

Hands-free retail and intelligent retail—How soon, how big?

Gaming Industry expected to witness a further rise

₹125

VOL. 33 | ISSUE 7 | JULY 2020

Enterprise Automation for CIOs—A Swan or a Grizzly Bear?

www.pcquest.com

PCQUEST

UNDERSTAND • CHOOSE • IMPLEMENT IT

The 5Cs of Working From Home

- Connectivity • Collaboration • Compute
- Cool gadgets • CyberSecurity

A comprehensive guide on how to cope





AMD
EPYC

New Leader. New Rules.

Raise expectations
for your data center.

AMD
EPYC





LATITUDE 9510

DOES YOUR PC KNOW YOU?

The Latitude 9510 is the world's smallest, lightest and most intelligent 38.1 cm (15") business PC with built-in AI*. Achieve your kind of productivity.

Learn more at
DellTechnologies.com/in/Latitude



SMS LATI to 56161



733 860 7474



[DELLTECHNOLOGIES.COM/IN/LATITUDE](https://DellTechnologies.com/in/Latitude)



*Based on Dell analysis, November 2019 when compared against ultra-premium business class PCs with built in AI. The smallest refers total surface area of the notebooks. Important Dell Details. Dell's terms and conditions: All sales subject to Dell's terms and conditions, see Dell.co.in/tnc. Goods by delivery only. Prices vary basis model and configuration. Mistakes: While all efforts are made to check pricing and other errors, inadvertent errors do occur from time to time and Dell reserves the right to decline orders arising from such errors. More Information: Go to Dell.co.in/details. Copyright © 2020 Dell Inc. or its subsidiaries. All Rights Reserved. Dell Technologies, Dell, EMC, Dell EMC and other trademarks are trademarks of Dell Inc. or its subsidiaries. Other trademarks may be trademarks of their respective owners. For more information on how we use and protect your data please visit Dell's Privacy Statement Dell.com/learn/in/en/incorp1/policies-privacy. If you no longer wish to receive our marketing communications, please visit Dell's unsubscribe Page Dell.com/Preferences/ListRemoval/. For more details, please visit www.DellEMC.com.

Contents

10-23 COVER STORY — WFH

P10 THE 5CS OF WORKING FROM HOME

Employees are working remotely due to the Corona virus pandemic and it has its disadvantages. There are multiple challenges which hamper your productivity, for example, you are interacting with colleagues via collaborating tools and not face to face. Here's helping you working better in the New Normal



P22 TECHNOLOGY ENABLING WORKING FROM HOME — THE NEW NORMAL

JULY 2020

AUTOMATION

- 24 Enterprise Automation For CIOs — A Swan Or A Grizzly Bear?

HPC

- 27 Quantum Computers Cannot Crack Covid Vaccine Gaps—Not Yet!

SECURITY

- 31 Working Remotely And Via Cloud—Not A Haunted House For Security Teams
- 34 Four Strategies To Secure OT Environments
- 36 Master Web Application Security With These Four Tips
- 38 The New Normal Of Work Makes Insider Threat Management A Tricky Affair

AI

- 39 Leveraging The Power Of AI In The Lending Sector
- 41 Injecting Technology In Corona-Battles—Into The Skin Or Muscles?
- 44 Hands-Free Retail And Intelligent Retail—How Soon, How Big
- 47 AI & Automation In Fused Planning Can Drive More Intelligent Workflows

AI

- 48 AI Done Right-Pick Jack-The-Baboon, And Not Jack-And-Jill
- 51 AI's Democratisation Will Make It All Pervasive

CLOUD

- 53 The Top 5 Skills A Cloud Architect Needs To Be Successful

GAMING

- 55 Gaming Industry Expected To Witness A Further Rise
- 57 Best Cyberpunk Games To Play While You Wait For Cyberpunk 2077
- 59 Raji: An Ancient Epic By Nodding Heads Studios

TECH MIRROR

- 62 DNS Architecture Suited To Scale During Remote Work Scenarios
- 64 Digital Transformation—A Jigsaw Puzzle—In, & Post, The Pandemic
- 66 OTT And Cinema Content Will Grow In Tandem

REVIEW

- 70 IRobot Roomba i7+

TECH NEWS

- 71 Series Of Digital Experiments By IKEA@ everydayexperiments.com
- 71 Riskiest Entertainment OTT Tiles To Stream In India
- 71 Identity Theft Tops Indian Consumer Security Concern
- 71 IBM Launches Watson Works
- 71 ROS 2 Robotics Controller
- 72 Teams Features To Support The Future Of Global Education
- 72 7 In 10 Public Safety Agencies Want Mobile Tech Adoption Speed-Up
- 72 Online Exam Solution With Facial Recognition Feature
- 72 BOT Makes Banking Easy For Mashreq Customers
- 72 Citrix Announces Back-To-Office Solution For Smooth Transition
- 72 Intuitive And Proven Data Preparation Solution
- 72 First End-to-End Hyperautomation Platform With Conversation AI

TECH NEWS

- 73 1570R Rugged Security Gateway
- 73 COVID Safe Work Environment For Employees & Guests
- 73 Privacy-Compliant Universal Identity Initiative
- 73 Canon India Launches The Imagepress C165 MFP
- 73 Packaging Solutions For SMBs E-Commerce Business
- 73 Spark Power 2 Launched
- 73 Hourly Rentals For Multi-Hour, Multi-Stop Needs
- 74 Wipro Lighting Launches Mapiq's Smart Office Tech In India
- 74 75F Launches Epidemic Mode To Make Workplaces Safe
- 74 Prama Hikvision Launches Temperature Screening Solution
- 74 Microsoft Offering Free Access To LinkedIn Learning, Microsoft Learn, and Github Learning Lab Till March

SUBSCRIBE NOW!



Turn to page 60

PCQUEST

UNDERSTAND • CHOOSE • IMPLEMENT IT

EDITORIAL

MANAGING EDITOR: Thomas George
EDITOR: Sunil Rajguru
ASSOCIATE EDITOR: Soma Tah
ASSISTANT EDITOR: Supriya Rao
EDITORIAL SUPPORT: Archana Verma
CONSULTING EDITOR: Anusha Ashwin
ASSISTANT EDITOR (Special Projects): Ankit Parashar
CORRESPONDENT: Aanchal Ghatak
DESIGN MANAGER: Nadeem Anees

VICE PRESIDENT RESEARCH: ANIL CHOPRA

CYBERMEDIA LABS

MANAGER LAB: Ashok Pandey

BUSINESS

SR. VICE PRESIDENT: Rachna Garga (rachnag@cybermedia.co.in)

NORTH:

ASSOCIATE VICE PRESIDENT: Harminder Singh
MANAGER: Sudhir Kumar Arora, Mohammad Shoeb Khan

SOUTH:

MANAGER: Shubhadeep Sen

WEST:

MANAGER: Shubhadeep Sen

EAST:

MANAGER: Sudhir Kumar Arora

MARKETING & ALLIANCES (marketing@cybermedia.co.in)

SR. VICE PRESIDENT: Rachna Garga
ASST. MANAGER MARKETING: Rajiv Pathak
MANAGER, MIS & DATABASE: Ravi Kant Kumar

OPERATIONS

GENERAL MANAGER: CP Kalra
MANAGER: Ashok K

EVENTS & COMMUNITIES

SENIOR MANAGER: Debabrata T Joshi
ASST. MANAGER: Shiv Kumar

CIRCULATION & SUBSCRIPTIONS

HEAD: Rachna Garga
SR. MANAGER: Sarita Shridhar
SR. PRESS CO-ORDINATOR: Harak Singh Ramola
CHENNAI: C Ramachandran

CORPORATE OFFICE

Cyber House, B-35, Sec-32, Gurugram (NCR Delhi) 122001, India
email us pcquest@cybermedia.co.in
call us +91-124-482-2222, **fax us** +91-124-238-0694

OUR OFFICES

BENGALURU

Address: 205-207, Sree Complex (Opp. RBNMS Ground)
73, St John's Road, Bangaluru - 560 042
Tel: +91 (80) 4341 2000, Fax: +91 (80) 2350 7971

MUMBAI

Address: 404 Trade Square, Mehra Industries Compound Safed Pool,
Sakinaka, Andheri East, Mumbai - 400072
Mobile: 9969424024

DELHI

Address: Cyber House, B-35, Sec 32, Gurugram,
NCR Delhi-122001. Tel: 0124-4822222, Fax: 2380694

Printed and published by Pradeep Gupta on behalf of CyberMedia (India) Ltd, printed at printed at M/s Karan Printers, F 29/2, Phase II, Okhla Industrial Area, New Delhi, published from D-74, Panchsheel Enclave, New Delhi-110017. Editor: Sunil Rajguru. Distributed in India by IBH Books & Magazines Dist. Pvt. Ltd, Mumbai. All rights reserved. No part of this publication may be reproduced by any means without prior permission.

For subscription queries contact: rsepcq@cybermedia.co.in
Send all your tech questions to: pcquest@cybermedia.co.in



www.pcquest.com



<http://twitter.com/pcquest>



<http://facebook.com/pcquest>



<http://linkedin.in/pcquest>



<http://gplus.to/pcquest>



pcquest@cybermedia.co.in

Never Miss Out
An Opportunity
To Reach A Wider
Audience With

WEBINARS

on

SECURITY

**DATA
STORAGE/
CLOUD**

COLLABORATION

**BUSINESS
CONTINUITY
PLANNING**

and many more...

- Communicate with hundreds of people from anywhere in the world
- Keep your audience Engaged
- Generate new Leads
- Qualify new leads and build Relationships
- Speed up sales process and get ROI faster

IT Decision Makers

IT Managers

IT Influencers

Network Heads

Network Managers

IT Security Professionals

Business Users

And more...

**WHO TO
ATTEND**

Verticals: BFSI, Manufacturing, IT/ITeS/Logistics/Healthcare, e-commerce

Contact Us: Marketing & Alliance

Rajiv Pathak | rajivp@cybermedia.co.in | 8010757100



Sunil Rajguru, Editor
sunilr@cybermedia.co.in

Jio as the largest tech co.?

Facebook is the No. 1 tech company in the world in terms of users; it crossed a whopping 2.5 billion some time back. Intel is the largest chip maker in the world. Silver Lake has invested in many tech companies like Airbnb, Twitter, Dell, Skype etc. KKR has invested in ByteDance (parent company of TikTok), Epic Games etc. Mubadala Investment Company owns GlobalFoundries, the world's second largest semiconductor foundry company. If there's one company that now unites all these companies, then it's Jio which is in the limelight with its spree of global tie-ups, also including Vista Equity Partners, General Atlantic, Abu Dhabi Investment Authority, TPG Capital, L Catterton and Public Investment Fund of Saudi Arabia.

What that translates into is a solid foot in the tech world of tomorrow. The world has woken up and taken notice even as all this culminated into Reliance becoming the first Indian company with a market capitalization of US\$150 billion. Said one headline: A reading guide to Reliance Jio, the most important tech company in the world! Said another: Is it going to be Ambani vs Amazon? You can also bill it: Jio vs Jeff. Hyperbole? Who knows? Maybe Jio is really headed to be one of the top global tech companies and Indian IT has come of age.

It also has to do with the quadruple play of the mobile, mobile apps, 5G and data that will dominate tomorrow. The mobile is gaining more and more compute power and doing more and more things. The mobile workforce will cross 2 billion shortly. That's why mobile apps will become all-pervasive and try to make sure that mobiles can do whatever a desktop and laptop can do. 5G or its successor tech will not just be about mobiles but power the recently supersized Work From Home culture, smart homes, smart factories, smart cars and hence smart cities. Finally data is the new oil and the mobile has both the bandwidth and storage to consume and crunch data like never before.

Once we reach the 5G+ stage, mobile service providers will be virtually the Internet providers of the smart connected world. Then there's online money and digital identity. Your mobile is now your wallet and I-card. Contact tracing has been introduced in the world thanks to COVID-19. In the future the Aarogya Setu app may become an essential part of all travel and pandemics.

There will be both a tech and economic boom in the post-Covid world. Jio is in pole position to make the most of that in 2021 and beyond. The lines between what companies are and what they can do are blurring, and a company which can do everything (one ring to rule them all) will thrive. So Jio as the largest tech co.? You may just be able to bet on it!

Sunil Rajguru

“
**One ring to rule
‘em all!**
”

Focused Digital Campaigns...



"IN THE MIDDLE OF DIFFICULTY LIES OPPORTUNITY"

Enable your business in this challenging time with  **CyberMedia** digital offering...



We ENGAGE with your AUDIENCE

Large Enterprise / Medium Enterprise / Small And Medium / Channel Eco-System / Start-up / Developer / End Cosumers / Gaming Community

HOW TO BETTER A DIGITAL BRAND STRATEGY



Branding



Response Generation



Webinar



Virtual Round Table



Custom Program



Virtual Event

Create a successful brand focused campaigns with :

Harminder Singh, Associate Vice President - Online Expert, harminders@cybermedia.co.in

THE 5CS OF WORKING FROM HOME

Employees are working remotely due to the Corona virus pandemic and it has its disadvantages. There are multiple challenges which hamper your productivity, for example, you are interacting with colleagues via collaborating tools and not face to face. Here's helping you working better in the New Normal

Ashok Pandey
ashokpa@cybermedia.co.in



To reduce the spread of COVID-19, the government imposed a lockdown, after which most of us started working from home. The outbreak has impacted on our lives, be it personal or professional. Several millions of professionals are working from home, across diverse sectors.

There has been a drastic change in our professional lifestyle. We are facing several scenarios that are set to transform the future of work. A report by Gartner says that 54 per cent of the companies in India do not have enough technology and resources for employees to work to home.

For those who used to work from home, this is not new. But people who are dealing with this situation

for the first time, here are the 5Cs of working from home–

1. CONNECTIVITY.

We all depend on the Internet to work from home and a secure VPN (Virtual Private Network) to access the company's data. The Indian IT industry, worth US\$191 billion, is struggling to have uninterrupted connectivity. The Indian IT service industry runs on two types of networks:

1. Broadband or fiber
2. Cellular networks

Challenges: According to a report, India ranked at 126 on fixed-broadband subscriptions per individual (1.33 connections per 100 individuals) and less

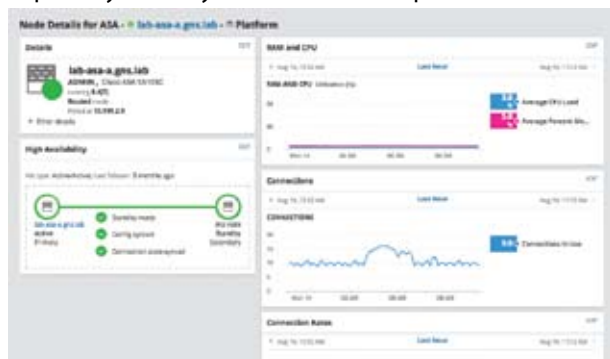
than one fourth of the towers are fibre connected. Therefore, most of the remote working employees are primarily dependent on mobile cellular network.

When we look at the mobile networks, it ranges from 76% to 97%, with download speed of less than 3-9 Mbps and the upload speeds are even lower. So, the biggest challenge for remote workers is the internet connectivity.

Solution: To deal with poor Internet connectivity to adopt WFH, here's what should you do–

Step 1: First and foremost, you need to choose a location for your home office work desk. Then ensure the range of your home Wi-Fi signal. You can use some tools to check the Wi-Fi signal strength at a particular location.

Network Performance Monitor–The SolarWinds Network Performance Monitor tool has numerous features including Wi-Fi analyzer. Its heatmapping capability allows you to create multiple color-coded



maps of your facilities using real device data to display signal strength.

NetSpot–NetSpot uses two different modes:

Discovery and survey mode. The first mode looks at a snapshot of the Wi-Fi networks near you, while survey mode can provide more detailed heat maps of Wi-Fi strength.



Sometimes moving the Wi-Fi router around a little can help to get better signals. As Wi-Fi signals weaken with obstacles, like wall, and if your router is placed in another room, then try to move as near as possible to your work desk.

Try to eliminate obstacles for instance if there is stuff placed next to it which is blocking the signal. If you have installed the router inside a wall shelf or hiding behind things, get it out and place it somewhere halfway between the floor the roof for ideal performance.

Step 2: Now it's time to check the router settings to see the bands and other stuff. You can open the router settings page, details usually written on a stick-on somewhere on the router, in case stick-on is misplaced you can try 192.168.1.1 via your web browser if that works.

Alternatively, some of the routers have their own companion apps for smartphones, install the app on your phone and then via Wireless Settings menu you can see the router settings. Set up your router to select the wireless channel automatically. If you have dual band router that supports both 2.4GHz band and the 5GHz band, ensure both are on.

Step 3: Every router comes with a firmware, and if it's not updated, might trouble with speed or range. Just update your router's firmware via the smartphone app, or from the settings. If you have any doubt, please do not attempt this.

Step 4: If nothing works for you or you have a large home with plenty of users, may be its time to buy a new router with better capabilities. Pick a router depending on users and home size that works on both 2.4GHz and 5GHz Wi-Fi networks.

For a large home, you can consider buying Wi-Fi mesh system. But if you don't want to invest much amount to buy a new mesh router, then buy Wi-Fi range extender. Connect the extender with your existing router and enhance its wireless strength.

Step 5: Now the most important part, ensure to have a fast-enough Internet connection with better download and upload speed. You can speak to your service provider to upgrade the plan if required. Subscribe to a plan that suits to your requirement, decent download and upload speed and unlimited data.

It is vital to have a sturdy Internet connection, and if Wi-Fi connection is shared by multiple users, then advise them to not to indulge in heavy Internet usage as it might impact your speed.

If your service provider's connection is unreliable, then you can use your smartphone's hotspot or USB

dongle. There is one more option, if you have a Wi-Fi router with USB dongle support, you can plug the dongle in router. This function enables the router to use both connections and provide you better connectivity.

Wi-Fi Routers

TP-Link Archer C1200

Price: INR 2,899/-

Upgrades your network cc with fast AC1200 Wi-Fi that has 2.4 GHz (867 Mbps) and 5 GHz (300 Mbps) bands. The router supports up to 1167 Mbps total AC Wi-Fi, letting you have video conferencing without any buffer, and download files without slowing down your network.



Tenda AC10 1200Mbps

Price: INR 2,629/-

The next generation router offers dual-band Gigabit wireless with all-new 802.11ac Wave 2.0 Wi-Fi. It has powerful 1GHz CPU and 128MB DDR3 that provides the best performance in both 2.4GHz and 5GHz, serving an incredible combined bandwidth of 1167Mbps.



Netgear Orbi RBR 20

Price: INR 8,999/-

It is a tri-band Mesh Wi-Fi router that delivers fast and reliable Wi-Fi coverage throughout your home. It supports speed up to 2.2 Gbps and stronger wireless connections. The Orbi router sports a sleek and modern look, which works with your Internet service provider for better Wi-Fi, everywhere.



Linksys AC 2600

Price: Rs 16,599/-

The Wi-Fi mesh networking router envelops entire home seamlessly delivering ultra-fast and full-strength Wi-Fi. This Wi-Fi mesh system is designed to scale to your household's Wi-Fi



needs. It comes with Intelligent Mesh Technology that ensures fast and reliable performance.

Once your connectivity is perfect, you can work on your projects, have video calls and collaborate with your colleagues.

2. COLLABORATION.

Since the pandemic spurs, people are engaging over various video platforms, and project managers are tracking their performance. At one end, employees are struggling to maintain balance between personal and professional life and schedule their day to complete the projects on time. And at other end, managers are trying to track performance of each employee so that they can deliver the projects on time.

Challenges: As I mentioned earlier, 54 per cent of the companies are not ready to deal with WFH situation. Similarly, employees are not prepared for the WFH environment. The main challenge is at any company, each employee have different levels of tech literacy.

Solution: The perfect choice would be—a versatile tool that can manage multiple tasks, rather than choosing a tool with single task management. There are multiple collaboration apps such as Google Meet and Hangout, Microsoft Teams, Slack, etc.

Let's take a look at Google suite that includes email, documents, calendar, videoconferencing tools. Similarly, Microsoft suite has all the tools as like Google. Microsoft and Google suites are used by millions of users across the globe. If you use any one of the suites, it will be beneficial in two ways, one it has almost every tool to manage multiple tasks and second every employee is familiar with them.

Let's have a look at different tools available with G Suite

Connect with team

- Reach out to your colleagues with **Gmail**.
- Schedule your day with **Calendar**.
- Engage with employees and work towards a common goal with **Currents**.
- From direct messages to group conversations, collaborate easily and efficiently with **Chat**.
- Connect with your colleagues with enterprise-grade video conferencing app **Google Meet**.

Create and complete your projects

- Create and edit text documents right in your browser with **Docs**.

- Work on multiple data sources with **Sheets**.
- Create custom forms for surveys and questionnaires to gather various data in a spreadsheet with **Forms**.
- Create presentations in your browser, and let your colleagues work on the same simultaneously with **Slides**.
- Organize your work, collaborate on notes with teammates and set reminders with **Keep**.

Store and access instantly

- Store any type of content and files, and access them anytime, anywhere from your desktop and mobile devices with **Google Drive**.
- One stop solution to search across your company's content, Gmail, Drive, Docs, Sheets, Slides, Calendar, and more, with **Google Cloud Search**.

Manage your employees

- With **Admin**, you can easily add users, manage devices, and configure security and settings.
- With **Vault**, one can retain, search, and export your organization's data from select apps.
- With **Endpoint** management, admin can manage endpoints from one place.
- Work **Insights** helps you to understand how your team collaborate and track legacy product usage.

What does Microsoft Suite offer?

