

EL-SOFTECH

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VOLUME 17 ISSUE 2 MAY 2022

STARTUPS' Puzzle



◀ **Skills to drive Electronics Industry**

Dr Abhilasha Gaur
COO, ESSCI



◀ **A Marvellous Journey Chasing Success**

N. K. Verma
CMD, Parker Overseas



◀ **VCs in a Transformation Mode in India**

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Managing Partner & Founder
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◀ **MediSys EduTech: Driving to Scale Up**

M. N. Rao
CEO
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◀ **Shri Piyush Goyal, Union Minister of Commerce & Industry, in conversation with Shri Sandeep Narula, Chairman, ESC, at the Investors' Round Table Conference of NICDC**

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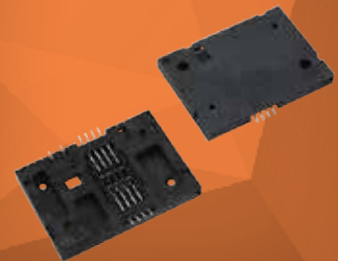
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ZIG-ZAG GAME OF STARTUPS



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Gurmeet Singh
Editor

EDITORIAL

“ Coming specifically to the startup landscape in India, driving innovation is an army of tech-enabled startups in sectors like healthcare, education, financial services, travel & tourism, and logistics, among others. India has now emerged as the third-largest startup ecosystem in the world. ”

There is a convergence of views that startups hold the key to future domination of the ICT sector. One has to delve a little deep into the subject to unravel the rationale of the conundrum. The uniqueness of the ICT sector lies in the proliferation of players or actors. In the software segment, Business Process Outsourcing (BPO) has been an integral part of the ecosystem and has several advantages.

Full-stack-supply chain model followed by electronic hardware manufacturing companies, where every segment of production was undertaken by one company, later experienced several downsides. This forced them to change the model. Empirical evidence indicates that not owning the entire supply chain can bring numerous benefits to companies and their clients.

One can source the best hardware from the most cutting-edge leading technology vendors by establishing mutually beneficial relationships with them and earning their trust, resulting in advantageous purchasing and procurement conditions. This can lead to sourcing the best local storage facilities available and considerably cutting down cost, the number of employees, etc by focussing mainly on the quality of local resource providers and building a network of the most consistently reliable vendors.

This approach has led to a proliferation of startups in the ICT sector. Companies, across the world, outsource work and establish long-term relationships with leading manufacturers, vendors, and component manufacturers and strive towards a long-term flexibility model. Vendors who fail to keep up with the times fall out of favour with clients. In their place, new companies get businesses. That is the quintessence of the ICT supply chain and the reason for the proliferation of startups.

Coming specifically to the startup landscape in India, driving innovation is an army of tech-enabled startups in sectors like healthcare, education, financial services, travel & tourism, and logistics, among others. India has now emerged as the third-largest startup ecosystem in the world. The country boasts of around 5,200 promising tech startups – and the number is increasing, leveraging cutting-edge technologies like IoT, Big Data and Analytics, AI, Blockchain, and Machine Learning. These startups are completely restructuring the way business is conceived and carried out in the country. That will hold the sway for the future to emerge as the mainstream of India's development process.

Has India really transformed into a startup enabler? Opinions converge to the point that India has to traverse a long distance to move in the value chain. Studies are numerous to explain what holds back the startup culture in India. Amongst them include insufficiency of talents, lack of risk-taking appetite, inadequate financing, and lack of a proper management system. This month's El-Softtech takes a kaleidoscopic view of the startup system in the country and suggests a number of steps to build on the strengths that India already has to mainstream it. We also believe that it is the route to excellence, creating massive employment and exports, particularly from the electronic hardware segment, which lags considerably behind the software in terms of production base and exports.

Trends in BPO

A new market study published by Global Industry Analysts Inc. (GIA), in its report titled "Business Process Outsourcing (BPO) – Global Market Trajectory & Analytics", gives some fresh perspectives on opportunities and challenges in a significantly transformed post-Covid-19 marketplace.

Players covered in the report include Accenture Plc, Alight Solutions LLC, American Data Exchange (AMDATEX), Atos SE, Automatic Data Processing, Inc., Capgemini SE, Capita Plc, Ceridian HCM, Inc., CGI Group, Inc., Cognizant Technology Solutions Corporation, DXC Technology Co., EXLSERVICE Holdings, Inc., Genpact Limited, Infosys BPM Limited, International Business Machines Corp., KARVY Global Services Limited, NGA Human Resources, NTT DATA, Inc., Randstad Holding NV, Sopra Steria Group, StarTek, Inc., Tata Consultancy Services Limited, TriNet Group, Inc., Wipro Limited, and WNS Global Services Ltd. It has covered important companies in all geographies, such as USA, Canada, Japan, China, Europe, France, Germany, Italy, UK, Spain, Russia, Rest of Europe, Asia-Pacific, Australia, India, South Korea, Rest of Asia-Pacific, Latin America, Argentina, Brazil, Mexico, Rest of Latin America, Middle East, Iran, Israel, Saudi Arabia, UAE, Rest of Middle East, and Africa.



Global Business Process Outsourcing (BPO) Market to reach \$215.9 billion by 2026

Business Process Outsourcing (BPO), a segment of outsourcing, is defined as a technique of delegating responsibility of a range of business processes to third-party service providers for a fixed consideration. Rapid increase in the size and scope of the BPO industry is attributed to the growing desire of global businesses to rationalize costs and address issues such as shortage of skilled personnel. Various benefits offered by BPO including cost reduction, improved customer services, better focus on core businesses, competitive capabilities, and speed to market, have encouraged enterprises to adopt the outsourcing model. Amid the Covid-19 crisis, the global market for Business Process Outsourcing (BPO) estimated at US\$164.7 billion in the year 2022, is projected to reach a revised size of US\$215.9 billion by 2026, growing at a CAGR of 5.2% over the analysis period. Customer services are projected to record

a 4.2% CAGR and reach US\$69.4 billion by the end of the analysis period. Growth in the human resources segment is readjusted to a revised 4.5% CAGR for the next 7-year period.

US and China Markets for BPO

BPO market in the U.S. is estimated at \$69.2 billion in the year 2022. China, the world's second-largest economy, is forecast to reach a projected market size of \$6.8 billion by the year 2026, trailing a CAGR of 6.1% over the analysis period. Among the other



noteworthy geographic markets, are Japan and Canada, each forecast to grow at 3.5% and 3.9%, respectively over the analysis period. Within Europe, Germany is forecast to grow at approximately 5.4% CAGR. Like other commercial enterprise functions, outsourcing was first conceptualized and implemented in the developed nations, which continues to wield immense authority in the worldwide BPO industry, even after attaining significant maturity.

Finance & Accounting Segment to record 5.8% CAGR

Finance and accounting BPO involve handing over the responsibility and management of finance and accounting business processes to third-party experts. Clients seek outsourcing services for F&A operations primarily to cut costs, reduce complexity of operations for the F&A department, and to comply with regulatory specifications. In the finance and accounting segment, complex processes, such as external reporting, budgeting, accounting, planning, and





forecasting continue to be outsourced due to the growing standardization of these functions. In the global finance and accounting segment, USA, Canada, Japan, China and Europe will drive the 5.6% CAGR estimated for this segment.

Uncertainties in Politico-Economic Policies challenge BPO Sector

The protectionist policies adopted by some governments, specifically the US, during tough economic times could prove to be a potential roadblock for the offshoring industry. Though government policies directly do not restrict clients' ability to contract offshore labour, the adoption of new regulations encouraging protectionist measures could potentially hamper growth in the industry. For instance, the US government has been looking to protect local businesses by implementing restrictive visa regulations for workers from abroad, and discouraging clients from using services of vendors that use offshore labour or that depend on visa holders. These decisions are vital considering the

fact that offshore BPO firms hold an edge due to their offshore leverage, which could be at threat due to such measures.

Ongoing transformations in the political and economic scenarios across the globe are posing several challenges for investors and businesses worldwide. The global BPO sector, which finds itself among the worst-hit segments affected by the fluctuations in the global economy, is currently being impacted by politico-economic scenarios such as the US tariff regime, among others. The shared service and the BPO sector are still growing albeit in an uncertain environment.

Data Sharing

Thanks to advances in data-sharing technologies, one can buy and sell potentially valuable information assets in highly efficient, cloud-based marketplaces. Combine this data with a new array of privacy-preserving technologies, such as fully homomorphic encryption (FHE) and differential privacy, one can now share encrypted data and perform computations on it without having to decrypt it first. This provides the best of all potential worlds: sharing data while preserving security and privacy. This has fuelled a promising new trend. Stores of sensitive data lying fallow in servers around the globe due to privacy or regulatory concerns, are starting to generate value across enterprises in the form of new business models and opportunities. During the next 18 to 24 months, we could see more organizations exploring opportunities to create seamless secure data-sharing capabilities to help themselves monetize their own information assets and accomplish business goals using other people's data.

Cloud Computing

Cloud and software vendors now offer vertical-specific solutions that modernize legacy processes and jumpstart innovation, freeing organizations to focus resources on competitive differentiation.

The healthcare industry initially deployed cloud processes for managing back-office data. Regulatory compliance with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) drove

the next phase of this sector's cloud journey as healthcare organizations began managing patient data in the cloud. Today, pioneering healthcare providers are exploring ways to use cloud-based HIPAA models to improve medical treatments.

Over the next 18 to 24 months, a growing number of organizations across market sectors begin exploring ways that industry clouds can help them meet unique vertical needs. According to a Deloitte analysis project, the value of the industry cloud market could reach US\$640 billion within the next five years. Distributed ledger technologies are changing the nature of doing business and helping companies re-imagine how they manage tangible and digital assets.

Blockchain

Blockchain and other distributed ledger technologies are changing the nature of doing business and helping companies re-imagine how they manage tangible and digital assets. Shared ledgers could eventually become an integral, if invisible, foundation of business operations, allowing established industry leaders to expand their portfolios and create new value streams and enable startups to dream up exciting new business models. First-generation blockchain and DLTs have proven the feasibility of such applications as cryptocurrency trading, clearing, and settlement, but they have also proven to be slow, energy-hungry, and impractical to scale. In addition, adoption was limited by unique challenges associated with transaction verification. For example, cryptocurrencies and other use-cases verified transactions using the proof-of-work consensus mechanism, a complex and lengthy computational process that consumes high amounts of energy and has high per-transaction fees and slow transaction times – 10 minutes or more for each transaction. Such challenges are typical of the early stages of adoption of most technologies, and entrepreneurs, enterprises, and academic institutions set out to industrialize blockchain and other DLT platforms. Today, maturing technologies, evolving standards, and new delivery models are boosting enterprise adoption.

(Compiled and edited from various published sources)

Technology Extravaganza



Cutting-edge Logistics Technologies

Major industries around the world are scouting for cutting-edge technology news to find something that they can use to streamline operations and cut down costs. Logistics company executives do the same, so they can better prepare for the future of their businesses. After all, the logistics industry has traditionally relied on manual processes and the data storage, and it has benefited considerably from new technological solutions.

But what are the new technologies that can change how businesses carry out their operations? We look at some cutting-edge technology examples that are occupying the minds of the major players in the logistics industry.

Artificial and Augmented Intelligence



In the last few years, Artificial Intelligence, or more popularly referred to as AI, slowly found its place in the logistics business. Now, AI solutions are being used for route planning, smart transportation, and demand planning for supply chain management. For the year ahead, industry players can expect a more robust utilization of AI. The use of this cutting-edge technology will make a big difference, as it will be valuable in sustainable solutions and propel the use of last-mile delivery robots and automated picking systems. Experts also foresee the greater use of augmented intelligence to complement AI. When combined with insights from AI, augmented intelligence will provide more value to companies by letting logistics workers do their tasks faster while minimizing their mistakes. Gartner's report (2021) says that augmented intelligence will create roughly \$2.9 trillion of business value, increasing workers productivity by 6.2 billion hours.

Real-Time Supply Chain Visibility



Supply chain visibility (SCV) has become a must-have for any logistics firm. This year, the industry can expect more than just visibility, as SCV will be in real time to satisfy consumer demand for real-time visibility of their orders. Supply chain visibility startups are offering technology that allows companies to use real-time data, such as weather or road



Driverless Deliveries

Companies are venturing into driverless deliveries to help boost efficiency and cut down labour costs. For example, Kroger and Walmart are testing driverless deliveries in Arizona. Regulatory issues on driverless delivery vehicles may take time to straighten out, but logistics industry players can expect more companies to develop this cutting-edge technology.

conditions and traffic patterns so they can respond quickly to dynamic conditions correctly. Discussions on supply chain visibility aren't complete without talking about IoT sensor technology, an essential tool in tracking shipments. Connected IoT devices on packages make tracking a whole lot easier for the warehouse team.

