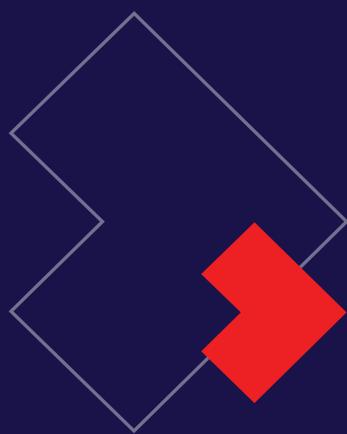


</SOURCEFUSE>

CIOs of India
Powered by ISMF

CIO Cloud Connect

Way Forward for Digital Healthcare



Vaishali Kasture

Head

Top Enterprise, Mid Market &
Global Businesses - India & South Asia, AWS



Girish Khera

Co- Founder, COO

India Head, Scientific Animations





Post Event Report by SourceFuse

On the 16th of July 2021, SourceFuse hosted its live Round Table for Healthcare Leaders in association with CIOs of India. This event brought together top leaders from the HCLS World to discuss the **“Way Forward for Digital Healthcare”**. With two keynote speakers, interactive polling, and QnA discussions, it was a thought-provoking and lively event.

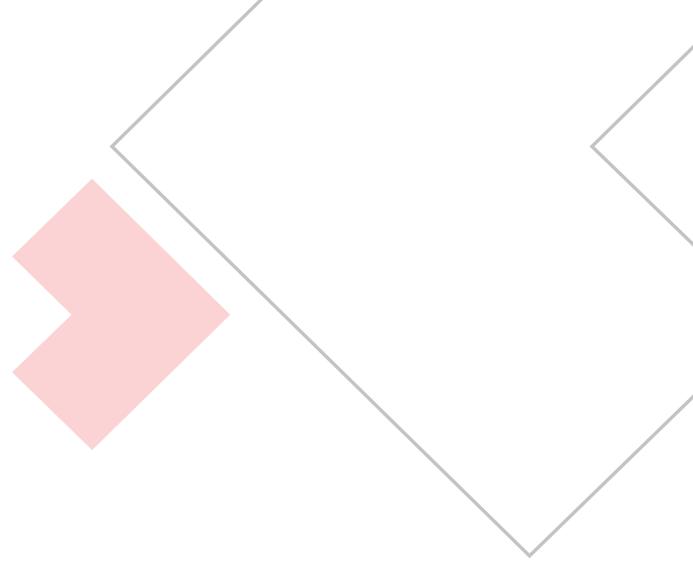


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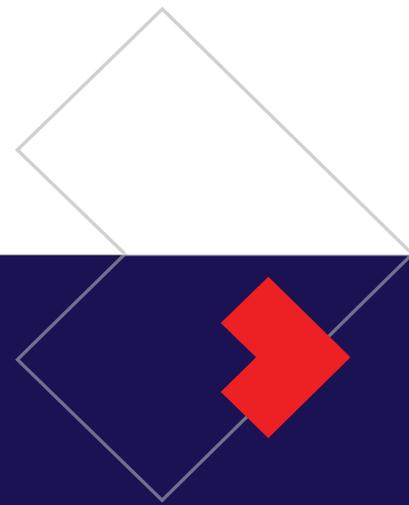
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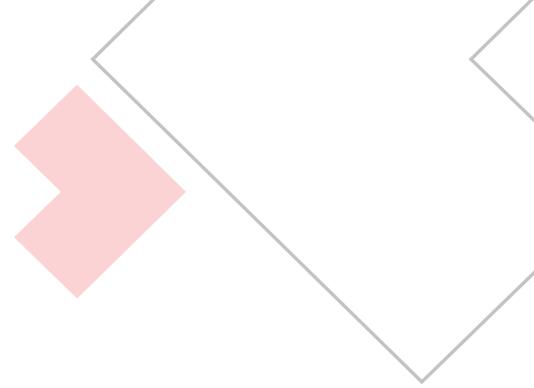


Introduction of CIOs of India

CIO's of India (Powered by ISMF) is the premier Information Systems Professionals body in India. It can be described as a national technology body with more than 300 members, which includes both Indian and multinational companies that have a presence in India. CIO's of India member and associate member companies are broadly in the business of manufacturing, retail, automotive, FMCG, Food and Beverage, Health Care, Education, software development, software services, software products, consulting services, BPO services, e-commerce & web services, engineering services offshoring and animation and gaming.

ISMF (Information Systems Managers Forum) was set up in 1996 at Delhi to facilitate interaction among IT/IS professionals in software and services and to encourage the advancement of software technology. It is a not-for-profit organization. Currently, CIO's of India is headquartered in New Delhi, India.

Introduction of Speakers



Vaishali Kasture

Country Head of Enterprise Accounts AWS India

She has 25 years of experience in Corporate & Investment Banking, Credit, Analytics Outsourcing and Consulting Businesses. She has led both sales and operational teams across her tenure. Vaishali has worked at Citi, Infosys, Goldman Sachs and Deloitte. Prior to joining AWS, Vaishali was the India MD & CEO for Experian. She has an MBA in finance and is a gold medallist from JBIMS (Mumbai). She is passionate about working with Female founders and start-ups and she co-founded Sonder Connect in 2015, which is the first mentoring platform for female founders in India.

Girish Khera

Co-Founder & COO, Scientific Animations

Girish is a serial entrepreneur & investor, with a marketing and consulting background for prestigious organizations such as McKinsey and Company. With an engineering background from Stanford University, he brings the combination of rock-solid stability, experience and innovation. Scientific Animations, co-founded by him, is a premier provider of animations & graphics studio for the Life Sciences industry. A prolific futurist, he recently established COVIDIndia.org, a non-profit organization focused on improving the course of the pandemic in India, raising understanding and awareness along the way.



Introduction of SourceFuse

SourceFuse Inc. is transforming the way today's most successful companies develop breakthrough roadmaps leveraging cloud-based technologies. Being the first and only AWS Consulting Healthcare Partner in APAC, SourceFuse has modernized and delivered many HIPAA compliant solutions for leading companies in the HLS industry.

From our AI-Powered innovations that accelerate the future of Digital Healthcare to applications that redefine patient centric care, our topmost goal is to modernize Healthcare Life Sciences Enterprises on the Cloud.

We hold 15 years of deep domain expertise in building solutions that offer AI-enabled Telemedicine, Remote Patient Monitoring & Care Delivery, Online Video Consultations, fully integrated Hospital Management, Patient Data Anonymization, Data Extraction, Remote Health Education and many others.



Healthcare Compliance:
HIPAA



Data Security Compliance:
ISO 27001



Some of our Healthcare solutions are also promoted by AWS:

- **SF Medic**
The only AI-enabled Telemedicine solution in the industry with Real-Time Clinical Decision Support Intervention and Language Translation
- **A Hospital Ancillary Revenue Insights Solution**
Developed for one of India's leading hospital chains, with an accuracy rate of 91% on AWS.

Headquartered in the United States, SourceFuse has regional offices in the UK, Australia, and India. To know more, visit our Website and follow us on LinkedIn and Twitter.

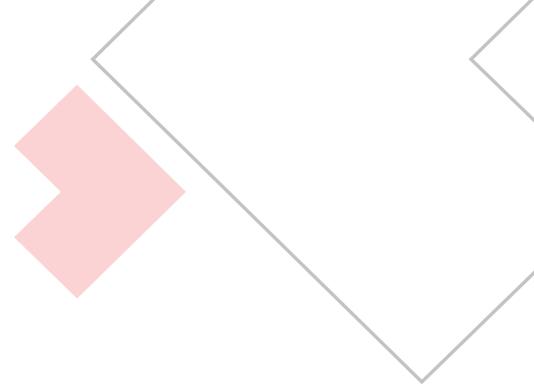
Executive Summary

The Healthcare industry in India comprises hospitals, medical devices, clinical trials, outsourcing, telemedicine, medical tourism, health insurance, and medical equipment manufacturing. The industry is growing at a tremendous pace owing to its strengthening coverage, services and increasing expenditure by public as well as private players.

Growing incidence of lifestyle diseases, rising demand for affordable healthcare delivery systems due to the increasing healthcare costs, technological advancements, the emergence of telemedicine, rapid health insurance penetration and government initiatives like e-health together with tax benefits and incentives are driving the healthcare market in India.