Microsoft has a suite of desktop and web applications that can help users to manage different tasks from home to business. These apps are developed create, collaborate and share your best work.

Core apps and services

Word– Microsoft Word has got many new upgrades with Microsoft 365. You can transform your Word document into a webpage. Easily translate documents in just a click, insert 3D models directly in your book reports, nonprofit presentation or any document.

Excel– The intelligent Microsoft Excel learns your patterns, organizing your data to save you time. It is now loaded with new charts and graphs. You can share your workbook with others and always work on the latest version for real-time collaboration.

PowerPoint– Create well-designed slides and share your Ideas with others. The new 365 PowerPoint let you insert 3D objects and embedded animations directly into PowerPoint decks.

Outlook– Connect with your colleagues, organize

your daily activities with Outlook, backed by enterprise-grade security.

OneNote– This digital notebook, help you to organize everything, you can divide into sections and pages. OneNote works across all your devices, and let you share ideas with everyone.

OneDrive– It is an intelligent app to store your files, share and work together. Securely share files and work together in real time using Word, Excel, and PowerPoint across web, mobile, and desktop.

Teams– Chat, meet, call, and collaborate with your teammates all in one place. Instantly go from group chat to video conference with the touch of a button.

Additional apps and services

- Access (PC only)
- Advanced Threat Analytics
- Cloud App Security
- Edge
- Forms
- Microsoft Endpoint Manager
- SharePoint
- Skype
- Whiteboard
- Yammer

These suites are great way to connect, collaborate and work, but might you don't require all the applications. So, choose a specific tool that fits in your budget and fulfill your requirements.

Let's check it out...

Video Conferencing Platforms

FLOOR by 10Times– It is aimed to capture



the untapped market of video conferencing for carrying out seminars, summits, or even facilitating tradeshows or market selling. The application offers video conferencing of varying types, thus attempting to establish itself as a one-stop solution for both personal and professional video-based communications.

Say Namaste, by Inscript– Say Namaste applications supports its multi-party video

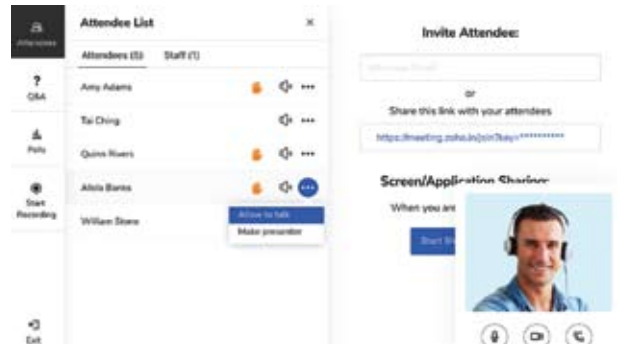
conferencing. The software also lays great emphasis on file-sharing in a chat window along with live screen sharing possibilities. The platform offers no time limit for calls, 50 participants per meeting, and plenty of other features.



of software that enables remote training, web conferencing, presentation, and desktop sharing. It is secure software with a Multilayered Security approach. It lets you customize your experiences with custom pods, images and layouts to personalize and brand your virtual room.

Zoho Meeting–The free to use meeting app

Cisco Webex Meetings–This is one of the most popular and trusted video conferencing solutions that make video and audio conferencing possible with sharing, chat, and more. Video conferencing is as simple and seamless as meeting in person.



Schedule and join meetings from where you work. Everyone you invite can join your online meeting, no matter how they're connecting, even guests.

helps you host and manage web meetings. Join a conference meeting from any location you want and collaborate with your team. You can deliver presentations, record sessions, and download useful reports.

GoToMeeting, by LogMeIn – GoToMeeting is an online meeting, desktop sharing, and video conferencing software package. It enables the user to meet online with customers, clients or colleagues via the Internet in real-time. Join or host a meeting from any device–PC, smartphone or tablet. Get crystal clear full band VoIP audio or phone call.



Lock meetings to conduct important discussions and maintain your privacy by keeping participants' cameras in disabled mode. Get the complete peace of mind with encrypted transmissions with industry-standard SSL/128-bit AES protocols.

Lark Meeting–Stay connected with your team with free video and audio meetings solution with unlimited minutes. Lark Meetings offers video and audio calls for up to 100 video participants. Share your screen to display meeting materials and conduct focused discussions.

Employees are working from home and reporting



Adobe Connect–Adobe Connect is a suite



to their managers, but the biggest challenge is tracking productivity of each employee. There are lots of productivity tools enabling you and your employees to create timelines, for tasks and meet your deadlines every time.

Time & Productivity Tracking Tools

DeskTime—It is the perfect app for companies



and teams who are interested in not only tracking also detailed analysis of the URLs and programs their employees use. The tool let you set the productivity target, then monitor to meet the target.

It is a simple-to-use app with three crucial features including—employee monitoring, project management and productivity analysis.

Time Doctor – It is a powerful employee time



tracking app with mix of three—time tracking, employees monitoring and project management. It lets you sync all your project management, communications, and accounting software. It comes with pop-up alerts employees when they go off task. Time tracking instantly improves employee's focus and productivity.

Toggl—This tool makes time tracking so simple, it only takes one click to start a new time entry or to continue tracking a previous task. It comes with timelines and budget planning feature making Toggl



a great solution for collaborative freelancers, startups, and small businesses working on complex, limited-budget projects.

Harvest—Track time and expense, then collect



the data and creates intuitive, visual reports. Harvest comes with features like timesheets that provides a wealth of information that can help you manage your team more intelligently. The tool collates this raw timesheet data into a visual summary of where your team's time is going.

Hours—It is a simple time tracker with basic report-sending functionality. Hours makes real-time tracking easy by keeping a running list of timers that you can switch between with one tap. You can manage your tasks and projects by color-coding

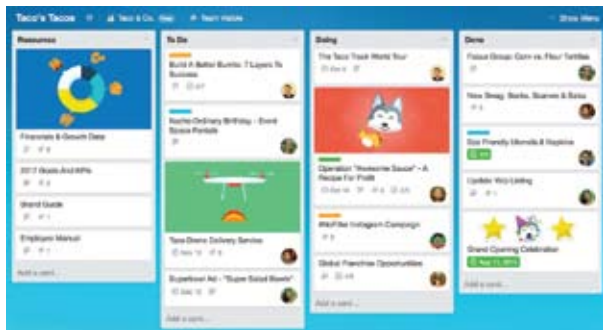


them. Also, the timeline in the app lets you quickly make adjustments in your recorded timestamps at any time.

Lots of projects and employees are working from home, then how to manage them and ensure on-time delivery? Don't worry there are plenty of project management tools available, just you need to choose the best one.

Project Management Tools

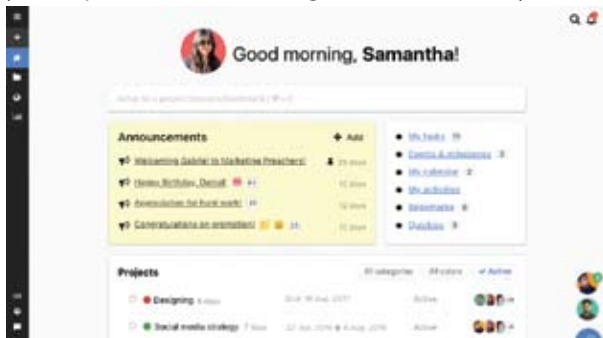
Trello—Trello is an interactive project management tool that lets you organize your work, a side project or



even the next family vacation. Add tasks or cards to your projects with more details by adding comments, attachments, due dates, and more directly to Trello cards.

Trello is available on browser, and smartphone including iOS and Android.

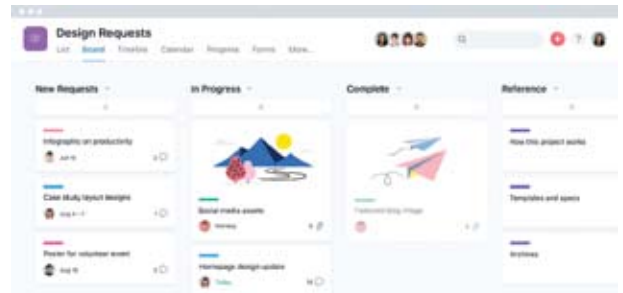
ProofHub—The task management tool allows you to plan, collaborate, organize and deliver your



projects. ProofHub is a powerful tool with three more views for your tasks: Gantt chart view (timeline view), list view and calendar view.

It comes with numerous advanced features including add tasks, prioritizes them, assigns them to multiple people, @mention people, collaborates over them, attach files, set start and due dates, and more.

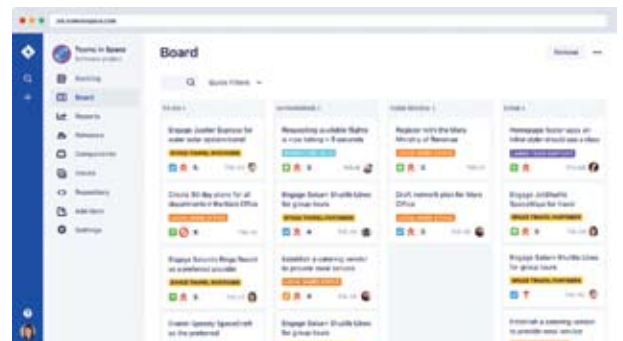
Asana—Organize your team and stay connected with Asana. The work management platform enables you to focus on your goals, projects and tasks. The



tool lets you assign tasks, view progress, and have conversations all in one place.

With Asana you can create visual project plans to see how every step maps out over time. Pinpoint risks. Share notes, attachments, add due dates and receive email notifications when a task is assigned.

Jira—Jira is built for every member of your software team to plan, track, and release great software. The project management platform is designed to not only develop software also evaluate the project timelines and progress by generating automatic reports.



This tool enables you to assign and distribute tasks, track each project with full visibility, and get real-time reports to improve performance and efficiency. It comes with an out-of-the-box workflow to match the way your team works.

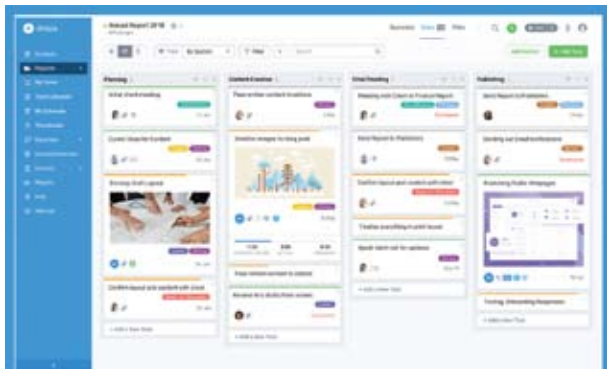
Zoho Projects—Get work done on time, plan your project activities, assign work, manage resources and collaborate with your team better to get things done on time. Zoho Projects keeps you aware of your critical tasks and their dependencies, and immediately shows any deviations between your planned and actual progress.

Zoho Projects help you to save your time on



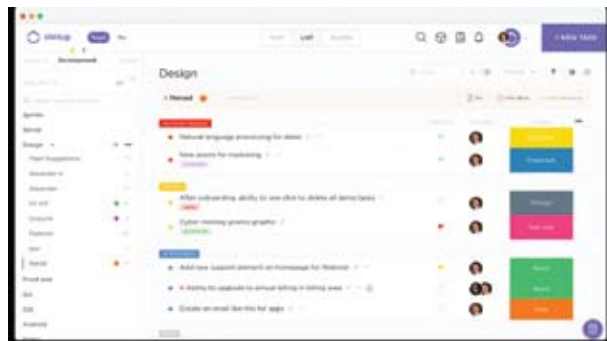
routine tasks. You can record every minute of your hard work, either manually or with timers, and our built-in integration with Zoho Invoice will automatically generate invoices from your timesheets.

Avaza—Avaza is a powerful tool that enables you to collaborate on projects & tasks with your team and clients. Gain a bird’s-eye view on who’s working on any project, and when. Confidently manage team time utilization, and make more intelligent work assignments and scheduling decisions.



The project management tool allows for easy collaboration with email-enabled discussions and notifications.

ClickUp—ClickUp is like a typical project management tool that allows you to assign tasks to



teammates, assign comments, get notified about changes, and make adjustments to dashboard view.

It is a compelling tool with machine learning capabilities that automatically predicts who you’ll assign certain tasks to and even you can determine if time estimates are accurate.

3. COMPUTE.

The WFH scenario is not the same for everyone. A few of us are using their secured laptop managed by companies’ admin, while others are using their personal laptop with less or no security. Moreover, these devices could be old, broken or running on previous version of software applications. These seem small, but have greater impact on the performance of your device.

Boost Performance of your PC/laptop—Windows and iOS

If you have an old device that troubling you, then you can try some of the below mentioned tricks to improve their performance.

Use the Disk Clean-Up for getting rid of Temp files

To delete temporary files, you need to follow below mentioned steps:

Step 1: Type disk cleanup in the search box and select Disk Cleanup from the list of results.

Step 2: Select the drive you want to clean up, and then click on ‘OK’.

Step 3: Now, you will get a box where you can choose files to delete under “Files to delete”, select the file types to get rid of. And then select ‘OK’.

If you need to free up more space, select system files as well and then click on ‘OK’.

Your PC drive can quickly be full with the backups and other files. You can free more space manually and keep backups on external drives.

Internet intensive/unusable apps

You might have too many apps and out them some of the unusable and some are Internet intensive apps. You need to identify those software applications which are useless and uninstall them from your PC/laptop.

At the other end, you need to identify, apps which are Internet intensive. Possibly, you require all of



them. So just try to use a single piece of software at a time. This way, you would be able to enhance the performance with a lesser struggle with the Internet speed.

If you are working with remote access, meaning additional load on the Internet, you might want to get all accesses from the server admin for better bandwidth.

You tried all these, but of no use? Your PC might not be capable enough to manage the heavy files and software. Buying a new PC/laptop could be a good idea, but this is last minute and might be low on budget. In this situation, it's better to upgrade your existing device.

Hardware upgrade

RAM—To improve PC/laptop performance, better to begin with the low-cost ones—the RAM. Shortage of Memory (RAM) capacity limits the performance. Upgrading the frequency or adding more RAM, can reduce system lags and make software more responsive.

Storage—Shortage of storage can lead to slower performance. SSD is the right solution, compare to hard drive, solid state drives deliver better overall performance. If possible, add SSD and install the OS, and store your files in the hard drive.

Software upgrade

OS—If you have not updated your operating system from last many weeks, then this is the right time to upgrade your OS. Click on 'Start' and type 'update', you will see "Check for update" click on that.

Now, you can check whether your OS is updated or needs to update. Click on 'Check for updates' and then if any update is available, then click on "Download and install".



Once updated, your system will restart and you are ready to go.

Software—As like OS, you should have updated software applications. Update your browser and other installed applications. You can check for the latest version available on their websites. Some of the apps show the notification if there is any update, so simply click on that and install the update. For rest, check the latest version available on their website and update the version.

4. COOL GADGETS.

If you're not used to working from home, then you need some of the cool gadgets to adjust your workspace to get things done. Many haven't been prepared for this shift, working from home sounds fun, but to make it real fun, you need a proper work from setup.

We have compiled all the important work from home gadgets, you can prepare your list of required devices.

Laptop/PC Gadgets

Laptop give you freedom to work from anywhere, sofa, couch, bed, etc. But it's always good to have a comfortable chair and desk, and this is important. Now let's have a look at some cool gadgets for your laptop.

Earphones—Choose the earphones of ergonomic design for comfortable use and with built-in microphone, so that you can manage your calls and listen to music. Regardless of what brand and model of laptop you are using, connect the earphones using 3.5mm jack or wirelessly using Bluetooth.

Honor AM115

Price: INR 399/-

These earphones feature multiple vent holes for high-fidelity music and call experience. AM115 has ergonomic design that offers great comfort and comes combine with the merits of both in-ear and traditional headphones.



Sennheiser CX 275 S

Price: INR 1599/-

Experience the ultimate sound with Sennheiser CX 275 In-ear headphones. The earphones are sensibly designed to give you an enhanced musical experience. This performance-oriented earphone is tried and tested for various environments and the results have turned out to be outstanding.



Sony WI-C200

Price: INR 1899/-

Go wireless with Bluetooth technology, connect your device wirelessly and enjoy flawless, interruption-free listening. Sony WI-C200 with up to 15 hours of playback in one full charge. Get ready in just 10 minutes of charging that deliver juice for 60 minutes of playback.



Portronics Harmonics Twins Mini

Price: INR 1499/-

Enjoy awesome sound and freedom from cables dangling and experience smooth music. It comes with a case which is pocket-friendly and has in-built 320mAh battery with LED Indicator and the earphones also have 40mAh inbuilt batteries. These earphones can last for more than 3 hours in one full charge.



Laptop Stand—Whether you are sitting at your desk or on sofa, a laptop stand help you to work comfortably.

STRIFF Adjustable Laptop Stand

Price: INR 1,199/-

Rest your laptop, or tablet on the stand and adjust to find the position you want. Place on your desk, dining room table, or kitchen counter. Fold it up and take it anywhere you need. Extend the life of your laptop and prevent overheating. Cut out vents allow air to circulate freely.



Portronics POR-105 My Buddy Laptop Desk

My Buddy can be used with almost all models of laptops available today. With the help of ergonomic design and multiple height setting, the laptop table provides you with the most relaxing inclined angle for all-day viewing and typing.

It's compressed and fold back design makes it easy to carry for travel and offers easy storage.



Gorevizon Foldable Adjustable Laptop Table with Drawer

Price: INR 1,018/-

This wooden laptop table protects both the laptop from overheating and the user from suffering heat related discomfort. This is a multipurpose table that can also be used as a coffee table/study table. Finely designed and crafted with a natural finish. It is durable and practical.



Techzere Folding Portable Laptop Stand

Price: INR 2999/-

This table can be easily folded and unfolded without any tool. You can use it as a laptop table while lying in bed or couch. You can adjust the height in three steps from 58 to 69.5 cm. It comes with anti-slip bar on the tray to keep your laptop in place.



Keyboard /mouse—Without these, nothing can be done, people working on a laptop may not require external keyboard or mouse, but a few prefer have one. And for PC, you need a quality keyboard and mouse.

ZEBRONICS Transformer

Price: INR 1199/-

The transformer is a full-fledged keyboard and mouse, combination of a USB standard keyboard



with a mouse. It has multi-coloured LEDs, 4 modes with 3 light modes with an integrated media control. The mouse comes with 7 breathing LED colors with compact and ergonomics design with a solid structure and extra buttons for DPI/ forward/ backward.

Logitech MK215 Wireless Keyboard and Mouse Combo

Price: INR 1395/-

The Logitech MK215 Combo has the 2.4 GHz wireless technology and effective signal receiver that



offers better connectivity. It has a compact and space saving design enabling the keyboard and mouse to be accommodated easily.

The mouse has compact design, better signal strength, battery and security, effective structure and easy set up.

Tygot Mini Wireless Keyboard and Mouse Price: INR 599/-

The Mini Wireless Backlit Keyboard supports 2.4GHz wireless. It combines touch pad, multimedia control keys and PC gaming control keys with USB interface adapter. The Ergonomically handheld design is easy to carry and operate.



The Keyboard has 92 keys Wireless QWERTY Keys, Touch pad which supports multi-finger functions. The 3 different color backlit key give user an advantage to use in dark while adding an elegant look & feel to the keyboard.

Logitech K400 Plus Wireless Keyboard Price: INR 3,599/-



Connect with your PC, mobile, and TV to navigate your connected devices from the comfort of your couch. It's easy all-in-one keyboard/touchpad that enables you to do everything with only one device. It has a long wireless range and battery life without the hassle and clutter of multiple devices.

The K400 Plus works with Windows 7 and higher, Android 5.0 or later, or Chrome OS.

If you have an old PC/laptop, you might be struggling with your webcam, USB port and some other things. And when you are using your desktop, then you need some new gadgets...

Webcam—You can get a full HD 1080p webcam for video calling to collaborate with your teammates. These days, everyone is working from home and most of professionals are meeting with their colleagues over video calls.



USB hub—To connect multiple devices with your PC/laptop, so you need a USB hub that let you connect multiple devices easily. The USB hub enable you to connect USB devices to transfer data simultaneously, such as Mobiles & Tablets, keyboards, mouse, card readers, Camera, hard drives, MP3 Players, and printers etc.



Monitor—A wide angle monitor with FHD resolution gives you great viewing experience. If



you have a small display laptop, you can connect it to a large screen. Or can upgrade to have better experience.

A verity of displays are available, choose a perfect one with FHD resolution. Also, curved monitors are available which could be a good choice for a truly immersive viewing experience.

5. CYBERSECURITY

The most important, whether you are using your personal device or official, it must be protected from any cyberattack. A VPN is the right solution to keep

hackers away and keep your connection secure. VPN creates an encrypted connection between your PC and a server.

Hotspot Shield

One of the most popular free VPN built with Hydra based on the OpenSSL library to make Hotspot Shield the fastest VPN. The patented Hydra protocol delivers unrivaled speed and performance, ensuring fast, seamless streaming and gaming with no buffering, even when connected to countries half the world away.



