



The inaugural meeting of

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The Coming of Age of a Global Innovation Hub

Executive Summary



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1) A transformed – and changing – Indian and global ecosystem

In the session on "**A transformed startup ecosystem**" the panelists discussed the shift that has taken place to an online delivery model and how the pandemic had forced businesses to adapt or face disaster. They highlighted how the consumer today wants convenience, reliability, range and access from the point of touch.

The COVID-19 pandemic has upended nearly every aspect of life, from the personal to the professional - how companies interact with their customers, how customers choose and purchase products and services and how supply chains deliver them. Technology has played an integral role in this paradigm shift, and the millennial generation is already emerging as a powerful influence in the Indian knowledge workforce.

Mohandas Pai, Co-Founder & Partner Aarin Capital, reiterated that during the times of Covid-19, 60% of the world shifted to an online delivery model. "All the successful people built their businesses on the internet and emerged as unicorns". He emphasized the massive surge of innovation – and adoption of innovation from individual consumers and corporations - during Covid-19 due to which 70,000 startups emerged in India." he said.

Derick Jose, Co-Founder, Flutura Decision Sciences and Analytics, recalled how going through the pandemic was almost a rebirth for everyone. "Startups had to change their model multiple times, and they shifted from problem backwards to budget backwards."

Outlining some of the most pressing challenges they faced during the Covid-19 pandemic, Hari Menon, Co-Founder & CEO of Bigbasket, shared that orders increased fivefold during the pandemic but 80% of the company's workforce had gone home, so there was no capacity to deliver the orders placed by the customers. "In these trying times, the organization's resilience came out and we hired 12,500 people in 15 days, which was never done before." People innovated on simple things and tried to meet consumers' expectations. The pandemic accelerated everything.

Noting how people today want content and information instantaneously, Umang Bedi, Co-founder, VerSe Innovation, said that India is simultaneously witnessing content creation, content consumption, delivery in local languages, personalization and hyper-localization. For him, "hyperlocal is the new global". Nowadays people want content and information instantaneously and even milli-seconds of delay or buffering is not acceptable."

It's high time that India shifts from problem-backward to being budget-backward to play in the global market. Businesses need to have a business plan that shows they can be profitable at some point. BJ Arun, Chairman, The Indus Entrepreneurs (TiE) Global Board, added that, "Start-ups have to be very sensitive about the bottom line, just remember that getting funded and aiming for a high valuation is not the end game. "

Bringing a perspective of the healthcare industry, Derick Jose said that since the Covid-19 pandemic, the many challenges faced by India, especially in the Healthcare sector, have prompted waves of new



innovation. “Suddenly there is a huge demand to produce organically. People are looking at healthy options now.”

Vaibhav Gupta, Co-Founder & CEO of Udaan, noted the rapid and countrywide expansion of digital commerce: “Farmers are reaching out to us to figure out how we can help sell their produce at a good price. Today even small shopkeepers are looking for a consumer-like experience. They want convenience, reliability, range and access in one app.” He emphasized that the people trust on online activities has gone up in the last few years.

Concluding the session moderated by Ralph C. Voltmer, Partner, Head of India Practice at Covington & Burling, the panelists stressed the importance of entrepreneurs getting in advance a good understanding of their financial needs so that they can play their role on the market. The end goal is cash flow and the need to make a profit. The startups’ mortality rate is high, among other things, because of sudden lack of funding but the founders able to manage their finances with a long-term view can achieve great things and make great money. The companies scaling up and growing in a sustainable way are the ones which are finding the right models for India, which have devised a solid operating model, and are not simply relying on mere assumptions.

Beyond assessing the positive transformations in the ecosystem that had been precipitated by the shock of the pandemic taken place, the trends shaping the next phase of the development of this ecosystem were also very much part of the agenda of the inaugural meeting of the IGIC.

In the session on “*The Trends Shaping The Future Of India's Start-up Ecosystem*”, moderated By Jarshad NK, Editor-in-Chief, Yourstory, the panellists discussed how an increasing number of start-ups are now targeting new markets abroad for growth and business expansion. Building on the tremendous achievements of the last fifteen years in making of India the world’s third largest startup ecosystem, the next step is also to see how to expand the present start-up configuration into a more broadly expanded, countrywide, ecosystem.

Considering that the so-called “start-up winter” – the tightening of funding conditions and the increased scrutiny on valuations - is a good thing as it will help bring back sanity into an overly exciting market, Tanmay Saxena, COO of Tata 1mg, said, “For a start-up to realize its vision, it’s super important to have the ability to adapt. It’s important to stay in the game in the face of adversity and not go suicidal.”

Highlighting how media entertainment will spring up as 5G steps in, along with metaverse enabling innovators to create new experiences, Zaran Bhagwagar, Investment Director at Anthill Ventures, considered that, “India has warm jackets when it comes to the “winter start-up” issue and it is the foreign competition that should be worried.”

"If 100 unicorns exist in India today, all that matters is the path to get to 200 of them. Indian founders know how to pull their companies out of downturns."

Pranav Pai



Flagging how start-ups today have not only to ensure the long-term sustainability of the entrepreneurial/start-up momentum but also contribute to making India a 10 trillion dollars economy by 2030 Pranav Pai, Founding Partner at Zone4 Capital, said that, "The startup winter notion has been exaggerated. If more than 100 unicorns exist in India today, all that matters is the path to go to 200 of them. Indian founders know how to pull their companies out of downturns." For Pranav, technology plays a very horizontal and neutral role in touching people's lives and people have underestimated the impact that technology has in India. There is a big swing coming in terms of diversity when it comes to innovation."

The transformational role of 5G and the impact of India's expanding shift to online along with the expansion of SaaS-based solutions, is today shaping the future of India's start-up ecosystem. Akshaya Kamath, Board Member & Chairman India, at Innoterra, shared how his company is providing the next wave of growth or tech-enabled solutions. "This would help the rural ecosystems moving ahead as only a natural winnowing process would help successful new businesses to get investment. These start-ups need to get the implementation of the idea right when it comes to the rural sector. These innovators need to fully realize the value of the community approach. It is imperative to have a systematic approach that looks at all elements of the value chains." he added.

Shaili Chopra, Founder of Gytree & SheThePeople, for her part, drew the attention on how India as a country often continues to build products and services that cater to a male constituency while a big opportunity lies ahead with the more than 200 million urban women who, most of the time, are the ones making decisions in the household. Women are shaping ideas and services, and that's a big change. "Women are not just the influencers of decision-makers, they're the decision-makers in today's age. That's a big change we're looking at. Women are as sharp consumers as they are voters."

Getting back to the point about the "star-up winter" she added, that in her view women are always in the start-up winter as they keep struggling to establish themselves in an environment dominated by men.

The element of "startup winter" and of the deterioration of the economic and financial outlook came out forcefully in the conversation that Malini Goyal, Business journalist, conducted with Jonathan Medved, Founder & CEO of OurCrowd, Israel;

"When public companies are down by 50-60%, private companies need to take a haircut." He highlighted that companies will not be seeing a 500 million- or billion-dollar valuation anytime soon. All companies must get ready for lower multiples in terms of valuation. This was the stark assessment Jonathan Medved, the founder of OurCrowd, an iconic personality in Israel's and the global startup/innovation ecosystem, brought to the participants of IGIC.

Medved has gone through and witnessed over the last 30 years the evolution and the ups and downs of the VC industry. He stressed that people should adopt a new mantra: 'Flat is the new-up', meaning if a person can hold onto what they had last year, then they are already ahead of the game. There is no fixed timeframe about when this winter will end and the most important commandment for all businesses



today is to survive. Accentuating this, Medved said, “‘Now’ money is better than ‘then’ money. If someone is offering you a term sheet- then take it, as ultimately everything will go back up again.”

Revealing how in comparison to the many cycles he has seen in the start-up world this cycle is different in terms of structure, he felt that the up-stride was exaggerated with more money and higher evaluation leading to an essentially symmetrical downturn which would make it tough to make money. He added, “If businesses do not have with them a two-year runway, they must raise money now or change their expenditure structure.” Companies need to readjust their spending plans to focus on their core businesses in order to make it a fine-tuned machine.

This playout is not homogeneous around the world and Jon noted that he would rather be a start-up founder in India than being one in Russia, today. He added that India is comparatively more focused on growth compared to the growing sense of winter globally. People right now should be more focused on raising money rather than focusing on their valuation. For Jon “your oldest investor will be your new investor, hence the need to communicate has never been greater.”

However, according to him this decade won’t be a lost one and he is very optimistic about the revolution that would come up in terms of opportunities. Many of the companies that are now unicorns grew when the markets were down, and for Medved down markets are the best time for investment. In that respect, the evolution that he sees in Israel might serve his country well as, for him, “People in Israel have moved from a start-up nation to a scale-up nation, and the size of the companies based there has changed drastically.”