- The global market for digital transformation is expected to reach \$695 Billion by 2025.
- The healthcare [digital transformation] segment is expected to witness significant growth and is estimated to expand at the highest CAGR of over 23% in the next eight years.
- The small and medium enterprise [digital transformation] segment is expected to grow at the highest CAGR of over 24% over the forecast period.
- The Indian Healthcare market is expected to reach \$190 Bn by 2020; \$372 Bn by 2022 at a CAGR of 39%
- By 2022, the diagnostics market is expected to grow at a CAGR of 20.4% to reach \$32 bn from \$5 bn in 2012
- During 2015-20, the in-patient market grew at a CAGR of 13%
- The Telemedicine market is the maximum potential eHealth segment in India, which is expected to touch \$5.4 Bn by 2025, growing at a compound annual growth rate (CAGR) of 31%
- The hospital industry in India, accounting for 80% of the total healthcare market, is witnessing a huge investor demand from both global as well as domestic investors. The hospital industry is expected to reach \$132 bn by 2023 from \$ 61.8 bn in 2017, growing at a CAGR of 16-17%.
- The diagnostics industry in India is currently valued at \$4 bn. The share of the organized sector is almost 25% in this segment (15% in labs and 10% in radiology).
- The primary care industry is currently valued at \$13 bn. The share of the organized sector is practically negligible in this case.
- Health insurance contributes 20% to the non-life insurance business, making it the 2nd largest portfolio. The gross direct premium income underwritten by health insurance grew 17.16% year-on-year to reach \$6.87 Billion in FY20
- The digital healthcare market in India was valued at INR 116.61 Bn in 2018, and is estimated to reach INR 485.43 Bn by 2024, expanding at a compound annual growth rate (CAGR) of ~27.41% during the 2019-2024 period.

Keynote 1



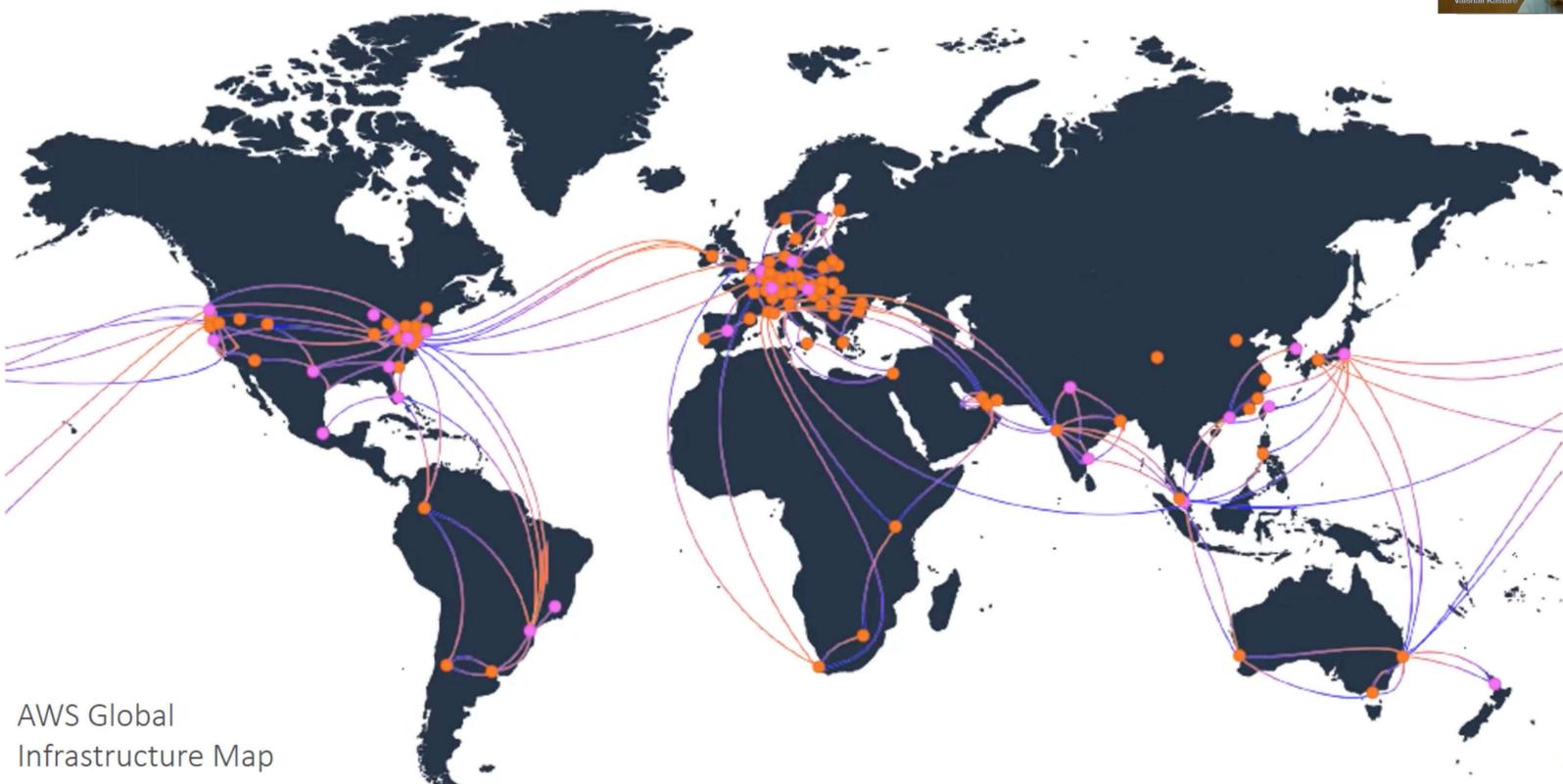
Eight Predictions on How Technology will Continue to Change Our Lives in the Coming Year

By Vaishali Kasture,
Head - Enterprise, Mid-Market & Global Businesses -
India & South Asia, AWS

Vaishali shared what both she and AWS believe are the main technology trends / predictions that will play a key role in 2021 digital transformation and beyond. She kick started with the thought that, rather than slowing us down, 2020 accelerated our shift to the digital world. A shift that happened in an unanticipated and unprecedented manner and, the year 2021 is now being taken as the launchpad for all kinds of innovation in industries including Healthcare, Finance, Media and more.

Prediction 1: Cloud will be Everywhere

PREDICTION ONE | Cloud will be everywhere



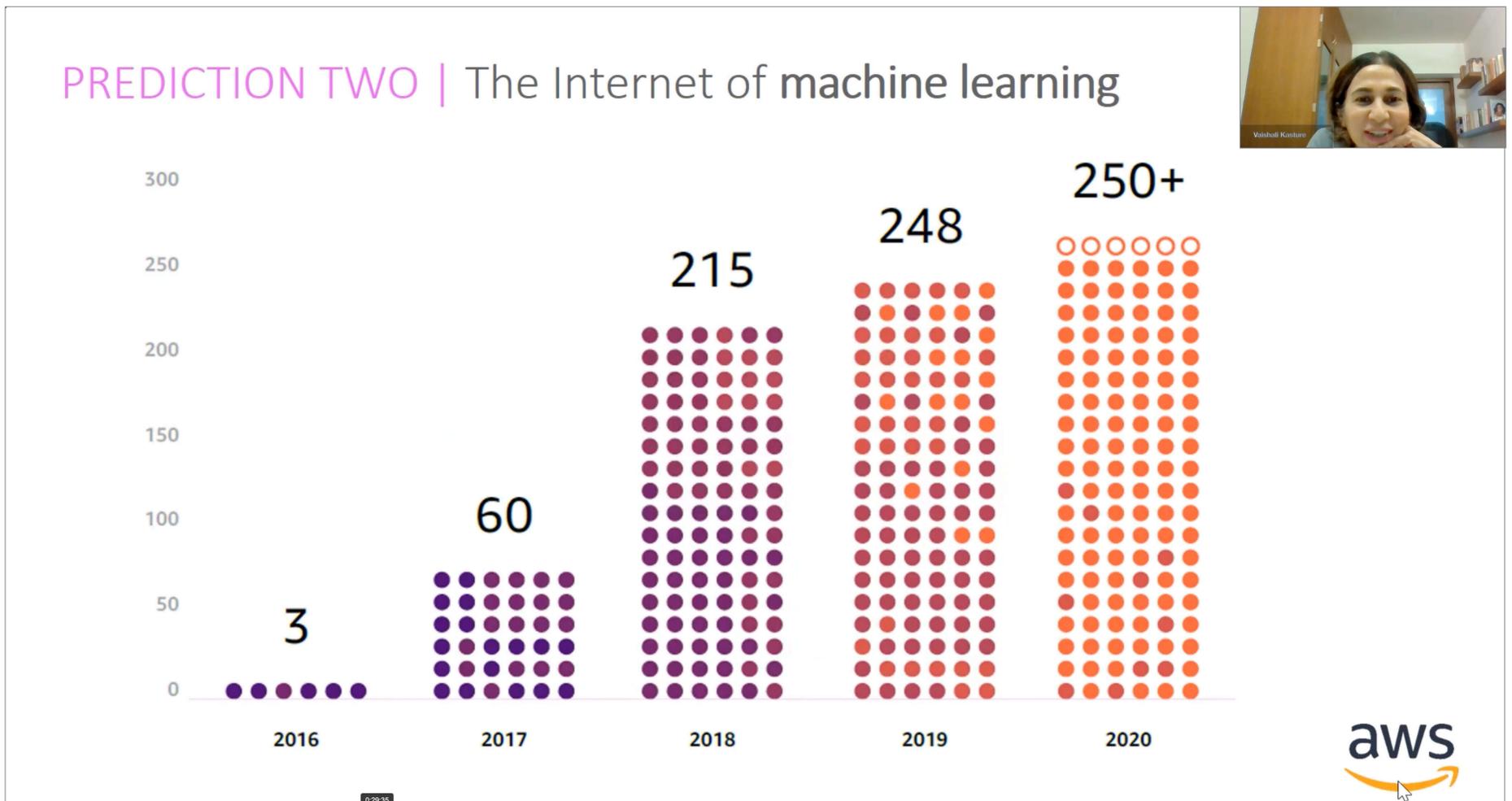
AWS Global Infrastructure Map



You can find cloud-based applications around us in full swing, be it our cars, homes, offices and even paving their way through to reach rural communities. From an AWS perspective, they have Regions and Availability Zones around the world to enable cloud technology to be closer to the customer. Their Customers are deploying devices such as:

- AWS Snowball to handle petabyte-scale data transport with on-board storage and compute capabilities
- AWS Outposts to extend AWS infrastructure, AWS services, APIs, and tools to virtually any datacenter or co-location space.
- AWS Local zones to provide a high-bandwidth, secure connection between local workloads and those running in the AWS Region, allowing to shrink cumbersome data centers in urban areas
- AWS IoT Greengrass to bring local compute, messaging, data management, sync, and ML inference capabilities to edge devices

Prediction 2 :
The Internet of Machine Learning



Currently, we are witnessing a data explosion. Today, we generate more data in one hour than was created in all of the year 2000. Additionally, in the next 3 years we will create more data than the last 30 years collectively. With an HLS industry perspective, by the likes of Machine Learning, how quickly and efficiently we were able to pivot to digital healthcare and build the vaccines, and offer treatments to keep the world healthy during the pandemic.

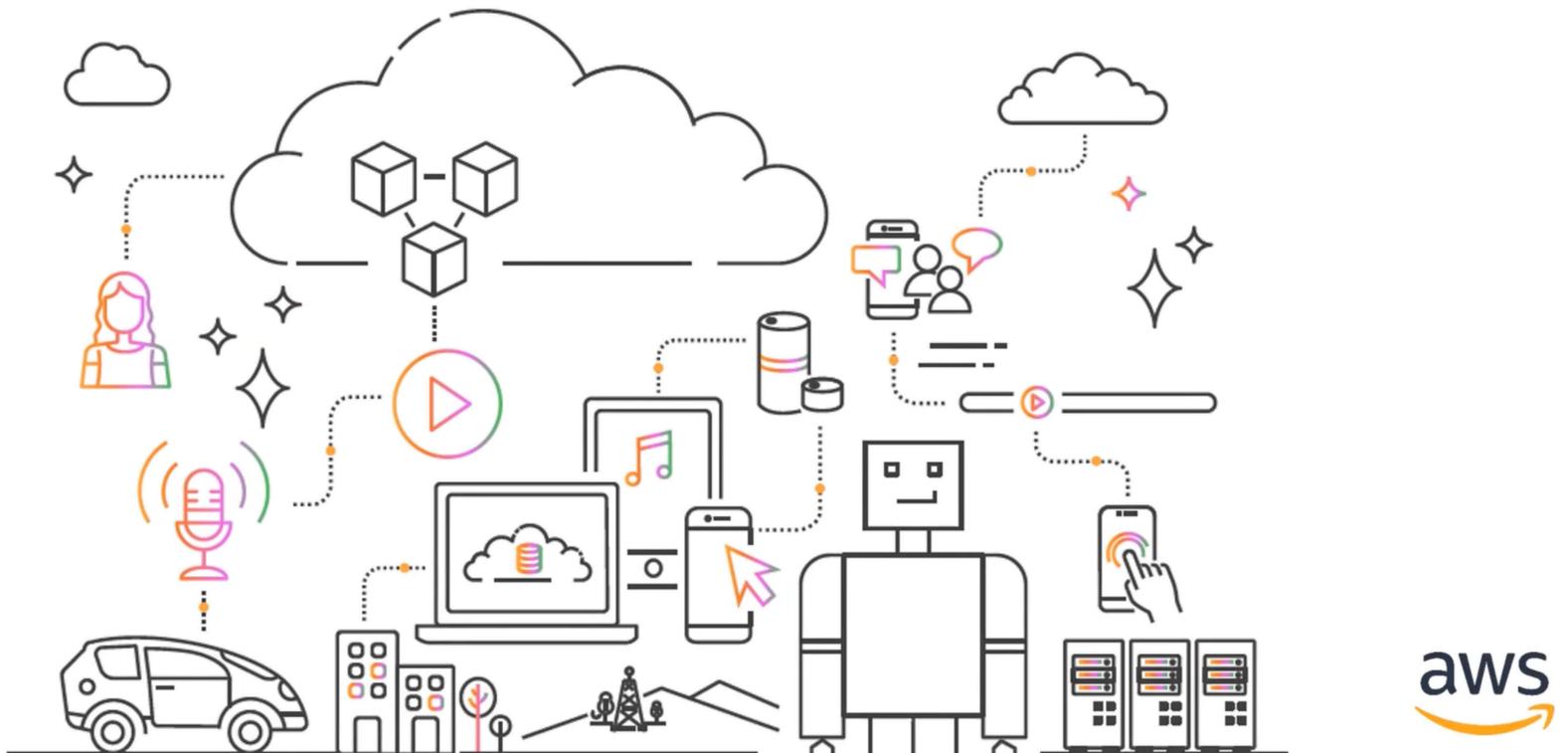
The only realistic way to handle such loads of information is to use ingestion and aggregation tools married to Machine Learning models. Utilizing cloud technology, and hardware and software working together to take ML to the edge, and make an even bigger impact from an AWS perspective, owing to the following trends:

- Amazon SageMaker - fastest growing ML service in the AWS history
- In 2020, just in ML, AWS introduced 250 new services

Prediction 3 :
In 2021, Pictures, Video and Audio will Speak more than words



PREDICTION THREE | In 2021, pictures, video, and audio will speak more than words



Historically, we've always represented everything pictorially. And, as we entered into the depths of the Covid lockdown, we connected with something similar which is multimedia, only this time, technology advanced.

Constantly, effort is being put in reducing text and increasing videos / images / audios even on social media platforms. For example: In a single day on Twitter - 80% of the messages contain pictures now and Twitter even rolled out audio tweets for iOS users only. Soon we'll be seeing Alexa in cars launching in India. And, people who have never learnt to read / write - are now operating mobile devices. Pictorially, our devices are enabling data to reach millions of people around the world.

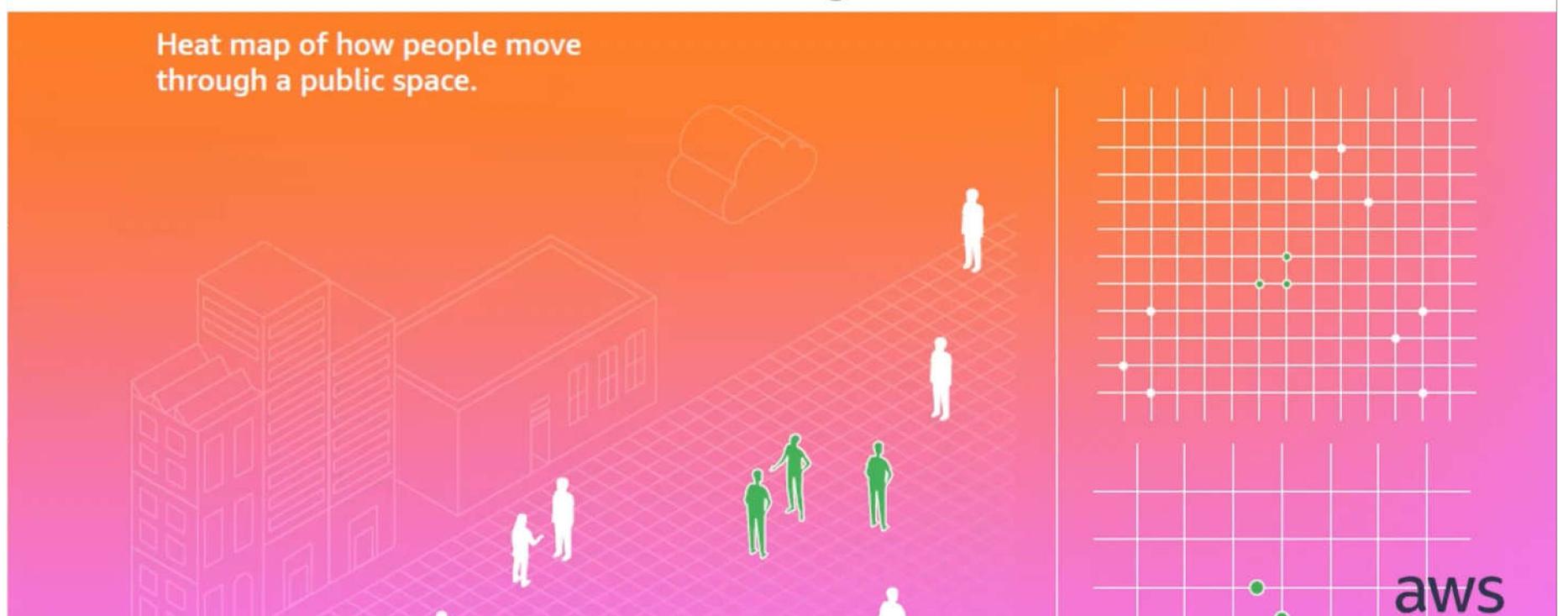
Prediction 4 :