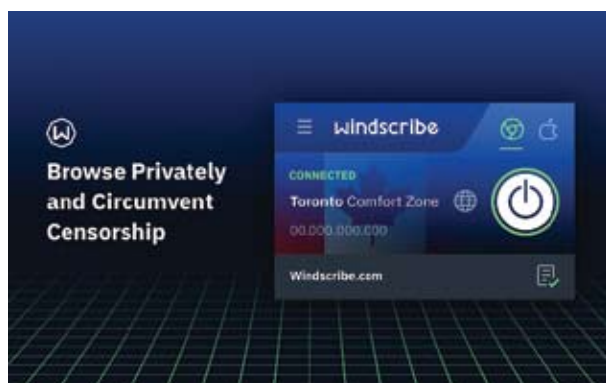
TunnelBear



The VPN security software is a clean and easy-to-use app available for PC and mobile both. The company behind TunnelBear is none other than security software giant McAfee. You can easily sign up with very little personal data.

Windscribe

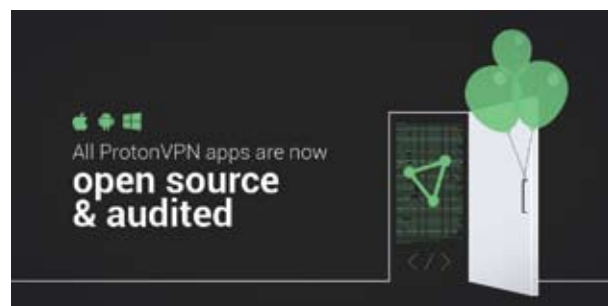
Windscribe comes with 10 GB bandwidth per month as standard and 10 remote server locations



including UK, Hong Kong, Canada, and US VPN. It doesn't store connection logs, IP stamps, or visited sites; it only stores your username, the VPN server location and the amount of data transferred. But all this stored data, get erased within three minutes of the session ending.

ProtonVPN

ProtonVPN offers a free VPN with unlimited data, but restricts you to only one device, only



three locations, and lower speed compared to paid subscribers. Also, it doesn't offer P2P support. It connects you to the fastest nearby server and offers strong security, including powerful AES encryption and an automatic kill switch.

VPNs can help you to connect securely, but you need to be more attentive and act responsibly.

Here are some tips for employees

- Ensure that personal devices have firewalls and anti-virus software installed, kept updated and always on. It should also be enabled to protect any browser
- Ensure Passwords for access and control, and employees should be encouraged to log out from the corporate network at the end of every day.
- Avoid the use of notified collaboration platforms that pose cyber threats. Use collaboration tools with built-in security controls for access and audit.
- Never use freeware solutions even from leading solution providers. Always go in for the best in class solutions even if it is a paid option.
- One should change their default settings and passwords to reduce the potential impact on their work of an attack via other connected devices.
- Employees working remotely should be required to use multifactor authentication (MFA) to access networks and critical applications.
- To avoid risk, one should turn off any file-sharing on the work system and ensure home router or Wi-Fi access point has WPA2 security enabled while accessing or working on an important document.

TECHNOLOGY ENABLING WORKING FROM HOME – THE NEW NORMAL

The pandemic impacted the industry and the ecosystem, the rapid digitization has brought a change from the normal, and every change carries the need for positive development

Sai Pratyush

The coronavirus (COVID-19) outbreak and the subsequent lockdown, has brought the world to a near standstill with significant economic disruptions across all industries and sectors. While the pandemic is first and foremost a human tragedy, its impact on the global economy is also expected to be significant. As the Government take measures to try and flatten the curve, a major challenge for business leaders is to ensure business continuity as employees work from home. It seems likely that “remote working” may be the new normal as the future of work is being re-defined by every passing day.

Research indicates that the biggest concern for most business leaders in the adoption of work from home as a modus operandi is the fall in productivity. With internet connectivity as the key enabler for collaboration, communication and resource allocation to drive businesses, the enterprises ensure that the employee productivity remains high. Most of the companies are using video/voice calls to ensure the seamless function of teams, workflows and operations. In the past month, internet usage has seen a colossal jump, leading to a surge in demand for high-quality and secure home broadband and virtual private network (VPN) services. Telecom companies are effectively enabling Collaboration Platforms thereby ensuring business continuity is in place.

As one of the essential services during the pandemic, Telecom companies are focused mostly on increasing network resiliency that helps businesses in timely communication. Being the enablers of connectivity and communication solutions for



businesses, the Telcos play a pivotal role in providing solutions for remote work scenarios. Their robust infrastructure of services can assist organizations in facilitating the right mix of solutions across connectivity, secure access, collaboration and extending back-office operations remotely. The rise in the use of digital tools, including Web-conferencing, cloud computing, and electronic payments has put the telecommunications sector in the spotlight in facilitating this new ‘normal’.

Customer-oriented interaction with Hosted IVR & Web Chat solutions

The COVID-19 outbreak has resulted in a massive uptick in the call volumes as both large and small enterprises are directing their consumers to contact them via phone, email or chat. The increased phone calls throw a challenge to enterprises to deliver frictionless customer experiences. Cloud based interactive voice response (IVR) is one such solution that can help businesses achieve an interaction between the company and its customers.

The Hosted IVR solution helps enterprises route inbound calls to the mobile or home phones of their employees thereby ensuring a seamless interaction over phone. The Hosted IVR Platform routes the

call to the Agent, enables the customer interaction, generates performance reports like before thereby ensuring Business Continuity of the entire customer interaction process.

Another product which enables an interaction with Customers is Web Chat which is a plug-in that enables the chat functionality on the customer's website. This tool enables any website to become interactive with Agents sitting at Home handling the Chat responses.

Effective audio and web conferencing solutions for remote collaboration

Amidst the current global scenario, business travel has completely come to a standstill making home the new workplace and remote working the new norm. As a result, not only have the large conferences suffered during this global pandemic, but smaller meetings are also affected. Hence, enterprises have increased the usage use of multi-channels such as audio and web conferencing for most of their communications.

The conferencing solutions follow high standards of internet security to ensure the privacy of all the parties involved in communication. These solutions help enterprises to engage with employees working remotely, collaborate across various departments and locations, interview candidates and manage suppliers as the technology is efficient, cost-effective and scalable. In these unprecedented times, these solutions have helped enterprises adapt to the modern and flexible working environment and continue business as usual.

In addition to Web conferencing, Web Casting services are also being utilized as a substitute for large face-to-face events. A Web Casting Platform ensures events like Town Halls, Product Launches, Trade Events, Lectures, etc can now be conducted in the virtual world.

Secured file sharing solutions for businesses

Cloud computing is one of the key enablers during the current remote working scenario. As small enterprises may lack the resources to provide employees with company hardware, they are mostly relying on employees to use their own devices while working remotely. The various cloud computing services across Infrastructure-as-a-Service (IaaS) and Software-as-a-Service (SaaS), enable the employees to get the same files, information and data they had access to in the office.

These document management solutions support



SAI PRATYUSH, Group Product Head – IOT, Cloud and SaaS, Tata Teleservices Ltd.

a wide range of devices and systems and help deliver integrated security that is required in this digital world. These solutions allow employees to work in a virtual workspace and help enterprises in reducing administrative costs, managing various projects, allowing seamless collaboration and enabling hassle-free auditing. Cloud based CRM tools enable businesses to address their customers' issues on real time basis thus upscaling their customer delivery model. This also helps the enterprises in data analytics to enhance business intelligence for informed decisions making it more imperative for them to leverage this technology.

Triggered by the pandemic the industry and the ecosystem at large are now moving towards a hyper-interconnected reality. The rapid digitization has brought a change from the normal, and every change carries the need for positive development. The enterprises are using various technology solutions to strengthen business resilience, improve processes, reach customers more effectively and manage their workforce more efficiently. With the focus on customer-centricity and innovation, telecommunication companies are striving to provide the best technology and services to businesses to improve processes, manage employee, customer and partner well-being and be prepared for the future – The New Normal.

The Group Product Head – IOT, Cloud and SaaS,
Tata Teleservices Ltd.

ENTERPRISE AUTOMATION FOR CIOs —A SWAN OR A GRIZZLY BEAR?

The Covid pandemic is shaping into a cliff where the only way forward is to jump—right in the thick of the things that were easy to avoid, put off or leave on a snail's ramp. Not anymore

Pratima H



We know what 'Black Swan' events are—Those unpredictable, improbable events with high global impact, yes. But some Forrester analysts recently dubbed COVID-19 as a 'Gray Swan'— something that is unpredictable, but highly probable and with a high global impact.

After all, how far from truth can this prognosis be? Who could have predicted this beast? Who can deny the wide-berth impact it has caused—and straddling every industry, every product, every service that we can think of?

Now when we say 'impact'—does it have to necessarily be a negative one? Don't we remember the underpinnings of the Nova effect? What seems a bad incident at first, may eventually, and layer by layer, turn out to be the cue for the best possible outcome one can hope for! If a car accident leaves you with a few scars but compels you to take a brain scan, thus, revealing a benign tumor that can now be treated on

time—is the accident really bad?

The answer will transpire in time. Specially for enterprises and their CIOs grappling with what to do next. The pandemic has moved some, has pushed some, and well, has bulldozed some into a world of unavoidable automation and transformation.

Does it matter now whether they were ready or not?

Out of the Fish Bowl now!

If we go by what Leslie Joseph and some co-authors outline in a Forrester report on COVID-19's impact on enterprise automation plans, we can spot that one of the lasting legacies of this pandemic could be a renewed focus on automation. It is interesting to see how companies see automation as increasingly urgent in the context of risk mitigation and strategic investment, as Joseph unveils here.

Referring to previous trends, we can see how firms recovering from recent recessions have increased their

investments in automation. As the recovery comes, the adoption of automation will take on a new urgency in the context of enterprise risk and resilience. Leaders will rethink old ways of tying work to specific locations or types of labor, whether that's human or digital, writes Joseph.

Ashish Bansal, CIO Director Global A&D ERP Operations, GSK observes that enterprise automation was growing at 33.6 per cent Compounded Annual Growth Rate (CAGR). "Overall challenges of manpower due to COVID-19 would expedite the existing projects in the pipeline. The pressure on cost efficiency, with speed of delivery which is error free & consistent—that is the need of the hour in the industry more than ever."

Automation has been around over few years for many industrial applications, points out Manikant R Singh, Chief Information Security Officer (CISO), DMI Finance. "The robotising of process through technology has been here since many generations. Right since day zero of lockdown, only organisations which had invested in process tech optimisation via automation were very successful during the lockdown. Be in business continuity, employee on-boarding or cyber security; automation has helped companies to extract productivity at max."

Singh unravels some reasons that make it important for CIOs to invest in automation. It is all easy to configure, easy to manage once it is deployed, it is scalable and up-gradable. It improves workflow and alerting-exceptions. It gives better safety too."

Where do the sea gulls fly to?

Now that everyone is scrambling to survive and salvage what is possible, the rush to automation can also turn into a bad knee-jerk reaction. While jumping all the hoops is something CIOs may not have enough time for, can they take a big pole and leap directly into a place where technology rules? Specially when they are standing at a place with no incremental steps to count on, or no previous encounters to fall back on—just because they had been postponing automation all this time?

That's a danger, avers Sanjay Srivastava, Chief Digital Officer, Genpact. "Most enterprises are jumping too fast and too deep at this time—more than what they can handle. Picking the very first software vendor that comes to you for automation in the wake of this pandemic—that's not a smart decision. CIOs might need a little more strategic thinking here. Think about end-to-end business. Think about the entirety of a customer journey. Drawing a good roadmap would help before anything else."

"Leaders will rethink old ways of tying work to specific locations or types of labor, whether that's human or digital."

—Leslie Joseph,
Forrester



Automation may, hence, vary as per the industry and the stripe of technology that works best in a given scenario. For one—The Forrester report explains the impact on supply chains as they move closer home. Talking about the enormous stress on global supply chains, the analysts underline that as the world emerges from the grip of the pandemic, business leaders in sectors including manufacturing and retail will look to bring their supply chains closer to key markets. That could essentially mean a move away from just-in-time supply and toward greater global diversification and technology enabled demand responsiveness using big data, Artificial Intelligence (AI), and cloud technologies.

When technological advancement turns to be a key driver of the uptake of automation, it is hard to dismiss an AI-dominated world next. "AI and Robotic Process Automation (RPA) have already introduced the world to digital workforces that can take on routine back- and front-office functions. In the current crisis, investments in drone-based delivery by Alibaba, Amazon, and JD.com and in robotic telemedicine by companies such as Denmark's UVD Robots and China's Yuoibot have demonstrated viability for larger-scale deployment. The Corona Virus pandemic is seeing national governments and institutions commit heavily to investments in AI-centric technologies such as synthetic biology, robotics, and drones." Joseph illustrates in the report.

Bansal notes that automating the mundane repetitive task—which isn't adding much value for the skilled young workforce of India—would help firms to focus on niche areas, advance tech or deep tech work & create a USP across the globe given the young enthusiastic workforce availability in India. Several industries leading this change are Banking, Insurance, Healthcare, Manufacturing, Telecom & Energy sector."

Once the Sharks go back

Would enterprise automation slow down or pick up

as we move through, and past, the lock-downs? Should it?

Post the lock-down crisis there would be a plethora of job cuts and new opportunities, Siinghh looks ahead and tells. "It would become difficult to find the exact fit of job-cuts; and replacements are not going to be easy and low-cost, which leads to automation of work. Jobs done by humans will be broken into small portions and computers will handle this work seamlessly. While manual intervention cannot be nullified, companies will invest intensively to ensure automation in next coming years." He predicts that following automation, companies will invest in Employee on-boarding—Remote, Sales & Marketing - Remote Sales, Manual & Labour Intensive Repetitive Work, Customer Interaction - Remote support automation L1 & L2 and in Lab testing & Reporting."

Do not forget the White Swans

Organizations often make tradeoffs favoring short-term outcomes over long-term resilience, warns Joseph. In the aftermath of COVID-19, Business Continuity Planning (BCP) will have to extend to account for unknown unknowns and their second- and third-order effects, as the report drills into, and without mincing any words. "Much automation has a transactional cost-reduction focus; some, particularly involving AI technologies and insights-driven automation, supports the transformation of parts of the business model. In the aftermath of the Corona Virus crisis, CEOs will demand that their business leaders strategically focus on risk mitigation and recovery from global 'White Swan' events. Investments in automation can remove some risk of dependence on humans and adapt without intervention to demand."

Look for the white space. That's the way to go about it and it is simple, in Srivastava's reckoning. Create a good roadmap of the customer journey first, he advises. "Then slice all your areas into three

"Think about end-to-end business. Think about the entirety of a customer journey. Drawing a good roadmap would help."

—Sanjay Srivastava,
Chief Digital Officer,
Genpact



categories. First one is where you do not need to touch anything. Let it be as it is. Second category is of those applications that do not change but move to Cloud. Lift and shift them. The last category is the one where you might need to fill a lot of white space with analytics and AI. But whatever you do, start with business, do not start with technology.

The hangover-effects of the Covid pandemic can be surmised in the way earlier 'Black Swan' events left the world scampering for more technology. In the aftermath of recessions between 1970 and 1982, it took two to six months for unemployment to begin to recover. But in the wake of the three recessions between 1991 and 2009, this process took 17 to 23 months. And these jobless recoveries occurred predominantly in middle-skill, routine jobs due to increased effectiveness of and investments in automation technology—Joseph argues in the report.

The writing on the horizon may be hazy but it is still legible. "Pre-Corona Virus, 57 per cent of global data and analytics decision makers at enterprises said that their firm had implemented automation technologies or were in the process of doing so. However, many of these automation initiatives suffered from the problem of automation sprawl, ending up as disconnected, localised islands of automation across the enterprise. In the post-pandemic recovery, enterprises must revisit their automation plans." Joseph switches on the torchlight for a peek into the way ahead.

The impact of these investments will continue to show up long after the Corona Virus has receded—and that comes out strongly here.

One thing looks certain. Automation is now not some strategic-retreat-topic or the good old boardroom-hot potato. It is not a choice. It is coming after you with a never-before force. CIOs can now stop running away from this bear. The smart way is to befriend it and let it show you the way out of the forest. It might just save you from some swans. Right Pooh!

"Be in business continuity, employee on-boarding or cyber security; automation has helped companies to extract productivity at max."

—Manikant R Singh,
Chief Information

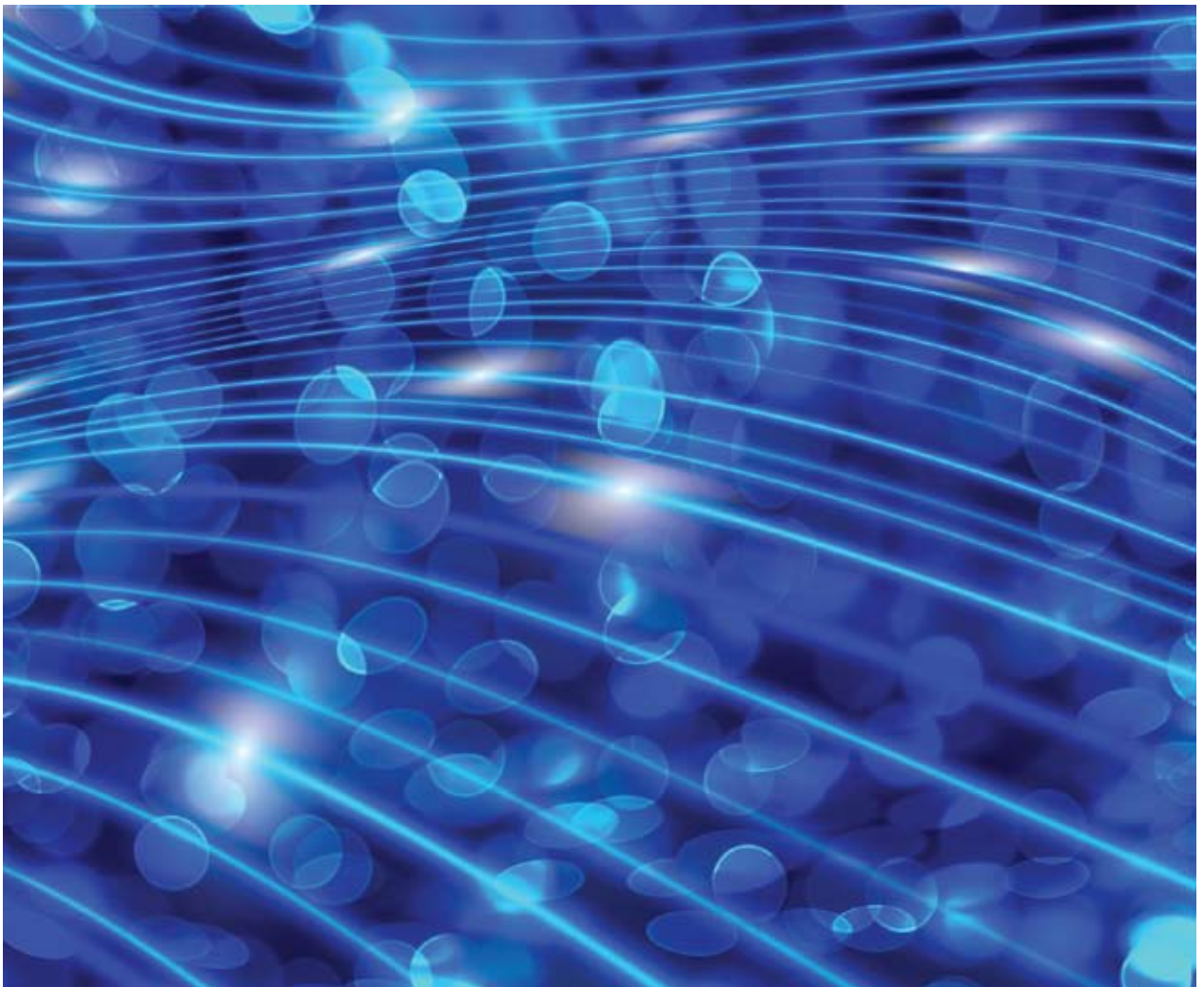
Security Officer (CISO), DMI Finance



QUANTUM COMPUTERS CANNOT CRACK COVID VACCINE GAPS—NOT YET!

And anyone who makes such claims is hawking nothing but hype. Let us find out from a Maths wizard why things stand that way despite all the drum-roll around quantum computing. And why IBM does not subscribe to the idea of quantum supremacy

Pratima H



Let's think of the word 'advantage' before we go on tangents like 'supremacy' and 'volume' when we discuss adjectives around quantum computers. Let us also take into account facets like device crosstalk, the cloud context, entanglement and application muscle here. Asking **Dr. Bob Sutor, Vice President, IBM Quantum Ecosystem Development** about the on-the-street reality of quantum computers is like standing next to the box with the Schrodinger's cat. Because after the third question one does something impossible—one forgets about the cat and starts to think of the box as a shoe-box. It's not about the shoes. It never was. It's what you do with them. Is that what he means? Dance around and find your feet.

Dr. Sutor, who has spent over two decades in IBM Research in New York, is also the author of *Dancing with Qubits*, a book about quantum computing. He has worked on, and led efforts, in symbolic mathematical computation, optimization, AI, blockchain, and quantum computing with his special hat on.

A theoretical mathematician by training, Sutor started coding when he was 15 and has got a hands-on métier in everything that stirred the software world from mathematics and mathematical software, Linux, open source, computer algebra, web standards to the current rockstars like quantum computing, AI, blockchain. How about some corridor walk with him chatting on what's coming our way next?

If you were to explain the concept of a Quantum Computer from your lens, how would you describe it?

I start with the observation that all computing systems—quantum computers along with today's classical computers such as phones, laptops, and



DR. BOB SUTOR, Vice President, IBM Quantum Ecosystem Development

supercomputers—operate on the ability to store and manipulate information. Classical computers manipulate individual bits, which store information as 0s and 1s. These bits can represent numbers, text, arbitrary data, and even what to draw on a screen.