Data Standards and Advanced Analytics

The logistics industry has traditionally stored and processed information using a fragmented ecosystem. This, in turn, has resulted in massive inefficiencies, making it difficult for companies to digitize their operations. This year, logistics companies can expect better data standardization in container shipping, thanks to the Digital Container Shipping Association that is creating conventional information technology standards. Data digitized and standardized in the logistics industry will yield massive benefits. Plus, young startups are working with companies to digitize their data that can be used for predictive optimization and advanced analytics for demand forecasting, improved supply chain visibility, proactive linear planning, unexpected conditions detection, predictive maintenance and last-mile delivery improvements.



Warehouse Robotics

The use of robotic technology in logistics is expected to be more widespread in the coming times. There has been an 18% year-on-year increase in testing for robots in warehouses, says the Global Customer Report, 2019. Innovations in robotics continue through 2020 as more companies research and develop the technology. There's Handle, the mobile and autonomous warehouse robot of Boston Dynamics that has a long reach, small footprint, and visit system. It is capable of helping in unloading trucks, moving boxes, and building pallets.

Wearable Devices



Workers in the logistics industry can now use wearable devices for daily inventories, where they can track certain products anywhere in the warehouse. This allows the logistics firm to save time and lower labour costs. This technology will include monitoring vital signs of employees, such as high-blood pressure, cardiac arrest, and heat exhaustion.

Last-mile Deliveries

Logistics companies are facing monumental challenges with the demands of consumers for fast last-mile deliveries, changing regulations, and higher operating costs. They are banking on technological advances to help them navigate and address these problems. New cutting-edge technologies keep on coming. The industry as a whole will need to embrace them to suit their needs or risk being outmanoeuvred over time.



(Compiled and edited from various published sources)

MediSys EduTech: Driving to Scale Up



"Our primary business model is licensing of content repositories to colleges offering undergraduate education. We also support those keen on developing new colleges with more turnkey solutions."

Mr M N. Rao
CEO, MediSys EduTech Pvt. Ltd

An engineer by profession, Rao has had significant success in managing turnarounds and scale-ups in different contexts. He has a deep appreciation of good governance and management assurance; and a genuine ease of working globally in diverse sectors and contexts. He also has an abiding interest in sustainability, and in design issues; in what it takes to craft new operating models and building enterprises that accomplish apparent odds. Rao held important positions before setting up his own company. Past positions held included MD & CEO, Tata Business Support Services Ltd, MD & CEO, Siemens Shared Services and Executive Vice President (Finance): Siemens Ltd. He also held assignments with multinational banks, NBFCs and a healthcare major in Europe.

MediSys EduTech has been developing ICT driven, curriculum-based teaching and learning aids for medical, dental, nursing and allied health education. Its peer reviewed undergraduate packages are comprehensive, well integrated and provide balanced support to both cognitive aspects of learning and specific competencies in various medical disciplines. MediSys is a frugal and ethical company, which works with a mission to transform healthcare education and thereby, the availability and affordability of healthcare services in the Third World. The products can be swiftly deployed in a college, a state or even an entire country, to improve faculty effectiveness and learning outcomes in a short span of time. El-Softech caught up with its Chairman M N. Rao to discuss about the future plans for expanding the footprints in India and abroad.

El-Softech (E): MediSys EduTech has done pioneering work in the areas of healthcare e-learning and healthcare education designed and crafted for digital delivery. Could you elaborate the vision behind the venture?

Rao (R) : The imaginative application of proven, inexpensive technologies can have an immense impact on most of the challenges the system is facing. Our purpose is to make an impact on learning outcomes, enrolment numbers, and costs of delivering quality medical and allied health education, particularly in underserved regions. There are innovative ways to design and package content constituted as per a curriculum, and to support most of the complex group or individual exercises and assessments that form the bedrock of the knowledge and cognitive components of medical education. The idea is to do this across the world, to reach out to geographies that have a deficit of good teachers and capital, and to fuse this aspect of our product/ service design with new thinking around

how the tactile components can be added via skill development centres and hospitals. The idea is also to use ICT extensively to achieve important aspects of the design objectives. Health systems in many parts of the world are in need of swift increase in qualified staff, and disruptive ideas and smart execution are very much required.

E : How did you evolve into the current business model as a specialist in developing content for medical, dental, nursing, and paramedical students? Are you planning to diversify into new areas?

R: Our primary business model is licensing of content repositories to colleges offering undergraduate education. We also support those keen on developing new colleges with more turnkey solutions. We figured that it will be necessary to become comprehensive, covering every aspect of a standard curriculum. There are several types of learning elements / exercises, set to a well-defined sequence, and assessments to go along. So, we are a little like the "Intel Inside" idea, helping teachers, examiners, students on the one hand, and other stakeholders, who work to see enrolment numbers increase, standards to improve, and costs to reduce, in the face of well-documented challenges. We will soon be offering turnkey services, including online / live teaching, and co-promote a few new-age colleges, particularly outside India.

E : The visionary approach of MediSys upholding the potential of e-learning particularly in the health sector is a boon for countries like India. How far is your reach within India? Which are the states for whom you are developing the curriculum?

R: We see traction in a few states, and they cover a couple of states where the infrastructure is very good, and two, where infrastructure is very poor. So, the demand is everywhere, though for different reasons. We are trying to map the demand and are evolving strategies for tapping the potentials in India and beyond.

Medical and Allied Health Education: Context for design of Medisys products and services



Deficit of good teachers:

To meet requirements of existing colleges as well as planned expansion in certain regions (new institutions, increasing annual enrolments). Content packs and LMS that facilitate varied online blended academic sessions

Heterogeneous classrooms:

The need to provide efficient, effective remedial and supplementary education for weaker learners, in important or 'difficult to master' subjects/skills. Intensified support for assessment and practice readiness

Deficit of pedagogy for a new generation of students:

Visuals, text, speech integrated into a dynamic new composition, seamlessly connecting horizontal and vertical integration elements as also related exercises and lab sessions, etc.

Need for more consistent standards:

The teaching, learning and assessment of all that matters in colleges of different vintage, geographies and constitution. Sharp differences presently, between rural/urban, new/old and Government/private colleges (on average)

An acute need for accelerated human resource development

Seamless transitions:

Online, campus, lab, field site and hospital – learning happens everywhere
Can an LMS and an assessment system follow you seamlessly?

Interdisciplinary learning:

Professional practice requires agile, timely, interdisciplinary exposure and study. Content design and ICT may be critical to this

Learning through deliberation and doing:

We recognise this is vital, and our SGDs, modules on clinical reasoning development are important contributions that can facilitate this

Live and up to date:

So much is changing so fast.
Is this a system geared to capture and reflect changes in laws to clinical practice, innovations, and therefore changes in curriculum promptly?

Across the spectrum, efficiency and acceleration in scaling up capacities, resilience in difficult times

E: When MediSys started its journey into e-learning, no one could have ever imagined the possibility of a pandemic that overnight transformed globally how we taught and learnt. The relevance of your product had a meteoric rise. Can you shed some light on the impact of pandemic - both the challenges and the opportunities you faced?

R: During the pandemic, we worked on further improving the online features of the Learning Management System and the assessment / evaluation system. Indeed, during the pandemic it was a learning process for us which we hope to leverage in the future.

E: Who are your partners and collaborators for delivering the service?

R: Governments and regulators, hospital networks, book publishers and telecom / ICT companies: These constitute our expanding partner ecosystem in effective delivery of our products and services.

E: Medical education is crucial to develop a county's health sector that impacts its economic growth. Many developing and poor countries are

constrained due to lack of medical training. Given the relevance of the product in strengthening medical education, do you have plans to expand internationally which are your target regions?

R: Yes, of course! Even though we are presently working on licensing use of our packages to colleges / governments in



English speaking countries, the plan is to produce Arabic, French, Spanish and other language versions within the next two years. We are also geared to produce and incorporate specific lecture sessions, group discussions and case presentations that may be necessary at times to completely adapt our repositories to the context of a given geography. Luckily, curriculum of many countries / regions are converging, and this makes our materials universally relevant to a substantive degree. We are particularly looking to support the setting up new colleges in government/ private sectors, and working on national platforms for licenced use of our packages, and setting up studios and relay facilities for countries that wish to partner with us in long-term development.

A Marvellous Journey Chasing Success

An Interactive virtual meeting with Mr N.K. Verma, CMD, Parker Overseas



The electronics industry was a toddler in the 1990s. Not many would have ventured into that uncharted domain. Those who did so, most of them burnt their fingers and exited the field. Policy tailwinds were inclement, the ecosystem had many grey areas. But a few people have succeeded in the game and built their edifice in the most challenging situations. One among them was Mr N.K. Verma, Chairman and Managing Director, Parker Overseas. In many ways, he earned a place in the expanding ICT sector. Foremost is the gradual progression he made in the electronics sector steadily moving up in the value chain and later becoming an integral part of the global supply chain. Here is the fascinating success story of Mr Verma as it has been unfolding since 1988. It is a story of how determination and passion can blend to script transformation under the most trying times.

Verma had a head start in 1988 when he

Wound magnetic components are an integral part of any electronics hardware. It is a crucial component like a chip, the self-reliance of the product is important for the growth of the electronics industry. Wide range of products that the Parker Overseas produces cater to sectors like pharmaceutical, power and energy, automobile, aerospace, electrical, mining, metal industry, cleaning and hygiene industry, education and even nuclear, telecommunication, and the list is growing.

formed a small proprietorship company and began manufacturing PCBs for the then prominent television brands like Crown and Uptron. Those were tumultuous times, and an entrepreneur could survive only through his sheer grit. He reminisces how tough it was to survive under the most hostile licence raj. Probably, surpassing those obstacles must have

helped in cultivating an indefatigable spirit to excel against all odds. Very keen on expanding his market, he formed a 100% E.O.U company under EHTP scheme exclusively for export "Parker Overseas" in 1996 and started exporting chokes and transformers when the country hardly had any export from those segments. This was much before India consolidated her prominence in the international software space. Within a short span of time, it has grown and new destinations were added subsequently.

Parker Overseas is still growing. Understandably, the ecosystem over the years has improved. "Yet, we have to traverse miles to catch up with the best electronic manufacturing destinations in the world," he says, adding that the infrastructure has to be toned up to emerge as one of the dynamic electronic hardware hubs in the world. When asked about China's unchallenged leadership





N.K. Verma
CMD, Parker Overseas

“Our manufacturing unit is a mix of fully automatic and semi-automatic machines to balance the product mix ranging from SMD components to High current inductive components. With a delicate balance of speed and complexity established at our production lines, we are currently serving our customers with MoQ ranging from 500 pcs to 500k pcs.”

position in manufacturing and India aiming toward putting up a challenge and positioning itself as an alternate for China, he said it was a good thing to compete but buttressed his view with a word of caution. “Challenging China is a herculean task, and I absolutely have no doubt about the talents and capabilities we possess as a nation, but I’m very much concerned about the infrastructure we have in India which is the only major impediment to growth. Infrastructure is the key to any type of economic activity. Look at the delays in our ports, the roads have to be excellent and the shipping documentation should be made more export-friendly as also import-friendly,” he observes.

