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10 Big Technology Trends'22 that are Here to Stay

As we continue to navigate the ensuing pandemic, let us look at technology not simply as a transformer and saviour, but, more importantly, as a strategic and innovative tool; with solutions delivering digitalization, efficiency, and eventual growth. Shifting gears from surviving to thriving!

Which trends will accelerate digital capabilities, driving growth by solving problems, and are, therefore, here to stay? Let us crystal ball gaze on the impact assessment for 2022.

1st Trend: Artificial Intelligence (AI) refuses to be yesterday's news. It is, and will be, one of the technology trends that is here to stay. It has permeated how we live, work, and play. Once AI engineering is combined with steadfast AI governance, the value of AI to an enterprise will become hugely incremental. The AI trend to watch out for is AI Engineering, which automates updates to data, models, and applications to rationalize AI delivery by using an integrated approach.

Then comes generative AI, which refers to the AI capability to use text, audio, or images to identify underlying patterns to create new innovative content, which may be like the original but does not repeat its content. This technology has uses not just in the creative fields, but also in the field of medicine.

It is possible that these AI trends

will be propelled by super-fast networks such as 5G and are almost a convergence of several other cutting-edge technologies such as the Internet of Things (IoT). This takes on a whole new perspective on how the most impactful trend of all may be convergence!

2nd Trend: Metaverse is here to stay. Mark Zuckerberg acknowledged it with a name change of his empire, and the rest of the world is about to see digitization, data fiction, and virtualization make great strides in 2022. This is an acknowledgment of the concept that persistent digital worlds exist in parallel with the physical world we live in. With an increase in the rate of digitization, metaverses will model and simulate the real world with increasing accuracy, allowing more immersive, convincing, and, ultimately, more valuable digital experiences. As



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Zuckerberg mentioned, inside these metaverses we will conduct many of the functions habitually done in the real world, including working, playing, and socializing. Ericsson predicts that virtual experiences may be indistinguishable from reality by 2030.

3rd Trend: Mark Zandari and Dr. Lorien Pratt led research on Decision Intelligence (DI), which will become the mainstay in improving organizational decision-making. In theory, each decision is modelled as a set of processes, using intelligence and analytics to inform and learn from and even refine the original.

The question is: Will DI automate human decision-making in 2022? Too early, I would say. However, DI will surely support and enhance the decisions we (i.e., companies/leaders) make. It will help us understand the possible outcomes of a decision before we make it. DI uses data and AI, amongst other technologies, to allow more sound, consistent, and profitable decisions.

4th Trend: Cyber security is not a recent technology, but its relevance is on the verge of exploding. Each day a new threat becomes real. The pandemic and work from home made the playing field even easier for hackers. This technology will continue to evolve till the last day we have a hacker.

How about entrapping the malevolent element in a mesh or, more specifically, a Cybersecurity Mesh (CM)? A CM is a flexible, composable architecture that integrates widely distributed and disparate security services, allowing stand-alone security solutions to work together. In so doing, CM improves the overall security within an organization as also with end-users and devices located outside network walls. It uses a distributed framework across cloud and non-cloud environments, as opposed to

restricting workers to a perimeter related to a network's reach. This allows a company to develop security measures specific to the identity of a device, providing a perfect scalable cyber security solution for an increasing remote workforce.

5th Trend: The theme of technology convergence has developed into the highly rated technology trend, namely, hyper automation. The future of business agility and resiliency are with hyper automation. No longer is it a consideration of what job a robot will take from a human; instead, work is being scaled up to a framework that empowers technology-enabled employees. Hyper automation takes digital transformation a step forward from AI-driven Robotic Process Automation (RPA) and includes technologies like IoT to improve operations. Briefly, intelligent automation converges with AI, connecting processes, people, and products. This end-to-end automation makes a determined approach to automate a maximum number of businesses and IT processes as can be automated and are necessary. There is an expectation of speed, efficiency, and discipline in identifying processes and then automating them. Hyper automation empowers businesses to achieve the desired level of scalability and remote access. Its main uses are in manufacturing and the global supply chain, addressing the issue with prevailing inefficiencies. Businesses that use high-volume processes can apply the data from a hyper automation framework to accelerate growth and enable real-time responses to issues that may arise.

6th Trend: Consumer, employees, and other data subject concerns on privacy and data protection will lead to Privacy-Enhancing Computation (PEC) becoming mainstay. With usable data becoming invaluable, its security demands extra care,

especially in untrusted environments. Using a variety of privacy-protection techniques, PEC allows data to be gainfully used while still being compliant with privacy requirements. Technologies converge in PEC to, first, create a safe environment for processing, then, encrypt data, before any processing and analysis of data. PEC is especially useful for conducting safer research over regions without the fear of losing confidentiality or privacy. B2B partners and consumers alike find comfort in dealing with businesses that have adopted one or more PEC technologies.