Quantum computers, alternatively, use the physical phenomena of nature's quantum mechanics to represent and manipulate information. Here we have quantum bits, or qubits. Unlike a bit, which has to be a 0 or a 1, a qubit can hold two pieces of information and so, in some sense, has two dimensions in which to operate. This is called superposition. The magic happens when we start using more qubits. For every extra qubit and using a fascinating property called entanglement, we double the information available for use. For example, just 50 qubits could represent more than one quadrillion compute states, simultaneously.

It's important to understand that quantum computers are not a replacement for classical ones. They complement today's computers with the potential to soon solve certain intractable problems that become extremely large or time-consuming during computation. Problems, for example, found in molecular simulation, or exponentially large optimization simulations in finance.

Can you share more details on the significance of circuits and cloud in accelerating Quantum Computing (QC)'s progress?

IBM put the first quantum computing device, open to the public, on the cloud in 2016. IBM was also the first to offer cloud-based commercial universal quantum computing systems as part of the IBM Q Network initiative, beginning in 2017. Today, we have 18 quantum systems available on the IBM Cloud. Our 240,000+ registered users, including those in the 100+ IBM Q Network organizations have run hundreds of billions of circuits on these systems, leading to more than 200 published research papers, and numerous industry case studies—all with the goal of developing practical quantum applications.

Quantum computing on the cloud is not new. We are now in our fifth year of providing it with the largest ecosystem, and development based on the community-driven open source Qiskit platform.

A circuit represents the basic unit of work for a quantum computer. Over four days in early May, our users ran over 1 billion circuits each day on actual, authentic quantum hardware.

Our team recently introduced circuit libraries into Qiskit to provide families of circuits for several practical applications and quantum algorithms. For example, the new optimization module is a library for researchers and beginners alike to experiment in quantum combinatorial optimization.

How does this compare to the 'number of qubits', 'superposition', 'entanglement' and other aspects that often come up as claims of a good quantum computer?

For clarity, qubits' properties of superposition and entanglement, as well as interference, are what give them their quantum mechanical processing power.

The number of qubits is just one of many aspects that help determine the performance of a quantum computer. It's why IBM developed the quantum architecture-agnostic metric, Quantum Volume.

Quantum Volume takes into account the number of qubits, connectivity, and gate and measurement errors. Improvements to underlying physical hardware, reduction of device crosstalk, and software circuit compiler efficiency can drive measurable progress in Quantum Volume.

IBM's stated goal is to annually double Quantum Volume, which we have done since 2016. Our latest 32-Quantum Volume system, Paris, is a 27-qubit device available to organizations in the IBM Q Network.

The industry does not yet have a quantum computer capable of delivering a practical advantage over what classical computers can currently accomplish. We believe that an application with a quantum advantage will be developed within the decade.

What would determine real quantum supremacy—scale, speed, level of noise, fidelity or real-world problem-solving? Should we compare these computers to supercomputers or legacy computers or something else in measuring these metrics?

IBM does not subscribe to the idea of quantum supremacy. You can read our official statement on this. But what I can say here is that we are focused on Quantum Advantage: the research and development behind practical quantum applications that provide benefits to science and business that reach beyond what classical computers will ever be capable of alone. Quantum Volume, the metric described in my previous response, is a guidepost for the performance of quantum computers.

When can we see solid QC applications in the real world—how much has been done, could be done, with extreme projects like the Covid vaccine?

Quantum computers today cannot help develop a vaccine for COVID-19 since they are simply not powerful enough yet. Let me make a stronger statement: if you see claims of quantum computing helping COVID-19 research, those claims are pure marketing hype.

IBM has focused on bringing the best classical supercomputers to researchers and scientists helping to fight this virus. In the future, and I'm talking about at least 10 years from now, we expect this could be a problem for which quantum computing might be useful. More generally, simulation of some physical processes such as molecular reactions that help us create new materials may be available in the second half of this decade.

So what then are the constraints that still come in the way of QC applications?

To accomplish the development of applications with a quantum advantage, our scientists have collaborated with and published several research papers and use cases with IBM Q Network member organizations. This research includes several quantum finance-related research papers with partners including Barclays, JPMorgan, Wells Fargo, and MUFG Bank in Japan.

Much of the research we've conducted examines applications in risk analysis and option pricing. For example, in 2019, we published with JPMorgan the paper 'Option Pricing Using Quantum Computers' where we "presented a methodology to price options and portfolios of options on a gate-based quantum computer using amplitude estimation, an algorithm which provides a quadratic speedup compared to classical Monte Carlo methods." And in 2019, with Barclays, we published 'Quantum Algorithms for Mixed Binary Optimization applied to Transaction Settlement' which introduced a novel approach for extending existing quantum methods for combinatorial optimization. The research optimizes the efficiency of securities settlements in capital markets, which is a difficult optimization challenge of importance due to the volume and value of transactions settled. Better algorithms could increase settlement efficiency, thereby minimizing the time period between trade and settlement.

In your reckoning, what would be the tipping point of QC, or have we already touched it? How does IBM feel distinct when others like Google, Microsoft, Baidu etc, are making big announcements every now and then claiming an edge of sorts?

The industry does not yet have a quantum computer capable of delivering a practical advantage over what classical computers can currently accomplish. We believe that an application with a quantum advantage will be developed within the decade for two main reasons:

First—IBM Quantum technology spans quantum hardware and software—all available on the cloud. IBM is the only company offering this complete stack.

Second—IBM Quantum's global ecosystem includes more than 240,000 users experimenting with our public devices, more than 100 organizations with access to our premium devices, and academic collaborators helping educate and develop the needed skills for a larger, more diverse "quantum ready" workforce.

By any metric, IBM Quantum has the broadest

ecosystem; the most advanced technology, and has made more advances than any other organization in the world.

Are issues like overheating, refrigeration, superconducting levels, propensity for errors, fragility, hardware availability etc. big challenges for the evolution of QC? What do you count as the big factor that needs to be addressed in the race of a great quantum computer?

Reducing noise and device errors are aspects of ongoing work that will continue for many years to develop applications with a Quantum Advantage. This will lead us to building fully fault-tolerant quantum computers. But accessing, experimenting, and developing near-term use cases are already possible on real, authentic quantum hardware. IBM offers 18 quantum computing systems over the cloud, many of which are publicly available for anyone to use, via the 'IBM Quantum Experience' platform.

Can there be something of a Moore's law here as well?

We measure these systems' performance by their Quantum Volume, explained in a previous answer. Quantum Volume is doubling every year in a similar Moore's Law trajectory.

What else keeps you excited about QC? Any current work or experiments that you want to talk about?

I'm excited about how our community has grown. Just last month, on the fourth anniversary of IBM putting the first quantum computer on the cloud, our team hosted the virtual IBM Quantum Challenge: a series of exercises designed to educate people to use quantum computing in a fun way.

Over four days, 1,745 people from 45 countries came together and ran more than 1 billion quantum circuits per day on 18 quantum computers on the cloud to solve four problems ranging from introductory topics in quantum computing, to understanding how to mitigate noise in a real system, to learning about historic work in quantum cryptography, to seeing how close they could come to the best optimization result for a quantum circuit. This was record-breaking and historic event for quantum education and skills development.

The Quantum Computing Era on the Cloud is now in its fifth year. I'm excited to be part of the team at IBM Research which is making the most advanced systems available to the most users.



WORKING REMOTELY AND VIA CLOUD—NOT A HAUNTED HOUSE FOR SECURITY TEAMS

If access and visibility were even mere illusions of control, letting them slip out of hand can be quite a nightmare for enterprise security folks. So has the COVID-19 office structure really created new monsters? Or is it time for new ghost-busters?

Pratima H



In the recently released Security Effectiveness Report 2020, it came up that real-world attacks were undetected and able to penetrate 53 per cent of the IT environments. What's jarring here is that 54 per cent of early-stage attack tactics were missed, and 68 per cent of the time, security controls did not prevent or detect the detonation within the environment. Why were as many as 65 per cent of security environments unable to prevent or detect the approaches being tested?

The security strengths of today's enterprises may be suffering a dent due to factors that are hard to believe, grasp and predict. **Steve Ledzian, Vice President & Chief Technology Officer, APAC,**

FireEye tells us how out-of-the-box configurations, environmental drift, EDR gaps and cloud breaches could be weakening an enterprise's security—and why it is easy to miss these red flags. He also tells how the dark blanket of horror can be melted away by switching on the right bulbs at the right time.

What reasons would you attribute to the tendency of enterprises and their security infrastructure missing so many attack-detections? How serious are reasons like out-of-box configurations, reconnaissance silence, and policy evasion?

There are many reasons why security controls may not be performing as effectively as the organizations

who purchased them assume. Organizations need to look beyond just malware and to the entire attack lifecycle including reconnaissance, infiltrations and ransomware, policy evasion, malicious transfer, command and control, data exfiltration and lateral movement. In addition, security teams have to keep up with rapidly changing network infrastructures. Security tools are often configured with defaults optimized for compatibility or performance and may be poorly optimized for detection efficacy.

What leads to this poor optimization?

A number of reasons like—they are deployed under default “out-of-the-box” configurations. Or lack of resources to tune and tweak post-deployment. It is also possible that security events are not making it to the SIEM. Other factors cover—Inability to force controls testing, limited network monitoring on expected protocols and inadequate tracking and communication of changes for one-off exceptions

Many times these changes are not within the security team’s control or even within their visibility, yet they can have implications on security effectiveness. We call this “environmental drift”, and it needs to be addressed by continuously monitoring the security controls which build out the defense in depth stack for effectiveness.

Has the Covid impact pushed IT teams to look at SaaS, network security, Cloud architectures, MFA, VPN, IT federation of identity management and zero-trust architectures with a new lens? What major areas should they be cognizant of and ready for?

What do you do when you have a server with a hard drive failure in your on-premise data centre, and you can’t swap out the hard drive because your IT staff is under a stay-at-home order? What do you do in the same situation when your server is in the cloud rather than an on-premise data centre? Cloud customers don’t have to worry about hard drive failures. For cloud customers, that’s a problem of the past because these types of failures are transparently managed by the cloud vendor. The pandemic has in many cases forced an acceleration of digital transformation projects out of necessity.

The dynamic nature of COVID-19 has resulted in rapidly-evolving shifts to the remote workforce. With the rise in the remote workforce, organizations may modify their remote access standards such as removing IP address whitelists, allowing unmanaged devices and moving to a split tunneling solution. Any of these configuration changes should be weighed



STEVE LEDZIAN, Vice President & Chief Technology Officer, APAC, FireEye

against the new threats to the organization and the risk appetite, based on thoughtful security reviews and testing.

In order to adapt to a remote and distributed workforce, organizations need to focus on protecting identities and applications regardless of whether they are in the corporate network or the cloud. And while each organization needs to take their own unique circumstances into account, some implementations and remote access considerations can offer a step in the right direction to keeping operations both secured and productive.

Can you share how?

Start implementing multifactor authentication to reduce the risk of abuse of stolen credentials. Focus on endpoint controls such as endpoint visibility, endpoint hardening. Secure cloud services by receiving logs from cloud providers and analyzing them for unauthorized access or compliance violations automatically. Conduct user awareness training. And continually evaluate security controls through red and purple team exercises.

Can remote work and business continuity function smoothly without any costly collateral damage on the security front? Would the risk factor grow when we think of misconfigurations, a patchwork approach to security and the issue of privileges/access?

Many employees have been working remotely

in a secure way from airports and hotel rooms for many years now. The challenge we see today is one of scale. How can we securely scale from those few roaming users to the entire organization? Security is evolving as new paradigms like SASE and Zero Trust build adoption, and at the same time user experience is also improving with usable biometric authentication and less dependence on passwords.

How can organizations get smarter with video-conferencing and teleworking gaps, when it comes to security?

As with any technology, organizations need to be paying attention to the security considerations of any technology they are considering. Don't settle for default values, find, understand, and deploy against best practices when adopting any new technology.

Would security budgets crumble under the new state of financial pressures? What new trends or focus areas can we expect here?

Cyber-attacks have not slowed down. We regularly see ransomware attacks now asking for million dollar ransoms. Security is not a luxury item. Business impact from unaddressed cyber risks can be much more costly than just investing properly in cyber security controls in the first place.

The good news is that COVID-19's effects on the cyber threat landscape remain limited. For the most part, the same actors we have always tracked are behaving in the same manner they did prior to the crisis.

What are some major trends, if any, that have emerged in this phase?

Yes, there are some significant shifts in the threat landscape that we have monitored recently: First, remote workforce has changed the nature and vulnerability of enterprise networks. Threat actors are now leveraging COVID-19 and related topics in social engineering ploys. Also cyber espionage actors are increasingly seeking to gather intelligence on the crisis. If we look at healthcare operations, related manufacturing, logistics, and administration organizations, as well as government offices involved in responding to the crisis, they are increasingly critical and vulnerable to disruptive attacks such as ransomware. Information operations actors have seized on the crisis to promote narratives primarily to domestic or near-abroad audiences.

What else shall we note when we think of the imminent mandates and challenges for IT security teams?

We've seen organizations shift from a prevention-only mindset to augmenting that prevention capability with Detection & Response capabilities. Many organizations have started with Endpoint Detection & Response (EDR), as a technology purchase is often an easy first step. However, Detection & Response requires more than just technology. It also requires analysts to drive those technology based tools and human cyber talent is much more difficult to acquire. The cyber skills gap makes building out in-house teams of analysts very challenging for most organizations, and we are seeing lots of organizations choosing to outsource in this area to Managed Detection & Response (MDR) services as an easy way to get the expertise required to properly drive those EDR solutions.

Can you share something about the idea behind, and the progress of, Cloudvisory, custom protection-and-response modules, and the joint solution with CipherCloud?

We're very excited about Cloudvisory. It directly addresses the most common cause for cloud breaches: misconfiguration. It provides visibility, compliance, and enforcement across the multi-cloud, in an elegant and effective API driven manner. Cloudvisory customers can easily implement security and governance policies for their cloud platforms based on frontline Mandiant knowledge of attacker tools and techniques. Further, Cloudvisory compliments cloud protections from FireEye Helix to inform intelligent, orchestrated responses to detected incidents. With the ability to connect FireEye Detection On Demand and FireEye Messaging Security, analysts have a truly robust ability to pinpoint threats across cloud collaboration tools and popular cloud storage solutions.

As to FireEye's partnership with CipherCloud, this is with respect to our Detection on Demand offering. Think of Detection on Demand as a serverless cloud native function to apply FireEye's best of breed detection at scale. This joint solution analyses content in real-time across SaaS applications and cloud repositories. The combination is designed to deliver high fidelity results as to whether or not an object shared via SaaS and Cloud applications is malicious. If such applications are detected, the content is blocked by CipherCloud in real time, helping to protect employees, partners and customers.

FOUR STRATEGIES TO SECURE OT ENVIRONMENTS

Interconnecting with an IT network opens up OT to the predatory world of cyber-attacks and malware for which it is unprepared

Rajesh Maurya



OT networks have been undergoing perhaps the most extreme digital transformation as organizations look to compete more effectively in the digital marketplace. However, because many OT networks have been isolated for so long, they are also particularly vulnerable to malware and criminal activity targeting today's networks. Outdated hardware, unpatched operating systems and applications, delicate devices and instrumentation, and a compute environment built around the idea of inherent trust all combine to put OT networks, their organizations, and—in the case of many critical infrastructures—the lives of workers and the safety of surrounding communities at risk.

Many, if not most, OT environments are like islands that have been isolated for eons. Their “ecology” has grown up in isolation because the air gap between the OT network and the rest of the IT environment has protected it like a wide ocean protects the species on a remote island. As a result, many OT systems that have evolved over decades use very old technology and have little or no internal security and are extremely vulnerable. Interconnecting with an IT network opens up OT to the predatory world of cyber-attacks and malware for which it is unprepared.

Although the convergence of the IT and OT environments continues apace, it is certainly not something that CISOs have wanted. They understand the IT

environment, suddenly being handed the OT network portfolio and asked to secure it is a new challenge that few CISOs are asking for. One of their key concerns is that they have so little visibility into the OT risks they face. Of course, they recognize the dangers that convergence entails, but they are also realistic and recognize that this is going to happen regardless of how anyone feels for a variety of financial and operational reasons. The challenge is how to bring the IT and OT worlds together under one roof.

Given the global pandemic and associated lockdowns, production teams have been suddenly forced to run—or halt—many systems remotely. This has meant monitoring plants and processes from afar. Even those environments not in use had to be safely shut down and monitored to prevent unintended activity, damage, etc. This sudden scramble for remote control and monitoring has created an enlarged attack surface that bad actors are trying to exploit. CISOs have been racing to catch up and to ensure protection.

When working to address this issue, it is important to understand just how widespread the challenge is – more than half of organizations have experienced a breach in their Industrial control system (ICS) or supervisory control and data acquisition (SCADA) systems. Because of the prevalence of these cyber risks, there are several solutions that leaders must put into place to defend against these complex cyber threats.

Securing OT Environments

How to protect those OT systems while still allowing important data, telemetry, and HMI (Human Machine Interface) traffic to reach its destination is the conundrum CISOs are wrestling with. The question is what can they do quickly to protect their OT environments? The answer boils down to four key strategies:

Zero Trust Network Access: All devices and all users must be scrutinized, logged, and monitored for vulnerabilities. Network access control (NAC) solutions can investigate devices for context (who, what, where, when, how), tie them to policy, control access based on role, and limit privileges to just those resources needed to do the job. Ongoing monitoring ensures devices comply with policy once they have been granted access.

Segmentation: When practicing a zero trust network access strategy, the assumption is that users, devices, and apps may have already been compromised and countermeasures must already be in place. Dynamically segmenting these devices, apps, and workflows acts, either at the point of access or when



RAJESH MAURYA, Regional VP- India & SAARC, Fortinet

workflows and transactions are initiated, serves as a way to limit the impact of a breach.

ICS/SCADA security: Cybersecurity teams must identify and deploy security tools that have been created expressly for the OT sector – they should be able to meet the demands of ICS/SCADA environments, function without disrupting delicate OT systems and sensors, support common protocols, and withstand the harsh physical conditions where they are often deployed.

Business analytics: Visibility is key. A proactive security posture that handles threats at speed is essential – it must be able to make use of advanced behavioral analytics to identify abnormal behavior, quarantine offending devices, and safely detonate threats so attacks won't impact live operations.

Cyber threat actors and adversaries lurk everywhere, targeting critical infrastructure and utility companies with a vengeance not commonly seen in other sectors. As guardians of our critical infrastructure – including energy grids, mining and drilling operations, refineries, energy transportation and pipelines, and materials companies – the security teams who work in these organizations have an enormous challenge ahead of them. The four strategies outlined above are their building blocks for success in outmaneuvering cyber criminals seeking to harm our critical infrastructure.

The author is Regional VP- India & SAARC, Fortinet

MASTER WEB APPLICATION SECURITY WITH THESE FOUR TIPS

Web applications can be extremely complex to secure and the lack of skills and resources prevents many organizations from adequately defending against the threats

Adam Palmer



In today's digitally connected world, it's not far-fetched to say that web applications power the world. From setting up new e-commerce services to deploying telemedicine portals, web applications are integral in every business sector and environment.

Challenges for securing web applications

The vast number of web applications makes them a challenge to secure. Developers are also always building increasingly complex business features and applications. Some organizations are even releasing new or updated web applications multiple times each day. There are nearly two billion web applications now across the world and potentially tens of billions of high-risk vulnerabilities that can be exploited by criminals.

A 2019 study found an average of 33 vulnerabilities on every web application. The sheer prevalence of vulnerabilities makes this attack vector attractive to adversaries as security teams struggle to keep up.

This problem is further exacerbated by the challenge of securing applications designed with multiple tools across different cloud and IT platforms. Most organizations vastly underestimate the number of cloud-based web applications used by their business. In some cases, security teams may lack technical skills to assess and remediate these vulnerabilities. According to research by the Enterprise Strategy Group, application security has one of the highest shortages of cybersecurity skills (32 percent) and most solutions are very technical and difficult to use. Often outnumbered by developers by 100:1, security teams struggle to keep up. The lack of security skills and resources prevents many organizations from adequately defending against web application threats until it's too late.

Contrary to traditional vulnerabilities, it's unlikely that a CVE (Common Vulnerabilities and Exposures) rating exists for a web application. Web applications are often maintained by the organizations they represent

and therefore a broad disclosure of vulnerabilities is not commonplace. Therefore, security teams require other means to test web applications for these “unknown” vulnerabilities. A combination of the internal security team and development teams must work together to identify risks, whether configuration or code issues and be able to remediate these vulnerabilities.

Luckily, there are ways to master web application security. Below are four tips for a CISO to master web application security:

Know your Environment: You can't protect the unknown

The rapidly changing dynamic environment of web applications requires automated approaches to vulnerability management. With new applications changing rapidly, a manual approach is impossible. In such a dynamic environment, automated scanning is essential to secure applications that constantly change and to uncover newly disclosed vulnerabilities that weren't known in previous scans.

Additionally, keeping track of vulnerabilities by using the Open Web Application Security Project (OWASP) Top 10 is the most effective place to start towards changing the software development culture into one that produces more secure code.

Remove Security Blind Spots

Poor web application visibility is a significant problem among security teams today. Make sure to scan all applications - traditional HTML web applications and those built using modern web frameworks.

Check for invalid, expiring or improperly issued certificates that trigger browser warning messages or overly descriptive responses to HTTP calls that may provide valuable reconnaissance information to would-be cybercriminals.

