



# COVID-19 MAPS DIGITAL TRANSFORMATION OF INDIA'S PRIVATE SECTOR

APCO WORLDWIDE'S RECOMMENDATION BRIEF



## PREFACE

As India battles with COVID-19 like the rest of the world, Prime Minister Narendra Modi has been connecting with citizens in his televised addresses to the nation. Continuing to enjoy an overwhelming political capital, he keeps sharing his experience and lessons from the global pandemic, which has affected millions of people globally and already killed hundreds of thousands. The biggest lesson, according to the Prime Minister, is that India must become self-reliant with each village, city, district and region ensuring it has basics of life in place.

To be a self-reliant nation, each of 1.35 billion Indians must have access to food, shelter, health and education to be able to take advantage of its demographic dividend with about 65% of the population being below the age of 35 years.

The COVID-19 pandemic has made the world—once again—focus on the power of technology and how its use has helped in expanding solutions in crucial segments like healthcare, food security, education and supply chains. The federal government has announced several measures to usher in structural reforms for sectors such as logistics, education, agriculture and healthcare, which are expected to renew investor interest and strengthen the government’s “Make in India” initiative. At present, it envisions the private sector to invest in future technology projects that will bring in extensive changes to drive economic growth, provide employment opportunities and ignite consumer sentiment.

In this paper, APCO Worldwide’s India offices look at the key sectors where technology can spur economic transformation and lays down key suggestions for private companies planning to invest in India and provide recommendations to the government of India on unlocking regulatory reforms.

India’s digital leap is picking up speed which will bring new opportunities and result in policy alignments and realignments. As public policy undergoes big changes in the post-COVID-19 world, and governments at state and federal levels plan to bring in more market reforms, we hope our APCO trend analysis would help businesses looking to invest in India understand the opportunities and risks.



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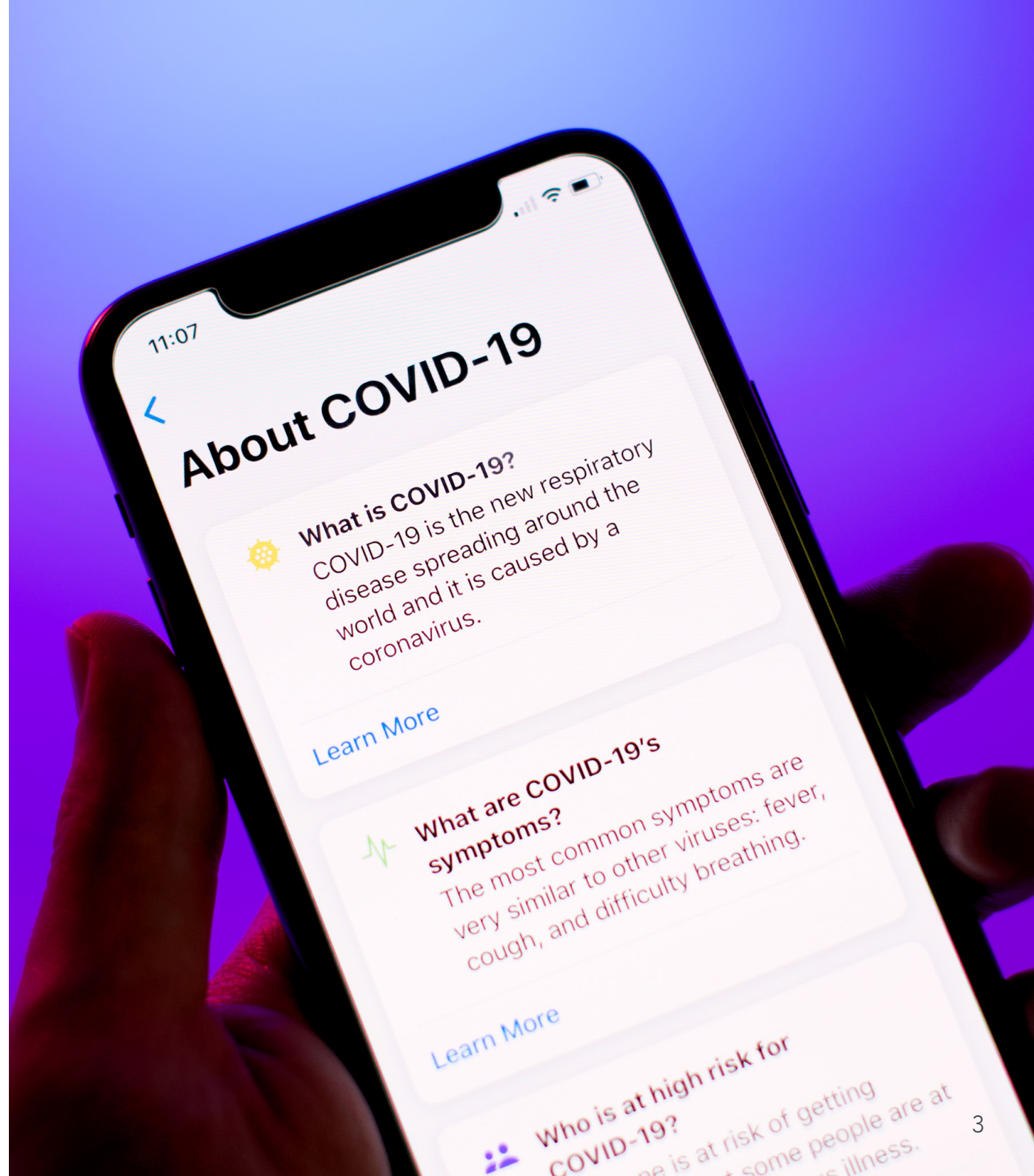
# SETTING THE CONTEXT