Talking about the opportunities that might arise from India and Israel joining hands, Medved said, “The world being built multi-laterally, therefore there is a huge opportunity for India and Israel to come together and build relationships over the Gulf. In Israel the start-up winter concept is not that cold and the last decade has been the most remarkable decade of global investment in start-ups. The investment in start-ups has generated many unicorns, and both India and Israel have benefitted from this.” To him, India looks unbelievably attractive when he looks at the start-up ecosystem of the country. The real challenge now is to focus start-ups on global problems such as food and climate, in order to survive globally.

“Six deep tech areas Israel is working on are Quantum, food tech, digital health area, investments in energy and its storage, space, and semiconductors.”

Jonathan Medved

While it is too early to predict how harsh or how long any kind of “startup winter” will last, to what extent it could affect India’s startup/innovation ecosystem, it was important for the participants of the IGIC inaugural meeting to measure how the emergence of India as a new global hub for innovation and entrepreneurship – with Karnataka at its crux – is happening in the context of a fundamental reshaping of the global innovation landscape, a redistribution of the balance of forces in the domain of innovation, and in fact the emergence of “a new play book on innovation”.



In a conversation with Jonas Brunschwig, CEO Swissnex India, Alexander Lazarow, Partner at Cathay Innovation and Adjunct Professor at the Middlebury Institute of International Studies focused upon the emergence of a global ecosystem for innovation and entrepreneurship. He pointed out that for quite a long time Silicon Valley had enjoyed being the quasi-exclusive centre for innovation and entrepreneurship. However, with the worldwide spread of the internet, the cross-border dispersion of knowledge and the exponential increase of transnational financial flows “new global hubs for start-ups like Bangalore, Tel-Aviv, Berlin or Zurich are eroding the Valley monopoly. They are creating new models for entrepreneurship and innovation, showing how start-ups can emerge, develop, and contribute to changing the global technology and business landscape in different conditions than those which made the success of Silicon Valley.”

We see today the emergence of a global ecosystem for innovation and entrepreneurship. It is not only innovation that has changed but also the message that innovations carry “More than 100 ecosystems have come up and they are offspring some of the biggest businesses we see.” stated Lazarow.

Highlighting the tremendous implications of this trend for technology innovation and economic development that the world is just beginning to witness, Lazarow said, “The biggest successful businesses are built on the philosophy of filling in the gaps that are experienced on an everyday basis. The next 10-50 years will be a tremendously exciting time for start-ups around the world.”

Remarking that ideas can come from anywhere and everywhere in the world, Lazarow said, “The Silicon Valley “gospel” is due for a refresh--and this comes from the “frontier”, the growing constellation of start-up ecosystems, outside of the Valley and other major economic centres, that now stretches across the globe”

The importance of valuation of a company has always been emphasized. Being a Unicorn carries the philosophy of growing at any cost, whereas the philosophy of being a “camel startup” is based on sustainability in any ecosystem which makes it more reliable. “Cross-pollination is imperative to help innovators to keep innovating, hence a global ecosystem.”

The global frontier today is a truly different world where start-ups often must cope with political or economic instability and lack of infrastructure, and where there might be little or no access to angel investors, venture capitalists, or large skill pools. So, noted Lazarow “under such conditions, entrepreneurs must be creators who build industries rather than disruptors who change them because there are few existing businesses to disrupt.” “The companies they create must be global from birth because local markets are too small. They must focus on resilience and sustainability rather than unicorn-style growth at any cost.” he added.

“More than 100 ecosystems have come up and they are offspring some of the biggest businesses we see.”

Alexander Lazarow



2) *The Karnataka formula*

Karnataka's booming start-up ecosystem and entrepreneurial and innovation mindset has been cultivated across the centuries, a key reason for the state prominent role in making of India the world's third largest startup ecosystem. In the official opening session the Hon'ble Chief Minister of Karnataka, Sh. Basavaraj Bommai highlighted to Claude Smadja, how growth and innovation take the front seat in Karnataka, with the state being a leader in start-ups and innovation in the country.

Reminiscing about the Karnataka's entrepreneurial history, Chief Minister Bommai mentioned that he was blessed to represent a state rich in culture and heritage. "Innovation has always been a part of people's lives in Karnataka. Starting from the days of agricultural innovation, it has been an inspiring journey." Sh. Basavaraj Bommai reminded the audience that the Maharaja of Mysore "supported industrialization, banking, and innovation long before the country attained independence. It was his policies and ideas that sowed the seeds of the start-up revolution in Karnataka. Years later, the Maharaja's passion for innovation and entrepreneurship remains, spurring a growth mindset across the state and the country."

Claude Smadja touched upon Karnataka's would-be competitors as the start-up capital of India, highlighting that there are other states in the country that are trying to catch up to Karnataka by nurturing a thriving start-up ecosystem. However, healthy competition is not a concern for Chief Minister Bommai as it "keeps people going and growing. With the right mindset, competition can be turned into acceleration, a necessary ingredient when establishing India's global footprint in entrepreneurship and innovation."

What about Karnataka's "secret recipes" to nurture success in the state? asked Claude Smadja. Sh. Basavaraj Bommai highlighted "that the mindset of the people in Karnataka, the state's access to venture funds from around the world, the new policies of the state government, and an ecosystem of growth are the key factors to the state's success." Karnataka's international community base is robust, and in the eyes of the world, the state is now a hotbed for unicorns. Furthermore, the people of Karnataka welcome innovations of all kinds, because they share a common belief that even small innovations can bring a big change in their day-to-day lives".

Elaborating on Karnataka's growth narrative, Bommai noted that "the state policies bring together high-tech people, funding and technology. Additionally, the new R&D policy recognizes an R&D center in a garage, a small school, an institution and in labs. The thriving R&D ecosystem is present in every walk of life and is in every village of the state. Karnataka is a brand in itself, helping start-ups to position their business."

"Karnataka Government has decided that It has no business to be in business."

Honorable Chief Minister of Karnataka, Sh. Basavaraj Bommai

In conclusion, Sh. Basavaraj Bommai said that "Aspiring entrepreneurs and innovators must put their heart and soul into achieving their goals. If they do so, they will never regret it." Bengaluru's emergence as the new Silicon Valley of the world would lead to a greater, safer, and stronger tomorrow.



Later on, expanding on the message of Chief Minister Sh. Basavaraj Bommai E V Ramana Reddy, IAS, Additional Chief Secretary to the Chief Minister and Additional Chief Secretary to Government mentioned in a dialogue with Harshil Mathur, CEO & Co-Founder, Razorpay that the mission is to introduce new technologies and modern techniques that enhance and uplift the lives of people.

"Karnataka is leading the charge of unicorns in India and the government of Karnataka has a steady commitment to the growth of start-ups in the country," said E V Ramana Reddy adding that "Karnataka is the 4th largest technology cluster in the world and has more than 13,000 start-ups in the tech sector alone."

NITI Aayog, the planning body of the Government of India, has ranked Karnataka as number one on the India innovation index in 2019 and 2020. "Bangalore is the only city in the country, to be placed in the world ranking in context of innovations and start-ups. From among the 100 unicorns in India, 40 are from Bengaluru", said Dr. Reddy.

Talking about government interventions to encourage innovation, the Additional Chief Secretary said, "Deliberate policies have been made by the government to focus on cities beyond Bengaluru and are offering industrial incentives and concessions to all other cities." "An electronic cluster is simultaneously being developed in Mysore and a fintech one in Mangalore. "The government's focus is to encourage growth beyond Bangalore."

Elaborating this further, the Additional Chief Secretary said that "The Karnataka government has been the first in the country in to come up with an IT policy in 1998; it was also the first to have a computer centre and has been a pioneer in introducing sectoral policies for growth..

Asked by Harshil Mathur about funding policies for the ecosystem E V Ramana Reddy mentioned that "the government has provided grants to convert ideas into reality with an independent jury assigned for the same. This in turn has encouraged outside investment as well. This year the government is looking forward to handover around 230 grants to implement innovative ideas."

In Karnataka industry, academia and government work together and that is where the strength lies. An Innovation authority was created to avoid that regulations might get in the way of growth. In the same way, the Karnataka Digital Economy Mission has been created as a government-sponsored company, where the major shareholders act as a bridge between the government and the industries.

Speaking about the role of the Karnataka Digital Economy Mission, its Chairman, B V Naidu shared the orientations designed to ensure the holistic growth of the state: "we are making a lot of efforts to spread the innovation ecosystem beyond Bangalore. A lot of innovation clusters have come up."

Citing the three decades of experience Bangalore has in the context of the innovation ecosystem, he shared how it has contributed to maintaining the leadership position of Karnataka as India's premier technology centre. This has provided the right environment for MNCs, major Fortune 500 companies, to settle into the state with major R&D centres.