Technology will Transform our Physical Worlds as much as our Digital Worlds

PREDICTION FOUR | Technology will transform our physical worlds as much as our digital worlds



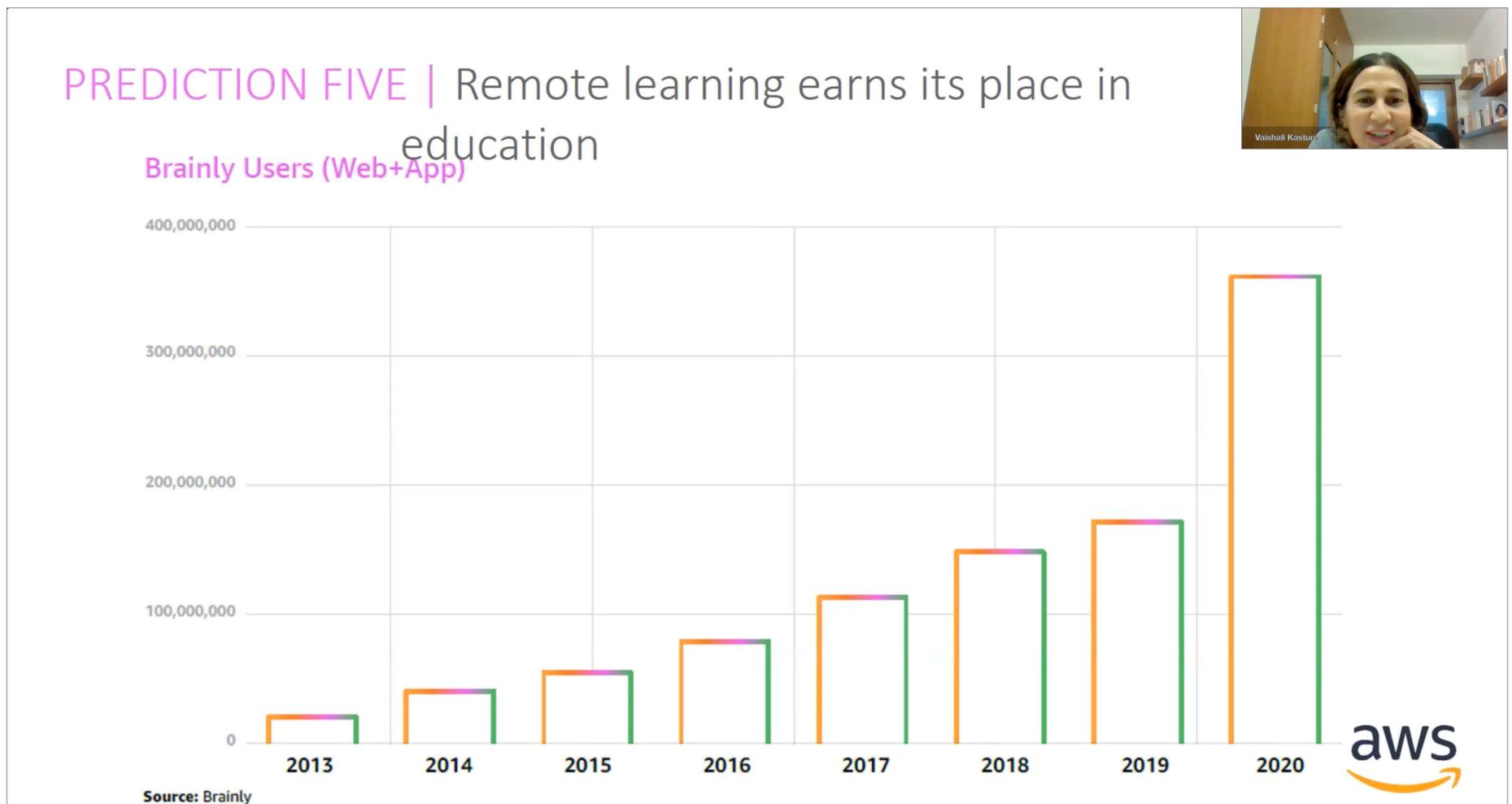
Heat map of how people move through a public space.



We were introduced to social distancing in 2020, which is now an integral part of our vocabulary everyday. In 2021, it was continuously discussed how to better design our cities without feeling distant from each other. Our Technology is beginning to assess traffic lights / grocery stores / people walking on footpaths etc. all of this continues to show that our physical worlds continue to transform while we remain socially distanced.

Prediction 5 :

Remote Learning earns its place in Education



We were introduced to social distancing in 2020, which is now an integral part of our vocabulary everyday. In 2021, it was continuously discussed how to better design our cities without feeling distant from each other. Our Technology is beginning to assess traffic lights / grocery stores / people walking on footpaths etc. all of this continues to show that our physical worlds continue to transform while we remain socially distanced.

Prediction 6 :

Small businesses will race to the cloud

The SMB ecosystem in India, 7.5 million businesses strong, is seeing a dramatic growth in the adoption of technologies. Businesses of all shapes and sizes are running to enable their operations on the cloud. The smallest example would be a fruit vendor downloading Paytm to accept payment, instead of asking for cash. People are racing to adopt the cloud.

Prediction 7 :

Quantum computing starts to bloom

Quantum Computing for industries such as Finance, Pharma, Telecom, Media, Travel, Logistics, and more has become affordable with Amazon bracket that makes it accessible at the rate of 30 cents/minute.

Prediction 8 :

The Final Frontier : Space

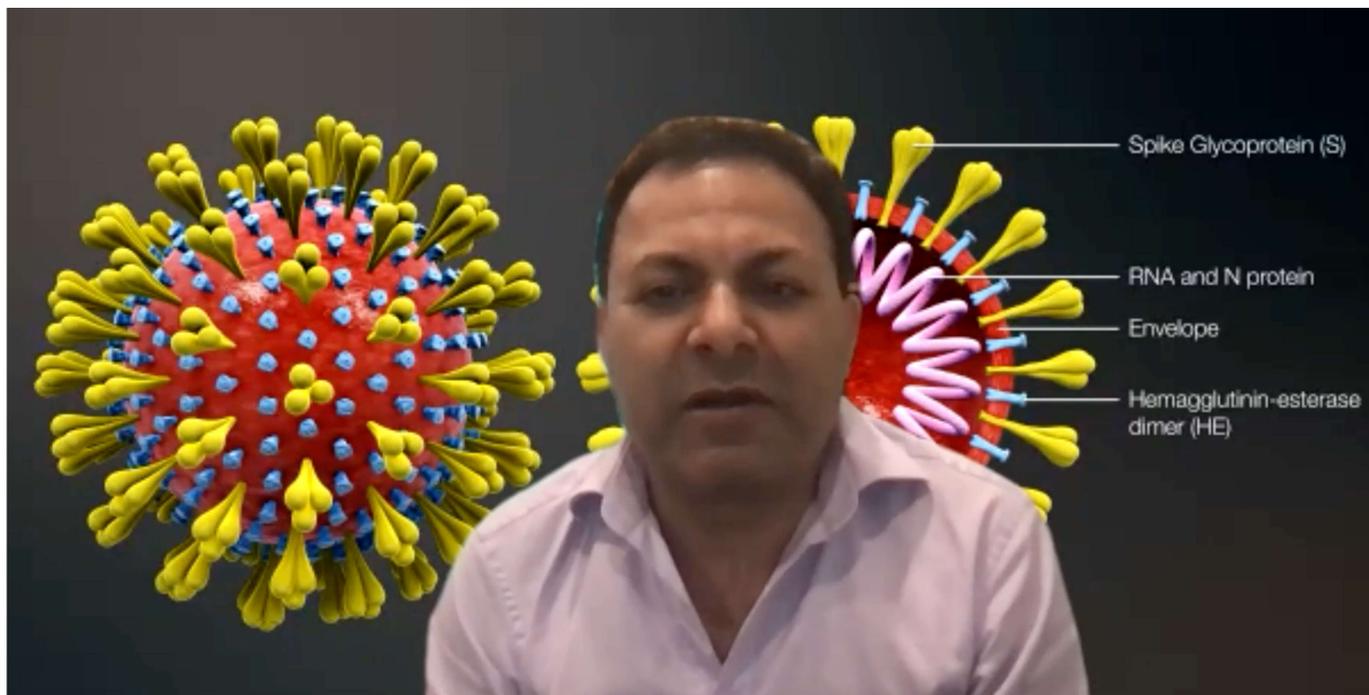
The famous Author, Richard Branson traveling 89 kms from the earth's surface, made space a lot more attractive. Vaishali mentioned AWS Ground Station, a fully managed service that lets you control satellite communications, process data, and scale your operations without having to worry about building or managing your own ground station infrastructure. From an AWS POV, an average of 990 satellites will be launched yearly by 2028. The AWS Trends shared during the keynote by Vaishali, were definitely inline with how SourceFuse, as AWS Advanced Consulting Partner with the AWS Healthcare Competency is approaching the Digitizing Healthcare Mission.