Many web applications also use authentication to control access to sensitive user data. This can inhibit the ability to assess an application. In these instances, using an application scan that supports a broad range of authentication options, such as form-based authentication, cookie-based authentication amongst others can address these requirements

Web applications also comprise up to 85 percent third-party and open source components, including content management systems, web servers and language engines. These are areas that may be unfamiliar to security teams but they often contain dangerous vulnerabilities that must be assessed. The ability to identify and assess these third-party components is critical in web application security,



ADAM PALMER, Chief Cybersecurity Strategist, Tenable

and must be part of a comprehensive web application scan.

Reduce wasted time and optimize resources

With so many threat vectors and vulnerabilities emerging, it's difficult to know what to focus on. The problem is compounded by the fact that security teams lack the data and insight they need to prioritize remediation based on the level of risk posed to the business. This exposes the organization to excessive and unnecessary cyber risk.

To counter this challenge, scanning applications can minimize false positives and identify false negatives potentially opening the organization to attack. This will save valuable developer time remediating non-bugs, improve security, and optimize the team.

Expanded attacks surface requires a new approach to security

Web applications can be extremely complex to secure because the web application attack surface and threat landscape are continuously evolving. This complexity and expanding attack surface demands a new approach and special attention to web application scanning. While common web vulnerabilities such as those identified by OWASP are often used for targeted attacks, third-party component vulnerabilities can also be weaponized for use in automated attacks that look for vulnerable components to exploit. Hopefully these tips will serve as a starting guide to better securing your web applications.

The author is Chief Cybersecurity Strategist, Tenable

THE NEW NORMAL OF WORK MAKES INSIDER THREAT MANAGEMENT A TRICKY AFFAIR

PCQuest, in association with Aujas Cybersecurity and IBM Security, held a live webinar on the theme of “Strengthening Remote Workforce Security” to give businesses a guided tour on Insider Threat Management

PCQ Bureau

Cybercriminals never sleep and constantly evolve their attack patterns to take advantage of online behaviour and trends. The COVID-19 outbreak is no exception, said Sunil Rajguru, Editor, PCQuest.

From devices and networks, threats now have shifted to user and application layers. With almost 90 per cent of employees working from home during the COVID-19 crisis, businesses need to invest in right infrastructure and controls and a well-defined response mechanism to protect themselves from the constantly evolving cyber threats, both inside and outside of the organization.

The live webinar was well-attended and participants got detailed information on how Insider Threat Management got tricky during COVID-19 crisis and how User Behavior Analytics (UBA) tools can help.

An insider threat is generally defined as a current negligent or former disgruntled employees, contractor, or other business partners who has or had authorized access to an organization’s network, system, or data and intentionally or unintentionally misused that access to negatively affect the confidentiality, integrity, or availability of the organization’s information or information systems.

A recent study by the Ponemon Institute recorded a dramatic increase in both the cost and frequency of insider threats since 2018. The average global cost of insider threats rose by 31 per cent in two years to \$11.45 million, and the frequency of incidents spiked by 47 per cent.

Navin Kotian, Co-founder & COO, Aujas said, “Remote Work has significantly increased the cybersecurity attack surface, making businesses revisit the security fundamentals altogether. Risk assessment in this New Normal has become extremely crucial for the organizations. One area that now needs to be monitored more than ever before



is that of the ‘Insider Threats’ because employees are not protected by the corporate networks anymore.”

Sudeep Das, Technical Sales Leader, IBM said, “The existing tools are not sufficient to distinguish between good legitimate users and bad malicious users, because the number of personal mobile devices and online tools used to perform work has grown phenomenally during the lockdown. People are using the same devices for work, online shopping, and entertainment when they are working from home.”

Das explained how UBA tools leverage out of the box behavioural rules and machine learning (ML) models to add user context to network, log, vulnerability and threat data to more quickly and accurately detect insider threats.

IBM QRadar User Behavior Analytics (UBA) can help security analysts identify risky user activities and drill down into the underlying log and flow data to identify the factors contributing to those users’ risk score.

Guna Prakash, Practice Head-MDR, Aujas explained how Aujas is adding further value to the threat hunts and remediation processes by analyzing trails and past incidents to identify any compromise by comparing logs, flows and user behaviours, etc.

LEVERAGING THE POWER OF AI IN THE LENDING SECTOR

Katerina Folkman is Head Of Analytics at Clix Capital, a lending firm that uses tech to make loans simpler, faster, and more accessible all the while identifying low risk high potential customers outside of usual assessments

Thomas George
thomasg@cybermedia.co.in
Sunil Rajguru
sunilr@cybermedia.co.in



Can you tell us something about Clix Capital and the tools that you use?

You have NBFCs (Non-Banking Financial Companies) who have large balance sheets and are not necessarily FinTechs. They always follow traditional underwriting and they might compete

with big banks and for the same type of customers. Then there are small FinTechs that use truly advanced analytics and AI (Artificial Intelligence) that don't have large balance sheets. So Clix is on the NBFC side, trying to incorporate the best of the FinTech world by building internal and quite

large analytical teams. We are developing our own internal algorithms and models to identify low risk high potential customers outside of usual assessments. Everything goes through our internal decision engine called DELPHI. We built it in-house over the last couple of years. That gives us a lot of flexibility. So we can have different targeting for different segments for different types of the customer. We can tweak it anytime.

Could you share your perception of AI and thoughts about maturity of the AI ecosystem in India. Is the AI hype real? Do you see AI as a game changer for your business in the next 5 years?

Currently most common application of AI in financial services in India is related to image recognition. What is commonly referred to as “AI” is in-fact, unstructured data analysis e.g. photo and video data mining for identity verification. Some firms also mention their chatbot activities as belonging to AI, even though they are usually rule-based decision engines.

What we at Clix envision as Artificial Intelligence, is a self-learning, continuously self-improving ensemble of models, taking feedback from decisions made in the past, to sharpen today’s algorithms. We are connecting our internal ML/DL decisions engines into such feedback loops, running with minimal manual intervention. The use cases will include loan underwriting and customer lifetime value management e.g. cross-sell and retention. We also experiment with deep learning models for video analytics, building Clix Visage, the tool able to recognize human emotions and sentiment from the short customer videos.

At what stage of AI adoption has your organization reached? Have you piloted with AI, done function-specific deployments, or large enterprise-wide implementations? Please walk us through some examples of the functions, BUs and geographies where you have deployed it. If you have not deployed AI, do you plan to deploy in next 2 years? Where do you plan to deploy?

Some of our AI activities are in the pilot/ experiment stages and some already executed. e.g. Clix Visage for video analytics, DELPHI 2.0 self-learning decision engine, and reinforced learning models for Cross-Sell recommender engines. Some of these ideas are being further scaled up in this financial year, based on the results so far.

Can you please elaborate on your enterprise vision and strategy for AI, if it’s there? What are your primary focus areas for AI? For instance, do you focus on better customer experience, front office functioning, or better process automation, enhance the back-office, or, do you adopt AI for fraud management and detection, risk management, governance, etc.

We believe AI is critical for our unique value proposition, allowing us to differentiate our approach from traditional NBFCs and banks. We apply AI for underwriting, cross-sell, fraud management and risk management as well.

For example, AI allows a very granular look into each customer applying to the loan, assessing individual willingness and ability to pay. Instead of traditional segments of “salaried Cat A” approved applicants, Clix is able to find “granular pockets” of “low risk – high potential” customers outside of typical profiles. This helps us to compete, and be the first lender to create offers for such customers. We are now further sharpening this work based on internal behaviour data of our own customers. We are also working on developing alternative digital channels to reach different customers online. AI-based sharp underwriting will be critical to deliver on this vision.

What business objectives did you have when you decided to embark on your AI journey?

Key business objective is growth and scale, and be where other lenders cannot be, in terms of customer segments. This means finding our “Next 5 MM customers” through deep analytics-driven understanding of customer behaviour and motives. And reaching out to these customers just in time of their need.

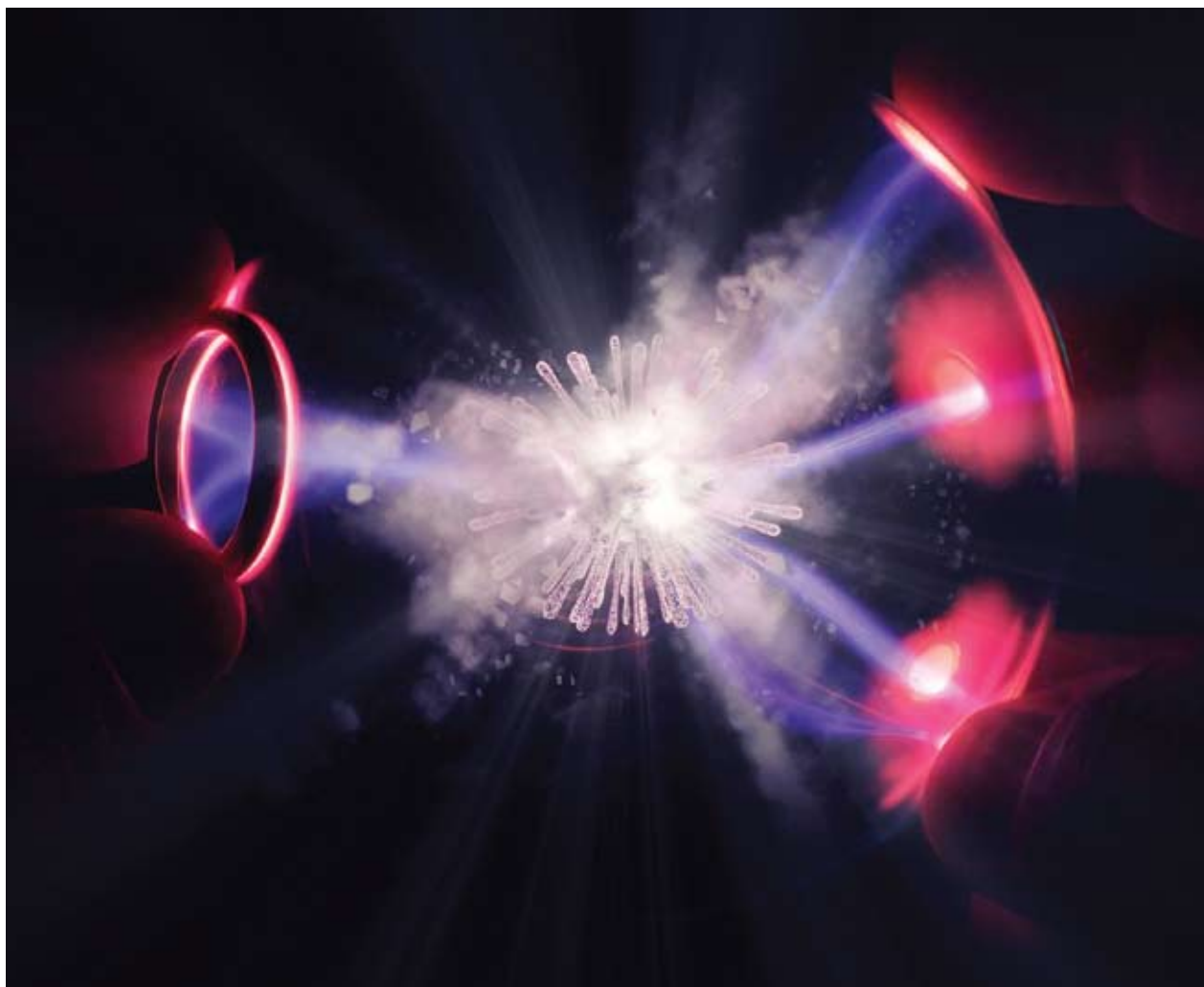
How do you/plan to enable scalability of your AI projects to other geographies and/or functions? What would be the critical success factors?

Our AI projects are running across Clix products and geographies. Now we’re working on applying AI beyond underwriting and customer value management, for example for customer servicing. We have launched an AI enabled chatbot Maya for customer experience to this effect. The critical success factor is mining and integrating alternative data sources including digital customer footprint. Another element of success is right partnerships with alternative data providers who can also serve as distribution channels, delivering Clix offers “just in the time of need” for their digital customers.

INJECTING TECHNOLOGY IN CORONA-BATTLES—INTO THE SKIN OR MUSCLES?

A recent collaboration between ICMR and IBM intends to use virtual assistants while supercomputing, AI and data technologies are already being used as strong shots in other places. Let's see how deep this needle goes

Pratima H



There must be reason why medical think-tanks are picking some technologies over others. Some tools are better directed to the skin because the right cells there make sure that the body learns to fight the enemy in an embedded way. Some are more predisposed to a certain vein or muscle because that's when speed matters most.

Indian Council of Medical Research (ICMR), Department of Health Research, Ministry of Health and Family Welfare, Government of India, has collaborated with IBM. This is for implementation of a Watson virtual agent (called Watson Assistant) on its portal for responding to specific queries of front line staff and data entry operators from various testing and diagnostic facilities across the country on COVID-19. The agent's job description also includes support for on-boarding new data entry operators and staff of diagnostic centres, as the COVID-19 test network expands across the country.

When this was announced, Professor Balram Bhargava, Director General, Indian Council of Medical Research (ICMR) had underlined the need to augment teams' response time and allow them to concentrate on priorities like developing and updating testing and treatment protocols and guidance for COVID-19.

We ask **Gargi Dasgupta—Director-IBM Research India and CTO-IBM India/South Asia** to tell us more about the relevance, significance, scope and struggles that define the choices the healthcare community is making.

What spurred the idea of a virtual agent—what exact value and role will this bring in the exploration effort?

The pandemic has led to a change in social norms including everything from reduced physical interaction and contact; to an explosion in digital communication and services. It is difficult for professionals such as doctors, teachers, lawyers, etc. to handle the deluge of requests that they are seeing owing to this explosion in digital demand. A natural outcome of this digital trend is the emergence of AI-based virtual assistants, who can help professionals handle this load and allow them to focus on the most pressing problems. For example, in the case of medical professionals, they can focus on complex treatments and patient care, while the virtual assistants can manage the workload of answering frequently-asked questions.

Would it be easy to collate data across diverse sources, platforms and queries? How will AI solve



GARGI DASGUPTA, Director-IBM Research India and CTO-IBM India/South Asia

the scale and precision parts of data? Will it also ensure that redundancy is addressed and real-time visibility into progress made in other areas is enabled?

The basic foundation of AI is data or information. Therefore, for AI to be successful, it is critical to develop an Information Architecture (IA). Such an IA can cater to data across diverse platforms, modalities, volumes, and quality. It also encapsulates important aspects about data governance and security. Such an IA then enables you to exploit the data to extract value out of it by developing AI models. Operationalizing these AI models also requires you to go through the process of model development, deployment, as well as monitoring these model decisions for various aspects such as accuracy, safety, and biases. Therefore, this journey from data to AI-based decision making is a step-wise ladder to be pursued.

Do we have any precedents or templates for similar problem-areas? Any special features that Watson would embrace for this specific task?

There are several examples where IBM's AI-based virtual assistants have helped professionals in their workloads. Most recently, at the Children's Healthcare of Atlanta in the state of Georgia, USA, Watson based 'COVID-19 Pediatric Assessment Tool' walks parents through a series of questions and results in suggested next steps that a parent should take. Here, Watson leverages recommendations on next steps according to the healthcare system's established protocols. Across the world about 25 countries are using the capabilities of Watson Assistant.

Can you share something on concerns around data privacy, security, lab confidentiality, recency, relevance etc?

As mentioned before, trust and security are at the very core of the journey to AI. Both at the IA level in terms of how data is captured, stored, cleansed; as well as on how the AI models are being used to make decisions and their robustness to adversarial attacks.

Is the main outcome here speed or collaboration? How will this assistant integrate with human factors in the process?

The virtual assistant is engaging constantly with human experts in all aspects ranging from gathering answers about medical best practises, to validating the quality of responses, to handing over complex situations to experts to manage.

What else is being envisaged at ICMR in terms of technology initiatives? Has technology been a help strong enough during this crisis—where exactly? Is there anything that could have been done better if we had that level or scale of technology ready in 2020?

We will be unable to comment on ICMR. However, at IBM—there are a range of scientific problems that are being addressed. For example, researchers are studying epidemiological models and cross-referencing them with weather patterns from weather data to understand and predict the underlying epidemiological spread better. Researchers are also looking at leveraging supercomputers to accelerate the speed of drug discovery and development. So, therefore technology has a very crucial role to play both during and after this pandemic is over.

Can you share some specific examples?

Some of the initiatives from IBM include a



IBM released novel AI-powered technologies to help the health and research community accelerate the discovery of medical insights and treatments for COVID-19. Researchers can expect to find help in more than 400 petaflops of computing power through supercomputing support too

partnership with the US Department of Energy, IBM is leading the Covid19 High Performance Computing consortium to make a vast amount of supercomputing power (more than 400 petaflops of computing power, from 'Peta' means quadrillion and 'flops'—floating point operations per second) available (like IBM Summit) to help researchers everywhere better understand COVID-19, its treatments and potential cures. The consortium recently selected to run an experiment from NIT Warangal on its supercomputers.

Another example is where IBM has pledged its entire global patent portfolio, which is comprised of more than 80,000 patents and patent applications, specifically, patent assets we feel are most relevant in the fight against COVID-19.



HANDS-FREE RETAIL AND INTELLIGENT RETAIL —HOW SOON, HOW BIG?

Reproducibility and prototyping can turn out to be important determinants of the ease and impact of using machine learning algorithms—a user of AI distills some experiences here

Pratima H



His company is not alien to the power of data as it has been helping supply chains with data-driven answers for SKU planning, but **Pronam Chatterjee, CEO, BluePi Consulting** tells us about the next level of experience and elevation that AI brought to this mix. Let us find out how the company is augmenting human creativity with AI.

Can you tell us more about the role of AI in what you offer? How important, and easy, was it to solve the supply chain issue at the SKU level?

I would say Artificial Intelligence (AI) is the enabler, the key ingredient of our solution. The core of the solution is the ability to understand the deep patterns of data, and to be able to forecast what is most likely to happen in the future.

Now if you think of SKUs as independent entities, each one of them has different rhythms, different seasonality, and different factors impacting its performance.

It would be impossible to chart each SKU's trajectory without AI. Our AI enables the "science" part of the equation or we can say decision-support part of the equation, while for creativity we rely on the designers and product managers. In short our solution augments human creativity with AI.

What role is technology playing in areas like markdowns, store analytics, and omni-channel strategies? How do you nail the 'customized' part in your solutions?

In the last decade with the rise of globalization, Internet, and multibillion-dollar conglomerates, the retail space has expanded both in the supply side and the demand side. Retailers now have thousands or even millions of SKUs, hundreds of stores, and multiple consumer channels.

Business decisions which were based on human



PRONAM CHATTERJEE, CEO, BluePi Consulting

intelligence can no longer scale. That is why markdowns, store analytics, and omni-channel strategies all have the best chance of succeeding with the support of technologies like AI and Big Data. The possibilities are endless, starting with business insights to decision automation, to even aiding creative designing.

The key to understanding and building good solutions is to acknowledge that each business and hence each supply chain, has its own nuances, peculiarities, and constraints. These differences are what make different retailers stand out and compete. Therefore, our focus is always to understand their key differentiators and adapt our solution accordingly.

Why did you pick AWS to build your solution? What were the key advantages?

AWS is the market leader and its services, especially in data-related technologies, Machine Learning, and AI are far ahead of its competitors. For us a key enabler was technologies like Amazon SageMaker that reduced our time to market by 5x.

Moreover in our experience, the AWS team has always been focused on solving real-world business challenges instead of focusing just on technology, and this really works well with our mindset.

How exactly did the data lake part and Amazon SageMaker part help here?

A data lake forms the foundation of any sizeable data platform. The data lake provided by AWS has the ability to store any type of data, at a massive scale—economically. The different tiers of storage help us build reproducibility into our results and there build business confidence in the outcomes. On top of these core capabilities, we use different analytical engines to support real-time analytics and AI and ML workloads.

Amazon SageMaker is a real AI/ML powerhouse. It has helped us prototype and collaborate much more efficiently within our team. The Amazon SageMaker Autopilot makes it possible for our team to build, train, and tune machine learning algorithms with significant improvements in speed and accuracy.

Is it easy for retailers to embrace AI or automation given the legacy burden, lack of data sets, and contextual data? What major challenges and outcomes have your customers reported so far? Have you incorporated them into your future innovations?

It is definitely not easy for retailers to embrace AI and exactly for the reasons mentioned above. But most of these challenges can be addressed technically or sometimes with human intervention.

However, in our opinion, the single most important key to success for any retailer is to have a consensus amongst the senior leaders to make the transformation successful. That is why a part of our

The key to building good solutions is to acknowledge that each business and each supply chain has its own nuances, peculiarities and constraints. These differences are what make different retailers stand out and compete

initial engagement with customers is to help them analyze and ascertain the positive results they can expect by adopting AI. Our approach is to help our customers arrive at a potential ROI for their specific use case.

Even before the start of the project, it is possible to demonstrate the potential impact on the top line or bottom line by adopting AI in the organization. This exercise lays a solid foundation and also helps our customers understand the process and outcomes.

Would the industry be moving towards more hands-free retail, click-and-go shopping, scan-and-pay checkouts, and robotic assistance as we step out of lockdowns? How will you adapt, and help retailers to adapt, to future possibilities?

Ensuring safety for customers and employees is most critical that is why click-and-go shopping, hands-free retail, and robotic assistance are expected to see an increase in adoption. We are also exploring possibilities with our clients to adapt their store layouts and modify the assortment mix, which will help them quickly pick these capabilities.

Post lockdown, one of the immediate areas of concern for most non-essential item retailers would be to optimize their inventory through liquidation, markdowns, and discounts. The idea, in essence, would be to free up as much working capital as possible and adapt to customer demands. We are working closely with our customers to help them prepare a business resumption strategy.