While India is a complex country with complex problems and challenges to address, innovation is now beginning to provide solutions to many of these problems. "Necessity is the mother of invention, which has really helped our country to discover new business models and new technologies."

"Markets in India are very large, noted BV Naidu. We have 750 million smartphones, a 75-million-dollar market for e-commerce and 48 billion transactions happening online in India. We are continuously thinking about what comes next."

The chairman of Karnataka Digital Economy Mission highlighted three priorities: "The first is cross-border pollination as India can take advantage of the basic research that has been done by other countries which don't necessarily have a large enough market to leverage and monetize the results of this research. This would help bring innovations to commercial viability. India needs to tie up with research institutes around the world. The government is very supportive of this approach and is drafting policies to make it happen. Karnataka always follows an industry-driven governance."

Secondly, he mentioned how the government is making efforts to spread this ecosystem beyond Bangalore and is providing the initial funding needed for setting-up new ecosystems. Thirdly, a number of developments are happening with respect to the socio-economic impact of the innovation ecosystem in order to improve the livelihood of the rural economy. "We look forward to achieving these three goals over the next decade with the help of our entrepreneurs."

3) Deep dive into some new wave sectors for startups

A significant part of the agenda of IGCI was devoted to discussing the growth prospects of some sectors offering tremendous opportunities for development to startups not only from India but to many of their peers from other ecosystems.

India as the new deep tech hub

India is now close to an inflection point where it will be emerging as the next global DeepTech hub. According to a NASSCOM report close to 20% of all the country's start-ups are now involved in deep tech developments, using Artificial Intelligence (AI) Machine Learning (ML) and Blockchain and other disruptive technologies to create new products and services and meet pent-up needs. This was the general assessment of the session moderated by Saket Agarwal, Founder & Managing Partner at Onnivation

Pradeep Vajram, Executive Chairman & CEO of AlphaICs, operating in India, the US and Japan, reflected the tone of the session said, "The next decade is going to be very interesting, especially for deep tech in semi-conductors. It's a good time to be in India." An assessment corroborated by Manish Singhal, Founding Partner of PI Ventures, for whom "Deep tech in India has really gotten to a new level. The kind of ideas we are seeing right now is amazing."

Highlighting that the last decade has been instrumental for Indian DeepTech start-ups, he added "I believe the next 10 years are going to be a deep tech story. The relationship between investors and founders of a startup should be like a marriage. Though we are marching towards a lot of private investments coming



into deep tech, not many of them are from India at the moment, and as a country, we do need much more of them."

Flagging the role of customers in DeepTech businesses Aruna Schwarz, Co-founder & CEO of Stelae Technologies in the UK and India, noted: "I have not heard of a lot of start-ups in the last 18 months, or before the pandemic able to raise to \$3 millions of funding and having the luxury of playing around building AI algorithms without a customer. So, when there is no customer, the funding dries up."

Organizations are currently betting on positive factors for the expansion of deep tech such as the accelerating digital adoption, the broadening of the national skills and talent pool, and a strong policy support, exemplified by the "Atmanirbhar" - the self-reliance policy of the government aiming at the development of an ecosystem propitious to research and innovation. For Satoshi Nagata, Director, of Sagri operating in Japan and India, "India being a booming market, there are multiple competitors in the field and start-ups sometimes end up copying each other. To stay ahead, companies need to figure out the areas where they will be leveraging best their competitive advantage and also must localize everywhere"

Noting how deep tech companies in India companies are today creating artificial milk, 3-D printed skins and much more, Manish Singhal added, "I don't see this trend going down, only up. Even without capital early on, people are still pursuing their ideas in the DeepTech space. New ideas are coming up every day. We all talk about AI and Machine Learning which has become a somewhat beaten down topic. However, two other areas need to be spoken about: Crypto and physical innovations. We will see a lot of physical innovations coming into the fray in the next five to ten years."

Technology is today focused on solving global problems, and it has to make an impact on them to actually make a difference. "Many of the startups in the deep-tech domain are aiming at solving a very unique problem and none of us are necessarily domain experts. However, companies do have some things in common that – put together – are going to make a big difference", emphasized Arun Chandru, Co-founder & Director at Pandorum Technologies

A Fintech Moment

In the session moderated by Woosuk Kenneth Choi, Editor, Future Planning Desk, The Chosun Ilbo Group, Republic of Korea, the panelists looked at the fast expansion of cloud banking and free-floating financial platforms, assessed the new developments taking place in the market and highlighted the challenges faced by fintech start-ups.

Global fintech funding reached a record US\$132 billion in 2021, more than double the 2020 amount - with this boom targeting every fintech category. The sector seems well on its way to continuing its expansion, by boosting a number of new growth-sustaining trends, such as the rise of neo – cloud – banking and free-floating financial platforms beginning to change the way people transact. Comparing this to the functioning of traditional banks, Vidhyashankar Sriram, Vice President, Client Solutions, at Crayon Data Singapore and India, noted that "the banks are facing a multitude of challenges with data and using intelligence."



FinTech companies are establishing strategic partnerships with traditional banking, insurance, and retail sectors, where they are actively catering to evolving customer needs, which will further accelerate FinTech's expansion in India. Naveen Bindal, Founder of EnKash, noted that out of the 100 plus unicorns in the country 15-20% of them are in the fintech domain: "This is the largest category amongst all start-ups that are coming into technology. The new generations simply want banks and payment companies to come together to the benefit and convenience of the customer; and this is where the whole embedded finance concept would come in."

Traditional banks and fintech need to coexist and it is unlikely that one can go solo and win the market. The banks who have partnered with fintech are trying to collaboratively solve challenges ahead of solo banks still struggling to address them.

Highlighting trust and credibility as two major factors in shaping the perception and choice of users of online payment software, Taneia Bhardwaj, Director & Head of Consumer Business, at Nium, India and Singapore, identified a significant change in customers' behaviour since the pandemic. "Customers don't want just a good experience; they want convenience" she quipped.

One challenge for Fintech startups is to develop activities in the cross-border space because of the many different regulations and licensing issues. The frameworks and models for Singapore or Europe won't work in India. At the same time Fintech businesses face difficulty in keeping up with innovation and customers' expectations in the age of accelerating digital adoption. Elaborating on this, Raj Gandhi, Co-founder, DollarBull, said, "The lack of financial education is a big challenge. People still come from a savings mentality. There's a need to empower middle-class people by democratizing access to global investments."

Digital business payments are still lagging behind in India. Small businesses don't have company cards to do inter-companies transactions. "Our company is built on resolving the friction that exists in business payments whether it's supplier payment or rental payment, mentioned Naveen Bindal. There is always a fear of misuse when using company cards for transactions, hence end to end monitoring is required."

Concluding, how creative disruption is the next big thing that's going to happen, Vidhyashankar Sriram said, "the industry is going to prosper and get bigger as consumers develop trust towards Fintech companies. Furthermore, the AI financial market is predicted to expand tremendously in the coming decade. Hwang Kyu-jong, Founder & President of Waiker, Inc. in Korea provided a very illustrative example of that mentioning how his company has developed "a solution to automatically extract and publish complex financial data using artificial intelligence. The focus of Waiker Inc is to work on the super-fast processing of financial data, which is the basis of all fintech industries."

Boosting the transition to e-mobility

In the session moderated by Renuka Kirpalani, Host & Editor the Autocar (Times Network) & Executive Editor Video content Autocar India, the panellists discussed how the automotive industry is facing its most disruptive phase ever, with high levels of innovation and great new opportunities, but with the whole sector of E-mobility now being a very challenging space.



Sharing how vehicles today are undergoing drastic transformations from talking cars to self-driven vehicles, Renuka Kirpalani, set the stage to further discuss the revolution the industry is facing. EVs is now *THE* buzzword in the automotive industry, with 6.6 million EVs sold in 2021 globally. A game-changing transformation is happening, which will reshape global supply chains. The mobility of the future must be carbon neutral and has to be electric.

Citing the challenges faced by electric mobility companies , Shreyas Shibhulal, Founder & Director of Micelio - Electric Vehicles, said that, "Although we can leverage a huge market to create products in this space that can translate well in emerging economies, we are still struggling."

First, people need to understand that this space requires a high-level advanced technology; regardless of any geopolitical situation, a complete indigenization of the supply chain is essential to sustain electric mobility; and, second, there needs to be more investors who understand that this space requires a long maturation period.

"If you look at the e-mobility ecosystem, you will see that the sector is currently dominated by start-ups in the country", added Akshima Ghate, Managing Director, RMI- India an independent organization that works towards accelerating India's transition to a clean, prosperous, and inclusive energy future.