It is fortunate that our able Prime Minister is very keen and has shown extra interest in monitoring key infrastructure projects in the country. “I’m sure soon we would be able to see the unclogged roads and swift and uninterrupted movement of cargo from the manufacturing hubs to its final destination,” he said. He has participated in prominent international exhibitions like ASIS HONGKONG, JETRO GLOBAL PARTS & MATERIALS FAIR, PCIM EXHIBITION, NEW ELECTRONICS, APEC, MIDEST, and the list is expanding. “These are the places where one can do a lot of business since buyers are from all over the world, across geographies and sectors,” he points out. That is how he widens his horizons and keeps himself updated on the developments happening in his segment. He says his major competitors are from Europe and

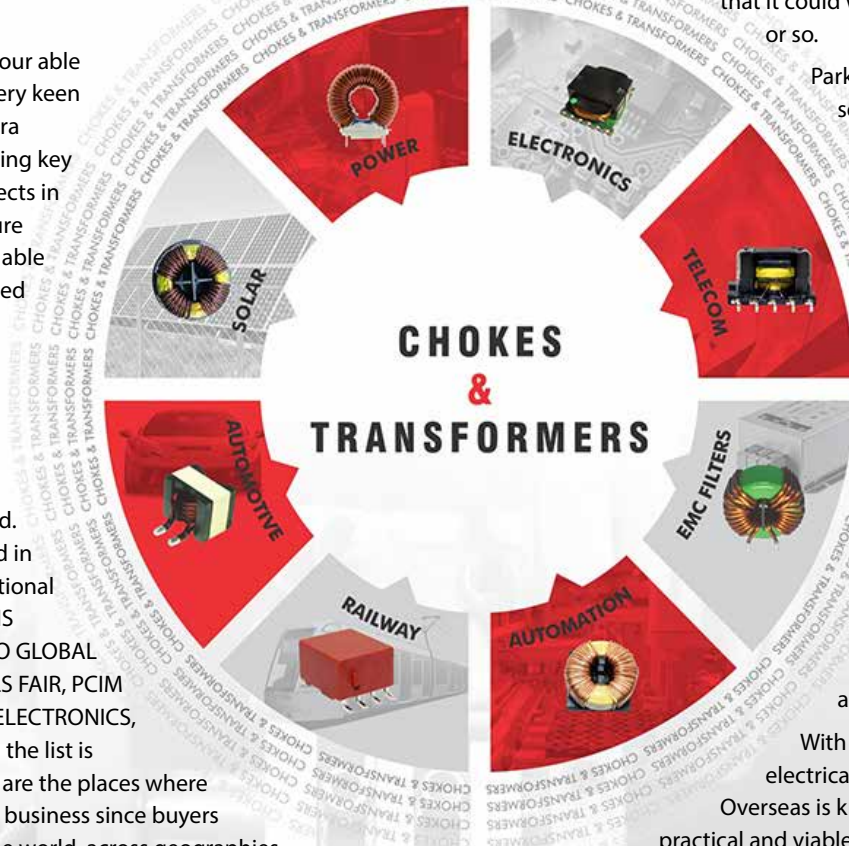
has a very strong urge to maintain his products at par with the excellence of international standards.

The grueling act of export promotions that he has undertaken is paying off. His products are mostly exported to Europe and the US. In Europe, Germany is his largest export destination and the rest are Italy, Denmark, Spain, and Switzerland. He even exports to China that is for his European clients who assemble their products in China. His products are wide-ranging and exhaustive to include Thru-Hole (TH) & Surface Mount Type (SMT), Wound Magnetic Components like Transformers, Inductors, Chokes, Coils, Line Filters, Power Transformers, Current Transformers, Power Toroidal Transformers, Switching and SMPS Transformers, and Modules for various applications. In trading, he is the authorized distributor for four companies – 3M, TESA, Mahindra CIE, and TDK (EPCOS). Verma reiterated that his trading company is complementary to his manufacturing company since most of the things in the production company are using those as an input components. That is how he is leveraging his supply chain with his manufacturing capabilities.

Most of his input materials are imported, even the copper wires, he says. “We don’t produce the high-quality copper wires, which are used in our products and presently there is a spiral in the prices of inputs, which can be attributed to manmade scarcity to make a killing,” he laments, adding that the current shortages of input materials are created artificially to make a huge profit. Upon asking the proportion of imported materials that he is using for manufacturing goods to be exported, Mr Verma said that it could work out like a meaty 30 percent or so.

Parker Overseas has come out with several unique products. One among them is Wound Magnetic Components, which are an integral part of any electronics hardware. It is a crucial component like a chip, the self-reliance of the product is important for the growth of the electronics industry. A wide range of products that the Parker Overseas produces cater to sectors like pharmaceutical, power & energy, automobile, aerospace, electrical, mining, metal industry, cleaning & hygiene industry, education, and even nuclear, telecommunication, and the list is growing.

With over 32 years of experience in electrical products and processes, Parker Overseas is known for consistently delivering practical and viable solutions and products for customer-specific requirements, with a promise of Quality, Durability, and Safety. That is also the mantra of the company and its punchline.



Zig-Zag Game of Startups



It is estimated that globally startups generate nearly US\$3 trillion in value. However, it is being severely impacted now by the Coronavirus pandemic, according to several reports including the latest Global Start-up Ecosystem Report. Even before the crisis struck, startups ecosystem was facing fundamental challenges, emanating mainly from skewed spread of startups across geographies and uneven distribution in the same country, where startups proliferated. Two main reasons were pointed out for the lack of growth of the sector: one, drying up of the funds from the venture capitalists, and two, the severe crunch in the consumer demand.

VC funding fell 20 percent worldwide in the first three months of 2020 and the spillover of such shortages are still persisting. It plunged 50 percent in China. The report states that 72 percent of the world's startups saw their revenue fall since the start of the crisis and the decline averaged 32 percent. 40 percent of all startups experienced a 40 percent fall in revenue or more. Only 12 percent recorded significant growth. Travel & tourism suffered most, a 70 percent fall in revenue. The automotive sector registered a 43 percent decline. The tech sector performed better, though it suffered a noticeable financial impact. Social media & messaging startups saw their revenue declined 22 percent, Gaming fell by 19 percent and Blockchain & Crypto contracted 14 percent.

Startups are often linked with the rise of Silicon Valley. This tech company concentration around Stanford University has had a huge impact on the technological development of the world since the 1970s. The term Silicon Valley was first coined in 1971 in a magazine called Electronic News, although it was used in a limited sense. It mainly referred to the companies in the area that were manufacturing semiconductors. The main ingredient that time for semiconductors was silicon and that is why the name Silicon Valley, covering the whole area

of Palo Alto, Cupertino, Sunnyvale and Mountain View, among others.

Most Startup-friendly Countries in the World, 2021.....

The United States secured its top spot as the most startup-friendly country in the world for a number of reasons. Its research and development (R&D) capacity is key among them. America's strengths include a very high rate of startups, robust angel and venture funding. It is important to note that the U.S. gets high marks for 'building its knowledge economy'. China's

startup ecosystem comes second in terms of numbers and first in East Asia. Though the exact number of startups in China is still being debated, some reports indicate that there are more than 11800 incubators supporting more than 0.6 million startups. As against that, in India, there are 520 incubators which can support 6200 startups every year.

Indian context

Even as India continues to improve its annual Ease of Doing Business ranking, its startup ecosystem is not keeping





World Top ICT Startups Top ranked companies founded since 2017
Scailyte AG, Switzerland
nanoleq, Switzerland
VAY AG, Switzerland
Assaia, Switzerland
Gilytics GmbH, Switzerland
PLIMES Inc., Japan
Morgen Technologies GmbH, Switzerland
Exnaton AG, Switzerland
Archlet AG, Switzerland
Modulos AG, Switzerland
Peregrine Technologies GmbH, Switzerland
CareerFairy GmbH, Switzerland
CryptoNext, France
Adresta AG, Switzerland
AI2C Technologies AG, Switzerland
Anapaya Systems AG, Switzerland
Ampeers Energy, Germany
Mantis Technologies GmbH, Switzerland
AI Retailer Systems AG, Switzerland
ZUVA Inc., Japan
aiNET GmbH, Switzerland
Pathmate Technologies AG, Switzerland
Validity Labs AG, Switzerland
Inspacion, Switzerland

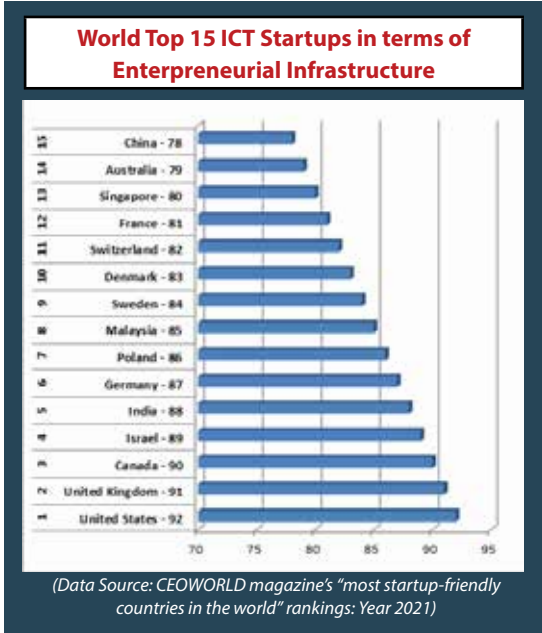
(Source: Compiled from various publications)

pace. According to the global innovation mapping and research company StartupBlink (2021 report), which gathers local data of every country to rank their startup ecosystem based on the quality of startups, business environment coupled with the quantity, India has moved down from 17th position in 2019 to 23rd this

year (2021) out of 100 countries. The third-largest ecosystem - India, in terms of number of technology startups, has been ranked even behind emerging ecosystems such as Estonia, Lithuania, Brazil, Denmark etc. The ranking has been led by the US, the UK, and Israel while China has improved its rank by 13 spots to 14th position this year

List of Countries that top in Startups (2020)
1. USA - 71517
2. China - 21500
3. India - 13218
4. UK - 6274
5. Canada - 3353
6. Indonesia - 2350
7. Germany - 2301
8. Australia - 2295
9. France - 1570
10. Brazil - 1405

(Source: Compiled from various publications)



and Japan stood at 21st spot.

Moreover, among the top 100 startup cities, only four India cities were captured - Bengaluru (down by three ranks to 14th position), New Delhi (up by three spots to 15th position), Mumbai (improved by seven spots to 22nd position), and Hyderabad (falling 21 ranks to a disappointing 96th position). Last year, seven cities were ranked in the top 100 list versus four this year. "This year has shown that the leap the Indian ecosystem had registered in its 2019 rankings was a bit premature," the report titled StartupBlink Ecosystem Rankings Report said.

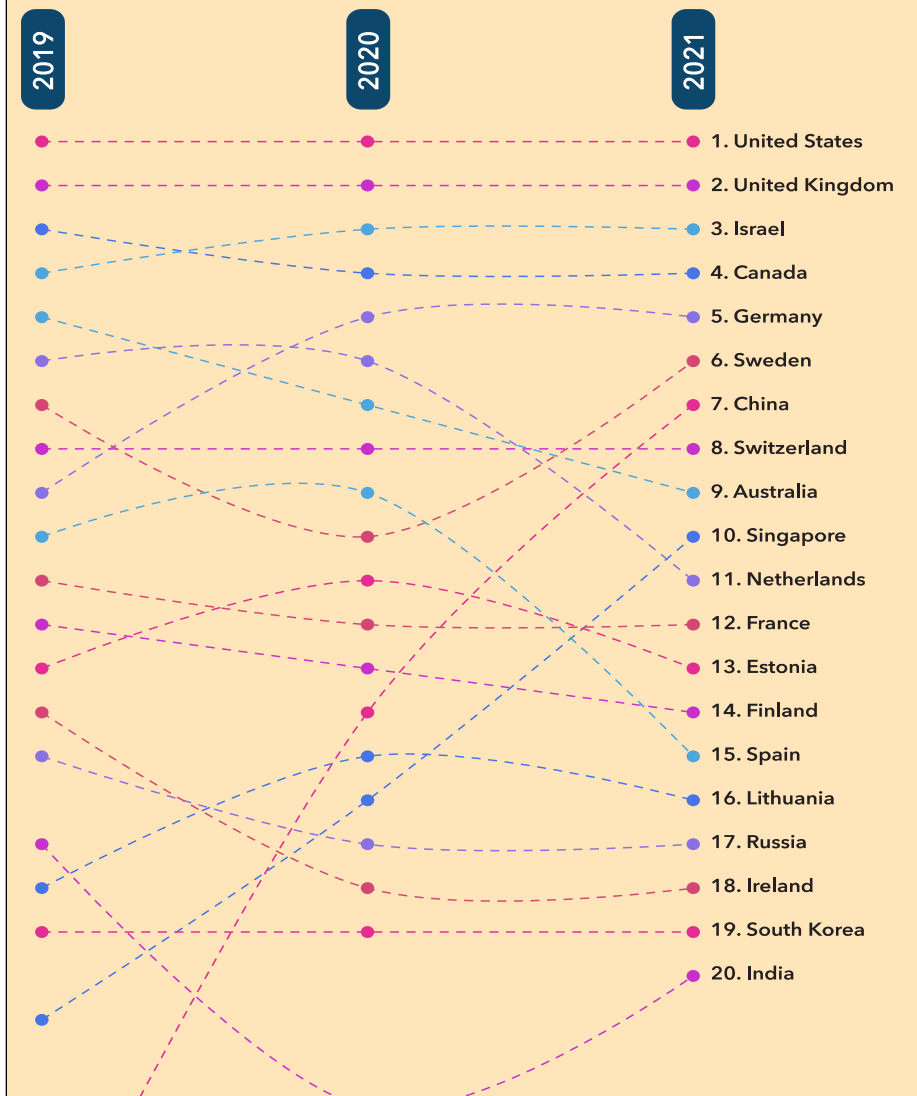
India continues to face "some immense infrastructure problems" affecting

entrepreneurs and startups such as “internet speed is low compared to most other countries, and power outages are frequent.” The report said urging the government to improve the infrastructure as “other countries in the region are growing fast.” Nonetheless, India enjoys a relatively better ranking vis-à-vis other countries in the Asia-Pacific region such as New Zealand (47), Indonesia (54), Thailand (50), Vietnam (59). Others like Bangladesh, Sri Lanka, Nepal and Pakistan were placed at 98, 99, 100, and 82 respectively.