COVID-19 has hit India hard. According to the International Monetary Fund (IMF), India's economy is expected to grow by only 1.9% in 2020-21 (April–March), and the global economy is expected to contract by 3% due to the pandemic.<sup>1</sup> A looming economic crisis triggered by the coronavirus pandemic is a chance for India to unleash the power of technology and integrate sectors that can enhance consumer sentiment and help revive the economy.

India has made rapid and impactful strides in the digital economy, riding on ever-expanding telecom infrastructure to provide connectivity to 1.35 billion people. In the emerging global order, the Indian government has been focusing on self-reliance to ensure that the country builds a home-grown base for a complete digital value chain, including electronics and computer hardware, which had been a missing link. The country is catching up fast through various policy support measures.

The Digital India, which is one of the Prime Minister Narendra Modi's flagship programs, needs to be in sync with the national priorities to enhance manufacturing, agriculture, education, healthcare and formalization of the \$2.7 trillion economy in the times of COVID-19.

1. *World Economic Outlook, April 2020: The Great Lockdown*, International Monetary Fund, April 2020



# STRUCTURING THE NEW NORMAL

The International Data Corporation (IDC), predicts that at least 60% of gross domestic product (GDP) will be digitized globally by 2022.<sup>2</sup>

According to a joint study by the Internet and Mobile Association of India (IAMAI),<sup>3</sup> India has 504 million active internet users, above five years of age. According to the industry body:

- 88% 4G penetration across India.
- Top three Internet activities that have emerged during quarantine—News, Entertainment and Social Media.
- Two-thirds of India's internet users are between 12 and 29 years old. This group comprises 70% of internet users in rural areas.
- Despite these advances, India has plenty of room to grow. Only about 40% of the population has an internet subscription. While many people have digital bank accounts, 90% of all retail transactions in India, by volume, are still made with cash. E-commerce revenue is growing by more than 25 to 30% per year, yet only 5% of trade in India is done online. Looking ahead, India's digital consumers are poised for robust growth.

As India looks to shore up its economy, it is worth reflecting on other systemic actions and sectors which would make India more sustainable and resilient.