Flagging how electric vehicles are still a relatively new technology, **Juliane Renz**, Head of Business Development & Funding at ELO Mobility in Germany, noted that although early adopters have paved the way, many mainstream consumers are unaware of - or just learning about - the advantages of electric vehicles. "Charging infrastructure poses a big challenge for German's E-mobility industry which is why they have to outsource to other energy sources." she added.

While people think that the infrastructure technology is lagging behind and is not catching up with the increase of EVs – creating a major barrier to electric mobility - the reality is that we are facing a structural problem not a technological problem. "If we Integrate EVs with the energy system we can decrease the demand on systems. I believe the electrification of transportation is the biggest change of our age", noted Ilan Ben-David, Co-Founder & Chief Technology Officer of Zooz Power in Israel.

Be it flying electric vehicles, cutting-edge charging technology, or hydrogen batteries, the automotive sector is now on a full speed mode toward e-mobility. EVs are now the dominant option on the table. "We also expect a transformational change happening when it comes to drones. These kinds of ideas are being approached by a combination of startups and the government", said Satyanarayanan Chakravarthy, Founder, ePlane.

"I believe the electrification of transportation is the biggest change of our age."
Ilan Ben-David



India as the land of the Super App?

Venkat Ananth, Co-Founder of Signal Dot Co moderated a discussion which illustrated the rich opportunities created for companies able to bring to the market the kind of super app meeting their pent-up needs and expectations. However, there was also no underestimating the challenges to be addressed and the bias to be overcome for startups or even well-established companies wanting to leverage the growing demand, especially among the new generation, for having multiple services available at the touch of one button.

Flagging these challenges Avrial Bhatnagar, from Venture Highway, remarked that the environment in India was not necessarily propitious to building a super app in the absence of a regulatory framework and in the face of intense competition. Citing China where many companies have a regulatory advantage, Avrial mentioned WeChat which could grow into a super app, as the market was internally focused, and the Chinese government reduced competition by blocking foreign apps like Facebook and Twitter. "In contrast, verticals in India are deep and the market is more open than in China. Hence, a vertical app tends to perform better in India," he said.

As a counter-point, Sauvik Banerjee, Chief Technology Officer of Tata Digital, Shared how a 152-year-old behemoth like the Tata Group with over 30 consumer-facing businesses broke into the super app space, Sauvik said the ecosystem enabled the Group to launch the "Tata New" super app within 6-8 months of conceiving it.

"In a crowded landscape of apps, a super app is all about becoming integrated with people. As Tata Group is a consumer-facing organisation, our bet has always been loyalty. Brands know they need to be trusted. By using the loyalty of our customers, we tried to stitch a perfect ecosystem and ventured into the journey of launching a super app," noted Sauvik.

Paroma Chatterjee, CEO of Revolut observed that consumers in India use nine different apps daily and thirty apps a month, Paroma said multiple choices gave an opportunity to service providers to think holistically on how to make a user's life easier. "As consumers want convenience, apps can be brought together to provide a service to users at a common spot, added Paroma. Our app Revolut has become a destination of choice for payments across 28 countries. Our company wants to bring to India this visualization so that payments can be a cornerstone of having a wallet that is fungible across platforms".

Wrapping the inter-active session, Sauvik said facing a cross-category pollination was an early sign of adoption in his organization, while Paroma summarized some key success factors for super apps: "A super app can become successful if it provides cross agility facility, convenience, cost advantage, security and value across multiple services in one app."

Designing India's Web 3.0 Innovation Roadmap

Web 3.0 networks will operate through decentralized protocols, with data interconnected in a decentralized way, and human users and machines able to interact with data. So, a convergence has



already emerged in the form of blockchain and cryptocurrency technologies, with interoperability and seamless integration allowing them to be used in a wide range of applications.

Taking in account the various examples of how tech platforms and start-ups have scaled the industry, Naganand Doraswamy, Managing Partner & Founder of Ideaspring Capital, who moderated the session observed that “people don’t want private companies to drive their platforms, which is why they are now turning to Web 3.0.”

Anirudh Pandita, Founder of Pocket Aces & Loco, referred to his digital gaming platform which helps break boundaries in a way similar to the blockchain mechanism and emphasized that it is the consumer journey that is important. “The ability to actually own something virtually brings out the prominence of Web 3.0. If one can go from game A to game B and bring the same products with oneself, that’s phenomenal. That is exactly what Web 3.0 is doing.”

As a practitioner discovering the capabilities of the technology, he feels it is more like a journey to find out what the final product will be like, so the short-term valuation of startups involved in WEB 3 leveraging does not affect him. Web 3.0 games can bring adoption, and in India, it would be transitional according to Pandita.

To this Emin Sirer, Founder & CEO of Ava Labs in the US who participated online added, “I believe the possibility of stopping Web 3.0 is zero. Its growth and applications cannot be stopped.” The potential for scalability will be huge as Web 3.0 will be a single-point solution, permitting multiple scales of user cases.

On top of the Web 3 features one can build all kinds of virtual machines that are not powered by crypto currency or tokens, so such examples do exist. “Web 3.0 can basically be defined as any platform where the service provider can provide users of a strong guarantee, be it on data security or on digital transactions, providing them security and better service emphasized Emin Sirer. Because of India’s early bet in the IT sector, it is well placed today when it comes to web 3.0.”

Nitin Sharma, Co-Founder & General Partner of Antler shared the key elements of the metaverse which are virtual representation, the fact that it’s immersive in a true sense, and it is a place where economies are virtual. According to him “Web 3.0 is not necessary for metaverse but it really makes it come alive.” Establishing his belief in the potential of Web 3.0, he shared that his company is as an early investor in Web 3.0 and have invested 1/3rd of their total capital for the same.

“It’s an opportunity that comes once in 20 years and India should define the way for the new internet or Web 3.0. We evolved from bitcoin to supply chain trading to gaming, and have established a way ahead. As compared to 7000 applications being built on the Web 3 platform in January, we now have the double of them, this underlines the availability of the infrastructure and the possibility of producing for the globe from India.” Nitin concluded.

Green / climate tech start-ups: the moment is now



In the session moderated by Amrita Gandikota, India Representative of the German Indian Startup Exchange Program (GINSEP) the panellists emphasized climate change as the defining issue of our time, making it imperative for companies to innovate and introduce new ways to address this challenge on a global scale.

Achim Burkart, Consul General of Germany in Bengaluru, pointed out that the clock is ticking on climate change and this issue must be addressed at a global level. “Both production and consumption need to be done more responsibly.” he remarked, adding that “the interchange of young people – India to Germany and vice versa - is very important to encourage the growth of start-ups in both countries. Indian ingenuity and German engineering go hand-in-hand exceptionally.”

Sharing her perspective on the consequences of the upcoming effects of climate change, Tammy Ben-Haim, Consul General of Israel to South India, added, “The time has been now for years.” She shared how for years the ideas of sustainable start-ups were approached with hesitation about their viability and funding. Promoting promising and sustainable climate-tech startups has now become imperative and a part of every VC’s portfolio.

To which, Neeraj Kumar Dasila, Co-Founder & CTO of SmartHelio, Switzerland added that, “green-tech and sustainability are a crucial part of the solution to the climate change problem and both conventional and clean energy resources should be focused on that aspect. What the world needs is innovation from young start-ups focused on a singular goal of sustainable energy production and consumption. The mindset of start-ups should not be about success or failure of an idea but striving towards change.”

Oded Distel, , Chief Executive Officer, Tal-Ya Agriculture Solutions, Israel, warned that “Expecting governments to lead the change is nice, however, politicians can only take the necessary steps when they feel confident that the changes will be accepted by the public.” Noting how the common people need to be more vocal and active and show the politicians the direction they expect them to take Anandhi Gokhale, , Investment Manager, Emerald Technology Ventures, Singapore, observed that, “Corporations today cannot survive with business as usual. What’s changed now is their way of working with startups. They cannot depend on innovation happening from within, so they have to look outwards.”

The consensus among the speakers was that while green technology has been around for two decades, it is becoming more popular as global warming becomes more urgent. The available industrial energy assets are now falling short by 30-40% in their deliverables and will slowly become non-performing assets. The green tech and sustainability market which was valued at US 9 billion dollars in 2019 is expected to be close to US 48 Billion dollars by 2027.

4) The way innovation develops as a game-changer

With more than two decades of experience exploring the dynamics of large-scale, long-term innovation and change, Paul Saffo, a Silicon-valley based forecaster exploring long-term technology trends and their impact on society, Professor in the School of Engineering at Stanford University discussed with Yaël Smadja, CEO of Smadja & Associates, US what he considers to be “*the innovator’s edge*”.



