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IN THIS ISSUE
LOOKING AT THE YEAR AHEAD

9 TRENDS FOR 2019

CXO TALKS
HEADWINDS &
OPPORTUNITIES
IN INDIAN AGRI
STARTUPS

NINE TRENDS FOR 2019



By Abhishek Raju, CEO - EMEA & Co Founder

The new year is just around the corner with and its time for us to oracle what we see over the horizon for the agri industry in the country. These trends provide a guidance to the state of play of events that may converge and impact our business in the coming year and beyond.

Trend One **El Nino Southern Oscillation**

Inclement long term weather issues may result in deficit of monsoon in India. There is a 75–80% chance of a fully-fledged El Niño event by February, 2019. The forecast however is that its not expected to be as powerful as the event in 2015-2016, which was linked with droughts, flooding and coral bleaching in different parts of the world.

Even so, it can still significantly affect rainfall and temperature patterns in many regions, with important consequences to agricultural sectors, and for management of water resources and public health, and it may combine with long-term climate change to boost 2019 global temperatures. If El Niño continues into the spring and summer seasons, it might bring down the average rainfall during the 2019 monsoon and cause warmer than usual summer temperatures. The winter which is currently prevalent in

North India and the possibility of reduced Monsoon next year will be of concern. Such weather is usually associated with widespread crop damage, especially to wheat, which is next to paddy the backbone of many Indian state economies. Warm or dry winters suck the moisture out of the soil, reducing the wheat yield. Apple crop in Himachal Pradesh and strawberries in Maharashtra could also be affected. Abysmal investments in Irrigation in India will most certainly lead to lower crop output and resulting financial impact for the lenders and the loanees.

Trend Two **General Elections & Farm Loan Waivers**

The loss of the national ruling party in the local elections may trigger loan waiver promises in agri as an election tactic. Infact, the opposition parties led by the Congress Party bolstered by its wins has made farm loan waiver a central election promise, irking the ruling NDA to come up another name to call the loan waivers by. Anil Padmanabhan writing in mint.com, observers, that farm crisis has always been on the top of the political agenda. He argues that political parties should keep in mind that the



“the phenomenon of farm distress is not new, therefore loan waiver promises for a political harvest in 2019 elections must be well thought out.”

phenomenon of farm distress is not new, therefore loan waiver promises for a political harvest in 2019 elections must be well thought out. It is possible that which every party wins will be burdened with loan waivers for the 2020 fiscal as weather trends point lesses that normal rainfall impacting crop in 2019 onwards. It remains to be seen how the financial inclusion piece will evolve.

Trend Three

Farmer Digital Transaction Platform

2019 may finally prove to be the transformational year where fintech finally breaks through into agriculture. The transformation will be the result of several converging factors such as the government push for digital payments, the break out of several digital payment platforms competing with each other.

The urban payment market is saturated with many players seeking to distinguish themselves in a scenario where margins are wafer thin. This logically will result in product innovation. Also to note is the the penetration of telecom and data services in the country. Its only a matter of time before a telecom player or a digital payments company will pivot into the agri-sector.

Trend Four

Big Data and Agriculture

In India there has been an explosion of data related to Agri, most of it driven by IOT, precision farming and satellite tech. Big Data from Space, Weather and IOT data covers the aspects of Volume, Velocity, Veracity, Value, Variability and variety in the data. The slow and steady adoption of cloud services is a boon to companies where they can spin up complex IT infrastructure in a matter of minutes.

Trend Five

From Agriculture to Horticulture

The structural shift in the composition of agricultural production is very evident from the data available for the past two years. Indian farming is no longer the story of food grains, because of horticulture. Being more remunerative for the farmers, horticulture is now a dominant part of the agrarian economy and the share of food-grains in the agrarian output is less than half.

This stragetic shift is major enabler for the entire agri value chain, from the farmers, to input providers to agri tech and agro logistics opportunities for new business models opens up.