According to reports, India is the second fastest digital adopter among 17 major digital economies. The shift to digital has witnessed reluctant spurts from time to time, but COVID-19 is taking online companies and ecommerce firms to new heights.<sup>4</sup>

Consumer behavior has also witnessed a major shift in terms of work, entertainment, procuring essentials and non-essentials, socializing and increase wellness during social distancing.

The acceleration of digital transformation continues to bode well for sectors like **ed-tech**, **logistics**, **healthcare**, **agri-tech**, **media** and **entertainment**. According to our reading of the market, we strongly feel that the following industries have the potential to scale up as they could become "crisis-proof" because of their intrinsic value and opportunities they provide.



2. IDC FutureScape: Multiplied Innovation Takes Off, powered by AI, Distributed Public Cloud, Microservices, Developer Population Explosion, Greater Specialization and Verticalization, and Scaling Trust, International Data Corporation, October 2018

3. India Internet 2019, IAMAI and Nielsen, September 2019

4. Digital India: Technology to transform a connected nation, McKinsey Digital, March 2019



# MEDIA AND ENTERTAINMENT

## Online Gaming

In the past decade, online gaming has caught everyone's attention. Three key segments—real money games (RMG), mobile-centric/casual games and e-sports—have gained traction. According to a Google-KPMG report, this segment is pegged at \$1.1 billion by 2021.<sup>5</sup>

Recognizing the industry's huge potential to keep people entertained the World Health Organization (WHO) has joined hands with gaming companies for a global campaign, **#PlayApartTogether**. India is among the top five mobile gaming markets in the world with around 300 million gamers, a number which is only multiplying due to COVID-19.

## Global vs. Indian Scenario

- The biggest global trend in gaming is that multiplayer gaming has started to pick up. Earlier, people only used games like PlayerUnknown's Battlegrounds (PUBG) in multiplayer mode. But now, people connect remotely to play games like Ludo, as people look to socialize and connect. Companies are leveraging innovative technologies like Extended Reality (XR) and Artificial Intelligence of Things (AIoT) to create a seamless game play experience.
- A 2020 report on India's Media & Entertainment Sector titled "The era of consumer A.R.T. – Acquisition Retention and Transaction," released by the Federation of Indian Chambers of Commerce & Industry (FICCI) and consulting firm Ernst & Young (EY), claims that online gaming grew at a rapid 40% growth rate in 2020 and the total revenue generated by the sector in 2019 was \$858.3 million.<sup>6</sup>
- The report claims that transaction-based gaming, including real money, contributed about \$607.42 million while the remaining was contributed by casual games.
- India's game downloads in 2019 increased 12% over 2018 and were 13% of total game downloads worldwide. That means, about 6 billion mobile game applications were downloaded in India in 2019, the highest globally. Transaction-based games grew 50% in 2019, and fantasy sports games grew by 118%, while poker and rummy grew by around 30%.<sup>7</sup>



5. [The Evolving Landscape of Online Gaming in India](#), KPMG, April 2019

6. [The era of consumer A.R.T. – Acquisition Retention and Transaction](#), Federation of Indian Commerce and Industry, EY, March 2020

7. [Digital gaming: A virtual portal away from the covid-19 pandemic](#), Livemint, May 3, 2020



## APCO Suggestions to the Online Gaming Industry

Online gaming in India, much like in most parts of the world, is a male-dominated industry, with 83% of gamers being men. We believe that the following measures would help the industry bolster its revenue and adoption:

- Freemium games (free to play games and paying only to unlock certain features) can be incorporated.
- Embedding gaming tools into business functions given the COVID-19 behavior has enabled work from home facilities, and face to face interaction has taken a back seat. For example, technology companies are engaging with new recruits using interactive and incentive-based learning.
- Increased investments and immersion with emerging technologies of AI, AR, VR and cloud-based architecture to gain market share quickly.
- Utilizing nostalgic and cultural elements to build customized and digitally scalable games for India.

## Measures in the Policy & Regulatory Space

Gaming/gambling being a state subject, have laws which differ from state to state. Section 12 of the Public Gambling Act exempts games of skill from the penal provisions against gambling—“Nothing in the foregoing provisions of this Act contained shall be held to apply to any game of mere skill wherever played.”