What next can we see come out of your think-tanks? What technology area excites you most? Will you continue to collaborate with players like AWS?

There is growing appreciation and demand for data-driven business transformation, moving on from digital transformation initiatives. The driving force behind digital transformation was mostly technology advancements, but a data-driven business transformation is mostly being fueled by organizations trying to achieve strategic advantage.

The areas that are most interesting to us are the new business applications and adoption paradigms for AI that are continuously evolving across industries. I think we are still at the nascent stages of the AI revolution and the real impact is still to come. We continue to innovate applying in new and creative ways to solve real business problems. An example that comes to mind is that of using Convolutional Neural Networks (CNN) to analogous products, which is a key step in forecasting demand for new products.

AI & AUTOMATION IN FUSED PLANNING CAN DRIVE MORE INTELLIGENT WORKFLOWS

PCQuest, in association with Algorisys and IBM, held a live webinar on the theme of “Infuse Automation & Analytical Power into your planning workflows” to give businesses a guided tour on how AI and automation can help in breaking down silos, unify data, and synchronize planning across the organization to reveal the full picture of your data and help businesses drive integrated plans

PCQ Bureau

Sunil Rajguru, Editor, PCQuest, said that Data is the ‘New Oil’ and whoever is understanding, crunching and analyzing that data will rule in this new paradigm of data. Businesses just need to use all the right tools and technologies to achieve that.

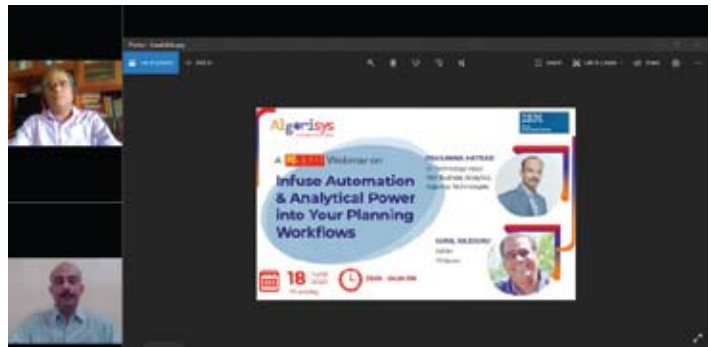
The live webinar was well-attended and participants got detailed information on the IBM Planning Analytics solutions from Algorisys Technologies and how it can help optimize businesses performance through advanced planning, analytics, modeling, and reporting.

Performance management solutions can help business in making the right decisions at right time, said Prasanna Hatkar Head Of Business Intelligence at Algorisys Technologies. He explained how businesses can gain quick insights from their business data by automating planning, and forecasting processes and adjust the plan in real-time.

IBM Planning Analytics is an integrated planning solution that uses AI to automate planning, budgeting, and forecasting and drive more intelligent workflows. Built on IBM’s calculation engine, TM1, the enterprise performance management tool allows businesses to overcome the limitations of manual planning. It has the full range of reporting, dashboard, self-service mechanism and easy to maintain sharing models to drive collaboration.

IBM Planning Analytics can connect to all sorts of Relational Database Management Systems (RDBMS), CSV file, Excel files also. It can even connect to the ERP data if connectors are available.

Spreadsheet is still the preferred tool for many business users. But spreadsheet-based manual planning exercises generally involve a longer planning cycle. Reporting and visualization also need to go through longer IT processes. But an automated



and smarter planning solution can offer scenario-based analysis for foresight, quicker data analysis at different levels, views and selections.

IBM Planning Analytics enables you to use your spreadsheets within our enterprise-level solution. Businesses have an option to choose from different user interfaces: the standard web interface, a traditional spreadsheet interface and the mobile one. They can be used together, and you can switch back and forth as per your requirement.

“IBM Planning Analytics is a customizable application and hence, businesses need not worry about aligning themselves to the tool’s functionality. The frameworks will help you to write your business logic, and model it as per your organization’s requirements and processes,” says Hatkar.

Different businesses use different planning methodologies suitable to their industry or their business. Use cases across industries and the functionalities such as rolling forecasts, scorecards and scenario analysis, predictive forecasts, strategic planning, etc. can easily be configured in the planning analytics.

The entire organization can collaboratively create its plan, and it can be easily reviewed and controlled at the top management level, or the reviewing level.

AI DONE RIGHT— PICK JACK-THE-BABOON, AND NOT JACK-AND-JILL

What's the importance of bread-crumbing, of the human-in-the-loop, and of ethics when it comes to deploying AI-led digital transformation? More than what we can imagine—because we might be using a hammer at a place where a screwdriver should have been picked

Pratima H



Enterprises make two mistakes with the other Jack. They send him to fetch a pail of water when there is so much more that he can do. Then they just watch him tumbling down a slippery hill that they paved with their ignorance and neglect in the first place.

Now what if they chose someone else—like the intelligent Baboon? Not an ape, but a signalman who was picked by a railway man James Edwin in the 1880s when he saw him driving an oxcart. So wise of James to instantly decipher that this Baboon can do more than drive a cart. May be handle a signal-box? Which he, eventually, actually, did. That's where Jack really shined. He picked the pattern of whistles and signals by watching James; and soon James was resting in the cabin and watching Jack happily work the signals with amazing perfection. So much so that even when the railway managers got a complaint

about it and came to inspect him, Jack floored them all with his work and got a proper salary from there on.

This Jack sounds quite like the AI that **Sanjay Srivastava, Chief Digital Officer, Genpact** is referring to. Because he explains AI's challenges and power with a simple question.

'When will dinner be ready, sweetheart?' How do humans answer that without all the modeling and Maths that a robot needs to chew to tell you 'almost by 8 pm'? Or is it that we too have these models and black boxes but are neither aware nor care to dig into them. Also there is a difference between prediction and judgement. Srivastava addresses some hard-to-ignore, and hard-to-understand, facets of AI in this conversation. He also tells us what is going to flip the script for enterprises when we think of data as the first-class citizen, augmented intelligence, ethical AI

and RPA. Let's get to know this Jack better.

How about we get the obvious question out of the way first? How has Covid redefined digital imperatives for enterprises, if it has? What new forces do you see at work, as a CDO?

It is, of course, a consideration for all boardrooms. There are three major shifts. First—there is a clear and strong move to Cloud which is different than what we saw earlier. So far Cloud made sense from an economics angle. But now a lot of reluctant users are moving to Cloud. Second, data-driven insights and data lakes are getting unlocked with a major thrust. We will see business models changing at a fast speed now. The ability to use data for making decisions will be critical everywhere—from allocation of critical supplies to strategic decisions. Third—we will move from automation to being autonomous. Just like our cars did—we will be in a new landscape.

Is it where Augmented Intelligence will become centre-stage?

Data is the new power. Finally it is becoming the first-class citizen it always deserved to be. Today IT infrastructure can be segmented into storage, computing and analytics in a neat way. Once we can separate things, it becomes easy to separate and automate them, and, thus, augment them.

Why do you stress so much on white-box algorithms? Can we lose the efficiency and speed of AI if we chase transparency and explain-ability?

The challenge with AI is that you give it a question and it gives you an answer. But humans want to know how it came up with that answer. Don't humans do this black-box thinking too? When we ask our family member—'how soon would the dinner be ready'—is it not amazing how they calculate every time and resource angle and tell us '8ish'? To explain what goes inside the AI box is, however, possible. One of the ways to do is—by bread-crumbling. Example—in the case of a risk-management portfolio for a financial services firm the reports that AI whips out can be disaggregated and drilled into. If a user wants to know what's what. They can make their inferences and AI presents the links in the form of breadcrumbs. They can click a part and see a detailed breakdown. That's when they can follow the insight to its source.

Have you been doing that?

Yes, we started four years back. Working with regulators, CIOs, users and developers over this



SANJAY SRIVASTAVA, Chief Digital Officer, Genpact

span we have learnt that every step of the process is important. Last two years is where we have worked on these click-and-drill capabilities with more attention. Such applications are also showing high adoption rates.

But when you argue about ethical AI, are you not worried that it is a difficult goal to achieve?

We are excited about AI but we are super-focused about its ethical role. AI is going to be increasingly accessible. In fact, right now it is completing our sentences and learning from our voices. How do we now make it free of unintentional bias, how do we train and label data—all those are important questions. Because a lot can change at this stage. You see the way Baidu and Microsoft train their data is quite different. So a lot can happen when it comes to data. How to do this is tough, but possible. There are AI-for-all initiatives in progress. Plus, we can do so much more in the way we apply data. What is gathered for a hammer problem, should be used for a hammer problem only. Do not apply the data—that you picked for a hammer—for a screw-driver.

How?

We should be cognizant about governance, application and ethics. Enterprises have to set up

this onus. You cannot rely on government or users to shine the torch here. The popular view changes over time. What they like or allow today may be out of question tomorrow. I advise all the CDOs and CTOs I meet to set up an Ethics committee on board. Getting started now is important.

Is that why it is important to have humans in the loop?

These tools are training themselves and you are just labeling the data. At some point humans have to get involved. Like how to use AI to make a decision. AI is going to be a probabilistic answer to events. If you ask AI—'Is a cat going to jump in my way', it will tell you 'yes' or 'no' or 'may be'. But what do you do with that answer then, is up to you. There is a big difference between prediction and judgement and we should not let those lines get blurred.

So they have to function on the upstream side?

Yes. AI models are designed in a certain way. There are a lot of black boxes out there. You have to train them. Whether you use AWS or Azure is another decision. They will give you the components, not the dinner. The dinner is something that a human still has to be there for.

What happens to Robotic Process Automation (RPA) with the advent of AI? Does it fade somewhere?

We are trying to paint a canvas when we talk of digital transformation and technology in enterprise. But RPA is one colour. If any one colour is missing, the painting is incomplete, but using only one colour will not suffice either. So when we think of architecting the business framework for the long term, we will have to consider RPA, AI, Business Process Management (BPM) etc. together. My advice is that we need to map RPA the right way. Enough of the hype, let us get to reality now. If people apply it incorrectly then RPA projects would fail. But when applied correctly, they deliver 100 per cent outcomes. Designing, programming and applying it right—are key to RPA. We put a lot of focus here.

Tell us something about Cora? What new have you learnt with this offering?

Genpact Cora is our digital business platform which we launched in 2017. It helps enterprises accelerate and govern digital transformation at scale. It has hundreds of customers, with millions of users processing billions of transactions. The design principle behind Genpact Cora was to curate

a set of automation, analytics and AI technologies that most global enterprises need for their digital transformation and deliver them through a modular, integrated and governed digital business platform—so that enterprises can future-proof their investments and make the most out of their legacy platforms. Digital transformation is about the journey, not the destination, and customers have said they really like the flexibility and governance offered by the Cora platform.

It is the bedrock of digital transformation for us. How do you enable a common governance platform? How do you bring in new components in a digital transformation journey? We are doing all of that.

What changes has it gone through, if any?

Cora is doing well presently. It is a self-learning platform. It is up and alive with lots of components. We made several enhancements to the platform over the past two years. We also developed Cora Pretrained AI Accelerators that help companies increase the time to value of their AI projects to drive greater business impact across the enterprise. One of the trends we are seeing now is a significant acceleration of our clients' the journey to the cloud, and we are enhancing the Cora platform to use it as a springboard to help them on their cloud journey. Digital is a journey. From RPA to Machine learning to chat-bots, so much is possible. There are so many components and turns. It is important to have a platform with all the interconnecting dots to make it all work together.

What is life like a CDO—Specially now?

As a CDO I have two roles. Internally, my mandate is to digitize Genpact's operations. I have a pool of users and applications. Innovation and risk mitigation are important aspects in that role. When I am a CDO to the external side of users and clients, I have to ensure that the clients have a clear roadmap. We believe that the future of decision-making is going to be a powerful and creative mix of data, analytics, and AI with just the right dash of human judgment.

What would you say to CIOs struggling with Covid?

Never waste a crisis—It may sound an oft-used advice but it is true. Never before have I seen so much adoption for automation and technology. The interest was always there but now it is a storm. So when one is embracing technology, think of it from the front-end, not the back-end. Think it the way your business model will adapt or change or grow from here on.



AI'S DEMOCRATISATION WILL MAKE IT ALL PERVASIVE

AI-based technologies are well-suited to take over repeatable, rule-based routine tasks, they inject productivity improvement across a range of functions, from supply chain management to customer service and tax compliance

Balakrishna D R



Artificial Intelligence (AI) isn't just a technology that brings much promise for the future to solve complex scientific or industrial challenges. It is closer to you today than you think, making our day to day lives easier. Take for example AI-powered personal assistants like Siri, Alexa and Google Assistant that are built in on smartphones. Or a variety of Google products from search to maps to Google Home, that have various forms of AI built in.

Since its mainstreaming began about a decade back, AI has moved from the realms of well-funded PhD-holding data scientists working in cutting edge research labs, to open-source software accessible to anyone.

AI's game changing potential for the enterprise

For enterprises, AI promises to truly be a game-changer that fundamentally shifts the landscape of development of new business, financial and operating models in the 21st Century. According to the 2019 KPMG survey of senior leaders at 30 of the world's largest companies, 26% have already deployed Robotic Process Automation at scale across the enterprise, and 83% expect to do so by 2022. For the deployment of machine learning at scale, these figures stood at 17% and 50%, respectively.

Because AI-based technologies are well-suited to take over repeatable, rule-based routine tasks, they inject productivity improvement across a

range of functions, from supply chain management to customer service and tax compliance. Due to their ability to also replicate cognitive tasks that involve human thinking and decision making, they can support growth through innovation, helping companies invent new products and drive new services and business models.

To be sure, some functions have found more uses of AI than others. Sales and marketing lead the use case race, where customer data usage to personalize experiences, promotions and thereby, increase sales, especially in retail. Supply chain management and manufacturing aren't far behind. AI's propensity for forecasting based on underlying causal drivers of demand, reduces inventory costs and boosts revenue. Risk assessment and management, especially in financial services, is a natural strength of these technologies in loan underwriting and fraud detection. Service operations, product development, strategy and corporate finance, IT and HR, are the other areas where AI has already proven its utility.

AI is being used extensively in retail to improve supply chain, predict demand, measure effectiveness of marketing campaigns, recommend cross-selling/upselling of products, predict a return order and smart warehousing to ensure picking and packing time is optimized. The life sciences industry uses AI for drug discovery, clinical trials, predict epidemic/pandemic spread rates, identify hotspots, etc. Financial services firms are leveraging AI chatbots to provide enhanced customer experience, wherein, customer requests are fulfilled within minutes, significantly reducing the number of tickets. Customer support activities are increasingly moving towards zero touch operations. These are just a few use cases.

The AI-human jobs dynamic

At its core, AI is a technology accelerator and enabler. It liberates workers from mundane, repetitive, time-consuming tasks, so they can focus their energies on more innovative, creative, interactive and collaborative pursuits/tasks. Yet, its impact has fuelled an ongoing debate whether AI and automation will replace humans, leading to much concern and speculation. It has caused workers to wonder which skills are replaceable, which will be automated, and what they can do to ensure their skills remain competitive.

Technology has always replaced tasks, not necessarily, jobs. Even when jobs have been made redundant, several more have been created by it. For example, email, computers, and the internet elevated



BALAKRISHNA D R, Senior Vice President, AI & Automation Services, Infosys

worker productivity and collaboration. The autopilot mode on airplanes was first incorporated in its most basic form back in 1914. Over a century later, it still hasn't replaced the human pilot but has helped make his/her job easier, and consequently, the skies safer.

At the same time, AI will transform the nature of work and the workplace itself. Over the long run, it will take on more tasks done by humans, complement human ability and even perform some tasks that humans cannot. Consequently, some occupations will decline, others will grow, and many more will change. Enterprises will need to grapple with significant workforce transitions and dislocation, while workers will need to acquire new skills and adapt to increasingly capable machines alongside them in the workplace. Humans will need to upgrade with new skills and, in some cases, change to new occupations.

The paradox of AI is that it holds both tremendous promise and mystery. AI potentially is to the 21st century, what electricity was for the 20th. From poverty alleviation, to healthcare breakthroughs, to climate change, AI holds the greatest promise in answering questions that the most vexing issues pose to humanity. Therefore, it is imperative to prepare for a future that leverages AI – whether you are an individual, organization, or nation.

The author is Senior Vice President, AI & Automation Services, Infosys

THE TOP 5 SKILLS A CLOUD ARCHITECT NEEDS TO BE SUCCESSFUL

Kevin Kelly



As businesses are using cloud technologies to transform at a rapid pace, many recognize that their organization need cloud expertise in order to achieve their goals. Yet, research shows that 90% of IT decision makers report cloud skills shortages in their workforce.

Professionals with cloud architecture expertise in how to best plan, design, develop, migrate, and operate applications in the cloud are in high demand.

Early in my career, I was one of my company's

– and industry's – first Cloud Solutions Architects. Use of the cloud has grown considerably since then, as have the number of services and features available to cloud builders. Now I lead certification and education programs where we offer individuals and organizations the training and skills validation to confidently implement cloud initiatives. The role of cloud architect is in high demand – and will continue to present endless opportunities for business growth and innovation.

What are the key skills required to be a successful cloud architect?

Read on to learn the top skills that employers look for – and professionals can build – to capitalize on the momentum and business potential of the cloud today.

But first – what does a cloud architect do?

Cloud architects are responsible for managing an organization's cloud computing architecture. They have in-depth knowledge of the architectural principles and services used to develop technical cloud strategy, assist with cloud migration efforts, review workload architectures, and provide guidance on how to address high-risk issues. To do this, cloud architects need a mix of business, technical, and people skills, as well as an understanding of the always-evolving, technical training that may benefit their team.

What skills are most important for a cloud architect?

Flexibility and Eagerness to Learn

A cloud architect must be able to work in a wide variety of scenarios and be open to learn the unique requirements of each project. No two projects or customers will be the same, so continuously learning and willingness to experiment can help both beginning and seasoned cloud architects provide the best guidance to their organization.

An early start to any day might begin with researching new services and features and tuning into trusted blogs and discussion boards. With a curious mind-set, cloud architects can be better equipped to seek out new approaches to problem solving.

Time Management

Cloud architecture professionals must possess strong time management skills. Their days are varied and can include customer meetings to discuss problems and needs, and designing architectural frameworks for those needs.

There is no typical day: they could be in meetings, traveling to onsite meetings with a customer, writing scripts, working on migrations, keeping up with new features via online trainings, or troubleshooting. As such, cloud architects are mindful to plan their days, prioritize their time on tasks, and understand how to maximize small pockets of time.

Communication Skills and Business Acumen

There are many stakeholders and participants along the cloud journey, from those who pay the bill, to the security team, to the technical team, to those helping to make decisions about cloud vendors. Cloud architects are encouraged to ask for a seat at the decision-making table, and be prepared to communicate their design to any stakeholder.

Successful cloud architects know how to communicate to audiences with little or no technical knowledge, while aligning their recommendations to business imperatives and the bottom-line.

Decisiveness

Many times, the cloud architect will be the person stakeholders turn to for guidance to problems they are facing. The ability to provide firm, clear perspective with confidence provides both reassurance that the business is in good hands, but also that the cloud solutions you've recommended are secure, resilient, cost efficient, and managed with operational excellence.

Decisiveness does not necessarily mean dominant or overriding. Cloud architects can provide guidance from a calm, leading place of domain authority.

Industry Technical Credentials

Of course, a cloud architect must also possess the necessary technical skills to serve as the foundation for cloud architecture planning and management, including basic programming, software development and continuous integration, continuous deployment (CI/CD), database, networking and security skills, modern application architecture skills, and more.

Additionally, cloud architects can attain industry-recognized certifications, that validate their ability to design and deploy well-architected solutions that meet customer requirements.

Over the last ten years, I have seen cloud computing evolve from a relatively unknown technology to a leading driver of business results. While the technology has grown and changed significantly, most skills needed to succeed in its use have remained largely constant.

By committing to understand how to use cloud to its full potential – and empowering the professionals who make that possible – we can make the most of the tremendous opportunity cloud creates for businesses and employees to thrive.

The author is Director, Certification and Education Programs at Amazon Web Services (AWS)

GAMING INDUSTRY EXPECTED TO WITNESS A FURTHER RISE

There is a major growth reported by smartphone game publishers in the subscriber base as well as usage during Covid-19

Ashok Pandey
ashokpa@cybermedia.co.in



In the wake of Covid-19 pandemic, the online gaming industry is picking up globally. The physical sports industry's biggest events have been evaporating and some of them like Formula 1 racing has now been converted into virtual events, allowing organizers to enhance their legitimacy as well as amplify visibility by broadening their audience.

As people across the world acclimatise to

life indoors, many are returning to, or picking up, gaming (be it PC or mobile) as a method of escapism. During these challenging times, the role of the gaming industry has helped people to get some relief and make their time in quarantine more bearable. Games have the power to reduce stress, provide some entertainment and social connection, which is much needed during this global quarantine.

The surge

- According to a report, the mobile gaming market is expected to grow by 2.9% annually and hit \$56.6 billion by 2024.
- A recent study from Verizon shows a 115% increase so far in gaming usage in the US alone compared to a typical day before COVID-19.
- Italy saw a surge of 70% in online gaming activities during its initial week of lockdown, under the similar circumstances, India is observing a surge of 40% which is growing day on the day in the country.
- Online Gaming industry is currently at a growth rate of 22% in India and its revenue is approximated to be \$1 billion towards the end of 2020.

There has been an increase in playing time for casual games like Bubble Shooter, Knife Up, Subway surfer, PUBG Mobile and FreeFire in this lockdown.