StartupBlink measures ecosystems based on the number of startups, their quality and business environment. The ranking is based on data from over 60,000 startups, over 14,000 co-working spaces, 100 global influencers based in multiple cities.

The report comes amid the Covid times when startups have been reeling under the pandemic impact due to poor demand, supply chain disruption and squeezed inflow of funding from investors. In fact, a Nasscom survey in April 2021 suggested that around 40 per cent of startups are about to shut down or have already halted their operations temporarily this year. Moreover, 70 per cent claimed that their survival is at stake with less than three months of runway left while revenues have declined for 90 per cent of over 250 startups surveyed.

Trends in Top 20 Countries



The Global Startup Ecosystem Index Report 2021

Top Unicorns in terms of valuation world-wide

What makes Start-ups tick
Innovation
Innovative ideas
Innovative route to market
Innovative product
Growth
Exceptional growth
Exceptional growth strategy
Management
Societal impact

(Source: Compiled from various publications)

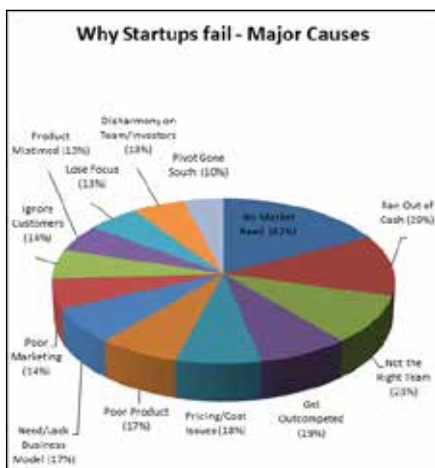
Rank	Unicorn	Valuation (\$billion)	Country	Industry	Investors
1	Toutiao (Bytedance)	75	China	Digital Media/ AI	Sequoia Capital China, SIG Asia Investments, Sina Weibo, Softbank Group
2	Uber	72	USA	On-Demand	Lowercase Capital, Benchmark Capital, Google Ventures
3	Didi Chuxing	65	China	On-Demand	Matrix Partners, Tiger Global Management, Softbank Corp.,
4	WeWork	47	USA	Facilities	T. Rowe Price, Benchmark Capital, SoftBank Group
5	JUUL Labs	38	USA	Consumer Electronics	Tiger Global
18	One97 Communications (Paytm)	10	India	Fintech	Intel Capital, Sapphire Ventures, Alibaba Group

(Source: ceoworld.biz/2019/04/15)



Top Reasons Why Startups Fail Globally

A survey in the USA put these 13 factors as the major causes for failures of startups.



Almost all new companies fail: 50 percent after five years and 70 percent after 10 years. The survey found that 46 percent of all companies in the US fail due to “incompetence.” That category includes everything from “emotional pricing” to “no experience in record-keeping” to “nonpayment of taxes.” The next 30 percent failed due to “unbalanced experience or

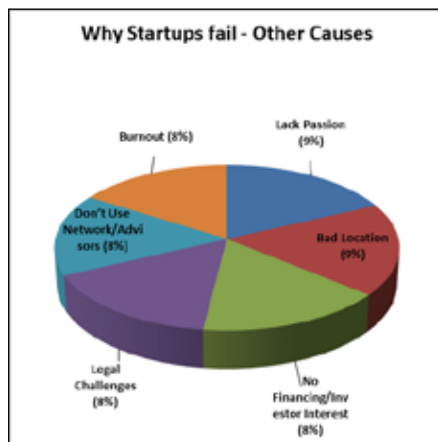
Top 11 Indian startup ICT Companies which are in the reckoning in India during 2021	
CropIn	A leading AI and Data-led agri-tech organization that provides SaaS solutions to agribusinesses globally using deep learning
HCL Technologies	A global IT services company, working with clients in the areas that impact and redefine the core of their businesses
MooFarm	An information technology company that bridges the technology gap to help marginalized dairy farmers
Digital Green	To integrate innovative technology with global development efforts to improve human well being
iKure Techsoft	To position India as a global hub for health and medicine
Yuktix Technologies	Digital Assistant for agriculture farm monitoring and risk management
ALC India	A leading management consultant in India, focusing on promoting sustainable livelihoods for the poor
Smart Scool Education	An e-learning company providing innovative educational solutions to various educational institutions
Vayavya Labs	An Embedded Software Tools & Solutions company. Catering to the domains of Semiconductor, Automotive & Communications
Devas Multimedia	A satellite communication service provider company
ReportsWeb	Provides premium market intelligence, strategic insights and databases

(Data Source: Crunchbase and SemRush)

lack of managerial experience”, followed by 11 percent failing due to “lack of experiences in line of goods or services.”

But while the failure rate for new companies in general is high, they’re nowhere near the failure rates of startups. A commonly cited number is “90 percent of all startups fail,” but one study by Harvard Business School senior lecturer Shikhar Ghosh found that the number might be closer to 75 percent. The “real” number is probably somewhere in between the two.

Other reasons ascribed to startups failure include:



Reasons for failure unique to India

Here are some of the major factors, why most startups fail in India:

1. Lack of Prioritisation

Most people think a startup means a lot of money. Their main focus is money, rather than solving someone’s problem. You’ll eventually get money, and it’s not like people don’t make money from startups but, before that, you need to understand the need of the market, you’ll need to solve an actual or widely faced problem.

2. Lack of Research

People get super enthusiastic at first, they get super pumped to start a business/ startup. But, they actually forget to do the actual research about their product, market, and most importantly, their competitors. Just after thinking of an idea or product, they jump into its launch. That’s where most of the startups lack.



Startup India: How Indian Entrepreneurs, with Top-Notch Tech Chops, are Conquering the world

Disruption was an alien word in India — until recently. For a civilisation that has sworn by the Hindu rate of growth for centuries, it’s a capital renaissance now, literally.

India’s enterprise technology and deeptech companies have begun disrupting the way how hardware and software, designed to meet the demands of a large organisation, are being conceived and delivered to the world.

From the global back-office to now being the IT-backbone globally, Indian startups have made great strides in how tech brains from the region capture the global narrative.

As clichéd as it may sound, the writing on the wall is clear.

India is taking the centre stage, globally.

The country’s software-products industry is expected to post \$30 billion in yearly revenue by 2025 as local players expand globally and several new companies get into the products space. A recent report by IT industry body, Nasscom, and market research company, UnearthInsight, says India is expected to capture around 8%-9% share of the global SaaS market by 2025.

Within enterprise software, the theme that has emerged central to many sectors is the use of cloud-based services, artificial intelligence, and machine learning-based offerings. From Ed-tech, Fintech, HR-tech, and Agri-tech to Health-tech, the new tools are changing the way traditional businesses have been operating across sectors.

Sample this: The International Data Corporation (IDC) has predicted that by 2026, 60% of enterprises in India will combine human expertise with artificial intelligence, machine learning, natural language processing, and pattern recognition to augment foresight across organisations. This will make workers 20% more productive and effective, the technology forecaster said in its FutureScapes 2022 report.

In this deep dive, we look at how the industry has come about.

It’s all about the funding boom, the external and internal challenges the industry faces, and the way ahead.

Gaining critical mass: a maturing Ecosystem

The SaaS landscape has matured in the last





decade. Within SaaS, horizontal and vertical business models have emerged. Horizontal business software remains the largest sub-segment while vertical business software and horizontal infrastructure software constitute the remainder.

A key metric of the maturing ecosystem is also on how these companies are gaining critical mass and adding to the revenues. According to industry estimates, in 2021, more than 35 Indian SaaS companies had more than US\$20 million in recurring revenue (ARR) and a dozen clocked more than US\$100 million of ARR.

The funding taps flows on...

The number of SaaS firms in India have more than doubled in the last five years and has led to heightened investor interest, too.

SaaS companies such as Mu Sigma, Postman, BrowserStack, Zenoti, ChargeBee, Darwinbox, Innovaccer, Mindtickle, Amagi Media Labs, and Hasura, among others, have crossed a billion dollar in valuations to enter the coveted Unicorn Club in India while having scooped up capital from risk investors.

Investments in Indian SaaS rose to US\$4.5 billion in 2021, a 170% jump from the 2020 level, the Bain & Co. report shows. "This interest spans both, early-stage Indian SaaS companies with an 85% increase in average value of seed rounds and later-stage SaaS deals with a 20% increase in share of Series D+ funding rounds, over 2019."

The pool of capital chasing such opportunities has also widened. From global crossover funds to sovereign funds to dedicated SaaS-focussed ones, capital is now available in abundance. Even the domestic institutional investors have 'come of age' and have now started participating in sector-focused funds.

Funds such as Pi Ventures, Mela Ventures, Antler Global, and Speciale Invest among others are now dedicatedly pursuing opportunities in the segment.

Challenges: overcoming one at a time

The competition from low-code, no-code companies, that offer a faster go to market opportunity is growing, and Indian firms are likely to course-correct to meet the rising demand.

Moreover, localisation — that is adapting to the local demand in terms of product capabilities, ease of use, and go-to-market — will remain a key factor.

India recorded a total of 380,000 job postings for cloud roles, a 40% increase over 2019, according to an August 2021 Nasscom report in partnership with Accenture and TCS. India, it says, managed to close around 115,000 of those openings, leaving 265,000 postings unfilled. This massive gap is expected to widen to 769,000 by fiscal year 2025, and that is pushing Nasscom to put more emphasis on creating cloud talent.

This will need a concerted effort from various stakeholders including educational institutes, government, venture capital investors, and successful startup founders.

Countries such as the US and Canada have taken up initiatives to support SaaS growth. Israel, China, and the UK have also developed a robust SaaS ecosystem, especially in cybersecurity, through targeted interventions from government and universities.

Close to 500 new multinational companies said they are likely to set up captive centres in India by FY25. Currently, India hosts around half of the global capability centres (GCC), around 1,300, employing close to 1.3 million people, generating \$33.8 billion in annual revenue in FY20. Aided by the pandemic and the push it gave to the remote working culture, GCCs are increasingly looking at India to meet the rising demand for cheap labour.

(The views and opinions were collated by El-Softech by talking to IT experts)

3. Lack of Passion

As said earlier, most people don't have actual passion, they either just do it for the money or they start it just by looking at others or being influenced by others. Running a startup requires passion and most importantly patience.

Start up schemes in India

The government is not only promoting schemes to help the present group of startups benefit from them, but is also motivating the budding entrepreneurs, startups, and students from all domains who tend to be independent and lead the vision of Atmanirbhar Bharat forward. These initiatives have been introduced for the development of the Indian startup ecosystem.