Gaming sites partaking a slice on the winning hand are illegal as they amount to a virtual gambling house. Attracting business or enticing players by luring them with prize money is also illegal.

Witnessing the recent surge in gaming practices, the **All India Gaming Federation (AIGF)** has reinforced its resolve towards responsible gaming and strengthened its advisory panel with the induction of more experts to its board. The AIGF seeks to build a self-regulated community and facilitative ecosystem to offer online games of skill in a transparent and fair manner.





Almost 55% of India's population depends on agriculture as its primary source of revenue and the sector contributes 18% to the national GDP. Indian farmers rely on a network of intermediaries to conduct physical transactions in local *mandis* (marketplaces). This ends up costing them 2-3% of the crop value, on each transaction. However, through agri-tech platforms, this cost could come down to almost 0.5% of the produce by eliminating intermediaries.

In the face of the COVID-19 outbreak, India intends to deploy an array of smart technologies, from satellites and remote sensing to artificial intelligence and drones, to help authorities track sowing, acreage, crop health and weather, and undertake pest surveillance.

## Global vs. Indian Scenario

Predictions state that the global agri-tech market will grow at a Compound Annual Growth Rate (CAGR) of more than 18% during the forecast period 2019-2025.<sup>8</sup>

North America accounted for the largest market share in 2019. With the most technology innovators and market disruptors in this region, its adoption is highest in the United States.

As per NASSCOM's 2019 report, India is home to more than 450 agri-tech startups, growing at a rate of 25% annually.<sup>9</sup> The sector has received more than \$248 million in funding, which is a clear indication of its growth potential. Given that the food economy impacts human population, and more so in times of crises, there's huge scope for building a seamless ecosystem in the agri-tech space.

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8. [Global agri-tech Market by Type \(Bio Tech and Chemicals, Analytics, Sensors, Mobility, and Others\), Application \(Irrigation, Production and Maintenance, Marketplace, Supply Chain, and Others\), and Region - Forecast up to 2025](#), Infoholic Research LLP, June 2019

9. [Finance Minister announces measures to strengthen Agriculture Infrastructure Logistics, Capacity Building, Governance and Administrative Reforms for Agriculture, Fisheries and Food Processing Sectors](#), Press Information Bureau, May 15, 2020







## APCO Suggestions for the Agri-tech Industry

- Finance Minister Nirmala Sitharaman announced a \$13.2 billion fund for Agriculture Infrastructure Projects at farm-gate and aggregation points. This fund will be for primary agriculture cooperative societies, farmers produce organizations, agricultural entrepreneurs and startups.
- Agri-tech industry could build platforms for farmers who can take their produce to an online marketplace and sell it across India. Through these online platforms, they can reach international buyers and sell their produce at attractive prices at a global level.
- Startups focused on agriculture and rural economy are likely to indirectly benefit from the \$22.4 billion mega relief package announced by the government due to COVID-19.
- Creating agri-stack (digital infrastructure) including real-time information on farm, farmer and crop for enabling access to farmers. Agri-stack can be used by banks to assess credit worthiness of farmers and then customize products for them. It can also help insurance companies to understand farmer and farm risk profile needed in deciding the premium. Corporates selling to or buying from farmers can also benefit immensely with targeted access to farmers. Government can use agri-stack for designing and implementing schemes for farmer welfare.
- Advocate government investments in localized technology interventions that are relevant for the small farm owner or agri-landholders.

- Despite the recent movement in Uttar Pradesh (UP), Madhya Pradesh (MP), Gujarat and a few other states liberalizing direct sourcing of farm produce, no state has notified the rules and regulations under which the new liberal order will operate. In this scenario, an export-led agricultural strategy offers an inclusive pathway towards growth, income, employment and rural poverty reduction.