Interestingly, we have also observed increased game plays by female gamers (1.5 times) on games like candy crush and cooking competition games.

The future of Mobile Gaming

Under the current circumstances, there is a huge increase in interest in the gaming industry. With the development of advanced, yet affordable, mobile phones that enable erstwhile PC game titles to be launched on smartphone platforms, it is easier and more accessible for people to play games using smartphones.

Gaming experiences on the smartphone platform have greatly advanced. It's so impressive that the smartphones of today are able to display the

“With people staying indoors and working from home - some are totally isolated, some are lucky to lock down with a family. The need to stay connected and socialise is there- at times without a conversation. That's what is causing this surge in Social Gaming.

We see multiplayer modes grow many folds. We see an increase in users from the age group of 25-35years audience on the platform - these are professionals who are now at home with time in hand which is resulting in a 30% spike in Tier-1 traffic on our platform.”

*—Saumya Singh Rathore,
Co-Founder, WinZO Games*

“Cloud gaming is the future of gaming, where a game lives entirely in data centers and delivery networks, eliminating the need for downloads and transforming a user's device into, essentially, a connected high-resolution terminal, with tangible benefits for both player and provider.

The gaming and connectivity technologies in the smartphone will enable a higher quality of experience and control for cloud gaming. One of the greatest examples of this is Google Stadia.”

—Dinesh Sharma, Business Head, Smartphone Division, System Business Group, ASUS India



graphical quality similar to the last generation of gaming consoles.

Also, the gameplay mechanics thanks to multi-point touchscreens and advanced sensors are cut-throat and complex, enhancing gameplay like never seen before on a handheld device. Additionally, advancements in the GPU have truly unlocked the potential of the mobile gaming market, allowing AAA titles to make a better entry.

More so, smartphone displays are already in the next generation with refresh rates reaching 120Hz, while also being extremely vivid. Display technologies such as HDR10 allow games to be run at FHD+ and QHD+ resolution with super-sharp textures.

E-sports is the other facet of online gameplay. No other gaming platform has picked up E-sports as fast as a smartphone. With games like PUBG, Free Fire, Mobile Legends, and Clash Royale, e-sports has already made a positive and eager engaging impact in India.

However, to compete professionally in gaming, there is an acute need of gaming-focused smartphone technologies that, at present, only very few phones have managed to capture that enables the gamers in India to not just participate but to engage and win at popular gaming platforms.

With the unknown future, the gaming industry is expected to witness a further rise, as desire and usage increases across the board.

BEST CYBERPUNK GAMES TO PLAY WHILE YOU WAIT FOR CYBERPUNK 2077

People have been waiting for Cyberpunk 2077, but it got delayed, twice. While we wait for the CDPR game, lets have a look at the best Cyberpunk games we can play right now

Rudraaksh Bhatyal



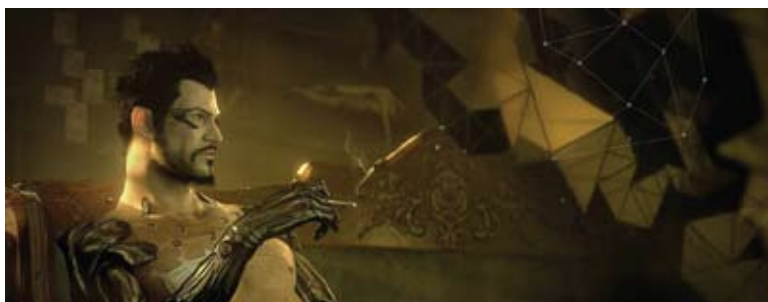


Detroit: Become Human

Originally released as a PS4 exclusive, the game is available on Steam for PC now. With multiple ending and tough moral choices and multiple endings, the game received favorable reviews though it had its flaws as well. The player takes control over three androids throughout the game and your choices determine the final outcome.

Deus Ex: Human Revolution

The prequel to the original Deus Ex, this is an FPS RPG. You take control of a Nano Augmented human, Adam Jensen. The story explores the themes of Transhumanism and the control Megacorps have over their governments. Definitely worth your time.



System Shock

The game was released in 1994 and was a breakthrough game in the FPS genre. It combines elements of RPG, Cyberpunk and horror. The villain of the game is an AI called SHODAN, which is considered among the best baddies in video games. The people associated with the games went on to make Deus Ex and BioShock. System Shock 3 was announced in 2015 and the remake of the original System Shock is scheduled to release this year.

The Outer Worlds

Outer Worlds isn't strictly a Cyberpunk Game, but the game definitely has its elements. It is first person RPG game and has a rich story with choices that matter. To top it off, it has a very colorful retro-futuristic 50s atompunk aesthetic. I would also say it is one of the best games of 2019.



Deus Ex

The OG Cyberpunk Game. It was released in 2000 and was an almost perfect game for the time, with impeccable retro design and an intricate yet easy to follow story featuring conspiracy theories from Illuminati to Rothschild and AI Takeovers. It has aged quite a bit for today's time, but the character progression, customization, the way different ways you can approach missions make this game still worth playing to this date. As they say, whenever someone mentions Deus Ex, someone reinstalls it.

Guest author of PCQuest

RAJI: AN ANCIENT EPIC BY NODDING HEADS STUDIOS

A Video Games developed by Indian gaming studios and Raji's Demo was available on Steam as a part of Steam's summer game festival and I tried it out

Rudraaksh Bhatyal

There aren't a lot of Video Games developed by Indian gaming studios and definitely none as much awaited as the upcoming game Raji: An Ancient Epic by Nodding Heads studios. Over the weekend, Raji's Demo was available on Steam as a part of Steam's summer game festival and I tried it out.

Just 40 minutes of a playable demo isn't enough for a full review so this is going to be short, but it is enough to help create first impression.

From the get go you will know the game is Indian. The prologue cutscene features Rajasthani art and folk music in the background. You get to know that Raji is an acrobatic performer whose brother is taken by Asuras (demons) during a fair where she is performing. The story is narrated by Goddess Durga and she and Vishnu engage in Dialogue throughout the game.

Coming to the game itself, the absence of cluttered HUD is a breath of fresh air. It allows the users to take in the beautiful set pieces and backgrounds without any visual noise. Even the pause menu is positively simplistic.

The combat mechanics are unique as well. While it features the regular left click and right click attacks, movement is given importance. The direction of the attack depends on the position of your cursor and that makes the combat more than just mindless clicking around, which might take a bit of getting used to, but keeps you on your toes. The music is one of the strongest features of the game. It is recorded using sitars and Rajasthani folk instruments and is a delight to hear. It also features some folk "Bhajans" which are played when you interact with murals



which then makes Vishnu narrate stories from Indian Mythology but it seems like they were not recorded in the studio. They sound like they would if you were strolling down a market in Udaipur which and there was a temple nearby having an aarti underway. And I am not entirely sure that's a bad thing and many might even like that vibe, but I would prefer a studio recorded version.

Also, bugs. In the last level of the Demo, I encountered bugs, two times: Once Raji kept going in one direction and wouldn't respond to commands and once she got stuck in a location where it shouldn't have been possible for her to reach in the first place. I had to restart the game both the times. Which brings me to another problem; there is no option to restart from last saved checkpoint. If you wanna restart the game, you will have to exit it.

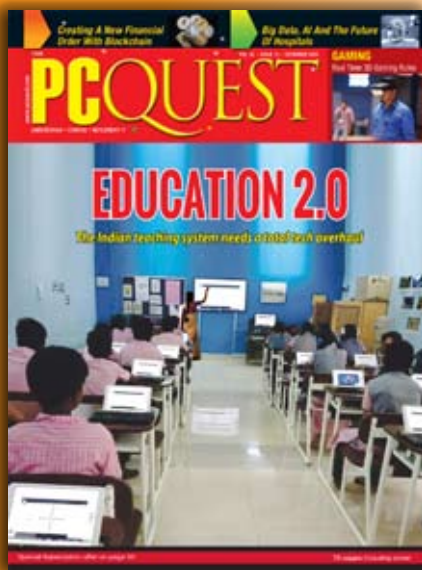
The game does show a lot of promise. But it still requires polishing and if the bugs I mentioned aren't taken care of by the time we see a full release, it's going to be hella annoying to play. But if they are taken care of, this is one game I'd buy.

Guest author of PCQuest

Subscribe To PCQuest To Know More About Latest

- Tech Products
- Gadgets
- Product Reviews

**Digital Subscription
also available on
Magzter, Readwhere,
Readly, Wink &
Paperboy.**



PCQUEST is available now for free download during Corona Virus Lockdown. Please go to our website pcquest.com and download the digital copy of the latest issue of PCQUEST

4 EASY WAYS TO SUBSCRIBE

1. Visit: subscriptions.cybermedia.co.in/pcquest.aspx

2. Through Cheque/DD in favour of '**CyberMedia (India) Ltd**'

3. Bank Transfer via RTGS/NEFT

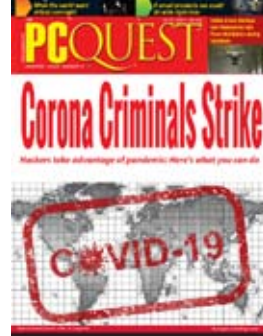
Bank Details: ICICI Bank Limited, A/c no. 017705000132, Branch & IFS Code: Gurgaon, ICIC0000177

4. Call: 0124-482-2222, +91-9810499208

For any subscription related query please email : rsepcquest@cybermedia.co.in

Yes!

I want to subscribe to PCQuest



Subscribe to Digital Edition @ ₹1300

Period	Issues	Print Subscription Rate		Digital Subscription Rate
		New Subs.	Renewal	
<input type="checkbox"/> 1 Year	12	₹1500/-	₹1350/-	₹1300/-
<input type="checkbox"/> 1 Year	24	₹3000/-	₹2700/-	₹2340/- Save 10%
<input type="checkbox"/> 1 Year	36	₹4500/-	₹4050/-	₹3120/- Save 20%

or Subscribe online: subscriptions.cybermedia.co.in/pcquest

Please tick your subscription choice above, fill the form below in CAPITAL LETTERS and mail it to us at rse@cybermedia.co.in

I want to avail premium service of receiving my subscription copy by courier. Tick which ever is applicable.

₹500/- 1 year, ₹950/- 2 years, ₹1400/- 3 years

Name: Mr/Ms _____ Date of Birth:

Organisation: _____ Designation: _____

Delivery Address: _____

City: _____ State: _____ Postal Code:

Mob [+]: Tel: Email [+]: _____

I am paying ₹ by DD/Cheque No.: Dated:

Payable at (specify bank and city) _____

OR

Please Remit for ₹ Through RTGS/NEFT to our A/C details given below:

Bank Name: ICICI Bank Limited A/c No. 017705000132, Branch & IFS Code: Gurgaon, ICIC0000177

[+] Essential fields

Signature _____ Date: Subscription No. (for renewal) _____

Order form can be mailed with payment (cheque/DD) to:

Sarita Shridhar, Cyber Media (India) Ltd, Cyber House, B-35, Sector 32, Gurgaon - 122001 Tel: 0124 - 4822222, 91-9810499208

Terms & Conditions: _____

• This offer is valid for a limited. • Rates and offer valid only in India. • Please allow 4-6 weeks for delivery of your first copy of the magazine by post & 8-10 weeks for delivery of your assured free gift. • Send crossed Cheques in favour of Cyber Media (India) Ltd. • Please write your name and address on the reverse side of the cheque or DD. All outstation cheques should be payable at par. • Cyber Media (India) Ltd. will not be responsible for postal delays, transit losses or mutilation of subscription form. • Cyber Media (India) Ltd. reserves the right to terminate or extend this offer or any part thereof. The decision to accept or reject any or all forms received is at the absolute discretion of the publishing company without assigning any reason. • Please include pin code for prompt delivery of your copy. • In case payment is through credit card, date of birth must be mentioned. • Request for cancellation of subscription will not be entertained once the free gift has been dispatched. • All disputed shall be subjected to Delhi jurisdiction only.

DNS ARCHITECTURE SUITED TO SCALE DURING REMOTE WORK SCENARIOS

According to a report, 99% of urban and rural users in India use their mobiles to access the Internet. This could mean that new technologies will continue to be developed to improve the user experience of using the Internet in a small screen format, says Samiran Gupta, Head of India, ICANN

Sunil Rajguru
sunilr@cybermedia.co.in



What steps and measures is ICANN taking to address the COVID-19 pandemic?

The Internet Corporation for Assigned Names and Numbers (ICANN) has been swift and decisive

to acknowledge the threat COVID-19 brings to the world. As you may be aware, ICANN hosts three public meetings in locations around the world each year. Well before the ICANN Public Meeting to be held

in Cancun, Mexico in March 2020, the ICANN Board of Directors decided that the meeting will not proceed as an in-person meeting. In fact, all ICANN Public Meetings this year are now held virtually, including the recently concluded meeting originally scheduled for Kuala Lumpur, Malaysia (21-25 June) and the upcoming meeting intended for Hamburg, Germany (17-22 October). All travel and face-to-face meetings have been cancelled. Instead, many of ICANN's community-facing engagements are now held online.

Separately, ICANN has approved to allow registrars to defer cancellation of domain names under the Registrar Accreditation Agreement. Based on this approval, registrars will be permitted to temporarily forebear from cancelling domain registrations that are unable to be renewed as a result of the impact of COVID-19 on domain name registrants.

The COVID-19 pandemic has also seen an upward spike in domain name system abuse (DNS abuse). Cybercriminals have been using domain names to enable phishing, malware, and other forms of abuse online. While ICANN does not have the remit to regulate online content, we remain concerned and are doing our best, within our remit, to support registries and registrars. We have been working closely with them and cyber security coalitions to help mitigate abuse.

There is a huge spike in bandwidth usage. Is this temporary or will it become permanent? What steps can be taken to boost bandwidth? Do we need much more optic fibre or innovations like Internet blimps/drones?

Surely, a spike has been seen globally in the usage of the Internet since March 2020. Various studies and surveys provide insights into the increased usage numbers. These numbers vary from country to country. Also, the COVID-19 pandemic has seen a change in network management operations of Internet service providers (ISPs) as more people ended up working from home. Whether these trends will become permanent or not remains to be seen. In terms of bandwidth, it really depends on the ISP and how they provision their networks based on the user demand. The use of blimps and drones are mainly to efficiently reach locations which are hard to reach—so that is a different conversation entirely.

At ICANN, the Office of the Chief Technology Officer (OCTO) conducted a study on the impact of increased Internet traffic seen on the ICANN Managed Root Server. This study concluded that the DNS architecture is well suited to scale during remote



SAMIRAN GUPTA, Head of India, ICANN

work scenarios and increased use of the Internet at home.

More and more people are using mobiles to access the Internet. Is the Mobile Web any different than the regular one? What are the advantages and disadvantages?

The Internet remains the same whether we are accessing it using a mobile phone or any other device. However, the browser features can be different for a mobile phone or a regular desktop, due to the physical limitations like the screen size, resolution, etc. In both cases though, the core technology—using Internet Protocol addressing—remains the same.

Rather than looking at advantages or disadvantages, one should look at the effectiveness for customers using these websites. According to the 2019 IAMAI – Nielsen report, 99% of urban and rural users in India use their mobile phones to access the Internet, apart from also using other devices. This could mean that new technologies will continue to be developed to improve the user experience of using the Internet in a small screen format.

DIGITAL TRANSFORMATION —A JIGSAW PUZZLE —IN, & POST, THE PANDEMIC

Granularity has to be embraced at an operational level and conflicts have to be sidelined if CIOs want to get ready for the 'new normal'. Sushant Rabra, Partner KPMG tells us how wielding the right prioritization levers and making transformation a business case are caution-kits that are going to eke out true gains from any digital transformation endeavor

Pratima H



Are there any conflicts (like short-term vs. long-term or customer-focused vs. internal or resilience-oriented vs. innovation-driven) that would be accentuated in digital transformation investments and efforts that enterprises will display now?

A meticulously-planned Digital Transformation

exercise using matured methodologies and accelerators builds up on strategic themes like customer centricity, operation excellence, innovation etc. It is akin to the pieces of a jigsaw puzzle to deliver larger and synergistic outcomes. Even during the global pandemic situation, the key impact in such a

case would be reprioritization of some of these transformational initiatives rather than managing any conflicts. A conflict typically arises if the transformation program is either based on short-term tactical aspirations and low-hanging fruits or it is simply treated as yet another IT exercise without a tangible business case.

Has the current pandemic also spurred a good audit of gaps, duplication, complexity etc. that digital transformation projects might have had?

The pandemic certainly has had an impact on organizational priorities, which is why, increasingly, many of our past and existing clients have been proactively seeking our help in performing a thorough examination, revalidation and reprioritization of Digital Transformation using our critically-acclaimed Connected Enterprise & CVRT frameworks. Such assessments help to provide continued guidance on the feasibility and tangible business outcomes as envisaged during the Digital planning phase. Given the situation, characterized by demand and supply shock, even minor tweaks in the prioritization levers can result in high impact across the enterprise value chain.

Would we see any leapfrogging—like directly jumping to high-level AI or blockchain or Quantum Computing investments?

While AI, ML, quantum computing and blockchain have been the focus for most technology consulting firms, the recent events have, most certainly, provided a larger push towards the research and implementation (working use-case) of these technologies at major client places.

KPMG has been making advances at an increased pace due to the inherent potential and proactive demand from the customers. In the past few months, we have performed major implementations and conducted PoCs across these technologies thereby delivering operational and strategic edge to our customers during these testing times.



SUSHANT RABRA, Partner, KPMG

Any other challenges that CIOs should be cognizant of? Or any trends or positive shifts that you see shaping up?

Starting with the trends first; firms have been increasingly focusing on operating in the new normal. Customer and Enterprise Digital would be the core themes that could potentially increase market traction and reduce operational overheads across most industries. Within Customer & Enterprise Digital; Digital Workplace (including enterprise collaboration), e-Commerce, Industry 4.0 and IT-OT integrations would be the areas to watch out for.

Key fallacies that the CIOs should avoid would be viewing/treating the themes as simple technology implementations rather than business-owned strategic initiatives. Moreover, the granularity of the transition architectures to operationalize these themes should be carefully defined along with an overarching change management exercise to ensure that the initiatives are implemented and widely adopted within the enterprise.



OTT AND CINEMA CONTENT WILL GROW IN TANDEM

The post COVID-19 world will be sharply focussed on efficiency for the best ROI. Therefore, AI and analytics are expected to play a more crucial role and will be increasingly used by various stakeholders in the entertainment industry, feels Kanwal Brar, Director of Sales, Cinema, Christie India

Sunil Rajguru
sunilr@cybermedia.co.in



What are digital cinemas doing to counter the threat of the OTT industry? Do you think OTT can ever go past the digital cinema industry? If not, why?

The Cinema experience and OTT are two different mediums—each having its own targeted format and consumer consumption patterns. Hence it might not be fair to compare them with each other. Both OTT and cinema content will grow in tandem and not compete with each other. I do not expect big budget movie productions to be able to make the kind of profits on OTT platform as they do in cinemas.

The film industry is still dependent on the box office as its main source of revenue. Some content meant for mainstream audiences has been released on OTT to relieve short-term financial stress on production houses. In the long term, both mediums will continue to co-exist.

When digital cinemas finally open, are there any measures being put in place to enforce social distancing and extra sanitization?

The Multiplex Association of India, working together with the Federation of India Chambers of Commerce & Industry (FICCI), has come up with an elaborate safety and precautions plan to prepare for the reopening of cinema halls after the COVID-19 lockdown. Some of the measures are mentioned below:

1. There will be body-temperature checks at the entry point. Masks will be mandatory for all, and PPE kits will be made available for purchase. Also, hand sanitisers to be placed at all strategic locations for use.
2. As per global cinema standards, in a standard auditorium, every alternate seat is to be kept empty. Families, couples and groups, however, can be seated together.
3. The Aarogya Setu app will be mandatory for all cinema staff. Further, only medically certified fit staff will be allowed to come to work. Masks and gloves will be mandatory for all cinema staff.
4. Use of sanitizers and disinfectants in the entire theatre premises ensuring hygiene for all.

Are you using things like AI and analytics to get the best performance out of cinema viewing and understanding what the viewers want?

The post COVID-19 world will be sharply focussed on efficiency for the best ROI. Therefore, AI and analytics are expected to play a more crucial role and



KANWAL BRAR, Director of Sales, Cinema, Christie India

will be increasingly used by various stakeholders in the entertainment industry (theatres, distributors, producers and so on). They will be used to collect all relevant box-office information on running movies and this information will be tracked in real-time based on individual screens. In this way, exhibitors and producers will always have accurate data available to them at all times.

We also need to ensure that the appropriate content reaches the relevant audience. Movie consumption data comprising occupancy, age group of audience, and timings will allow movie exhibitors to be more efficient in planning their resources.

What innovations have come in the last few years like your pure laser projectors and 4K tech? What further innovations can we expect?

On the industry front, Christie has proven its leadership in laser projection by achieving several industry firsts. As a Leader Level Member of the Laser Illumination Projector Association (LIPA), we are helping to drive the direction of this new illumination platform. Looking to the future, our R&D and engineering teams are working on developing

the laser projection technology of tomorrow.

With brightness levels for varying screen sizes from boutique to mainstream and on to premium large format (PLF), Christie's proprietary RGB pure laser technology—Christie Reallaser™, takes audiences to new worlds of colour and contrast with a choice of 2K or 4K systems, all 3D capable and delivering greater than 95% of the Rec.



2020 colour space. The products are advanced, yet affordable, DCI compliant cinema projection featuring Christie Reallaser technology for various screen sizes.