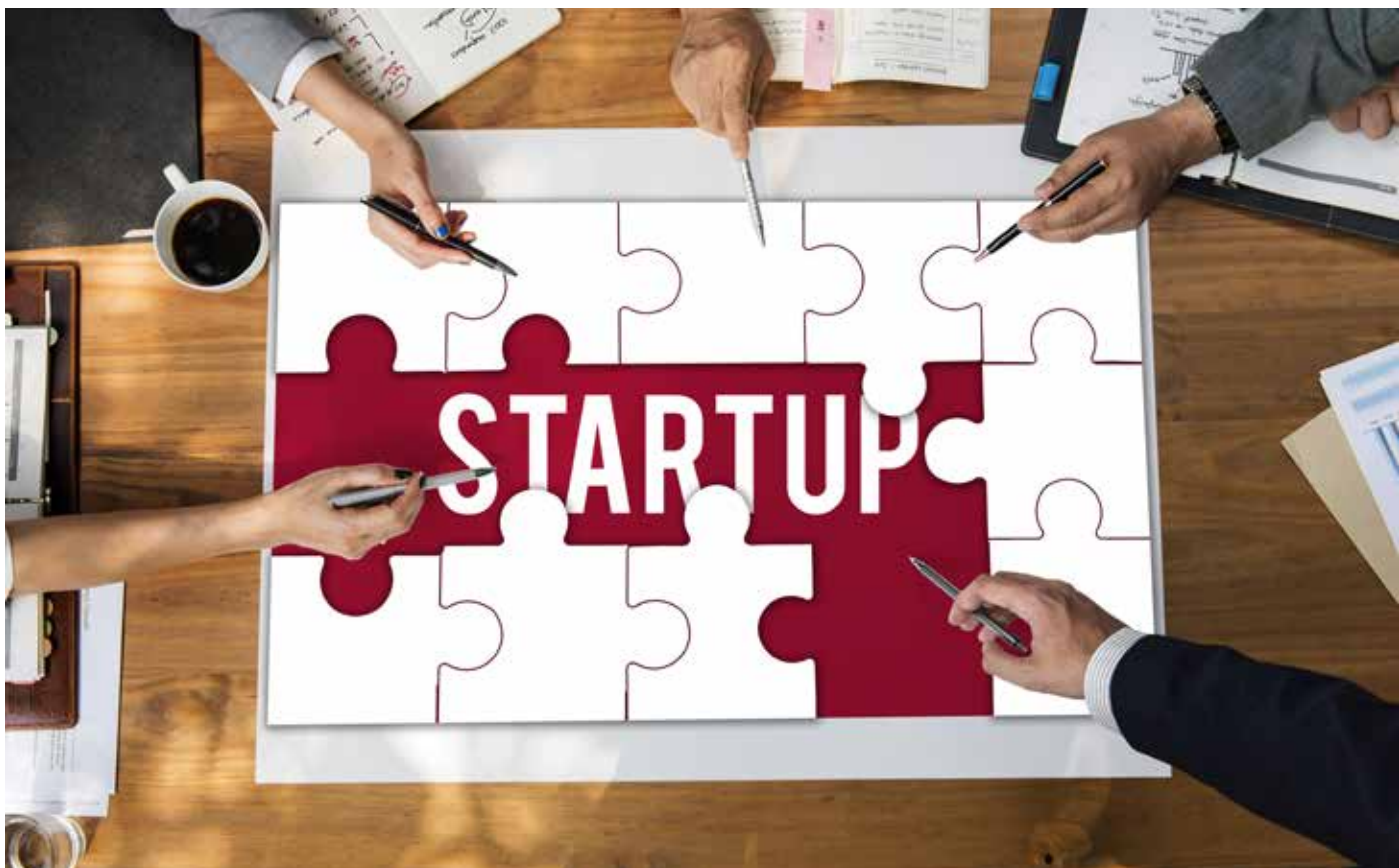
SAMRIDHI Scheme
Startup India Seed Fund
Startup India Initiative
Pradhan Mantri Mudra Yojana (PMMY)
Atal Incubator
eBiz Portal
Support for International Patent Protection in Electronics & Information Technology (SIP-EIT)

Way Ahead.....

India's startups are in a precarious trajectory of growth. On one side, the startup numbers are registering phenomenal growth. At the same time, there are many failures. Some studies indicate that over 92 percent of the startups fail. Some of them fail even after months of its existence. There is no dearth of reasons attributed to failure of the startups. They range from lack of proper finances to absence of a sound ecosystem that can promote startups. Most of the reasons are universal. El-Softech tried to find out from experts what that are unique to India. Some of the findings of the opinion survey are surmised below;

1. Lack of incubators and accelerators

While countries like the US and China have a large number of incubators - a place, with support, staff and equipment made available at lower rent to new small businesses, in India, their numbers are very small. According to some estimates, India



has only 520 plus active tech incubators and accelerators, whereas there are 2165 accelerators and incubators in the US. China also has more incubators and accelerators than in India, although the exact number is a matter of speculation. India has set up Atal Innovation Mission, which included a string of institutions like Atal Incubation centres that were started in 2016, is slowly having impact on the startup ecosystem. There is a need for pacing up the number of incubators and their working to reach out to more startups.

2. Funding

Traditionally, startup funding comes normally from venture capitalist, which assess their working. Venture capitalists normally invests in an enterprise in a short term period. In 2021, VCs invested in India close to US\$ 36 billion, accounting for a major chunk of the investment requirements of startups. It is often said that there is always a mismatch between the business goals of a startup and the venture capitalists and startups. Startups are glued to long-term goals. Lack of understanding between the two often

leads to friction. There is also another factor, which holds up the investment of the VC in startups. Startups are careful about not diluting their stake in the business enterprise. However, VCs sell their stake at the earliest opportunity and exit the enterprises, which can destabilize the management. Also, being the third-largest country in terms of startups numbers and the total quantum of businesses done by VCs worldwide amounted to US\$3 trillion last year, more VC investments should come to India. Also, startups should plan their repayment schedule based on a time frame that venture capitalists will stay invested only between three and five years in one company. The need for the government to come with an alternative strategy to help startups to focus on long term funds has been felt by many experts EI-Softtech spoke to.

3. Lack of data on startups

Worldwide data on startups is difficult to come through because of various reasons. It could be because of high rate of failures of startups. That will have an inherent problem. Policy makers, venture capitalists and other stakeholders will not be able

to take correct position while drawing up policies regarding startups.

4. Need for more proactive institutions to nurture entrepreneurship

India has set up skill councils and a skill and entrepreneurship university. It is important to enhance the activities of this institution not just for creating more skilled people but also for converting a sizeable number of skilled persons into entrepreneurs. There should be a premium for creating newer ideas and innovations, which should have commercial values and applications.

India has witnessed enormous growth over the past two decades in the ICT sector, becoming the world's leader in exporting software and IT services. India is also making solid strides towards making a dent on electronic manufacturing for leveraging the phenomenal global trade in the sector. This growth has also created a number of jobs owing to the digitization of India and the movement of the vast majority of India's population into the modern job sector. That also underscores the importance of India moving up in the ICT value chain. Yes, it is impertive for creating a sensational India Growth Story.





23rd EDITION INDIASOFT

International ICT Exhibition & Conferences

27th - 29th March, 2023

New Delhi, India

INDIASOFT

India's premier ICT Show - INDIASOFT – will be back during March 2023. In its 23rd consecutive edition, the Show will host some of the finest Indian Tech brains and large number of global delegates facilitating new partnerships and unlimited business opportunities.

SHOW HIGHLIGHTS

1 3 days of intense networking and exchange of new tech ideas

2 Nearly 500+ delegates from more than 60 countries

3 More than 200 exhibitors with focus on Start - ups

4 Focused Conferences to bring latest trends in the world of technology

Focus Sectors

- ✔ Artificial Intelligence
- ✔ Robotics
- ✔ Smart Manufacturing
- ✔ Big Data Analytics
- ✔ Fintech
- ✔ Blockchain / IoT
- ✔ Health IT / Edutech
- ✔ Cloud Computing / Cyber Security
- ✔ Animation / Films / Gaming / AR / VR
- ✔ Software Development
- ✔ Web & Mobile Apps
- ✔ Telecom Equipment and Hardware
- ✔ Security Electronics
- ✔ LPO/KPO/BPO

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Skills to drive Electronics Industry

Interview with Dr Abhilasha Gaur
COO, ESSCI



El-Softtech discussed with Dr. Abhilasha Gaur, COO Electronics Sector Skills Council of India (ESSCI) to capture her perceptions, future plans, and how her organisation is gearing up to meet the skill gap in the electronics sector. She talked about some of the schemes which will be rolled out by the Council in course of time in consultation with the industry. Excerpts of the interview are given below:

Michael Saul Dell, Chairman, and CEO of Dell Technologies, one of the world's largest technology infrastructure companies -Dell Technologies- famously said: "You don't need to be a genius, or a visionary, or even a college graduate for that matter, to be successful. You just need a framework and a dream." One thing, perhaps, he would have missed out in the quotable quote was the need for acquiring the right skill, which can gel with one's dream and ambition to make possible things, however difficult they may be. The question then boils down to what is a skill. It may be difficult to define or explain it in precise terms. Broadly, a skillset is the combination of knowledge, personal qualities, and abilities that one has developed through one's life and work.

Formation of skills and the importance of aggregation of that skill for nation-building has been a globally accepted credo. The Indian development story also focused on skill formation is high and paramount. Sector Skill Councils are set up as autonomous industry-led bodies by National Skill Development Corporation (NSDC). They create Occupational Standards and Qualification bodies, develop competency frameworks, conduct Train the Trainer Programs, undertake skill gap studies and assess and certify trainees on the curriculum aligned to National Occupational Standards developed by them. There are currently 38 Sector Skill Councils imparting training in various types of trades. They work in close

cooperation with industry representatives.

El-Softtech caught up with Dr Abhilasha Gaur, Chief Operating Officer (COO) of the Electronics Sector Skills Council of India (ESSCI), to know about the vision and range of activities being undertaken by the Council since it is set up and to map its future activities.

ESSCI is a strong contributor to fulfilling the skills needs of the vibrant ESDM sector in India. We work closely with the industry, the National Skill Development Corporation (NSDC) and the Ministry of Skill Development, and our Ministry of Electronics and IT (MeitY) to provide both skilling and re-skilling services



to the industry. Over the years, we have successfully skilled over a million professionals in the ESDM industry and have a wide footprint across India.

“The Ministry has been actively engaging with these SSCs. Our Council has been promoted by six associations, i.e. CEAMA, ELCINA, IESA (formerly ISA), IPCA, MAIT, and ELCOMA, with financial support from National Skill Development Corporation (NSDC),” Abhilasha says, adding that the Council envisions to enable a world-class electronics manufacturing industry with an ecosystem for skill development and enhance employability of a large number of Indian human resource. To establish a structured mechanism wherein ESSCI will facilitate and collaborate with NSDC in strengthening the existing vocational education system for skills development in the electronics sector and upgrading the vocational training system for the industry to achieve global standards in manpower productivity.

Happily, there is a proper system being set up to give importance to skill development. The University Grants Commission (UGC) launched a scheme in 2014 for skills development-based higher education as part of college/university education, leading to a Bachelor of Vocation (B.Voc.) degree with multiple entries and exit points. The B.Voc. programme is focused on universities and colleges providing undergraduate studies which would also incorporate specific job roles and their National Occupational Standards (NOSs) along with broad-based general education. This would enable the graduates completing B.Voc to make meaningful participation in accelerating India’s economy by gaining appropriate employment, becoming entrepreneurs, and creating appropriate knowledge.” Focussed attention that we are assigning to skill development has started giving rich dividends in creating a strong army of skilled persons in the country. In our Skill Councils, over a period of time, we have trained close to 1.6 million people and of that 50 to 60 percent of people who have undergone training are successfully employed and some of them have moved in the value chain occupying higher technical positions, commanding higher salaries,” Abhilasha Gaur says.

What is the relevance of the Skills Councils for India, a country endowed with over 1.3

billion people, having the second-largest population in the world and its population is more than the population of the largest continent in the world - Africa. Abhilasha is circumspect in her observation. “India has a great demographic advantage. We may have more people, but we are also endowed with a large number of people in the working-age group and skill councils including the one that I am heading to facilitate and create a pool of qualified job-ready resources,” she avers. The overall skill impartation provides flexibility to students by means of pre-defined single/multiple entries and multiple exit points. The training centres ensure adequate knowledge and skills for making students work ready at each exit point of the programme.

Skill development and identifying areas where the skills are to be developed are decided by giving utmost care. It is based on industry requirements in the state through a meaningful industry-academia partnership by adopting a dual system of training. “While the main focus

ESSCI is a strong contributor to fulfilling the skills needs of the vibrant ESDM (Electronic System and Design Manufacturing) sector in India. We work closely with industry, the National Skill Development Corporation (NSDC) and the Ministry of Skill Development, and our Ministry of Electronics and IT (MeitY) to provide both skilling and re-skilling services to the industry. Over the years, we have successfully skilled over a million professionals for the ESDM industry and have a wide footprint across India.

is for enhancing employability of the trainees in meeting domestic and global workforce requirements., there is utmost importance to integrate the National Skills Qualifications Framework (NSQF) and international specifications. That will help the workforce to enhance their employability globally also.

Abhilasha is confident that with the type of focus being given by the government to the electronics sector now, there will be a huge intake of students by the sector to

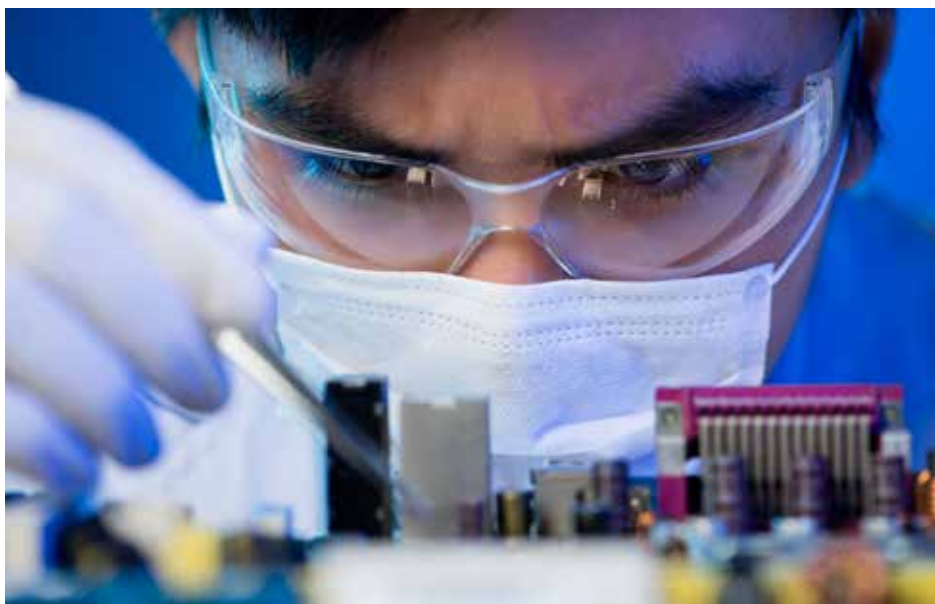


Dr Abhilasha Gaur

Dr Abhilasha Gaur is an accomplished professional with vast experience in the Skill Development ecosystem. She is a hardcore management practitioner with 18 years of experience in Business Development, Execution of Government Projects, and Implementation of various initiatives in Skill development, Corporate, and academics. She worked as Vice President with Algol Group of Companies and started their skill development in 2011.