From Agriculture To Horticulture

Trend Six **Year of Agri-IOT**

For all the technology innovations touted for agriculture, IOT may finally break through into the scene. There has been a dramatic change in technology, companies building the stack and the pervasive network availability. It is rumoured that several telecom players are opening the flood gates for IOT for new revenue generation and network utilisation as the user base has flatlined in the past year.

Enabled by roll out of LoRaWAN , NB-IOT and graduation from 4G to 5G of the network and dramatic changes in edge computing for the devices, 2019 may well be the Year of Agri IOT in India.

Trend Seven **Climate Resilient Agriculture**

In 2011 the national initiative for climate resilient agriculture was launched in India, covering crops, livestock and fisheries to climatic variability and climate change through development and application of improved production and risk management technologies.

An inevitable consequence of weather variability and climate change is the adoption of climate resilient agricultural practice. Several pilots that have been running for nearly a decade is now converting into full fledged practice with companies from investing in the sector. 2019 may well turn out to be a pivotal year for climate change and therefore the right time to venture into the field. Several agri startups were launched in 2018 with farming-as-a-service concept wherein such practice was used. Also seen was the trend of IP transfer to the private sector from research institutes in this domain.

Trend Eight **AI in Agriculture**

The national strategy for AI, calls for implementation of the technology in Agriculture domain. In fact its one of the pillars of NITI Aayog to deploy such technology to the progress of the country. As Agriculture is the mainstay and the pillar of growth in India, there is an immediate need to deploy such advances to the betterment of beneficiaries in this sector.

What was observed is the mushrooming of technology companies in agriculture, each deploying machine learning and AI to solve a key problem in the value chain. Be it Crop Yield prediction, Harvest Readiness, Default Probability Risk, Weather Risk, Logistics, there is at the minimum atleast one company addressing the problems using ML and AI. Also seen is the keenness of Wbig technology firms in the domain. There has been several initiatives, most notably by Intel and IBM to promote the use of AI in Agriculture and Food Security Domains.

Trend Nine **Smart and Last Mile Logistics**

The sticking point in Indian Agriculture has been the inefficiencies in procurement and last mile logistics. It is said, who disrupts logistics will be crowned the winner in Indian agri. But sadly there are no companies coming closer to solving the problem. But that might change. Companies like Big Basker, Ninja Cart and Amazon are chipping away at the problem. Though they may not be addressing the central issue, the innovation they are bringing in last mile logistics has its place to revolutionise the first mile. It remains to be seen as to who will emerge the clear winners, the odds are favorable to those who are hyper local in their focus. 2019 will see the explosive growth of ecommerce companies addressing this problem.

Headwinds and Opportunities in Indian Agri Startups

By Amardeep Sibia, CEO



Life of all startups is characterised by what they achieve given the limited resources, money and time they have. At times these headwinds are demoralising, due to non-productive use of the Startup's resources. These have broader, and long-lasting negative impact on them, as opposed to established companies in this domain. Indian agri startups constantly find themselves at this intersection of limited money, time and resources.

Access to Working Capital

Given the seasonal nature of agriculture with income being generated at the end of the season, Agri Startups and their clients may only see seasonal access to revenue. They need money to pay their employees and invest into their enterprises. The assumption that such companies can only raise capital from VCs needs a relook as not every startup is suitable for equity based capital. Some of these companies may only be looking for working capital loans in the range of Rs. 50 Lakhs to Rs. 1 Crore to become sustainable. This capital in the form of equity or loans from banks are inaccessible to Agri Startups preventing them from being viable.

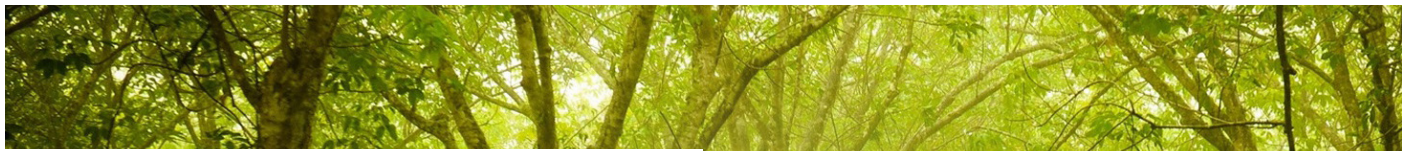
This can be resolved by creating separate schemes for startups to take working capital loans against confirmed orders and a liberal grant regime tied to solving problems in the agri sector, which will attract more startups to this domain. Companies and industry federations can also pool funds in their CSR initiatives to support such startups.