The rapid rise in use of telehealth was also discussed, and how machine learning and AI is now able to evaluate photos or images, supporting online diagnoses and consultations. While very necessary to prevent hospital bottlenecks during the pandemic, this technology is now likely to stay. And in future, there should be a real drive to use 5G for medical purposes first and foremost, before entertainment purposes.

Keynote 2

How can the **Healthcare Life Sciences Industry** be ready for disruption

By **Girish Khera**,
Co-Founder & COO, Scientific Animations



The session constituted insights about disruption and how it is creeping into the healthcare space, especially post covid. Covid is a 130Bn \$ market, more than 50% of which is taken up by new players like Moderna. Disruption is happening already on a patient level, and is dominated by the likes of the latest healthcare companies such as MediHealth, Practo, CrediHealth, 1mg, etc. Although these aren't traditional players, we are now starting to view them at par with mainstream healthcare providers. Hence, disruption is not necessarily coming from the core of the industry but rather from the new minds, competing to become market-ready and launching their products and services efficiently.

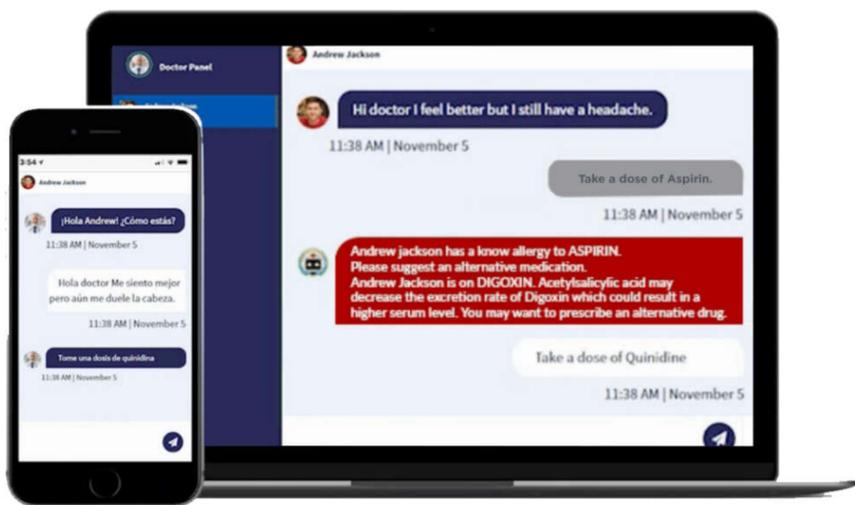
The real meaning of disruption is not just making something easier / faster. That is just the result of incremental innovation. For example: A patient spends 1 day in a hospital instead of a whole week constitutes innovation. Disruption would be when the patient did not have to visit the hospital at all. Reinventing the business model to disrupt the status quo is what we're looking at.

In the HealthTech space, changing the Consumer mindset is the main focus. The moment your consumer reaches a certain conclusion by themselves, is when disruption has fully taken place. The conclusion goes

something like this, "Before I used to worry about how to manage X, but with Y it is sorted." For example: "Before I used to worry about travel intercity, but with Uber it is sorted."

Coming to the role of Technology in the healthcare disruption space, it is not at the heart but the gut. It is not required to trigger disruption but it is required to enable the provoking ideas that our leaders have. Everything from hospital admission discharge to patient compliance to insurance & approval, they are still legacy driven systems and need to be redesigned for the digital post-covid world. This necessitates a move away from directing the patient and onto partnering with the patient and from being experimental to being data-driven and logically predictive.

SourceFuse Products



SF Medic

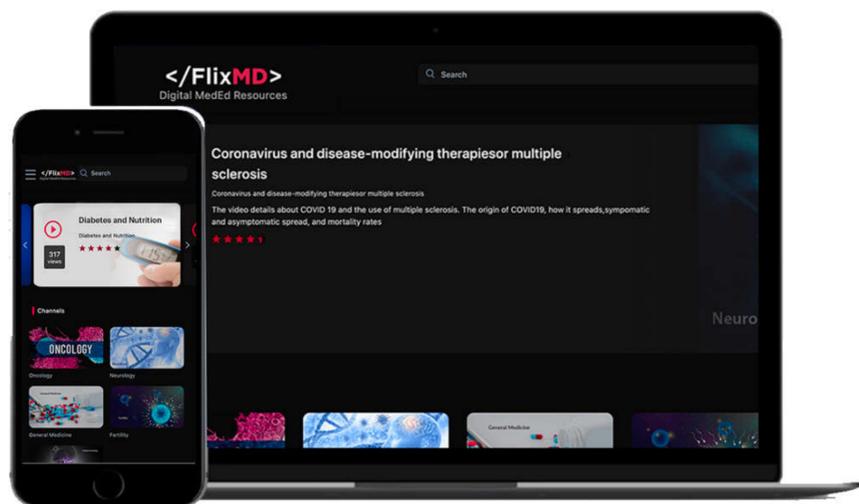
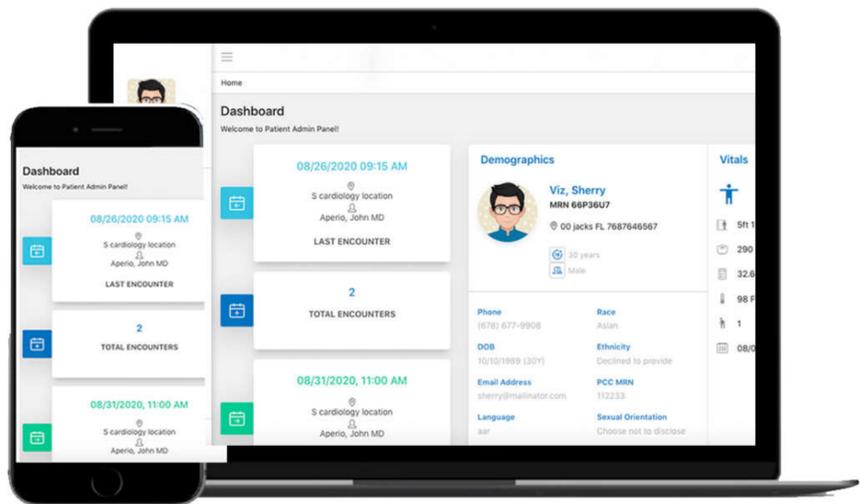
AI-Enabled Telemedicine Solution

SF Medic weaves cognitive computing in its veins to provide smart & language-independent assistance to doctors and personalized health consultation for patients. While building SF Medic, we leveraged artificial intelligence (AI) & natural language processing (NLP) services, real-time messaging, and most importantly, regulated infrastructure to protect patient data.

helloMD.online

Online Video Consultations For Better Remote Healthcare

helloMD.online constitutes a reliable platform that enables patients to get assistance from the comfort of their homes, improves diagnostic efficiency and offers cost-effective patient care services. The product focuses on Device independent video conferencing, customizable UI that enables doctors to adopt the interface as per their needs and different ways of providing healthcare. One of the major benefits of this product is the ability to seamlessly sync with EMR/ EHR.



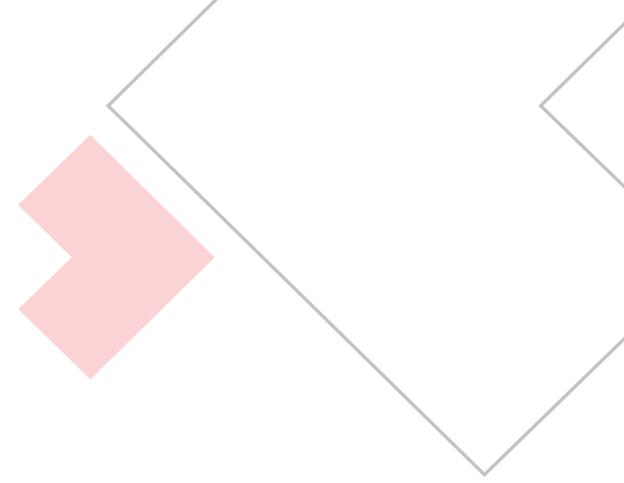
FlixMD

OTT Platform for Healthcare Professionals

Modern Healthcare online CME demands access to a digital alternative. A platform that would bring together global healthcare knowledge in the form of on-demand videos on a single online learning platform.