At the core of Christie Reallaser technology are the Multi-Laser Pack Devices (MPD). These compact, robust, solid-state laser banks comprise of individual emitters populated in a matrix that is specifically tuned for the accurate reproduction of DCI content. With Enhanced Wavelength Diversity (EWD), each MPD features a special configuration of laser diodes making the Christie digital projectors ideal for every type of cinema exhibition, including 3D applications on high-gain silver screens.

What about advances in audio technology?

Today's cinema audio formats support more richly detailed soundscapes and demand the same from cinema speakers. Christie® Vive Audio™ immerses audiences in sound with the world's first cinema audio system to combine ribbon driver and articulated line array technology into single cabinet speakers. The result is uniform delivery of sound to every seat in the theatre. Christie Vive Audio, with its ribbon driver technology, represents the next evolution in speaker design, providing enhanced clarity, dramatically reduced distortion and ultra-fast transient response.

Do you think smaller screens and smaller halls will be more popular in the post-Covid world and do you have the tech and plans for that?

With varied demographics and income levels,

both small screen halls and large format auditoriums will continue to be popular among cinema patrons in India. With only 9,000 screens nationwide, India is a hugely under-screened country and there is much opportunity to grow the number of cinema screens domestically. In comparison, China has 60,000 and the United States has 40,000 screens.

Christie develops innovative cinema systems for all screen sizes—from small screens to large format theatres. For smaller screens, thanks to our engineering excellence, we have developed a range of truly affordable RGB pure laser cinema projectors. We eliminated the need for external chillers, fibre-coupling, lamp replacements and concerns about space when retrofitting an existing booth. To top it off, our cinema projectors, equipped with Reallaser illumination, provide the lowest total cost of ownership in their class while delivering higher image quality and performance over any other illumination technology.

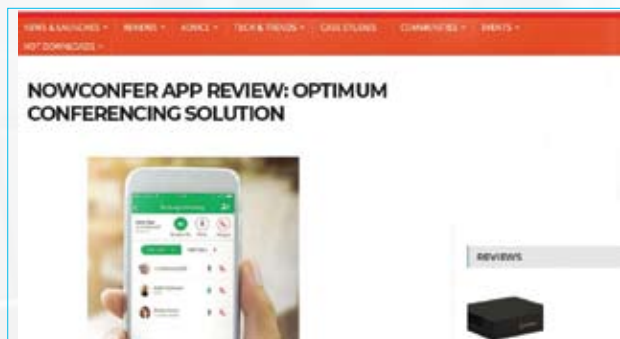
On the other end of the spectrum, we have RGB pure laser cinema projectors that defines the premium movie-going experience for large format theatres. Featuring CineLife+ electronics and Reallaser illumination, our compact DCI-compliant projector models excel in image quality, operational lifetime, and onscreen brightness. Exhibitors can impress audiences with incredibly colourful and detailed, true-to-life 4K images while benefiting from a platform designed to support the content and formats of the future.



PRODUCT REVIEWS

A Powerful Marketing Vehicle

Thousands & thousands of products are launched every year. But a bunch of them are reviewed. A good product backed by experts' review translate into increased user interest and hence sales. Get your product reviewed by CyberMedia Labs which is run by a team of experts/product technologists having 10+ years of experience.



[Visit more product reviews by CyberMedia Labs](#)

SOME OF THE CATEGORIE SCYBERMEDIA LABS SPECIALIZES IN:

• Firewalls	• UTMs	• Thin Clients
• IT Infrastructure Hardware & Software	• Networking Devices	• Printers & MFDs
• Audio Equipment	• Cameras	• Smartphones & Tablets
• TVs & Display	• Computers & Laptops	• Tools
• Games	• Mobile Apps	• Imaging



To leverage the opportunity of product reviews by CyberMedia Labs

Contact us:
Rajiv Pathak
Marketing

marketing@cybermedia.co.in,
+91 8010757100, 0124 482 2222, ext: 219

VACUUM CLEANER

IROBOT ROOMBA i7+

— Ashok Pandey
ashokpa@cybermedia.co.in

Cleaning is one of the toughest tasks for any homemaker. Especially when you don't have enough time, an intelligent machine can ease your life. iRobot Roomba i7+ is an emblem of automation.

The next-gen home appliance is an improved version of its leading robot vacuum. Roomba i7+ can start automatically, collect the dirt and empties its dust bin into a larger, easily manageable dock.

Design

If this is the first time you are looking at the Roomba, then you can be confused as it doesn't look like a traditional vacuum cleaner. It's a premium-looking black plastic-clad with charcoal grey on the top and a wide black bumper on the front.

On the top, you can see three buttons – one with 'Home' symbol, second with 'Location' and the third one 'Clean' button in the centre. Buttons are quite responsive and register the pushes with minimal feedback.

At the bottom, there are two rubber wheels and one small roller wheel front and centre. The two rubber rollers have chevron patterns that guide dirt into the vacuum chamber. Also, a three-spoke side brush is added that spins along ahead of the right wheel. A floor-tracking sensor sits on the opposite side, quietly mapping out the surroundings.

The rounded clad has a small dustbin that pops out with a push of a button. It is small in size meaning requires frequent cleaning, but don't worry, the Clean Base has a much larger footprint than other vacuum bases. Roomba empties the dustbin automatically.

The Clean Base has a more sophisticated look with no button. The base has only led light and a power cable. The clean base charges the Roomba as well as store the dirt in a large dirt bin.

Setup

Setting up Roomba i7+ is quite easy, just connect the clean base with power and Roomba robot to the base. It is controlled via the iRobot Home app, available for both Android and iOS.

Connect the robot to the phone and home/office Wi-Fi network. Simply follow the steps of the app for the initial setup. In the first few times, Roomba gives you the option of cleaning and mapping the house.

In the training run, it maps your house floor, that you can view in the app and make changes by adding and removing virtual boundaries. The app lets you schedule the cleaning time; you can plan your week as per your preference.



Price: ₹89,900

Overall: **9/10**

SCORE

PRICE: **8/10**

PERFORMANCE: **9/10**

FEATURES: **9/10**

KEY SPECS: 1WiFi connectivity; Robot Vacuum; Automatic Dirt Disposal; Dual Multi-Surface Rubber Brushes; Clean or Schedule; Washable Bin

PROS: Floor mapping, automated, navigation, clean base, fast cleaning

CONS: Rug cleaning could be better

Performance

Roomba robot has only 3.7 inches of height, meaning it can fit under the furniture with a floor clearance of 4 inches. While cleaning our bedroom, it managed to go under the bed. Its powerful vacuum sucks various left alone papers and other small size articles.

Not only floor, but it can also clean the rug, only corners and edges cleaning wasn't satisfying, as it was bumping on its edges. The side brushes help to grab the dirt from the corners, but it spun slowly on the rug.

Till now we talked about its various features, now its cleaning efficiency. In our lab test, it managed to sweep all type of small grime. The large particles like pieces of snacks, pencil dust, etc. it was more than 97 per cent efficient. On the rug, it was average, depending on different types of rugs, it can be better.

It is quite quick on cleaning the mess on different surfaces. Its side brush is fast enough to grab the dirt, but hair stuck on it with over 90 per cent of efficiency.

Bottomline: The iRobot Roomba i7+ is an intelligent vacuum cleaner with a small footprint that let it roam around the corners and under the furniture. Automated cleaning, scheduling and floor mapping make it a perfect robot. Though price seems high, this is well worth the money.

SERIES OF DIGITAL EXPERIMENTS BY IKEA @ EVERYDAYEXPERIMENTS.COM



With people spending more time at home than ever before, now is the time to act and learn more about the way we experience and engage with our homes. The web-based platform EverydayExperiments.com - gathers some of the most interesting technology and design studios to showcase a series of digital experiments that explore new ways of how we interact with the spaces we live in. The project is initiated by IKEA and its research and design lab SPACE10.

RISKIEST ENTERTAINMENT OTT TITLES TO STREAM IN INDIA



From an analysis of more than one hundred most talked about entertainment titles available across today's leading streaming providers, McAfee has identified a "top 10 web risk list" for both television and movies. Ranked in order of web search risk (from highest to lowest) as identified by McAfee's Web Advisor platform, Delhi Crime and Mardaani 2 took the top place in their respective categories.

Top 10 Web Risk List: Television-India: 1. Delhi Crime. 2. Brooklyn Nine-Nine. 3. Panchayat. 4. Akoori. 5. Fauda. 6. Ghoul. 7. Mindhunter. 8. Narcos. 9. Devlok. 10. Lost.
Top 10 Web Risk List: Movies-India: 1. Mardaani 2. 2. Zootopia. 3. Jawaani Jaaneman. 4. Chapaak. 5. Love Aaj Kal. 6. Inception. 7. Bahubali. 8. Rajnigandha. 9. Gully Boy. 10. Bala.

IDENTITY THEFT TOPS INDIAN CONSUMER SECURITY CONCERN



Findings from the 2020 Unisys Security Index from Unisys Corporation reveal that India has the second-highest level of security concerns of the 15 countries surveyed. The Unisys Security Index score of 223 out of 300 signifies that Indians have a high level of security concern across the breadth of national, financial, internet and personal security covered by the survey, with identity theft emerging as the top security concern overall, with 83% of Indians seriously concerned about this issue. Internet security concerns were a close second, with 82% of respondents seriously concerned about computer viruses and hacking and the security of online transactions.

IBM LAUNCHES WATSON WORKS

IBM has launched Watson Works, a curated set of products that embeds Watson Artificial Intelligence (AI) models and applications to help companies navigate many aspects of the return-to-workplace challenge following lockdowns put in place to slow the spread of COVID-19. Returning people to the workplace during the continuing global pandemic demands new approaches to promote the health, safety and productivity of workers in a privacy-preserving way. Watson Works provides data-driven insights to help employers make informed decisions on workplace re-entry, facilities management, space allocation and other COVID-related priorities.

ROS 2 ROBOTICS CONTROLLER

ADLINK Technology, a global leader in edge computing, has launched the ROScube-X Series, a real-time ROS 2 robot controller for advanced robotics applications. ADLINK's ROScube-X Series is powered by the NVIDIA Jetson AGX Xavier module, which features an integrated NVIDIA Volta GPU, dual deep learning accelerators, and a wide variety of interfaces, including GMSL2 camera connectors for advanced robotics system integration. The ROScube-X supports the full complement of resources provided by the NVIDIA JetPack SDK and is specifically suited for robotics applications demanding high-performance AI computing capabilities with minimal power consumption.

TEAMS FEATURES TO SUPPORT THE FUTURE OF GLOBAL EDUCATION

Microsoft announced 'Teams for Education' features to engage and prepare students and teachers for new remote and hybrid learning formats in the upcoming school year. These features include expanded audience view of up to 49 participants, custom backgrounds, class insights, and virtual breakout rooms, among other new features.

7 IN 10 PUBLIC SAFETY AGENCIES WANT MOBILE TECH ADOPTION SPEED-UP



The final of Zebra Technologies Corporation's three-part Future of Field Operations: Public Safety vision study shows that 86 percent of public safety respondents have indicated their agencies are taking a mobile-first approach in their technology strategies, and workflows are designed around first responders and their mobile devices. However, seven in ten agencies are still concerned that they are not investing quickly enough in new mobile technologies to keep pace with the speed of change, especially with the availability of faster 4G and upcoming 5G wireless networks.

ONLINE EXAM SOLUTION WITH FACIAL RECOGNITION FEATURE

In order to assist educational institutions to conduct rigorous examinations during the COVID-19 pandemic, an EdTech start-up Admission24 announced the launch of its Online Exam Solution with Facial Recognition Feature in order to authenticate learners for attending an online exam. The solution launched by the company is compatible with both IOS and Android. With this launch, Admission24 intends to provide highly advanced tech-enabled proctoring solutions to the educational institutions acknowledging all the mitigating problems like lack of bandwidth or Internet connectivity, avoiding cheating, and more.

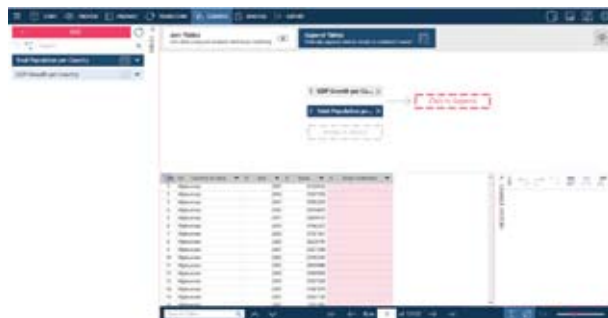
BOT MAKES BANKING EASY FOR MASHREQ CUSTOMERS

Customers of Mashreq, one of the leading financial institutions in the UAE, are now being served by the region's first digital engagement banking bot, giving them access to powerful self-service capabilities that result in instantaneous service delivery and shorter times to resolution.

CITRIX ANNOUNCES BACK-TO-OFFICE SOLUTION FOR SMOOTH TRANSITION

Citrix announced the availability of a new back-to-office solution built on Citrix Workspace that its customers and partners can use to safely transition employees back to offices, enhance their experience and wellbeing and enable them to efficiently adapt to the new world of work. With Citrix Workspace, companies can provide a consistent work experience that allows employees to perform at their best while addressing safety and health in the office environment. Leveraging new back-to-office microapp capabilities within the workspace, organizations can manage vital tasks associated with re-opening offices across HR, legal, facilities and IT.

INTUITIVE AND PROVEN DATA PREPARATION SOLUTION



Altair, a global technology company providing solutions in product development, high-performance computing (HPC), and data analytics, today announced the latest launch of Altair Monarch, a major new release of its powerful and intuitive data preparation solution. Marking the 30th anniversary of Monarch's original launch, the new version strengthens the ability of users to extract and convert data automatically from sources including Excel spreadsheets, PDFs, and text-based files, and prepare it quickly and precisely for efficient data analysis and machine learning predictions.

FIRST END-TO-END HYPERAUTOMATION PLATFORM WITH CONVERSATIONAL AI

UiPath, the leading enterprise Robotic Process Automation (RPA) software company, today announced it has added conversational AI capabilities to the industry's first end-to-end hyperautomation platform. With out-of-the-box conversational capabilities for UiPath Robots, industry-tailored chatbots, and new automation capabilities that engage employees more productively, UiPath is making it easier than ever for enterprises to offer always-on, scalable, best-in-class global support experiences that give customers access to support whenever they need it on the most popular global messaging channels.

1570R RUGGED SECURITY GATEWAY

Check Point Software Technologies Ltd., a leading provider of cybersecurity solutions globally, has announced the new 1570R rugged security gateway to protect networks in critical infrastructure, Industrial

Control Systems (ICS) and SCADA systems against all types of advanced Gen V cyber-threats. The 1570R delivers unrivalled performance, threat prevention security technology, ease of deployment and control, and reliability to the most demanding industrial settings such as power plants, automated factories and maritime fleets.



COVID SAFE WORK ENVIRONMENT FOR EMPLOYEES & GUESTS



While remote working has become the new norm, businesses globally are working on plans for the employees and guests to return to office. Hughes Systique (HSC) has implemented a post-Covid safe work environment for its employees and guests using HSC's proprietary solutions such as Next Generation Hotspot (NGH), Intelligent Monetization Platform (IMP) and People Insights (PI). These solutions utilize existing infrastructure and will enable HSC in reducing physical touchpoints, ensuring social distancing, adherence to mask wearing policies and real-time communication with staff and employees.

PRIVACY-COMPLIANT UNIVERSAL IDENTITY INITIATIVE

Global customer intelligence platform zeotap today announces the launch of ID+, its universal identity initiative that aims to empower the marketing ecosystem to overcome challenges posed by the demise of third-party cookies and other platform identifiers, as well as a fast-changing regulatory landscape. The ID+ project is an open invitation to the entire industry to collaborate on a collective vision for the future. More than 20 global, regional and local organisations have confirmed their public support and adoption of ID+, including Accenture, Annalect, International Business Times (IBT), Imágen Digital, ItaliaOnline, Mediasmart, OMD EMEA, Prensabérica, PubMatic, S4M and Tabmo.

CANON INDIA LAUNCHES THE IMAGEPRESS C165 MFP

Canon India launched the imagePRESS C165, multi-functional printer. The new MFP combines the best of Canon's patented technologies and easy-to-use user interface combined with a suite of security tools.



The imagePRESS C165 delivers professional quality documents time after time. The MFP offers a high-productivity output of 65 pages per minute (ppm), low power consumption, seamless connectivity, equipped to meet the diverse needs of print shops, creative agencies and corporate offices.

PACKAGING SOLUTIONS FOR SMBS E-COMMERCE BUSINESSES

Shiprocket, India's largest e-commerce shipping and enablement platform for SMBs has recently introduced smart packaging solutions on its platform. With this launch, Shiprocket aims to make high-quality packaging accessible to all businesses, allowing them to elevate their overall end-user experience. Shiprocket packaging solutions comprise tamper-proof courier bags and corrugated shipping boxes. Available in a variety of sizes, the brand is allowing businesses to choose the right packaging size as per the shipment and reduce weight and billing penalties.

SPARK POWER 2 LAUNCHED

TECNO launched the SPARK Power 2 that introduces two major segment-first features: an enormous 7" Dot Notch display with stereo sound dual Speakers and a massive 6000 mAh battery with 18W Fast Charger. These features, along with a 16 MP front camera and 16MP Quad Rear Camera in the sub-10k segment, exponentially enhance the immersive experience with superlative audiovisual offerings and enable TECNO's customers to rediscover telecommuting and entertainment in much better and bigger way.



HOURLY RENTALS FOR MULTI-HOUR, MULTI-STOP NEEDS

Uber launched in Bengaluru Hourly Rentals, a 24x7 on-demand, intracity service, which allows riders to retain a car with its driver for several hours, and make multiple stops on their journey, thereby providing them greater flexibility as they restart their lives after a lengthy lockdown.

WIPRO LIGHTING LAUNCHES MAPIQ'S SMART OFFICE TECH IN INDIA

Wipro Lighting in association with Netherlands based Mapiq has launched a smart office technology software, Office Shifts in India.



Due to the new norm of social distancing, in most offices, desks and workspaces availability will decrease by an average of 43 percent. This means only half the employees can be in office. Organizations need to align schedules and working patterns of employees and their teams. Organizing teams together, anticipating and updating office capacity quickly become hassle-free with this SaaS tool. The solution can be scaled depending on the policy changes organizations need due to local government directives. Customers can pay either as per building, per month or per building, per year model.

75F LAUNCHES EPIDEMIC MODE TO MAKE WORKPLACES SAFE

75F announced 75F Epidemic Mode, a new HVAC software sequence that ensures commercial buildings are healthier while keeping employees and customers safe. The system features various components such as indoor air flushes, where post working hours the entire air within the premises is replaced with fresh air from outside and during office hours ventilation from outside is increased to limit movement of airborne particles and reuse of indoor air. All these are based on the latest guidance from scientists, government organizations, and global industry leaders for the operation and control of HVAC systems to reduce disease transmission from infectious airborne particles and ensure a safe and healthy workplace. Apart from minimizing viral loads in buildings it also delivers significant energy savings.

MICROSOFT OFFERING FREE ACCESS TO LINKEDIN LEARNING, MICROSOFT LEARN, AND GITHUB LEARNING LAB TILL MARCH

In response to the global economic crisis caused by the COVID-19 and to help the unemployed reskill for in-demand and stable jobs, Microsoft has made LinkedIn Learning paths available free of charge through the end of March 2021. Each learning path includes a sequence of video content, collaborative courses covering a broad range of skills from entry-level digital literacy to advanced product-based skills for technology roles and is coupled with Microsoft Certifications and LinkedIn job-seeking tools. For roles that are more technical in nature, job seekers can go deeper on specific role-based Microsoft technologies with Microsoft Learn modules or GitHub Learning Lab to practice their skills.

PRAMA HIKVISION LAUNCHES TEMPERATURE SCREENING SOLUTION

Prama Hikvision has launched a bunch of Temperature Screening Solution comprising various types of thermal imaging cameras and applications designed to detect skin-surface temperatures for safe and rapid screening in public areas.

Temperature Screening with Fast Deployment

Economical and practical for high-traffic scenarios, buildings



Temperature Screening with Access Control

Suitable for long-term temperature screening with access control for offices



Temperature Screening on Patrol

For flexible and manual inspection in high-speed exits, cabins, and engine rooms



Display temperature and Mask status

A solution that visually display temperature and mask status





LEADING TECH MEDIA PLATFORM & NETWORK SINCE 1982



6 Brands

2000+ impact articles

15+ Webinars & Virtual Roundtables

5000+ Attendees Across Verticals

65,000 People Influenced

50+ Industry Leaders & Tech Experts



COMMUNITIES

Technology Decision Makers - Enterprise and SMB, Telecom, Channel Partners, Start-ups, Functional Heads and many more

MOVED THE NEEDLE DURING COVID-19 CRISIS

CREATING HIGH IMPACT & INFLUENTIAL CONTENT IN THE LAST 80 DAYS

- From Survival to Revival
- Proactive Business Recovery



- CXO of the Week
- CIOL BCP Playbook
- CIOL BCP Player Series



- Are There any Make in India IT Products for Us to Use?
- Cloud Adoption in Digital World
- Govt to Harness IT to Empower MSME Sector



- **DQ TECH** Series
- Business Continuity Planning Series



- Secure Smart & Intelligent Network
- App Modernisation
- Collaboration in WFH environment
- DevOps
- **CyberMedia** Product Review



- Business After Covid
- TLF Dialogue Series

and many more....

8 cores at your fingertips

Upgrade to the
world's highest
performing processor
for ultrathin laptops.
Built for professionals.

AMD
RYZEN