Dr. Abhilasha Gaur joined the Electronics Sector Skills Council of India (ESSCI) as COO in 2021. She is responsible for overseeing the operations of ESSCI and works closely with its Governing Council on strategic issues related to the growth of the Electronic Systems Design and Manufacturing (ESDM) industry in India. She has been visiting faculty at many Management Institutes and has counseled more than 5000 school & college students.

man a number of ICT industries coming up in the country. In the last couple of years, the Government of India has been coming up with a slew of policies that can give a critical push to the electronics sector, such as production linked incentives, capital subsidies for the manufacture of semiconductors, and incentives for manufacturing mobile phones and components, etc. This would push up the demand for technical persons. “Our effort is to gauge the likely demand for each trade and create a set of manpower to meet the industry’s demand in consultation with them,” she stresses. Over a period of time, the Council has created



Electronics Sector Skills Council of India (ESSCI)

The Electronics Sector Skills Council of India (ESSCI) is a Not-for-Profit Organization, registered under the Indian Companies Act, 1956. The Council has been promoted by six major Industry Associations from the electronics sector with financial support from National Skill Development Corporation (NSDC).

The ESSCI's focus is on establishing an effective and efficient ecosystem for developing and imparting outcome-oriented skills for the Electronics Systems, Design and Manufacturing Industry (ESDM).

ESSCI is responsible for standardization, accreditation, and certification processes to enhance the employability of the Indian workforce globally. It envisions enabling a world-class electronics manufacturing industry with an ecosystem for skill development and enhancing the employability of a large number of Indian youth.

The approach of ESSCI is to build a robust ecosystem of partners and knowledge contributors leading to research and analysis and developing a training mechanism leading to accreditation and certification of trained resources

ESSCI has over 250 training partners having over 4000 training centres across the country, that are well equipped to undertake skill development across job roles in all segments of ESDM.

ESSCI has developed 178 Qualification Packs (QPs) and over 250 National Occupation Standards (NOS).

The qualifications are spread across the 09 sub-sector spectrum and across the product life cycle.

ESSCI has numerous credible Qualification Packs for skill development in this segment and have been closely developed with the industry after assessing the intrinsic demand for trained technical manpower in the industry in the near future.

The Electronics Sector Skills Council of India has so far skilled over 16,00,000+ candidates in various job roles in electronics across the country and helped place over 8,00,000 candidates for wage employment and handheld candidates for self-employment.

The Electronics Sector Skills Council of India is moving ahead with an ambitious programme to work closely with the industry and is committed to skill over 3.5 million candidates in the electronics sector.

ESSCI is very actively working with the Ministry of Electronics and Information Technology-MeitY and has skilled many candidates in its capacity building programme for ESDM Sector and is closely attempting to be a skill development and manpower supply partner with PLI, SPECS, and EMC 2.0 Cluster applicant companies

technical persons for the electronics and IT hardware sector. Some of the segments that have been given focussed attention by the council included training of access control installation technicians, CCTV Installation technicians, set-top box technicians, and skilled persons needed for DTH, air conditioners, module solar panel technicians, and importantly TV and computer repair technicians.

Of late, the Council is focussing on training people in dishwashing technology since there is an increased preference for installing such technologies (dishwashers) at home because of the pandemic. People are wanting to do most of the household work by themselves to insulate themselves from easily transmittable diseases like Covid-19. The Council is also rolling out a course for creating technicians that are needed by the semiconductor industry, which the country will hopefully start manufacturing shortly, given the interest shown by the government and industry.

The ESSCI portal is specifically designed for the electronics and IT hardware sector. It is a digital platform to bridge the gap between skilled resources and the industry's demand. It connects job seekers and recruiters by accurately matching a candidate's profile to relevant job openings through an advanced 2-way matching technology. It focuses on the entire career growth of candidates including career counseling, skill training, placement assistance, and upskilling in their domain.

"Another area of interest", Dr Abhilasha Gaur said: "was the design and manufacturing of electronics hardware within India, which seems to be the conceptual origin for both the Make in India and the Digital India programmes. These initiatives encourage domestic manufacturing and exports across the electronics system design and manufacturing (ESDM) value chain, aiming to achieve a market size of US\$251 billion by 2023. ESSCI will play an important role to fulfil the demand for a skilled workforce for the same. I am fortunate and excited for this opportunity to work with the industry leaders and policymakers in the ESSCI Governing Council, and hope to significantly contribute to this national cause with their guidance and leadership," Dr Abhilasha Gaur says, exuding optimism.



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Serbia: The Emerging Hub for the BPO and SSC Industry

The Covid-19 pandemic has forced companies, people and governments to reconfigure their operations and processes. The unprecedented health crisis turned our working, production and sales methods upside down and digitization became a key factor for survival. Some estimates are that in 2020 alone the speed of digitization and automation has increased six times compared to pre Covid-19 trends.

In the rapidly changing global business environment dictated by the Covid-19 protocols, companies are turning to outsourcing more than ever. Soaring demand, crowded markets, and cost cutting will induce companies to look for new avenues for outsourcing. Untapped markets with skilled labor will certainly attract attention.



BOJAN DIZDAREVIC
Head, Balkans Direct Investment



The BPO and SSC industry has gradually been evolving in Central and Eastern Europe ever since the 1990s in concentric circles with its epicentre in the Visegrad 4, firstly Poland and later to the Czech Republic, Hungary and Slovakia. At the turn of the millennium, the BPO industry expanded to Romania and Bulgaria and the Baltic States and gradually to the Western Balkan countries, most notably Serbia.

Let's look at why it is very likely that Serbia could be the next most attractive BPO/SSC destination in Europe.

Serbia

Key Investment Factors

In the BPO/SSC industry, the key factors for decisions regarding investment locations are: geographic and time zone, availability of cost competitive and skillful labour, office price and availability as well as

developed infrastructure combined with a business-friendly environment and high quality of living.

Geographically Serbia is one of the Balkan countries closest to Western Europe and is in the same time zone which means everyday communication and travel with the rest of Europe are very practical.

The availability of cost competitive and skillful labour is one of the main factors that place Serbia as an attractive BPO/SSC destination. Thanks to many universities and higher schools, the labour pool is skillful and speaks various languages and ranks well compared to the already established BPO/SSC locations in Central and Eastern Europe. Serbia always ranks among the best globally in English proficiency.

Readily available and affordable office space, developed infrastructure, and a high standard of living are some of the other factors that give Serbia an edge over other established BPO/SSC locations in Central and Eastern Europe.

Belgrade

Belgrade is the capital of Serbia, and the closest major city to Western Europe in the Balkans, but Belgrade is much more than just the capital of Serbia.

Just until 1991 Belgrade was the capital of Yugoslavia, which means the capital of 6 of today's Balkan countries and the capital to more than 18 million people, double of what it is today. Things have changed a lot since 1991 and Belgrade is not the capital of Yugoslavia anymore, but in a way it is. Belgrade is the most visited capital city and most inhabited city by the Ex-Yugoslavian population making it the cultural centre of the Western Balkans and broader, giving it a massive advantage when it comes to attracting a much needed workforce in the outsourcing industry.

Belgrade is evolving at a pace faster than any city in Southeast Europe, with millions of square meters of residential and office space being built, as well as a subway system, tallest buildings and largest





shopping malls in the Balkans, expanded airport capacities and high speed railways linking it to Budapest and Western Europe which will drastically improve the quality of transport and overall quality of living. The city is located on two big rivers, the Danube and Sava of which the Danube is the second largest in Europe, which makes Belgrade a major river cruise destination.

All these factors place Belgrade as an ideal new BPO/SSC location in the Balkans.

Maturing market in established BPO/SSC destinations

Central European countries have a longer history when it comes to the BPO/SSC industry, but that also means that the labour market is much more saturated and most companies are opening additional offices and centres in Tier-2 and even Tier-3 cities to be able to provide much-needed labour.

The natural process of expanding to new markets in search of cost effective but

good quality labour will only continue to the untapped markets of the Balkans.

That leaves the Western Balkans very interesting to the outsourcing industry. The country with the largest city and largest general population is Serbia, which makes the country first in line for being the new BPO destination of choice.

FDI and Macro-economic Champion

The level of FDI attracted by Serbia is 12 times larger than expected for an economy of its size. Serbia has topped Financial Time's FDI Greenfield Index for years already as the number one country globally when it comes to the number of established greenfield projects compared to the size of the economy. In other words in 2019, 2020 & 2021 Serbia has attracted more than 60% of all FDI in the region and has far outperformed countries like Bulgaria, Croatia and even came close to Romania, a country three times larger by population and economy.

The impressive Foreign Direct Investment figures are due to the country's very strong macro-economic indicators as well as business-friendly environment.

Inflation has been at a record low for years, public debt is far under the 60% EU recommendation and GDP growth was one of the highest in Europe in 2019 and was one of the best performing in the whole of Europe in 2020 with a GDP decline of only 0.9% and then an amazing V shaped recovery in 2021 of 7.6% GDP growth.

War in Ukraine

Even though the current war in Ukraine seems to be of local character, the economic and political implications are global and no country or industry is immune to the damage. Three countries which are deeply involved in the conflict – Ukraine, Russia and Belarus were all major IT outsourcing destinations with an estimated 1.5 million tech workforce but were also rapidly rising BPO/SSC destinations. With war massively destroying

infrastructure, displacing millions from Ukraine and drastic sanctions being imposed on Russia and Belarus, companies that are present in this Eastern European region are dramatically changing course and relocating their operations to already existing offices in other parts of Europe but are also actively working on establishing new offices in less volatile countries. Serbia has already started witnessing relocations of major IT companies as they recognize the country's potential while in urge of rapid relocation.

Open Balkan

The Open Balkan is a multilateral project currently underway with the aim of integrating the countries of the Western Balkans into a Schengen like zone. Officially Serbia, North Macedonia and Albania are already full members while Montenegro and Bosnia Herzegovina are likely to join in the near future. The aim of the project is to create an area where the movement of capital, goods and people are endorsed and the current restrictions simplified or completely removed. This would create an area with around 16 million people that could travel, work and do business in a more favourable manner and it is estimated that more than 30 million hours of cross-border time would be saved.

Put into the "BPO in Serbia" context this means that since Serbia is the most developed country in the Western Balkans regarding infrastructure and has the largest city of Belgrade, the additional workforce available with this initiative would most likely favour Belgrade and Serbia the most, as the influx of citizens to Serbia and Belgrade is already the highest. With this zone in place Serbia would have the advantage of even more well- educated and language skilled labour from other countries in the Western Balkans.

Covid-19 labour

It is estimated that more than 300 thousand Serbian citizens working in Europe of which a lot speak various foreign languages have returned to Serbia in the midst of the Covid-19 pandemic. Some have returned back to Europe after the first wave, but a lot have remained and probably will for the medium-term as unemployment levels have risen sharply in a lot of EU countries.

Already, some smaller and medium BPO companies have taken advantage of this situation and have opened offices in Serbia, hiring to some extent exactly these language skilled workers that returned to Serbia because of the Covid-19 pandemic. As recovery in Serbia post Covid is taking place swiftly, if not the fastest in Europe, using the current economic and labour situation, it could bring certain benefits to BPO companies.

Already-established companies as indicators

NCR Corporation, one of the largest US tech companies, has recently consolidated



its 6 Belgrade offices into a new US\$90 million campus building that currently houses around 6000, employees. This is the company's second campus globally and will make Belgrade NCR's regional centre in this part of Europe. NCR's branch in Belgrade provides business services in a variety of languages. The new campus will provide services from software development to human resources and communications.

It is just a matter of time before major global BPO companies like Infosys, Accenture, Cognizant, Wipro, HCL, Genpact, Tata Consultancy Services, Tech Mahindra, Concentrix, IBM and many others enter Serbia's ripening market.

