-standard ports, but found the volume dropping to 15% by year's end with a total of 64 million detected threats. This type of tactic is utilized to deliver payloads undetected against targeted businesses. ■

'My Father' Gives Some Competition To Dr. APJ Abdul Kalam!

The former president of India and space scientist is the person that NEXT100 winners across years admire the most
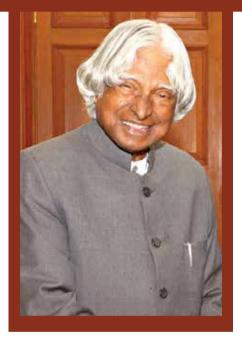

Dr APJ Abdul Kalam is the most popular role model for the winners of NEXT100, India's most coveted award for future IT leaders. As many as 16% winners in 2019 and 14% of winners in 2018 say he is the person they admire the most.

The most commonly admired person after Dr Kalam are their own fathers. As many as 13% of the winners in 2019 and 10% winners in 2018 point to their fathers when asked who is the person they admire the most.

Prime Minister Narendra Modi is in the third spot, both the years, with 7 admirers in 2018, which has dropped slightly to 6 in 2019.

Interestingly, the names and sequence of the three most admired persons in both the years are the same.

Ratan Tata, Steve Jobs, Bill Gates and their own mothers, occupied the third slot jointly in 2019 with 5% of the winners pointing to each of them as their role models. 'My mother' occupied the fourth slot in 2018. Mahatma Gandhi who was identified as the most admired person by four of the 2018 winners has been referred to as the most admired by just one winner in 2019.

Former India cricket captain Mahendra Singh Dhoni, Warren Buffett and Elon Musk and Swami Vivekananda are the most other admired personalities.

While Dr APJ Abdul Kalam stands tall, there is a good diversity of personalities—from business, politics, spiritualism, sports—that stand as role models for next-generation IT leaders.

Along with Mahatma Gandhi, the popularity of cricketing icon Sachin Tendulkar has also fallen sharply this year.

Sadguru Jaggi Vasudev and Amitabh Bachchan are the other important personalities who have been identified as the person admired most by the winners. ■

The most commonly admired person after Dr Kalam are their own fathers. As many as 13% of the winners in 2019 and 10% winners in 2018 point to their fathers as the person they admire the most. Prime Minister Narendra Modi is in the third spot, both the years, with 7 admirers in 2018 and 6 in 2019

Double Scoop

Two times the revelation

MY FAVORITE BOOK

'The Story of My Experiments With Truth' by Mahatma Gandhi

MY FAVORITE SINGER

S.P. Balasubrahmanyam

A TECH GADGET I USE FREQUENTLY

Amazon Firestick

I KICK-STARTED THIS NEW DECADE IN

Anshi National Park, Dandeli, Karnataka

Gopinath TK

Head - IT, The Bhavasara Kshatriya Co-operative Bank

A TECH EVENT I ATTENDED RECENTLY

IDC Data Security Event in Bengaluru in November 2019

MY PEER IN THE IT COMMUNITY

Maheshwar Singh, Head - IT Infrastructure, JTEKT Ltd

Maheshwar Singh

Head - IT Infrastructure, JTEKT Ltd

MY FAVORITE SPORTSPERSON

Leo Messi

MY FAVORITE ACTOR

Tom Hanks

A TECH SHOW I LOVE WATCHING

The Gadgets 360 Show by NDTV

A TECH GURU I ADMIRE

Steve Jobs

MY FAVORITE CAR

Rolls-Royce

DELLTechnologies

LATITUDE 7400 2-IN-1

Work at full speed.

Meet the world's smallest 14" (35.6 cm) commercial 2-in-1. With features like Dell ExpressSign-in to instantly log in, battery life that lasts up to 24 hours and Dell ExpressCharge capability to power your system up to 80% in one hour, getting to work has never felt so fast*.

SMS LATI to 56161   733 860 7474   DELLTECHNOLOGIES.COM/LATITUDE

Windows 10

The best devices in the world run Windows 10 Pro.