For Paul, innovation requires a time frame. It is like a relay race. Most ideas take about 20 years to become a success, and that is what visionaries today are working on. However, there needs to be a change in the DNA of an innovator, otherwise the process of innovation will not change. Furthermore, change is only possible when a species is under stress, “‘innovation’ essentially means mutation and species can only undergo mutation when they’re under stress.” For instance, there’s a reason why traditionally, in Silicon Valley, the buildings are two stories high and surrounded by grass. “During the crisis in New York, 1929, when companies failed, people jumped out of the windows. Since the buildings were only two stories high; they landed on the grass. They went home, put an ice pack on their ankle, and continued their lives. That’s innovative thinking,” recalled Paul.

Over the years, Paul Saffo has evolved from being a technology innovator to a fast follower similar to Bill Gates. Following in the footsteps of the business magnate that co-founded Microsoft, Paul intends to analyse what other people are doing and identify which ideas have vastly more potential. “Today’s world needs fast followers like Bill Gates” he mentioned.

Yet again, the importance of innovators in the technology sector came to light, “This is a moment in time where we are facing vast global challenges. And the world isn’t doing a very good job of managing them. It’s up to innovators in the technology sector to help move us forward.”

Asked to elaborate on how the DNA of the innovator has evolved since the pandemic, Paul noted that, “Technology has always been advancing steadily and innovators had been trying lots of different business ideas when the pandemic came along.” The pandemic precipitated this fast change where all of a sudden entrepreneurs had customers who were prepared to work with them, and businesses had the right technology in place and that’s very often how innovation happens.” he added.

Noting that customers will always use new technology to do an old thing in a slightly new way, Paul said that ““Copying an old thing in terms of the experience is often an inevitable part. If businesses have something way too advanced and too different, they are not going to find a market.”

For Paul, the next big thing will be lower orbit space. “Space is turning into a resource really fast and a whole bunch of companies are losing a lot of money trying to get into space.” He elaborated how if some clever people here on Earth could help that cause at the same time by leveraging what’s happening in space, then they would truly make an impact across the world.

Elaborating further he explained that according to him, component technologies are hugely important but unless businesses are actually dealing in R&D, the technology-specific technologies would remain less important than the intersection between technologies. In his perspective, the most important short-term opportunities come from the recombination of things that are out there and so the world is in the middle of a vast sensor revolution where combining sensors with networks is currently a huge opportunity.

Adding to this he shared that in his view, the next big thing on a 30-year scale is biology. The whole science of life is moving much faster than the digital technology space and in the long run, that’s going to be a much bigger area. So, in the short run, businesses should be looking for a combination.



Highlighting the importance of an entrepreneurial mindset Yaël asked Paul Saffo, if there were any secret recipes to nurture success. For him “an idea needs two things for success. An innovator with the vision, and a receptive public.” Most ideas according to Paul, take a lot longer to come to pass than we think. “If one acts short but thinks in the long context one will find a way to succeed.” he added. There are times with innovation when one needs strategic patience so one should wait for the right moment. Also, he believes the first-mover advantage is grossly overrated and one must pay attention to the timeframe.

“The most important thing about the timeframe is to think long-term in terms of the consequences and the opportunities so that the impact of the innovation will be much more profound.” “And above all, think about the generations unborn. Take on the short-term challenges, and change the world but above all, remember, one is going to be judged long after one will no longer be here on whether one was a good ancestor or not.”

“I believe the next big thing will be lower orbit space. Space is turning into a resource really fast.”

Paul Saffo

As Paul Saffo highlighted there is a context in which the process of innovation can develop and there are circumstances which can accelerate it, such as the possibility to leverage and to build upon **Digital public goods, i.e., open-source software, models and standards.** this was the topic of the session which looked at the ways to « *Maximizing the potential of public innovation platforms for new technology and new businesses*”, moderated by Claude Smadja, President Smadja & Smadja Strategic Advisory.

Sharing his perspective about the power and potential of Digital Public Goods for generating innovations, Sharad Sharma, Co-founder, Indian Software Product Industry Roundtable (Isprit), observed said that, “it is incorrect to think that private innovations happen in a vacuum. During the Covid-19 pandemic, eight hundred million people in India received direct benefit transfers related to food which helped minimize the social problem during the pandemic. Also, India vaccinated more people than so many countries put together which is laudable.” India is by far the largest direct deployer of direct benefit transfers in the world. A quantum leap from a licensing economy in a not so distant time where entrepreneurs were all about arbitrage rather than being about R&D.

India is in the fourth wave of reform focused on the financial sector. In terms of bank account expansion, the country did in seven years what took other countries about forty-six years to do. India today is going through a massive data revolution, and the next big thing will be lending in the financial sector. According to Sharad, challenge grants would give India an edge over others in a short time.

Talking about the tremendous transactional capabilities of public platforms, Rakshit Daga, CTO of Bigbasket, remarked that the start-up innovation being done earlier was focused on markets abroad, which has now changed. “Since the launch of public platforms, the internal ecosystem of India has blossomed tremendously. The Open Network For Digital Commerce (ONDC) launched in April 2022 as



a prospective alternative to dominant global giants such as Amazon.com and Walmart is now democratizing e-commerce in India. Only 0.1% of retailers in India, are now digitally enabled but In the next three to five years India will do one billion digital transactions a day. UPI platforms have helped India gain financial literacy and economic stability.”

The concept of private innovation in public goods needs to sink deeper in the country's culture, with a focus on R&D. Nirankar Saxena, Deputy Director-general, FICCI, Leader for S&T Activities, Chair of the Advisory Board for the 6 Innovation Clusters set by the Government of India, said that, “the kind of policies orientations I would advocate to push the public innovation model further are, firstly make academia much more focused on being the base for innovation, second expand and deepen the involvement of private sector leaders, and third, expand third party intervention.”

Highlighting the complementary correlation between public consortiums and private organizations Alex “Sandy” Pentland, Program Director at the MIT Media Lab Entrepreneurship Program said that, “Linking the Indian picture to the global picture is imperative as India is slowly becoming the pioneer in the production of public platforms globally. An enormous transformation is being observed with new fundamental means of production.”

A key element emphasized in the session was that the concept of private innovation leveraging public innovation platforms to meet public goods needs have to sink deeper in the country's culture and the arbitrage mindset must be replaced by a focus on R&D in India.

“In next three to five years India will do one billion digital transactions a day, which is more than total global transactions a day.”

Rakshit Daga

The agenda of the inaugural meeting of IGIC also focused to another crucial course of action for developing India technological innovation capabilities was addressed in the session moderated By S. Raghatham, Opinion Editor, Deccan Herald, on how to move “From city-clusters to a sustainable countrywide startup/innovation ecosystem”

Technology, deep tech and entrepreneurship are now beginning to flourish from tier one to tier two and even Tier 3 cities where startups have enough bandwidth to kickstart their journey. However, predominant issues need to be resolved at a grassroots level. It takes time for an evolution to take place, but it cannot happen if the focus still remains limited in many cases to urban locations.

Founders have to be where the problems and needs are. They have to go to places and learn from people. Design thinking is another important aspect. India is the second largest innovation ecosystem, but the scale of this ecosystem is still small for a nation of 1.4 billion people. This year only fifty-eight thousand patents were filed in India whereas China files one million five hundred thousand patents every year. The SME sector is a source of some innovation, but owners don't even know where to file



for a patent. There is an urgent need from some support from the government and it is high time for India to adopt a different strategy to enhance innovation in rural areas.

Noting how many people moved back to their hometown during Covid-19 and started building a network of people Navratan Katariya, Director - Innovation, Entrepreneurship –IOT & AI, NASSCOM said that “In a short time, they explored technology, deep tech and entrepreneurship. Due to the effects of the Covid-19 pandemic, we now have the bandwidth in tier one and tier two areas and reasonably good power to scale our businesses.”

Citing the importance of having a market and ecosystem where one has the framework conditions to develop innovation and entrepreneurship Sandeep Allur, the Director of Microsoft Technology Center in Bengaluru shared his conviction that “startups will grow in rural cities because agriculture and healthcare are the most powerful sectors which can be disrupted. Today founders are going back to their roots and are discovering the network and learning new things.”

Madan Padaki, President, TiE Bangalore, concurred that there is no dearth of talent in rural areas and there is unlimited potential. “Rural and urban aspirations are equal and entrepreneurial resilience is far higher in rural areas because the adversity they face is much higher. There is an inadvertent march of technology in rural areas and therefore we can unleash the power of startups. All the elements are there, all we need is a new perspective to see them.”

Shweta Shalini, Official Bharatiya Janata Party Spokesperson, Advisor to Chief Minister of Maharashtra, sounded a note of caution, warning that founders will not by themselves go beyond the urban boundaries. She sees the need to first create an ecosystem in less urbanized parts of the state and the country to incentivize entrepreneurs doing something for India.

Shalini advocated for a big change of approach and mindset when it comes to the media, innovation platforms, entrepreneurs-focused events, and the government policy: "We need to look at the prism the other way, there is innovation at the grassroots level." For her, "the government needs to provide district innovation funds because innovation is lying there and it needs money, she noted, adding that "we are still spending 0.7% GDP on innovation whereas Israel is spending 4% of its GDP on innovation." India needs to learn from China's government how they bought all the patents IPs from the world and gave them to SMEs to support their scaling up.