7th Trend: After the promising technology trend of IoT, the new trend here to stay is Internet of Behaviours (IoB). IoT is related to 'things' built with WiFi connectivity, allowing them to be connected to the Internet and to each other. Increased digitization is creating increased information and data. IoB, relying on customer data, provides valuable insight into consumer behaviour, preferences, and purchasing decisions. Wisely used, IoB, can help a business not just remain competitive, but maintain an edge over competition by enhancing user engagement and client experience. IoB involves the analysis of data, which has been gleaned from diverse sources, from a psychological perspective.

8th Trend: With frequent power outages, remote locations, and last-mile challenges, India presents a perfect opportunity for Edge Computing or Intelligent Edge (EC). With 5G, the world may heave a sigh of relief in terms of connectivity and system efficiency, but this may not be true for all of India. Though data can now be processed in the cloud, each second of computing counts. EC enables connected objects in a network to self-process data. EC not only solves a connectivity issue but is also hugely relevant in solving a

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wide array of challenges in industries where time is of essence. Mission critical operations of the healthcare, manufacturing, and logistics industries are lapping up this new approach to data processing. Again, those industries and individuals who were hesitant in adopting technology and intelligent devices will welcome them when they offer improved computing and connection speeds.

EC bypasses the latency caused by getting data to a data centre for processing. Processing closer home allows EC to process time-sensitive data in remote locations with limited or no connectivity to a centralized location.

9th Trend: The health crisis created by the pandemic has made people more aware of their own genetic predispositions. What they now are seeking are Genetic Predictions. The quantum increases in computing power help us to conduct a better analysis of individual genomes today, providing far more accurate predictions of health conditions. Health being a paramount consideration with every individual, predictions based on DNA may be the next big technology trend. Of course, this gene-determined technology would also help in better diagnosis and far more personalized treatments. The human genome is complex, but technology is improving and should catch up sooner than later.

10th Trend: Continuing pandemic, or otherwise, the Distributed Enterprise (DE) is here to stay. In many ways like what Gartner calls the 'everywhere enterprise', DE is not just a reflection of remote working technologies, but rather a digital-first business model to improve employee experiences, digitalize consumer and partner touchpoints, and build out product experiences. Smart working and virtual services are creating the new buzz. DE has helped business not

only navigate the pandemic predicament, but also reach higher levels of competitiveness. Its essential components include digital readiness, virtual collaboration, and a people-centric approach.

Today, a business attractiveness to employees, partners, consumers, and future investors is intrinsically linked to its resilience to change, highlighted by innovative remote working policies which protect every network gateway. Does the business have a sustainable 'anywhere operations' model? Each technology tool that helps a business to achieve a DE status, be it Zoom, Trello, Slack, Microsoft Teams, ClickUp, Proof Hub, or other, is poised for exponential growth.

About Mr. Sajai Singh

Sajai is the Co-Chair of the Firm's Corporate Practice. His practice focuses primarily on Mergers, Acquisitions, Joint Ventures, strategic alliances, restructurings and financings (whether debt or equity), with particular emphasis on cross-border transactions.

Sajai is the Chair of the International Bar Association (IBA) Technology Law Committee.

He is an acclaimed transactional lawyer with more than 28 years of experience representing a wide variety of industries, businesses and sectors funnel investments into India. This wealth of experience means that he understands the issues that arise in major transactions and can provide solutions to resolve these issues; providing advice that goes well beyond legal and contractual matters, and into the technical and commercial heart of the success of the transaction.

Sajai also does corporate work related to regulatory matters, internal investigations and conflict resolutions, including:

- all aspects of white-collar crime,

Finally

The pandemic has increased the pace of change and innovation. I note that short-term technology solutions are turning out to be more long-term technological mainstays.

Convergence of technologies is being facilitated by the compelling new higher-frequency radio waves solution - 5G. Nothing remains isolated; in fact, each technology trend supports another. These are exciting technology times, riding on the back of a fearful health crisis.

Yes, I have not included quantum computing, crypto currencies, blockchain, neural interfaces, or nano technology in my list above. I may revisit them a few years after 2022!

government investigation and compliance with the Prevention of Corruption Act, the Money Laundering Act, the Foreign Corrupt Practices Act (FCPA), UK Bribery Act and other local and international anti-corruption laws. Indian employment law, industrial relations, whistle blower complaints and executive compensation practices.

In terms of sectors, Sajai maintains an active practice in the Knowledge based industries sectors. He is known as a pioneering lawyer supporting the development of the Information Technology sector in India. He regularly publishes and speaks on a variety of legal, regulatory and transaction related topics, specially focused on cross-border trade.

Sajai is passionate about education, and regularly conducts client education seminars, executive education programs and boot campus for young lawyers. The Cyberspace Camp™ program is one such program he has patronized and promoted in several developing nations. Sajai is the Past President of ITechLaw, the International Technology Lawyers Association, headquartered in the US. This is a first for any Asian.