FlixMD, built by SourceFuse, is a one of its kind over-the-top Video Streaming Platform hosted on AWS dedicated to enable Healthcare professionals globally to continue medical education online.

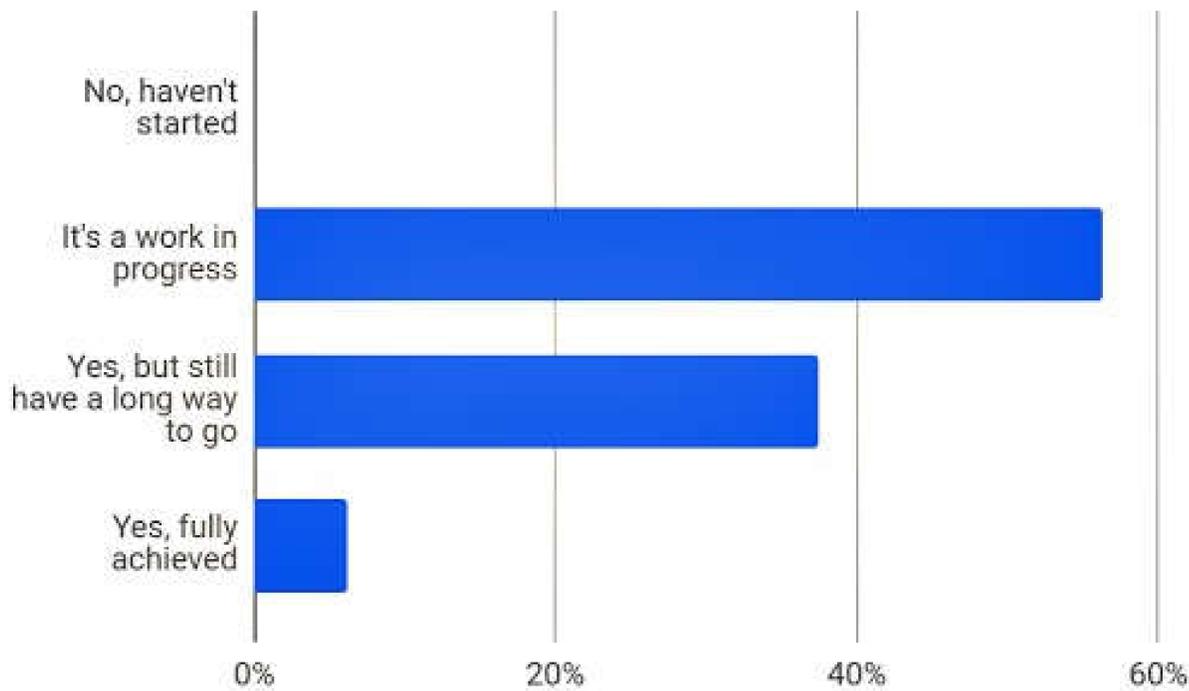
Discussion Summary



A. Polls & Results

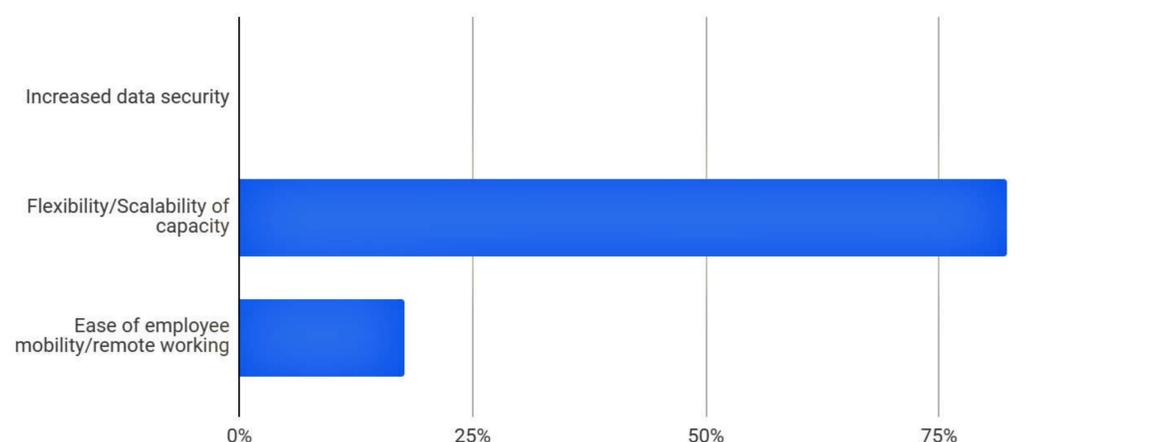
Question 1:

Have you started your digital business transformation journey?



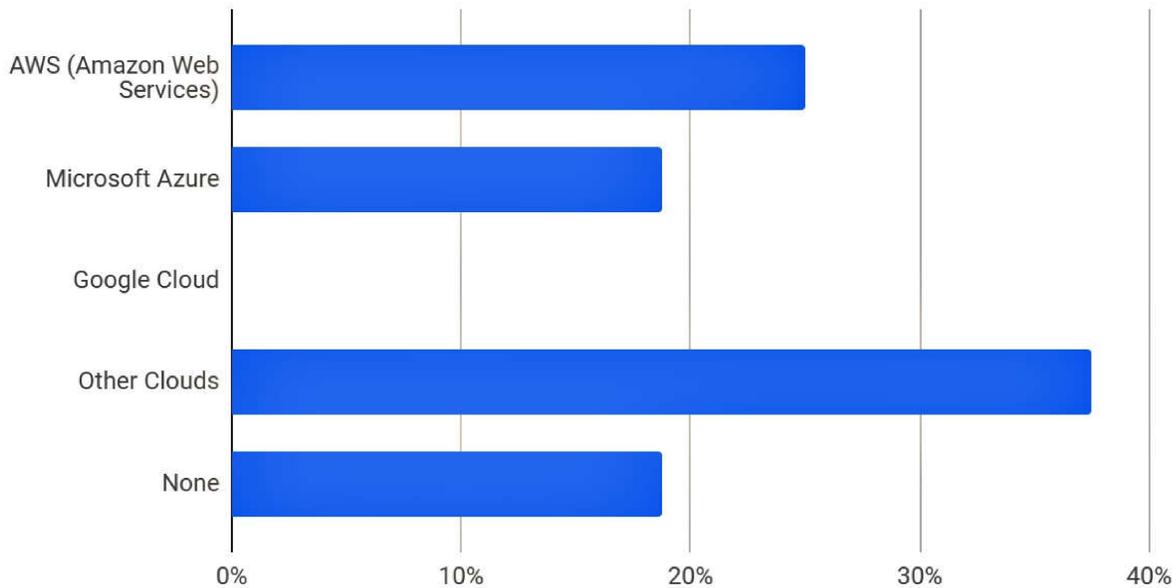
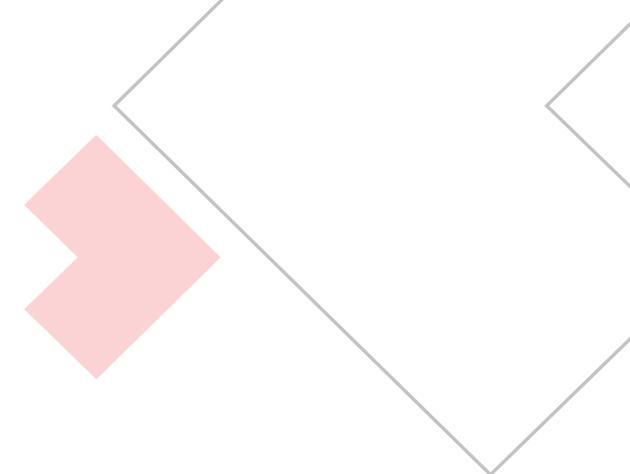
Question 2:

What do you feel is the top benefit of moving your processes and apps to the cloud?