## Measures in the Policy/Regulatory Space

- India has had several years of sub-4% growth in the sector,<sup>10</sup> prices for most crops are stagnant or falling and no technology breakthrough has been delivered in over a decade.
- The government has amended the stringent Essential Commodities Act (ECA) to deregulate cereals, edible oil, oil seeds, pulses, onions and potato from its purview. This will enable better price realization for farmers.<sup>11</sup> Also, a new law is being drafted to give farmers the option to choose the market where they want to sell their produce by removing inter-state trade barriers and providing e-trading of agriculture produce.
- The government is also creating a new fund to address the lack of adequate cold chain and post-harvest management infrastructure in the vicinity of farm gate which causes gaps in value chains.

10. [India Economic Survey, 2018-19](#), Government of India, July 2019

11. [Digital India: Technology to transform a connected nation](#), McKinsey Digital, March 2019



## Telemedicine

The pandemic created challenges on traditional healthcare systems in India. Due to the countrywide lockdown, mobility and access to healthcare services were curbed drastically.

This situation led the government to change the regulations around remote delivery of healthcare services and allow telemedicine via video, audio or text. India's telemedicine guidelines, issued by the Ministry of Health and Family Welfare in March 2020, have clarified regulations for startups and investors. The telemedicine industry could create a market opportunity in excess of \$5.4 billion by 2025 in India.

## Global vs. Indian Scenario for the Industry

- The global telehealth market size is projected to reach \$266.8 billion by 2026, exhibiting a CAGR of 23.4% during the forecast period. Rising adoption of telehealth services to combat the rapid spread of the COVID-19 infection will play a key role in boosting market growth, finds Fortune Business Insights in its report, titled "Telehealth Market Share and Industry Analysis". The industry stood at \$49.8 billion in 2018.
- Frost & Sullivan's recent analysis,<sup>12</sup> shows that demand for telehealth will soar by 64.3% in the United States in 2020 as the COVID-19 pandemic disrupts the practice of medicine and the delivery of healthcare. In March 2020, the U.S. government expanded Medicare telehealth coverage, which will affect roughly 44 million people covered under the program.
- A recent McKinsey report testifies that India could save up to \$10 billion by 2025 if telemedicine replaces 30% to 40% of in-person outpatient consultations and there is more digitization in the overall healthcare industry.<sup>13</sup>

12. Telehealth—A Technology-Based Weapon in the War Against the Coronavirus, 2020, Frost & Sullivan, April 2020

13. Digital India: Technology to transform a connected nation, McKinsey Digital, March 2019







## APCO Suggestions to the Health IT Industry

- There is a need to bridge the access inequality and the technological gap between rural and urban India. The industry could receive huge support from the government if it expands its business to rural areas. While a large proportion of the population live in rural areas, healthcare establishments are in urban settings; hence telemedicine could be a boon to help protect health workers in the face of future contagious outbreaks while not adding stress to the limited physical healthcare infrastructure in the country.
- Cementing the National Health Stack (NHS) as a virtual digital platform for healthcare in the country. This would make appropriate use of digital health tools, Electronic Health Records (EHR) as a system level intervention, can improve efficiency and effectiveness of healthcare delivery in the context of health systems strengthening.
- Establishing clear guidelines between healthcare providers and patients for when virtual consultation can be sought and when physical check-ups may be mandated.
- Enlisting with the AarogyaSetu Mitr portal, which is a public-private partnership initiative, that lists several e-pharmacies and telemedicine services for better public outreach and visibility.

## Measures to Be Relaxed in Existing Policies/Regulations

The National Digital Health Blueprint (NDHB), which was proposed in 2019, planned to establish and manage the health data and infrastructure required for its seamless exchange, promoting adoption of open standards. The Ministry of Health and Family Welfare needs to finalize the NDHB and enforce the plan.



# LOGISTICS

The logistics industry is considered a crucial sector to boost international trade because of digitalization and globalization. The innovative and advanced technologies have provided increased efficiency and agile operating models in the logistics industry in India. We all know that an effective and efficient logistics ecosystem can be a key contributor to robust economic growth in the country, as this sector is one of the most important accelerators of trade in the country. Specifically, an efficient supply chain network has the potential to increase farmers' incomes manifold, which can lead to a domino effect on the overall economy.