"Entrepreneurial resilience is much higher in rural than it is in urban cities in India."

Madan Padaki

While it is great to come up with an innovative concept or ideas for a technological innovation it is quite a different story to master how to translate this innovative concept or breakthrough into a marketable service or product. How can this innovation be deployed, what market to target and how to mobilize the financial resources, set up the right organization and management team to secure



perfect execution? The challenge of the *Last-Mile Connectivity* was the focus of a session moderated by Woosuk Kenneth Choi, Editor, Future Planning Desk, The Chosun ILBO Group, Republic of Korea;

Opening the session, Karin Mayer Rubinstein, CEO & President Israel Advance Technologies, Israel, shared her analysis on how the combination of innovative mindset and entrepreneurial spirit, the strength of the country's academic and R&D system, the dynamism of the VC sector and its readiness for risk-taking have created the conditions for moving fast from an innovative idea to a service or product able to find its market globally. Karin pointed out that "Israel is only 75 years old and has already become home to over 6000 startups and 400 R&D centres of multinational companies. In 2021 Israel raised 26 billion dollars for 700 deals and 6 billion dollars for high-tech companies in Q1 2022."

Israel does not rely on foreign companies anymore. Around 88 mega funding rounds of 100 million took place in 2021. Furthermore, more than 50% of the country's industrial experts come from high tech and the academic and research ecosystem is very developed at a top level, which sustains growth and innovation, she added.

The panelists stressed that if Israel can do so much in such a short period in implementing technological innovation capabilities, then why not India? The discussion brought to the fore one of India's biggest challenges in the present context which is the availability of imported equipment. Almost 90% of all the equipment is bought from western countries, which in turn reduces the number of DeepTech unicorns able to emerge.

Anand Anandkumar, Co-Founder & CEO of Bugworks, a clinical stage biopharmaceutical company developing affordable, accessible, novel therapies against infectious diseases and cancer, stressed that one key factor in being able to converting research faster into business success stories was the combination and the creation of synergies between basic science and engineering expertise. Israel is demonstrating this capability, while India needs to continue to work at that. However, it is also true India is capable of doing great things that nobody else can. For example; We normally manufacture 1.5 billion vaccines every year but in 2021 we manufactured over 3.5 billion vaccines and vaccinated over 1 billion people. We went from less than 1 million tests to 800 million tests in RT-PCR. "

"Many parts of the world, for instance – Southeast Asia, Africa and remote parts of Eastern Europe - are alive because of the Indian Biotech and Pharma Industries, just like the information technology industry kept our livelihoods going. We have done a lot with just less than 1% of GDP spent on R&D and less than 1.3% GDP spent on health." Anand noted. If India is to develop holistically and to become capable of keeping pace with top nations around the globe, it needs to invest a lot more in Research & Development for the future".

Highlighting Israel's tenacity for science and engineering, Jagadeesh Gopalan, , Senior Professor, & Chairman Center of Excellence in Hypersonics at Indian Institute of Science in Bangalore, Co-Founder Ykrita Life Sciences, emphasized that science is an element the richness and importance of which the Indian society doesn't fully recognize; it is mostly technology which is fully recognized as a value and an asset: "Israel is a wonderful model because its basic science and engineering merge seamlessly."



Anandi Iyer, Director of the Fraunhofer Office India, came back to the missing element in India in the continuum from an innovative idea to as marketable product or service is the applied research ecosystem that could take the results of this research to the market in the shortest period of time.

Manoj Gopalakrishnan, Founder & CEO of Algorithmic Biologics, India, stepped in with some sharp facts: "A person without assured healthcare, education, and financial inclusion would find it extremely difficult to take entrepreneurship to the next level. What is missing is the supporting framework and patient capital to help promising young innovators to implement their ideas beyond what VC funds are ready to do" he declared.

Shrikumar Suryanarayan, Co-Founder, Chairman & CEO of Sea6 Energy, India; brought up the challenges faced by research enterprises in domains such as biotech in which the cycle from innovation to product is quite long and uncertain. "There are two kinds of roadblocks, the first is government and the second is what makes us not do it. In India, it's difficult to do research on Indian Biodiversity without permission. So, the regulations on scientific research have increasingly been called into question. As a society, we are averse to risk and that has a cascading effect on many aspects of our decision making in the public and private spheres."

"The contribution of enterprises to R&D has been a mere 0.86% of GDP and has not moved one bit. R&D is looked at as a cost and not an investment by entrepreneurs, and that needs to change."

Anandi Iyer

Speaking about the missing link in the industry, Anandi Iyer added that, "One of the glaring mistakes made by the government is that it doesn't provide enough funding for high-risk research. It's vital that a certain common denominator of technology is developed, and high-risk and high-tech companies can come into a level playing field."

The panelists were in agreement that four most important elements need to improve rapidly: the regulatory environment, the funding, the availability of patient capital and a commitment from big pharma companies.

Concluding the conversation, all the panelists were in agreement that India needs to have a synchronized ecosystem, more funding pools in the healthcare sector and enterprises need to look at R&D as an investment. Only then can we see more unicorns coming out of academic innovation.

"A model that can translate in an efficient and faster way academic research into innovation is becoming increasingly important to devise."

Manoj Gopalakrishnan



Despite all the issues and challenges to be addressed to expand and deepen India's technology innovation capabilities and make the country a full-fledged global player in that domain, a very promising new reality in the session how the country is moving fast "*From the world's back-office hub to technology innovation made in India*"

During the conversation moderated by Sanjeev Gupta, Managing Director & CEO of Lahari and CEO of Karnataka Digital Economy Mission (KDEM), the panellists discussed how India is now at the cusp of developing a new role as a technology innovation provider to domestic corporations as well as to MNCs.

Flagging the session topic on how the country is now at the cusp of developing a new role across the technology spectrum Amit Kalra, Managing Director at Swiss Re Global Business Services, said that the Swiss Re operation in India began as a back-office 15-20 years ago has grown significantly ever since. "We have evolved from shared centres to global innovation centres in a matter of few years. The journey is towards making India a global and transformational hub. The quality of start-ups in India has improved especially with domain capabilities coming in."

Citing how companies are today leveraging their presence in India to increase the valuation of their global portfolio Shikha Pillai, Head of Strategy at the Siemens Healthineers Development Center, added how Siemens is "looking at India as a land of opportunities and calling out our global offices to take advantage of the same, which is helping us position ourselves better."

The consensus among the speakers was on the critical importance to work with start-ups in India or else they will disrupt the market and the existing businesses and established corporations will at some point find themselves wrongfooted. Furthermore, with India now growing as an innovator at an international level, Hemanth Sheelvant, Innovation Director, Corporate Venture Building, at Bosch GMBH, elaborated on India's technological journey, noting that "Start-ups have given proof of value using the technology that they are developing and it is now up to the global corporate ecosystem as to how the solutions these startups provide can be incorporated in the mainstream."

GNV Subba Rao, Global Head of Quality & Operation Centers, Process Automation Director, ABB Innovation Center, concurred that this shift of perception is present everywhere, but is different in its intensity from industry to industry. "The global ecosystem is now focusing on India in terms of innovation and deliverables. The kind of research start-ups are doing is helping businesses save 2-3 years of work, effort, time and money." he added.

"The global ecosystem is now focusing on India in terms of innovation and deliverables. The kind of research Indian start-ups are doing is helping businesses save 2-3 years of work, effort, time and money."

GNV Subba Rao

Reflecting on how the rise of India as hub for innovation and startups has resulted in the country's new positioning on the global map, Masayuki Toriumi, Managing Director, Sony India Software Center, illustrated that trend by emphasizing how the overall perception in Japan with regard to technology made in India has evolved: "Companies in Japan now look up to India or China for valuable insights. India is growing and the world is now trying to keep up with its pace. Sony India is now providing technology solutions integrated into Sony's products sold in the whole world."

The perception of Indian talent, of Indian organizations and their capabilities, has not only changed but expanded in a radical way. Analyzing the trends of growth for India as a technological innovation hub the top corporate executives from MNCs involved in the session were at one in considering that the emerging

perception now with respect to India is that of a country of global technological capability able to contribute innovation to products and services of MNCs worth tens of billions of dollars turnover.

The journey is towards making India a global technology and transformational hub.”