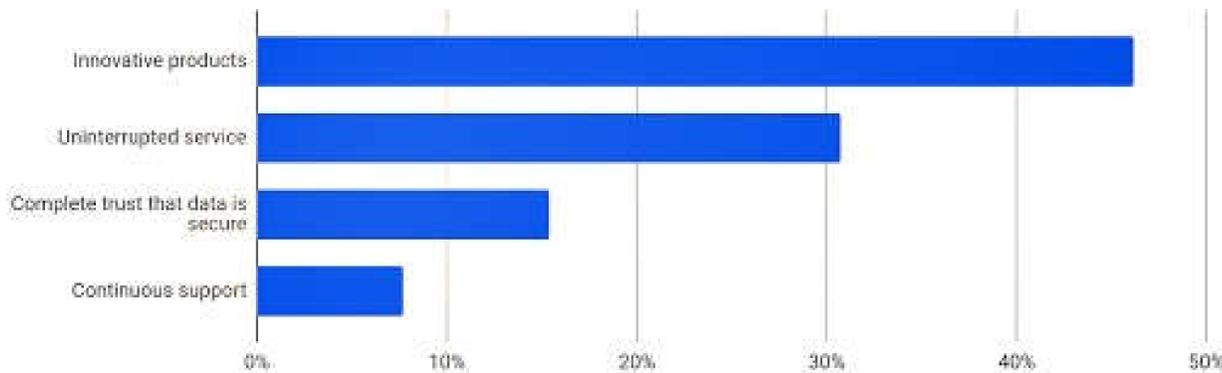
Question 3 :

Which cloud is your organization currently operating on?



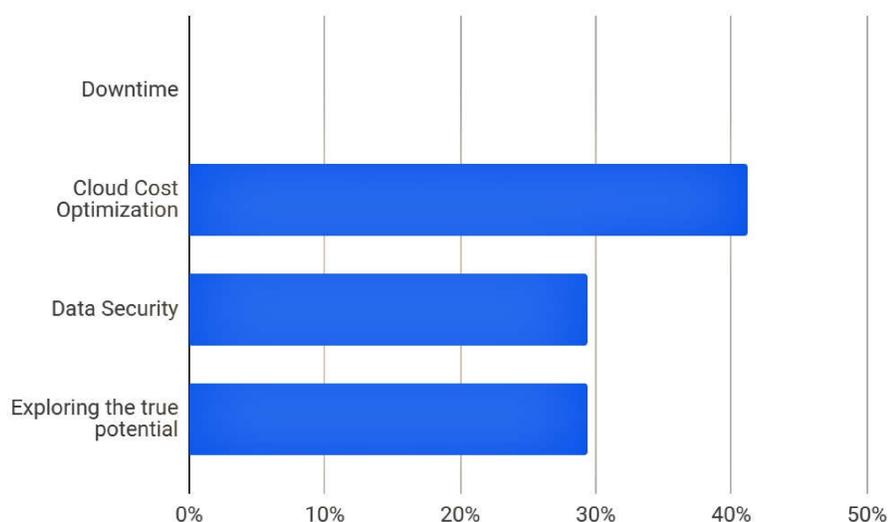
Question 4 :

What do you believe is the most important thing your organization can offer customers?



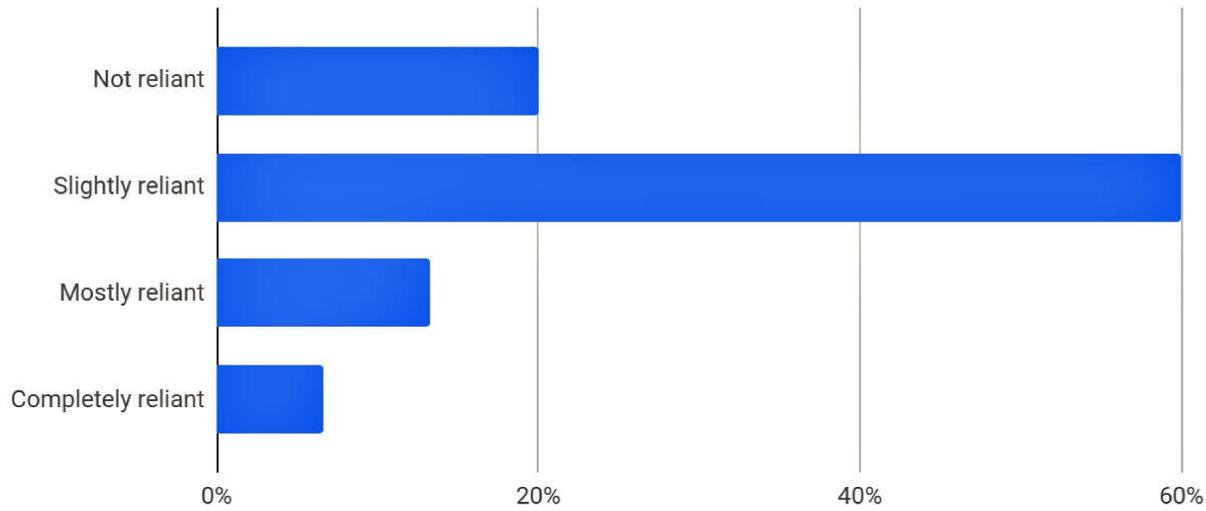
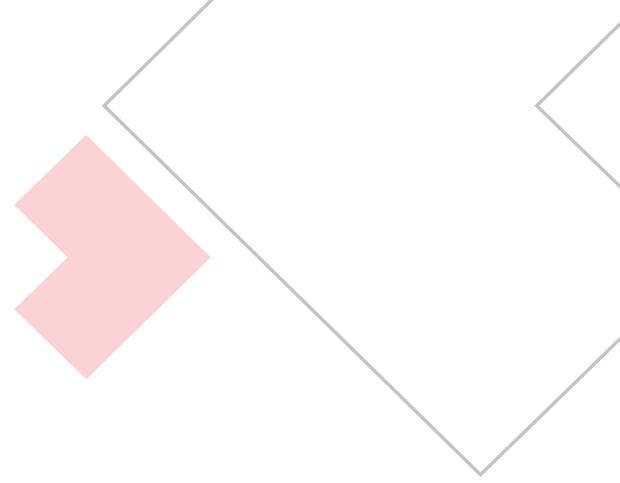
Question 5 :

What do you think is a challenge when moving to the Cloud?



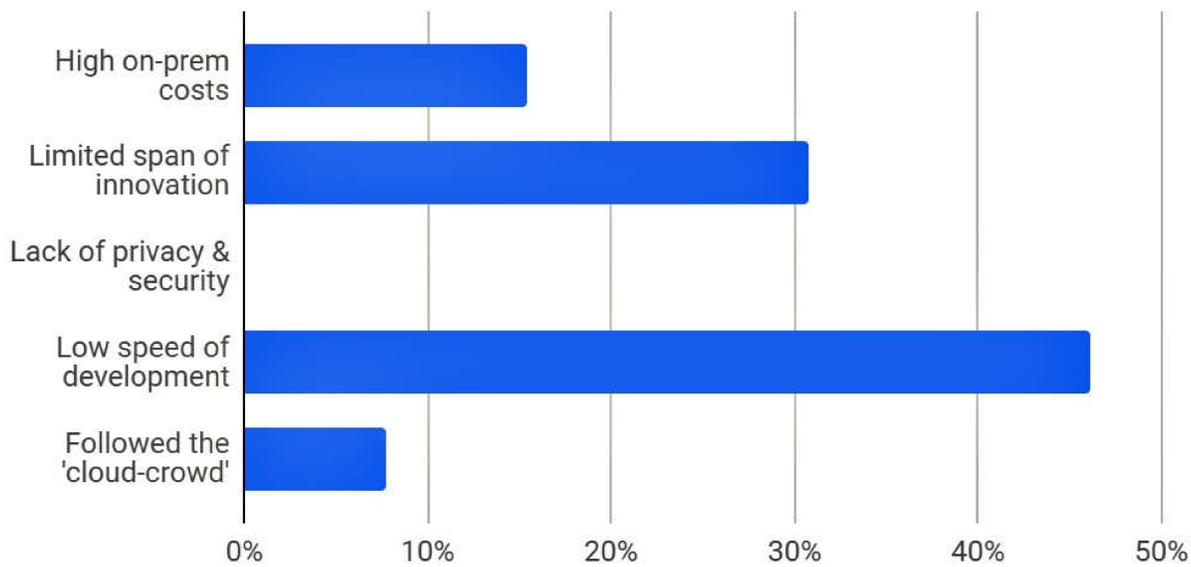
Question 6 :

How reliant is your organization on legacy technology?