## Global vs. Indian Scenario for the Logistics Industry

- The supply of vital products in Singapore, South Korea and Japan has regained normalcy. Thus, the Asia Pacific region is expected to show positive signs as soon as the supply chain industry recovers. The Asia Pacific region is expected to have the largest logistics market size as the region has taken stringent and quite early measures to contain the virus outbreak.
- The WHO has also appreciated India's control over the spread of the pandemic. This has allowed the logistics and supply chain companies to meet consumer demands during the pandemic situation.
- Despite the recognition of logistics being a critical driver of economic development, logistics cost in India, estimated at 13-14% of GDP,<sup>14</sup> are very high (United States 9-10%, Europe 10%, Japan 11%) compared with more efficient global environments,

and the sector continues to be highly unorganized. India also has a skewed modal transportation mix, with 60% of freight moving on roads,<sup>15</sup> which is significantly larger than in key developed economies.

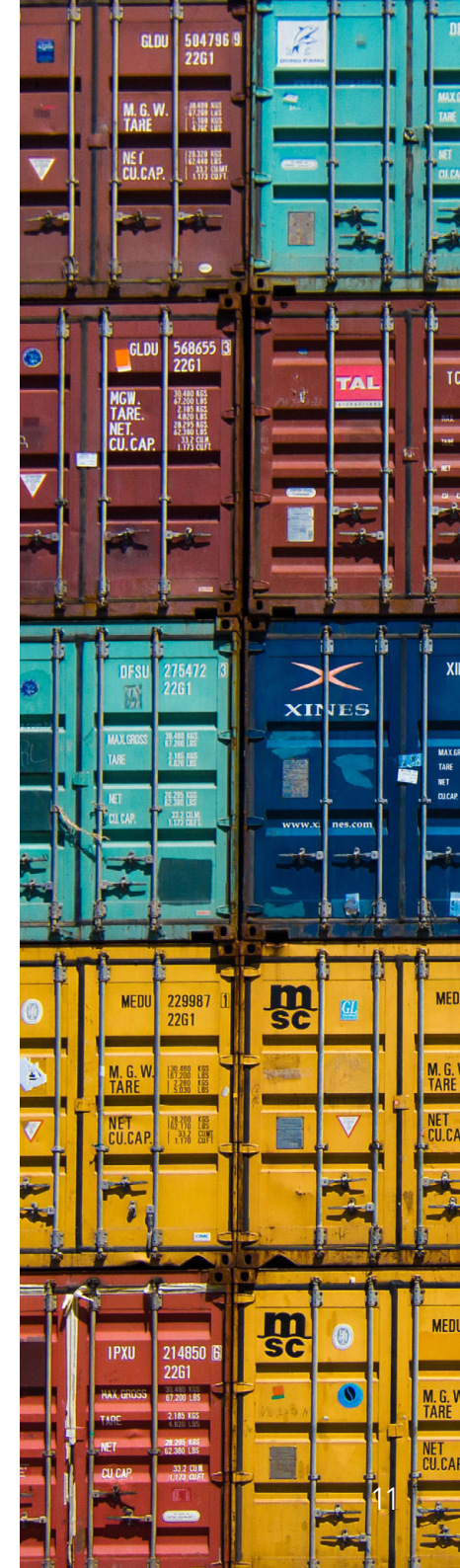
## APCO Suggestions for the Logistics Industry

Infrastructure is the backbone of every country's growth and prosperity and for the logistics industry to flourish special emphasis has to be on building world-class road networks, integrated rail corridors, modern cargo facilities at airports and creation of logistics parks. The industry needs to align itself with the government's aim to digitize supply chain and logistics networks.

Emphasis on research and development by the Industry would be potent mainly because it encourages the use of indigenous technology which can make the industry cost competitive and can also bring about improvement in services thereby using better, effective and efficient services.