Etiha Aviation Group opened its Serbian Shared Services Centre in 2017 for language skilled employees providing services for the company's global

operations. The facility performs contact centre and loyalty operations in seven languages in Europe for Etihad Airways, Air Serbia, Air Seychelles and Etihad Regional.

SR Technics another aviation company is one of the leaders in the MRO (Maintenance, Repair and Overhaul) industry, with over 80 years of operational experience. It has moved its Business Process Centre to Belgrade in early 2015, as SR Technics Services LLC. The Centre of business processes in Belgrade provides administrative support for the company's global operations.

Kuehne + Nagel is a Swiss logistics company operating three Shared Service Centres (SSC) worldwide. The Shared Service Centre EMEA, based in Belgrade, is serving the regions Western Europe, Middle East and Africa as an internal service provider, being responsible for the handling and execution of operational tasks within the organization. The SSC performs global and standardized processes mainly back office tasks, for the internal customers.

Ball Packaging (Global Business Service Centre) and Ardagh Group (SSC) in the metal and glass packaging industry have established Shared Service Centres in Serbia and are rapidly increasing their employee number to cater the companies' global needs mostly in the areas of finance, planning, HR management and internal auditing.

Other notable companies that have centres in Serbia are Clarivate, Site1, Gate Group, Syneos Health, First Data Corporation, Telesign, Transcom, Seavus, Euronet Worldwide, Europ Assistance and the list is expanding.

In short, Serbia has every potential to emerge as a hub for the BPO/SSC industry. Joint efforts by Government and private sector to showcase the potential of the sector can go a long way in attracting global attention, and it is time to do so.

It is just a matter of time before major global BPO companies like Infosys, Accenture, Cognizant, Wipro, HCL, Genpact, Tata Consultancy Services, Tech Mahindra, Concentrix, IBM and many others enter Serbia's ripening market.



IT Technology Trends to Watch Out in 2022



Devanarayanan Gopakumaran Nair
Founder and CEO, AlignMinds

2021 saw many technology trends as a continuous response to the covid pandemic that emerged in 2020. In 2021, most industries optioned for technology adoption and it helped them tremendously. The industries that took advantage of digital transformation include manufacturing, transportation, healthcare, education, financial services, media, and retail. Since customers were mostly confined within their homes, we saw some big jumps in emerging technologies in industries like education, media, retail, and healthcare.

2021 is already over and we are now in 2022. Most of us will be wondering what to expect this year especially in technology industry since it was the driving force behind all emerging trends for the past couple of years. To help the curious minds, here is a curated list of emerging technology trends for the current year, 2022.

Automation

The word “automation” is not new to any of us. We have been hearing about automation and how different industries are adopting it to improve their productivity, efficiency, cut costs and boost profit margin. However, as different industries are seeking out more ways to adopt automation, automation is also seeing a diversification.

Metaverse

Facebook renamed itself to Meta in October last year. The tech giant rebranding itself after a decade and a half reflects the potential of metaverse. While AR (Augmented Reality) and VR (Virtual Reality) are not a new trend in 2022, the coming together of physical, augmented, and virtual world to form a single and seamless entity, where people can hang out with friends, meet new people and places, do shopping, participate in entertainment and professional activities alike, is something new and yet to experience.

Decision intelligence

As artificial intelligence and machine learning are becoming popular and effective, businesses are trying new ways to leverage these disciplines. For example, organizational decision making was always a hard task in the corporate world. Big multinational companies find it more tiresome compared to small organizations.

Distributed business

A distributed business or distributed company is a business that has a remote workforce and consumers connected via digital technologies. It is a digital-first, remote-first business model that encourages hybrid workforce and virtual services to improve employee and consumer experience.

Cyber AI

Hacking, breaches, data theft, etc are becoming widespread despite technological advancements. Hackers are leveraging the advancement in technology to find loopholes in systems and create

novel ways to get access to them. In 2022, businesses need to be proactive than ever to counter such cyber threats.

Distributed ledger and Blockchain

Decentralization is happening in all fields. Data storage and processing are also undergoing a major transformation. The traditional, centralized databases are giving way for distributed ledger (shared ledger or DLT) and blockchain models that are more secure and safe.

Cloud

Businesses are moving from legacy environments to the cloud at a faster rate. The necessity to go virtual and remote forced most businesses to ditch legacy models and find alternative solutions.

Wordless Passwords

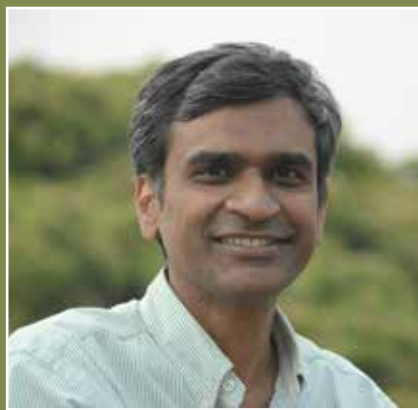
Are you someone who always click on the “forgot password” button every time you try to log in to a platform? If yes, here is good news. The traditional, character-based passwords are giving way to more sophisticated biometric passwords. The use of fingerprint, face recognition, iris scan and voice authentication etc. are becoming popular as an authentication mode.

Conclusion

There are some exciting technology trends we can expect in 2022. Maybe some of the names associated with these trends seem familiar to you. However, we are yet to see the adoption of such technologies on a scale that is large enough to make an impact on our day-to-day life. 2022 seems like to be the year we get a chance to experience them.

VCs in a Transformation Mode in India

Venture Capital is an essential ingredient of the startup ecosystem. El-Softech had a virtual interface with Naganand Doraswamy, Managing Partner & Founder at Ideaspring Capital, one of the pioneers in the VC domain. He explained the evolution of VCs in India, the present status and the future role it will assume to give a critical push to the sector, in various fields including deeptech.



Naganand Doraswamy
Managing Partner & Founder at
Ideaspring Capital

Naganand is a serial entrepreneur turned investor. After exiting his most recent startup, he founded Ideaspring Capital to fund and actively support product innovation startups. He enjoys working with entrepreneurs who have the vision and passion to build products for the global markets. Naganand Doraswamy is very well networked and respected in the startup ecosystem and he actively participates in various organizations focussing on Entrepreneurship and Innovation. Naganand has co-authored a book on "IPSec" published by Prentice Hall.

El-Softech (E): We know in the startup ecosystem, there are two prominent players: startup founders and Venture Capitalists (VCs). How well they are blended with each other worldwide and in India.

Naganand Doraswamy (ND): There is a symbiotic relationship between startup founders and VCs; each one needs the other. For startups to scale up, resources are required and venture capitalists are the main source for providing such resources. Bootstrapping is possible, but it is a difficult mode to raise resources. There are more examples of people raising capital from venture capitalists and becoming large as opposed to people, who have bootstrapped to become large. When VCs are raising capital from their LPs, i.e. 'Limited Partners'- the term used for people from whom resources are raised, one has to promise a few key financial metrics for the LPs. There are venture capitalists, who are driven by passion to help startups. I used to tell LPs that we cannot just look at financial interests; but real passion to support and empower Indian entrepreneurial initiatives. Financial metrics play a very key role while raising resources, but equally important is fulfilment of a creative passion to build a sound startup ecosystem, which is basic to create an entrepreneurial class.

When you raise resources from limited partners, you got to be investing in founders and companies where you

believe you can get a return on investment. VCs need good founders as much as good founders need venture capitalists. That is the basis of building symbiotic relationships. By and large, this relationship has gone pretty well. There are more success stories than there are stories of conflict and differences. Issues are most likely to crop up since one is dealing with two people who know their own games quite well. At times, ego or power-play comes into play. There are bound to be a few instances of discord. When the founder says he got a raw deal from the investors and the investors say the founders basically cheated, those are exceptional cases. Predominantly, it is a very good ecosystem where two entities require each other and converge their business interests. The relationship prospered over the years, say, over the last 50-plus years and it has a tremendous future.

E: India's case is a curious one, we are third in numbers in the startup ecosystem after the US and China. But when it comes to the quality, output, and performance we are down below. Some estimates indicate that our failure rate is 92% because of the high risks attached to the startup ecosystem. Your take on this?

ND: There are multiple reasons for Indian startups showing curious pathways. It goes back to history. We are still a very young country as far as our experiment with the

market economy is concerned. We were driven by public sectors or by licence raj. Those were the two key directions in which our businesses were running. When the transformation happened with heralding of the reform era, IT services were the first to take off in a significant manner. That is when India's entrepreneurial mindset in the tech sector started blossoming. Until such time, predominantly state-owned sectors were operating. There was no scope for anyone to make telephones since the monopoly of the Indian Telecom Industry (ITI) was there. One has to wait for 15 years or so to get a telephone connection. Because of the licence raj, there was a discernible entry barrier.

The concept of software development came into being in the '60s and '70s. In India, the software revolution started in the early '80s. TCS and Infosys started developing software initially. But now software development and related avenues have accelerated. If you look at the change in India from 2010 to 2015 to 2020, they are phenomenal. Just being B2C companies, we were building the likes of Flipkart in 2010. We are doing exceedingly well in IT software and IT-enabled Services exports. Our footprint is expanding with respect to B2C companies and now the Software-as-a Service (SaaS), a software distribution model in which a cloud provider hosts applications and makes them available to end-users.



Now, I think we are going strong in Life Sciences. We are not just being manufacturers of generic drugs; we are also creating new medicines. The growth of entrepreneurial pursuits necessitates the availability of capital. There were only 15-20 VC funds in 2010. Today, it is close to 600 plus. Approximately, US\$40 billion is being invested each year. We were not touching a billion dollars in 2010. Infrastructure was not there, and the ecosystem was not there for us to be innovative in building around startups. All those things have changed in India.

Still, there are several grey areas in our ecosystem. Our education system has still not changed, although efforts are underway to script radical changes. If you look at the US, top 100 universities are engaged in cutting edge research. That can help the proliferation of startups. There should be considerable value addition in our academics. We produce good quality engineers; but we cannot produce good quality researchers. We can excel in product innovation, but deeptech would take a little more time for us to evolve. That also will happen, but an environment of serious investment is required. India took 50 years to change, and evolve. We are recognized as the software capital of the

world and recognized as the third-largest software powerhouse. We are competent enough in building great products with good user experiences. A serious transformation is underway and that will be happening very soon.

E: How much is the government support that would have happened in building a landscape for VCs?

ND: The government recognized that startups are the key mechanism to increasing the GDP, move up the innovative index value chain, and shoring up intellectual capital in the country. One programme in the Government that supported VCs extensively is the 'Fund for Funds' programme, which has created a Rs. 10,000-crore dedicated fund and is managed by SIDBI. The government commits up to 25% of the total requirement of the funds, which is a good augury. SEBI is also enabling Alternative Investment Funds (AIFs). That has enabled VC funds to start in India and outsource funding of startups. There are three things that helped VCs considerably. They are: SEBI has enabled AIFs to invest in startups. Fund of Funds enabled us to create our own funds. The third one is enabling HNIs to directly invest in angel funds.

E: We have been talking to startups, either on a one-on-one basis or through their association. One thing which they have been telling as a sort of constructive criticism is that there is a lot of pressure exerted by the VCs in terms of performance. VCs want them to perform very fast and, in the process, some of them miss out on long-term perspectives. What is your take on that?

ND: Let's also understand when you take capital from a VC, the VC doesn't have an unlimited horizon, but a limited one. VC fund are for a limited time frame, say a seven-year fund, eight-year fund, ten-year fund, and so on. You are obligated to return money to your LPs within that time frame. You also have promised that you would give a certain return on investment. VC funds have to face two imponderables; one is the time limit and the other is pressure on performance. Obviously, once you raise capital from the VCs, you need to understand how the VC business works. That will help you to fathom the pressure they have to put up with. VCs are not going to put pressure because they would like to do it just for its on sake. They are also obligated, which is also good for the startup founders to have this kind of pressure because everything has a shelf

life. You might look long term, fifteen years to do something, it might be too late. You have to keep clocking revenues year-on-year for you to stay competitive and ahead of the curve. So the pressure from the VCs can be constructive.

E: Why is the failure rate so high among startups? Is there undue pressure exerted on startups?

ND: What I can say is that the pressure should not be a stupid pressure, but a positive pressure because it helps the startups to be more focused and channel their energies to make the companies more productive.

E: Your VC's name is a very interesting Ideaspring, a catalyst of ideas. Look at the Indian situation; more number of IPRs are being registered every year, but commercialization of IPRs is not happening. Most of the research is being done in silos in research institutions without any commercial or disruptive values.

ND: As I alluded to you earlier, look at all the government labs and the research that is happening in these institutions. We still have a lot of things to do to translate that into actuals. In government labs, a lot of research is happening but people who were into research probably would not have an entrepreneurial mindset or it is hard to take the idea and develop it into a product that can be sold not only in India but across the world. But the number of deeptech startups in India is not enough. What we are doing in India is building great products that necessarily don't need to be called deeptech products. The definition of deeptech is a confluence of multiple domains.