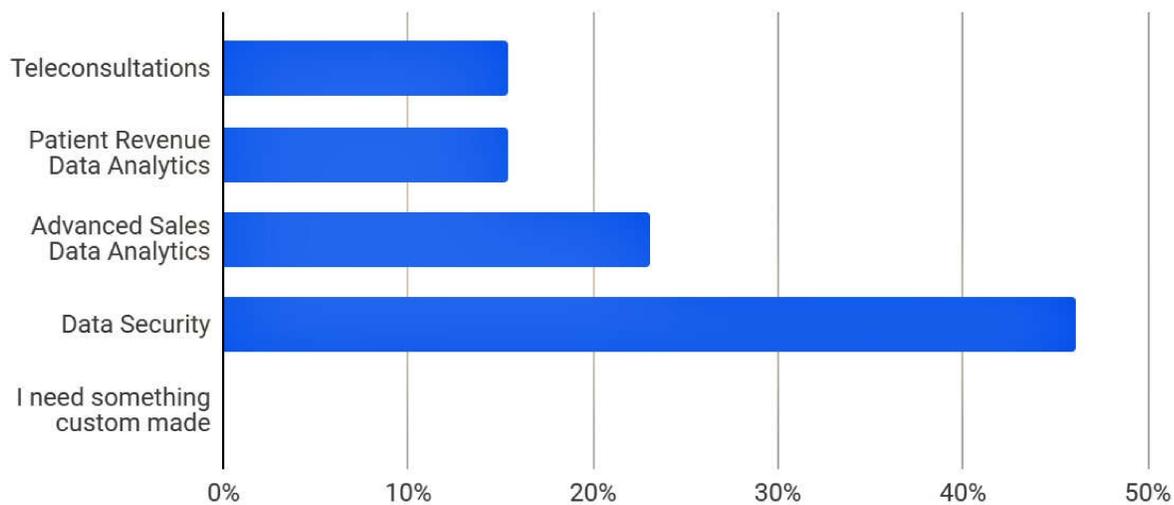
Question 7 :

What triggered you, or is driving you, to move to the cloud?



Question 8 :

What's the biggest Healthcare problem you are trying to solve?



B. Discussion Summary

The event opened up a conversation about the immediate need to move to the Cloud. All of the attendees resonated with the fact that Cloud is the key to hypergrowth and to get ahead of the competition in the real sense. For most of the leaders, understanding the true potential of Cloud still remains a mystery but the sheer appetite they had, to proactively explore the benefits, was truly mind-blowing. The event also busted a myth about the cost which comes with moving to the Cloud. SourceFuse's experience suggests that moving to the cloud can actually save up to 40% of the annual on-premise cost.

All the attendees are excited to see what the future will look like, especially after listening to Vaishali speak about the 8 predictions for the Future of Technology. Girish on the other hand got everyone thinking about ways to become a part of this disruption story that our future entails.

Brief Profile of Attendees



Rajiv Sikka
Senior VP
Medanta

Rajiv Sikka is the Group CIO for Medanta hospitals. He is responsible for group IT functions covering digital transformation initiatives and IT Operations.

Rajiv writes in various forums on HealthTech subjects and is a regular panelist / speaker on digital initiatives in healthcare.

Rajiv is a member of CII led National AI Forum. He is also an executive council member of CIOs of India, a 25-year-old not for profit forum of IT professionals comprising multiple CIO bodies. Rajiv is also on advisory boards of academic institutes & IT companies.



Harmandeep Singh
VP IT
Rainbow Hospitals

Currently working as a Group Head of Rainbow Children's Hospital, a chain of Hospitals with a bed capacity of 1500 beds. Having approx 22 years of experience in the IT industry including 13 odd years in Healthcare IT.



Badar Afaq
Head IT
Antara Senior Living Ltd.

Badar has vast experience of almost 18 years in management of IT Operations at group level, implementation IT & Telecommunication Systems, IT Security & Governance. He has done his MBA in Information Technology and Post Graduate Diploma in Computer Applications, from Jamia Millia Islamia University, New Delhi, CIO Competency Program from IIT Mumbai, GCIO Programme from ISB Hyderabad. In his last assignment he was associated with Lemon Tree Hotels Ltd, as Deputy General Manager - Information Technology. Prior to this assignment, he has worked with organizations like ITC Fortune Hotels as Corporate IT Manager, DLF Group and Radisson Hotel.



Ritesh Mittal
AVP- Corp Strategy
Paras Healthcare Pvt. Ltd.

13 years of experience in healthcare delivery spanning operational excellence, P&L leadership, IT and growth strategy. In his current role at Paras Healthcare, he is a part of a team entrusted to build a \$1B organization through inorganic growth and carving out the digital journey of the organization. He is currently leading 3 organization-wide strategic digital initiatives - BI, Revenue cycle management and Business on whatsapp.



Prashant Singh
CIO
Max Healthcare Institute Ltd

Veteran in Healthcare IT and has been working in this space for more than 2 decades, set up many corporate hospitals and worked on digital transformation through BPR, digitisation, AI, RPA and other technologies.



Dr. Avadhut Parab
GLOBAL CIO
Wockhardt Ltd.

Global Leader in Business and Technology with Deep insights of and vast experience in value creation using technology. Successful track record of creating robust IT/OT/IS Strategy , Vast experience in Implementing Digital Technology,Cyber Security transformation for Pharma industry , Industry specific Regulatory & statutory compliance of Leading to Technology and Business alignment . Successfully Lead many initiatives of change management , Transformations Projects across global locations – Multi country – Multi currency . Proven ability to bring the benefits of IS to resolve business challenges while managing opportunity , cost and Risk



Aneesh Nair
Co-Founder, CIO
MyHealthcare Technologies

Aneesh Nair is the Co-Founder & CIO of MyHealthcare Technologies. MyHealthcare is a digital ecosystem that improves healthcare delivery and enhances patient care outcomes. A platform that brings together the hospital, its doctors, nurses, allied services, health records, pharmacy and home care services to offer seamless care to patients.



Ashish Khanna
CISO
The Oberoi Group

Ashish holds over 20 years of experience in IT operations, IT Strategy formation, IT security, managing new hotel builds, hotel applications, compliance and governance, managing internal and external customers. A keen strategist with expertise in devising strategies aimed at enhancing overall organizational growth, sustained profitability of operations and improved business performance.



Jai Prakash Dwivedi
CIO
Rajiv Gandhi Cancer Institute & Research Centre

JP Dwivedi is a senior IT leader with over 33 years of experience in the industry. He is the CIO of Rajiv Gandhi Cancer Institute & Research Centre (RGCI & RC), Delhi since 2011. After completing his MCA from MNNIT Allahabad in 1988, he initially worked in public sector organizations in Telecom and Railways for 8 years. He subsequently joined Perot Systems (later acquired by Dell) in 1996 and held several positions in this organization for about 15 years before taking up his current position at RGCI & RC.



Kamal Karnatak GROUP CIO

RJ Corp (Cryoviva Biotech Pvt. Ltd is group entity)

Experienced CIO with a demonstrated history of working in the Food & Beverages industry, Manufacturing, Healthcare, Real Estate, Retail, Textiles and Education. Skilled in Business Process, Enterprise IT Strategy, IT Enabled Business Transformation, Team Building, and IT Strategy. With over 26+ years of experience, he is a strong information technology professional with a Doctorate focused on Flexible Systems Management from Indian Institute of Technology, Delhi.



Naveen Gulati CIO (Group)

GimnarSoft (CarDekho)

Naveen joins us with over 17 years of experience in managing Digital Transformations, Operational IT; spearheading Multi-Cloud journeys for Business Operations. Currently at CarDekho group, he is leading Digital led Business Transformations, DevOps, Cyber Security & Compliances, across the group companies.



Ninad Raje Director & CIO

HealthAssure

Ninad Raje is a visionary Healthcare, Insurance, Information Technology and Financial Services senior leadership professional with in-depth knowledge and 23+ years of experience in successfully leading large organizations. He is a specialist in successfully growing organizations at an exponential rate of 10x using extreme innovation.



Ravi Sharma Head IT

Wanbury Ltd

An IT strategist, innovator, and evangelist, who contributes to company's profitable growth through process innovation, progressive change management and convergence of business and technology. He is the former CIO of Marksans Pharma and is currently the Head of IT at Wanbury Ltd.



Krishna Rao Head IT

AIG Hospitals

An astute & result oriented IT professional, Krishna comes with over 2 decades of Progressive Techno Functional experience in the field of Information Technology, of which over 17+ years of experience in Healthcare Industry.



Dipesh Thakar

CIO

Meril Life Sciences Group

IT Leader with over 25+ yrs of experience & cross industry business acumen that have resulted in successfully maximizing efficiencies, deployment of complex business solutions, Digital Governance & Data Security for Large global businesses & enterprises across multiple geographies;

Brings on board very strong experience of working as Group CIO/CDO & Senior IT leadership roles across large Indian Corporate houses with diverse industry background covering BFSI, Healthcare, Agro Chemicals, Renewable Energies, Realty, Hospitality, Customer Service.



Sanjay Verma

Group CIO

Akums Drugs & Pharmaceuticals Ltd

A Technology & Digital Leader, Sanjay has led IT as Chief Information Officer for large companies inclusive of Somany Ceramics & JK Lakshmi Cement. Digital Transformation & Process Excellence are his forte. He has also led initiatives inclusive of IoT, RPA, Business Predictive Analysis, Cloud & Business continuity Planning, Enterprise Application & Mobility, Security & Risk Compliance, and User Behaviour Analytics. He is the Winner of many prestigious IT awards & an active member in various CIO communities.



Saurabh Gungani

Head IT & Security

People Strong

A result-oriented IT executive offering 14+ years of experience in IT Service Management/ Infrastructure Services/ Service Delivery & Leadership with proficiency at grasping new technical concepts quickly and utilizing the same in a productive manner.



Thank you