Amit Kalra

VC

and

PE Funds play an important role in providing the resources for translating innovative ideas and the results of technology research into marketable products and services. The role of VCs in allowing the innovation to happen of taking the risk for innovation to be nurtured and then to be translated into new services and products is quite significant while not necessarily fully recognized. It is such a role which was explored in a dialogue between Prashanth Prakash, Partner Accel Partners and Gururaj “Desh” Deshpande, Co-founder Sycamore Networks, Founder The Deshpande Center for Technological Innovation at MIT & Founder Deshpande Foundation, USA

Noting how the VC market was almost non-existent in the initial stages and even the idea was unknown, Prashanth Prakash observed that, “It was only a few years after the global VCs entered India that our people became aware of the importance of Venture Capital. All aspects of the market making that happen among start-ups came up in some form of innovations leading to consumer applications and some of them leading to B2B start-ups that emerged in the last few years. This all would not have happened if the VCs would not have taken a forward-looking view. It has been a momentous journey because as a country, India doesn’t have an educational ecosystem that produces innovation and neither does the government invest willingly in R&D compared to the other nations.”

Gururaj “Desh” Deshpande, concurred with Prashanth’s points, adding that all players together need to play a role in building an ecosystem to nurture more entrepreneurs and ideas. ““All of us have to play a role to nurture more entrepreneurs in the country. It is a must to connect thinkers to doers which would help solve the problems via innovation. In the last three to four years, we have seen that anything done in this synergistic way creates an everlasting impact. We should not underestimate India’s role as a hub for R&D with the number of established IITs.”

Comparing India to US and China he noted that the US and China cannot be overtaken yet and that India needs to invest much more of its efforts in the domain of innovation. For him, “Indians have proven not only to be entrepreneurs but that they can run bigger organizations.”

Talking about the extent to which the technological potential of a country might be in direct relation to the strength and dynamism of the country's VC ecosystem, “Desh” Deshpande shared that the Indian government is not lagging behind in terms of support for startups. What is missing is the connecting element between the thinkers and the doers. “Innovation should be measured by the impact businesses create. They should talk less about deep tech and more about social impact.”

Prashanth reflected on how India started as an outsourcing source and has now built huge, internationally competitive companies of its own. “The business champions are a great source of



investing in R & D and so, the main source of risk funding for innovation either comes from VCs or from some of the big MNCs that invest in India, as they believe in India's potential as a source of technologically innovation". He deplored that the country remains mostly stuck on these two sources of funding. For him, this situation needs to be changed in order to expand the system and get more of it.

For Prashanth, biotech innovations are difficult to be developed due to the lack of applicability in India. These have to be sold to US companies, and the US doesn't have enough of the market for these at the moment. For him, Indian entrepreneurs need now to endeavour to climb the value addition ladder for the world products. "Nothing can substitute the talent that comes out of India, as the country will always have the leverage of being the biggest talent pool."

5) *It all about entrepreneurs*

In a standing room only, session moderated by Shereen Bhan Managing Editor of CNBC TV, N.R Narayan Murthy, Co-Founder of Infosys Ltd & Founder- Chairman of Catamaran Ventures advised the young entrepreneurs to look at the early model he had designed for Infosys, with predictability, sustainability, profitability, and dependability as its core values.

Lauding India's leadership in the startup ecosystem globally, the IT icon founder said an entrepreneur required three elements to be successful in the business – access to customer or ease of selling in the market, right talent and capital. Cautioning the participants against over-estimating the market, Murthy advised them to lead by example, choose a right successor and focus on the value of their services and products. "Price is what customers pay; value is what they expect from a product or service" he asserted, adding that "if businesses focus on how to improve value for their customers, then the price will also increase."

Asked for his views on many startups going for IPOs to raise capital, Murthy warned that "Businesses have to operate as trustees when taking an outsider's money. Having an IPO is not a fun, IPOs have been too often considered as a surrogate for the next round of finance."

A lesson Murthy learnt very early was to disclose when in doubt. It is better to be known as a respected individual than a smart person. It's okay not to be that smart. It's more important to be trusted. Businesses must think about the poor retail investors before embarking on an IPO. Noting that IPOs come with huge responsibilities, Murthy said it was better to bring the bad news early and pro-actively. "Let bad news take the elevator and the good news take the stairs."

For the Infosys founder shaping the corporate culture is among the toughest challenges. To ensure success, a leader has to lead by example in creating a culture of fairness, accountability, imagination, quick decision-making, honesty and choose a right successor, who has the same values.

"To enhance chances of success, entrepreneurs must have a mix of old culture, which has a reasonably good influence and bring in a new culture and make a merger of them," Murthy reiterated.



Flagging the impact of change in a company's structure and the setting up of legislations, Murthy said regulations and government policies would not have an impact if you deliver your best.

Competition helps businesses keep their customers happy so entrepreneurs must embrace it and do their best to solve problems. Every CEO will profess in public to like the virtue of competition but will do everything possible to stifle the competition. Competition will always exist, what is important is one's ability to solve the problem. The lesson is to introspect and work hard rather than blaming others.

"If product businesses have what makes corporations look smarter in front of their customers, then it will work. First, think of what an individual can do. Focus on individual growth that is something one can control. Competition comes second," Murthy noted.

On being asked for his assessment of present-day entrepreneurs, Murthy said he is not that smart to compete with the people of the present generation. As compared to when he started, the kind of progress India has made is unbelievable. The perspective of the world towards India has changed. He expressed his gratitude towards Indian Silicon Valley and stalwarts of Indian start-up ecosystem for rising to the top of the global scenario to bring in this transformation. "What makes me proud is now is the best time to be an entrepreneur in India. Though friction to access ideas has reduced, one must work hard, as success cannot be achieved without going through difficulties," he added.

It is easy to dream about launching a start-up. Most promising entrepreneurs often talk about success favoring those individuals with a ground-breaking idea, a stomach to learn from their failures and an affinity for hard work. However, while these are certainly prerequisites to create a startup, building a company that evolves into a unicorn is a long and testing journey, marked by limited resources, tough decisions and an upward learning curve. In a dialogue with two unicorns founders, Nithin Kamath, Founder & CEO, Zerodha, and Deena Jacob, Co-Founder, CFO & Head of Revenue & Growth at OPEN, Menaka Doshi, Managing Editor of BloombergQuint, explored the mix of factors and conditions that shape the trajectory from startup to unicorn.

Deena Jacob is a result-driven highly dynamic senior executive with demonstrated ability to spearhead organizations. She is currently on a mission to simplify business banking through OPEN. And on the other hand, is Nithin Kamath, an Indian entrepreneur, stockbroker, and investor, is the co-founder and CEO of 'Zerodha,' a financial services company in India that has the largest number of retail clients in the country.

For Deena Jacob, the entrepreneurial journey is a collection of mistakes that then lead to success. When Open as a platform was being set-up, no one in India understood neo-banking including the stakeholders. Deena and her co-founders at OPEN believe that during an entrepreneurial journey one should set out to solve a problem one feels passionate about. OPEN aims to solve the complex problems of finance for the average customer. When Deena looks back at the journey, she feels it's the passion she and her co-founders had, which made all the difference.

For Nithin Kamath it was being at the right place at the right time that hit off. Understanding the customer is for him the key to growth. He shared that the company has just lost 1% of its tech team over the last decade. For Zerodha, business doesn't interfere in tech decisions, it is rather technology that drives the



business, and not the other way around. Zerodha builds on core competency and collaborates on the rest. Not once has Zerodha advertised and continues to be a bootstrap operation. He considers that if one can keep people working for themselves, interested, and motivated they get better with time. Covid was a boom for Zerodha.

How both entrepreneurs are approaching their competition from banks and angel investors respectively? Deena shared how OPEN is being approached for collaborations by different banks and how they look forward to providing solutions to different sectors in the ecosystem. Deena believes collaboration rather than disruption is the way forward. For Nithin there is no status quo in this world and everyone will get disrupted at some point – although he doesn't see at the moment any of his competitors doing that. For him, disruption will come from someone they don't know about yet. Zerodha is one of the few companies that makes money on its talent acquisition and the reason for that is the focus on customer first. "At the end of the day, if the customer wants the business to do well, the business will do well." We at Zerodha wanted people to access the market with ease and that is what we aim to do. We want people to do better with their money.

For Deena there are two ways of doing a startup - one with no funding and the other is to go down the funding route. OPEN needed financing as it was from the very start a full-fledged operating system and funds would be required to handle the evangelization. One must look forward to a minimum 10-month runway to pitch to investors according to Jacob as it should be done from a position of strength. From his part, Nithin finds it surprising to be among the few bootstrap companies in the ecosystem as, in his view, not all companies need capital to run their business. According to the pioneer, the whole celebration of valuation is a flawed concept and priority should be on business instead of money chasing.

Besides successful unicorn founders participating in the inaugural meeting of IGIC, a number of startup founders were keen on following their trajectory, aspiring to have a transformational impact on the sector in which they had created their company. In a session Moderated by Shaili Chopra, Founder, Gytree & SheThePeople, the would-be transformers elaborated how they were hoping/planning to shake up their respective sector with the products and services they were developing.