Buying Capacity of the End User

While there are many startups solving many issues in the sector, a big challenge is the ability for the end user (the farmers) to afford such technology or services. This is a disincentive for the Startups because there is limited avenues to acquire sustainable revenues in an organic manner. Such new technology deployments in the sector require a sufficiently large deployment size to be financially viable. This is further compounded by paucity of orders from established Agri Businesses.

Taking the example of IOT and drip irrigation-as-a-service. In villages with small land holdings, this may not be a financially viable option if offered to the farmers individually. The same may become financially viable if a mechanism was available for majority of farmers to subscribe to such a service with sufficient protection for the assets of the service provider. A focus on farmer collectivisation and incentives for businesses to source from them is one way to build buying capacity.

Agri Businesses can be a major source of revenue as end users, creating an incentive scheme for agri businesses to acquire products and services from the agri startups in the form of paid POCs and the like shall have a major positive impact in the sector.



Elephant in the Room

Governments are a major stakeholder in the sector. A large proportion of new technology deployment in agriculture happens through the Government subsidy model. Even large wealthy farmers prefer to procure new technology through Government subsidy channels. However, Government procurement practices need a major rethink if innovation from Startups are to be channelled through Government subsidised channels. The current Government subsidised model for providing new technology to farmers is not Agri Startup friendly. The current structure of Government subsidy channel procurement tends to favour established players who can meet bidding norms and have financial wherewithal to fulfil supply levels.

GFR norms dictate suppliers provide Advance & Performance Bank Guarantees for payments. For entities with limited banking history, RBI norms dictate that the Banks must retain collateral of equal value to the amount of the Bank Guarantee in most cases in the form of a FD. This essentially means a Startup will have to tie up a substantial portion of its capital if it wants to invoice the Government.

Most Government departments require deployment of a large number on-site resources for effective engagement. Thus, the cost of servicing the Government increases further burdening the Startup especially when the number of people in a Startup is low. To compound this further, payments from the Government can be delayed by many months. Thus, if the Startup has invoiced the Government, the Startup will be liable to deposit GST irrespective of whether the Government has actually released the payment or not further burdening the Startup.

As long as the government norms are not changed there remains little or no hope for the companies in the sector. As a start, the government can create channel for banks to provide working capital loans for Government contracts to Startups. Government can give a certificate recommending release of working capital loan through ring-fenced mechanisms like escrow accounts. The scrounge of performance and advance bank guarantees should be removed as well as relaxation of GST norms for government contracts awarded to these startups.



Access to Technology, Data and Experts

Deploying new technologies like AI in agriculture require access to data sets owned by the Government like yield, fertiliser, land records, soil records, irrigation, weather to name a few. However, most of these datasets remain offline or has unreasonable access restrictions. This prevents Agri Startups to effectively bring technology to bear. Also the Indian Startups are not exposed to advances and developments in other parts of the world and the lack of exposure will ultimately adversely impact the ability of Indian AgriTech Startups to compete globally and scale faster.

There needs an immediate rethink in the way access to technology and data is provided to startups, as well as the way they are able to access expert resources for advise and validation. Policy change for granting access to data like land records, digital maps, Survey of India data, CCE data, Soil test data, weather data, satellite data, primary data from Agriculture Research Institutes, and regional level access to agri experts will result in a step change the way the sector organises itself and delivering benefits to the end customers.

Collectively these issues ramp up to creating a talent deficit in the sector in India, lowering of valuation of companies in the domain vis-a-vis other technology startups operating in the country and last but not the least, forcing such companies to seek customers from outside the country, thereby depriving India the benefit of their innovations. Now is the time to change headwinds into opportunities.



*Season's Greetings
From everyone here
at SatSure.*

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