## Measures to Be Relaxed in Existing Policies to Facilitate Growth and Digitization

- Use of research and development to digitize the supply chains.
- Relaxation in labor laws.
- Enhancing infrastructure and capacity to develop high-level logistics landscape.



14. National Logistics Policy, Press Information, Government of India, Ministry of Commerce & Industry, December 11, 2019

15. Goods On The Move: Efficiency and Sustainability in Indian Logistics, NITI Aayog,



## Ed-tech

COVID-19 has inspired a rethinking of existing education models. Isolated at home, students have taken to online tools and Indian ed-tech startups have reported an upsurge in enrollment rates. The adoption of digital platforms in the wake of COVID-19 may well offer a glimpse into the future of education. In the event of an extended lockdown, online tools may no longer be a privilege, but a necessity.

## Global vs. Indian Scenario for the Industry

- The United States has the highest number of ed-tech enterprises, with 43% (1,385) of all ed-tech company headquarters being in the country.
- India is home to the second highest number of ed-tech companies (327), followed by Brazil (275), the United Kingdom (245) and China (101).
- Sweden's ed-tech companies see the highest success rate in securing venture capital, with 57% of companies backed by VC funding.
- India is home to the ed-tech startup, BYJU's, which has raised the highest amount of capital, at \$969 million. Following shortly behind are China's Yuanfudao at \$544m and Zhangmen at \$499m.

## APCO Suggestions for the Ed-tech Industry

Every village has mobile access. But the infrastructure has a long way to go before it can sustain digital platforms at scale. We still have places in India with poor digital penetration. While online learning is being viewed as a convenient option by lot of people in urban India, it is not proving to be of much benefit to rural India as they do not enjoy the internet footprint that the urban India enjoys.

Integration of AI with education has already been recognized in the current government's vision and AI solutions in education can be constructively expanded and rigorously tested.

## Measures to Be Relaxed in Existing Policies/Regulations to Facilitate Growth

- Overall, the B2B (business-to-business) ed-tech market in India is fragmented with buyers like government, high-budget and affordable-private schools all functioning under varied regulations. If the government can leverage on its public school ecosystem to be more open towards smart solutions and better integrate technologically driven learning opportunities for students, there can be a shift in ed-tech industry.
- Initiatives such as "Startup India" can provide increased emphasis on ed-tech startups that are solving the most challenging education problems in a cost-effective manner.





# CONCLUSION

One of the major consequences of the COVID-19 outbreak has been the renewed scaling up for the online business and delivery platforms and contactless financial transactions. Online business played an important role in keeping the economy open with essential services, as the country endures a nation-wide lockdown, since March 25, 2020. This is increasingly being recognized in top government circles and previously negative sentiments are changing for better.

Self-reliance is being touted as the next big mantra and technology has emerged as the fundamental tool to ensure smooth functioning among a diversified stakeholder group. It must be a top priority for both the government and the industry to effectively leverage. The existing schemes of "Startup India" and "Make in India" should heavily incorporate technology as a driving force.

## Key Recommendations to the Industry:

- Engage in key whitepaper/strategy document discussions being drafted during this period. A lot of influx is awaited as a massive rehaul of the existing architecture takes place.
- Invest in reskilling/upskilling measures in AI, ML and data science.
- Rethink core business functions with tech being pivotal to the plan.
- Align with the Indian government's vision of partnerships to provide solutions which can provide advantage to populations in large number.

- Closely monitor the changing regulatory scenario, with changes taking place at a fast pace in government departments/ministries.
- The Technology, Information, Forecasting Council, under the Department of Science and Technology is working on a whitepaper to list the technologies that will help smoothen the path for industries in the post-COVID-19 world. Stakeholder engagement would be crucial on this whitepaper and this must evolve as a participatory effort between the industry, civil society and government.

Along with the pandemic outbreak, India is in the middle of major geo-political development vis-à-vis China. With Chinese companies having established a major presence in India, India's topmost policy makers are re-aligning their economic priorities, leveraging a huge market. This is an area to be keenly watched for the global businesses and policy professionals.



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