We should stabilize and work on our strengths. As of now, our strength is building products. Deeptech has to be addressed in a different way. At the research level and at the government lab level encouragement should be given to translate our vision to become stronger in deeptech. That is a long-winded journey. I believe that it would take a decade or more to fix it.

E: There are certain views from some quarters that VCs' funding institutional sources have dried out. Financial institutions and government, are of the view that VCs are better equipped to financially assist the startups. What are your views on this?

ND: I strongly believe the government should invest more and more in research

rather than getting into the capitalistic outcome of the investment. Focus more as an enabler and facilitator in supporting the VCs. VCs cannot fund research, but can fund the outcome of the research in developing the products. So, the government's role is that of an enabler including that of research, not an investor.

E: What about Atal innovation centres, how far has it helped in R&D?

ND: This has certainly created a positive environment; you cannot measure things all the time. But the Atal Mission has helped in creating an entrepreneurial spirit, encouraging people to try out

We should stabilize and work on our strengths. As of now, our strength is building products. deeptech has to be addressed in a different way. At the research level and at the government lab level, encouragement should be given to translate our vision to become stronger in deeptech. That is a long-winded journey. I believe that it would take a decade or more to fix it.

new ideas. There are a lot of intangible outcomes through this mission. It definitely pushed up the entrepreneurial index in the country. This is a big playground to try things out.

E: How big is the VC segment in India and what would be its growth?

ND: I would say that it is huge; year-on-year, the investment is US\$35 billion. The industry is worth around US\$300-400 billion. In five years' time, my assessment is that investment would be around US\$100 billion

E: Different states have different programmes for startups. Some of them are very proactive. According to you which are the best performing states in the country?

ND: 70% of the investments are between Bengaluru and Delhi NCR region. Remaining is between Chennai, Pune, Mumbai, and Hyderabad. I wish more states come forward in promoting startups and creating an ecosystem for them to grow and flourish.

E: Which are the areas where funding mostly is going in?

ND: There are two categories, B2B and B2C, i.e. business innovation vs product innovations. These days 60% of the funds

is going for business innovation and 40% to product innovation. Not much funds are channelized towards hardware and Life Sciences. Most of the funds, close to 80%, are going to the software segment. Funds being channelized to hardware manufacturing are minuscule. That is what the government is trying to change now. India should also invest in hardware manufacturing, fab, and other things. Large investments are coming up in the sector. It will take time to come to fruition.

E: You might have heard about the recent governmental policies relating to the hardware, the PLI, and the opportunities that are being given for the manufacturing of semiconductors, design, and other things. Is there any such scope for VC's turning their attention to these segments?

ND: These segments are all capital intensive. The concern is that there are very few customers in India who buy those products. The market is still in the US and these products from India are very hard to sell if you don't have a strong presence there. So, there are a lot of challenges. As you move up in the value chain, you got to be close to your customers. There are a whole bunch of challenges that we have to address to become an important hardware manufacturing and export hub.

E: Software is mostly exported, close to 60% to the US; the rest is to Europe, Japan, and other countries. Do you think this trend will continue?

ND: I don't think it will change in the next decade. I hope India's domestic market for software should go up. India also would become a big market for software. We are close to a three trillion economy now and in the next decade, we will become a US\$ 7-8 trillion economy. Then India would also become a good place to sell software.

In conclusion, I would say these are exciting times for Indian startup ecosystems. We will start building great products for the world. For that, massive investments are needed in R&D, academics and standards. Along with that, we have to invest in deeptech. Building better products for our defence will have a huge impact on our economy. We are one of the largest buyers of defence equipment. That has to change for good by manufacturing equipment domestically. Many products and parts that go into the manufacture of equipment have to be sourced from vendors including startups in India. Apart from that, it will fuel innovation.





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IndiaSoft 2022: A Rare Confluence of Global ICT Players

An important feature of this year's IndiaSoft was its timing and collocation with another established brand 'Convergence India Expo' a technology show of repute. Both the shows had synergies and complementarities. Apart from that, the visiting delegates had the opportunity to visit the stalls put up by both the organizations. That way, the event had a lot of brand recall value.

Shri Kaushal Kishore, Hon'ble Minister of State for Housing & Urban Affairs, was the chief guest at the inauguration. Others who visited the show included Shri Om Prakash Saklecha, Hon'ble Minister for Electronics & IT and MSMEs, Government of Madhya Pradesh. Importantly, IndiaSoft was visited by a large number of policy makers, industry honchos, diplomats, etc, apart from regular business visitors.



Shri. Kaushal Kishore, cutting the ribbon to mark the opening of IndiaSoft 2022.

ESC's 22nd edition of IndiaSoft was held on March 23-24, 2022 with the support of Department of Commerce, Ministry of Commerce & Industry, Government of India.

Organized at the sprawling refurbished Pragati Maidan, New Delhi the event helped in displaying products and solutions relating to both software and hardware. In all, 274 delegates from 38 countries attended the event. The Indian

“Let me congratulate ESC for bringing a large number of international delegates and Indian exhibitors to this important annual event. I wish a lot of business deals will take place during the next two days of the IndiaSoft.”

**Shri Kaushal Kishore
Hon'ble Minister of State for
Housing & Urban Affairs, GoI**

ICT companies from tier-2 and tier-3 cities got a chance to present their products to discerning foreign buyers and to the invited delegates. One hundred and forty-two Indian exhibitors put up their stalls to showcase their products and solutions. The products on display included web and mobile components,

security equipment, animation and gaming, IoT, embedded technology, automation, Artificial Intelligence, EMS, electronic hardware, etc.

IndiaSoft 2022 in Nutshell	
Number of Visitors/ Foreign Buyers	274
Number of Indian Exhibitors	142
Number of enquires	1250
Number of MoUs negotiated	116
Orders booked	1250 (Estimated)
Total business generated	Rs.1150 Mn



Shri Prakash Saklecha, Hon'ble IT and MSME Minister, Government of Madhya Pradesh at the IndiaSoft 2022



“PLI Scheme introduced by the Government to promote manufacturing sector in the country. The Scheme would help make the economy Atmanirbhar, as envisaged by Hon'ble Prime Minister.”

Sandeep Narula, Chairman, ESC at the inaugural ceremony of the IndiaSoft 2022



“India provides mind-boggling opportunities in the ICT sector for outsourcing software and solutions. Gradually, we are developing our base in the electronic hardware segment, which will help us to emerge as a strong manufacturing hub with competitive cost and quality advantage.”

**Gurmeet Singh,
Executive Director, ESC**



A view of the display booths at IndiaSoft 2022



A section of the foreign delegates at IndiaSoft 2022

Despite the pandemic, the mood at the exhibition was upbeat and brisk businesses were conducted during the two-day event. Some upshots of the event are worth highlighting. Importantly, it generated, in total, 1,250 business inquiries, which in value terms would work out to Rs.1,150 million. This is only a conservative estimate, going by the number of orders booked. The businesses generated could be several times more if one takes into account the handholdings that took place and the businesses and orders in the pipeline.

Countries Participated Indiasoft 2022

Canada	Nepal
USA	Singapore
Argentina	Sri Lanka
Namibia	Bangladesh
Brazil	Ghana
Chile	Nigeria
Colombia	Tanzania
Guatemala	Kenya
Denmark	Senegal
Netherlands	The Gambia
UK	South Africa
France	Syria
Turkey	Zambia
Germany	Togo
UAE	Uganda
Kyrgyzstan	Malawi
Azerbaijan	Ethiopia
Armenia	Mauritius
Uzbekistan	Slovakia

ESC pledges support to government in revamping digital infrastructure



Shri Piyush Goyal Union Minister of Commerce and Industry discussing ICT industry perspectives with ESC Chairman Sandeep Narula on the sidelines of NICDC Round Table.

Sandeep Narula, Chairman, ESC, had a very meaningful discussion with the Hon'ble Minister of Commerce & Industry, Shri Piyush Goyal, during the Investors Round Table Conference of NICDC held on April 22, 2022 at New Delhi. Speaking at the conference, Shri Piyush Goyal highlighted various initiatives taken by the Government to boost the economy and create employment across sectors. He also underlined the need to set clear targets on taking merchandise and service exports to US\$ one trillion in the next few years. He said that India needed to position itself to forge valuable alliances with companies present all across the globe.

Shri Narula had the opportunity to discuss with the minister issues of the MSME sector, especially the sunrise sector of electronics and explained the constructive role that can be played by the ESC for opening up more export destinations for the ICT segment. The minister was very positive and told ESC to update the government about the support the MSME sector was looking forward for augmenting ICT exports.

MEGA GLOBAL MSME BUSINESS SUMMIT

Recognising the crucial role played by technology based enterprises and the need to help them grow, Ministry of Micro, Small & Medium Enterprises, Government of India decided to hold "MEGA GLOBAL MSME BUSINESS SUMMIT" jointly with Electronics & Computer Software Export Promotion Council on 24 March 2022 at New Delhi.



Shri Bhanu Pratap Singh Verma, Hon'ble Minister of State in Ministry of Micro, Small and Medium Enterprises, at "MEGA GLOBAL MSME BUSINESS SUMMIT" held at New Delhi on 24th March, 2022

Aptly named "Empowering Tech Entrepreneurs", the Summit aimed to help MSMEs learn about latest innovations and their applications in the commercial world. The Summit also enabled enterprises to align their technical competencies with developments in the international environment to suit the needs of global buyers. Presence of a large number of global delegates facilitated cross-country tie-ups that would ultimately result in enhanced business opportunities as well as avenues for technology transfer. With over 150 delegates from India and abroad, the Summit facilitated Indian tech-based MSMEs to network with potential partners to set up new alliances.

Summit had a special session chaired by Shri Shailesh Kumar Singh, Additional Secretary & Development Commissioner (MSME), Government of India, and addressed by ICT industry leaders.

The Summit had Panel Discussions on Women in Technology: Tech as gateway to shatter the glass ceiling, changing landscape of data privacy - A CISO Perspective, and energising MSMEs to forge global links. The Summit also had a plenary session.

Panel speakers at the MSME Summit



Sunil Vachani
Managing Director
Dixon Technologies



Vinod Sharma
Managing Director
Deki Electronics



Ateesh Kumar Singh
Joint Secretary
Ministry of MSME, Gol



Mercy Epao
Joint Secretary
Ministry of MSME, Gol



Mandeep Singh Puri
Director
FutureSoft



Veer Sagar
Vice Chairman
ESC



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Refilling Aids



Surge Protectors



Laptop Adapter



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● **Nationwide** presence

● **1000+** distributor network

● Product availability at **10000+** counters

● **1000+** employees

● **1 million** happy customers

● Market leadership for over **3 decades**

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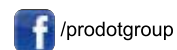
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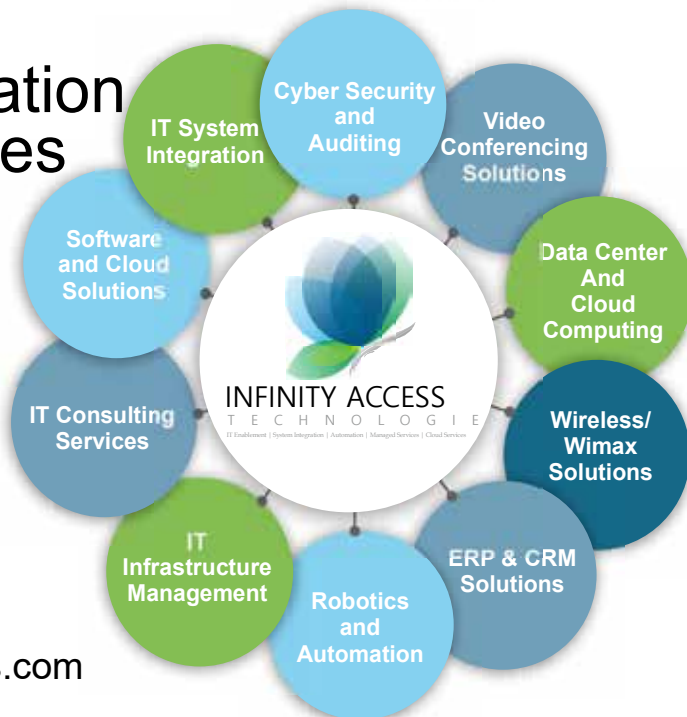
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El-Softech dwells on four verticals viz software, electronics hardware, telecom, and important technology which drive the developments in the three segments. El-Softech carries incisive articles, interviews, features, etc. in the magazine primarily meant for sharing of experiences, promoting good business practices, technology advances, global developments, and important analysis of policies and their impact.

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