Establishing the importance of preventive healthcare, Ankit Anand, Vice President - Software and India Business at Sleepiz, Switzerland, illustrated that when it comes to digital healthcare, we have just scratched the surface. His solution 'Sleepiz', addresses sleep disorders of which the awareness is quite low. "People spend one third of their life sleeping and the device could help people diagnose sleep apnoea in the comfort of their homes."

Focusing on the ecosystem as a whole Peter Choe, CEO of Contents Holdings, in the Republic of Korea, explained how his company looks forward to integrating different experiences for content creators in both B2B and B2C markets. He would summarize his work through three keywords: Emotions, passion, and journey.

Putting his work in the context of many innovative business ideas of tech start-ups across diverse industries Neils Delore, Head for Asia-Pacific at Flyability, Switzerland, said that, "Our start-up is the



largest drone manufacturing company in Switzerland and the first indoor drone manufacturer in the world, providing solutions to inspect confined spaces, typically for heavy manufacturing industries. We already have eight hundred customers with around two thousand drones scaling surfaces successfully.”

Taking stock of how the world is shifting toward urbanization, Ramkumar Govindarajan, Founder & Chief Executive Officer, Wizfreight, India, highlighted how the importance of companies creating solutions in integration with the ecosystem, and working towards sustainability will be crucial. “Our idea was based on cutting down shipment fallouts and increasing accountability in the supply chain. Almost two trillion dollar is annually spent on cross border supply chain and we aim to address this issue globally to reduce operational costs.”

Resonating with the issue Nakul Kukar, Co-founder & CEO of Cell Propulsion, India, described the activities of his startup as manufacturer of electric trucks on a sustainable template. “This transformation would accelerate the growth of sustainable cargo transportation globally. Electrical vehicles are disruptive and are being backed by a supportive policy framework. We are aiming at creating a streamlined and sustainable transportation system globally.”

Saurabh Tembhurne, Founder & CEO of SoHHytec, Switzerland, reiterated the crucial importance of reducing the dependency on fossil fuels. “Providing renewable solutions for the onsite production of solar fuels and power is what we deal in. At SoHHytec, our technology is based on our novel photoelectrochemical device working with concentrated solar irradiation. Our Arb system is a highly advanced and innovative solution for replacing the conventional fossil fuel-based energy. It takes only sunlight and water as an input and produces fuel (hydrogen), electricity and heat at the same time.

As up-and-coming entrepreneurs all the speakers in the session have faced challenges such as mindset shift, aligning the ecosystem, facing monopolies and conservative mindset, and supply chain major challenges. While this may keep them awake at night if it’s the feeling of being up to the challenges that drive them forward.

An additional similar session, moderated by Menaka Doshi, Managing Editor BQPrime brought to the stage a new set of up-and-coming entrepreneurs sharing the same ambition of having a transformational impact on the sector in which they operate, and on society at large.

Sharing his perspective on how innovators from different sectors are disrupting the space in digital transformation, InsurTech, Biotech, MedTech and so many other domains R Subramanian, CEO & CTO of Resulticks, India, observed that “Science without technology is useless and technology without a business model doesn’t benefit anyone. Companies can use data in a smart way and try to engage customers in the best possible way.” Businesses must first understand the market prospects and consumers needs and expectations and then try to establish a conversation.

The big surge of innovation that we witness today is powered by emerging technologies and the approach of DeepTech entrepreneurs. Citing how risk in the economy is high, Thomas Krapf, Founder & Chief Executive Officer, Riskwolf, Switzerland, said that “Risk brings along with it an opportunity for insurance. With new innovation and start-ups stepping in, the very nature of risk has evolved. We have new



ambitions for insurance in India; we believe that the growth of the insurance industry will be huge during this decade.”

Alexander Nitsch, , Founder & CEO of Oxyprem, Switzerland, the creator of a next-generation medical device that monitors brain oxygen levels of preterm infants in real time, using harmless, non-invasive near-infrared light to identify potential diseases and prevent premature death, mentioned how faster and even more accurate diagnostic technologies are needed in healthcare to identify the nature or cause of a disease. For him, “there are so many entrepreneurial opportunities available in prevention, the quality of care and rehabilitation that can be explored. There is a dire need for sensory equipment in healthcare. 70% of all medical decisions are taken involving some kind of diagnostics but still the rate of global healthcare funding in diagnostics is only 2%.”

Staying in the domain of diagnostic, Nithya Rao, Co-founder & CEO of Heart It Out, India, stressed the importance of diagnosing mental health as well, mentioning that India recorded 153,000 suicides in 2020 alone, “While the world is focused on finding med-tech solutions for physical health, mental health has taken a backseat. The social, human, and economic impact caused by negligence of mental health is detrimental. This is where improvements in diagnostics are finally getting better. We have devised new screening tools to detect mental health problems based on AI that are scalable because we are using technology.”

Yuval Regev, Vice-president at MyOr, Israel, another startup developing high-tech non-intrusive personalized preventive medical solutions on allergies, noted that “Today one in five person suffers from skin allergies and one in ten persons has food allergies, this is the market we are exploring. There is a customized plan for prevention and treatment of such ailments.”

Whether it is the dynamism of India’s startup ecosystem and the country’s growing technological innovation capabilities and its specific assets of population size, countrywide mobile phone internet penetration and fast digitalization, or the geopolitical risk advantage vis à vis China, India represents an attractive proposition that no VC or PE company can afford to ignore. However, conditions for startups funding are now getting tighter with interest rates rising, greater scrutiny about valuations, increasing uncertainties about the global economic outlook. How, in these conditions, Global VCs and Indian VCs can complement one another to secure capital for innovation? This was the focus of the session on “Betting on India’s startup story” moderated by Katy Knight, Associate, Corporate Practice, Covington & Burling, USA

While India is now considered by many as a game-changing country to invest in, the attention that global VCs and their Indian peers pay to some key prerequisites and criteria for investing in startups in India or anywhere else is bound to become even more acute. Sharing her approach to the different parameters for evaluating start-ups, Kanika Mayar, Partner Vertex Ventures, Singapore/India said, “First we look at the market potential, then we access the white space in which the founder is building its startup, next we assess the quality of the foundations and then we look at monetization - or the ability of the founder to build a large consistent business. The start-ups should think carefully about how they can drive product market kits and monetization so that they can use capital more efficiently.”



Kanika had a warning from startup founders: "At this stage, if you are raising capital, you need to be well-capitalized for the next eighteen to twenty-four months. You will need to use capital more efficiently".

Starting from the assumption that if there is a compelling story it will automatically attract value, Ranganath M.D, President Catamaran Ventures, India, observed that "The external environment and the expectations of the people have dramatically changed." Other trends he noticed include the visibility of the market or the trajectory of the cash and how it has been driving the market in the last two years. "Indian VCs understand innovation, the ecosystem, the cultural aspects and the governance aspect so there is a phenomenal collaboration possible between Global and Indian VCs. India is a country of exponential change but once the change starts happening there is no looking back." he added.

Noting that Indians have plenty of capital and firepower to invest in startups, Ganapathy Venugopal, Co-founder & CEO of Axilor Ventures, India, recommended that "the founders only need to figure out the valuation or the multiple they are comfortable with to take it forward." He also advocated that "If you are a global VC investor, there is no choice but to be in India. If you are here now and doing a little, this is the time to do more."

"Having a growth mindset hides many things. There are two things that startups need to focus on, one is the value-creation aspect, and the other is the valuation creation aspect, asserted Nao Murakami, Founder & General Partner at Incubate Fund, Japan/India. "Now it's time to fix the fundamentals to allow the startup ecosystem to expand and flourish even more",

The seed ecosystem in India is far more mature than what it used to be three-four years back. Seed funds are now available that have sector-specific portfolios. Ankit Sarwahi, Managing Director, Middle East Investment Partners in the United Arab Emirates pointed out that Global fund managers look at the entire set of conditions in the market in which they plan to invest and noted that "India stands out because of its very stable and political environment. A diversified economy and group contribution of service sectors makes the India market more suitable for investors." Despite the tightening of conditions in the financial markets, Ankit Sarwahi brought a note of optimism about the funding for Indian startups from global VCs, considering that most of the valuation creation in India will still be protected "because global fund managers continue to believe very passionately in the Indian startup ecosystem."

With Indian VCs understanding innovation, cultural aspects and the governance aspects, the ecosystem has all the needed conditions for a phenomenal collaboration between Global and Indian VCs remarked Nobutake Suzuki, President & CEO of MUFG Innovation Partners, Japan, adding: "India is now a major source of engineering capability at the global level."

"There is enormous interest in Indian startups building for global markets. And there is a lot of collaboration potential between Indian and global VCs to allow scale for Indian markets."

MD Ranganath

SUPPORTING ORGANIZATIONS

