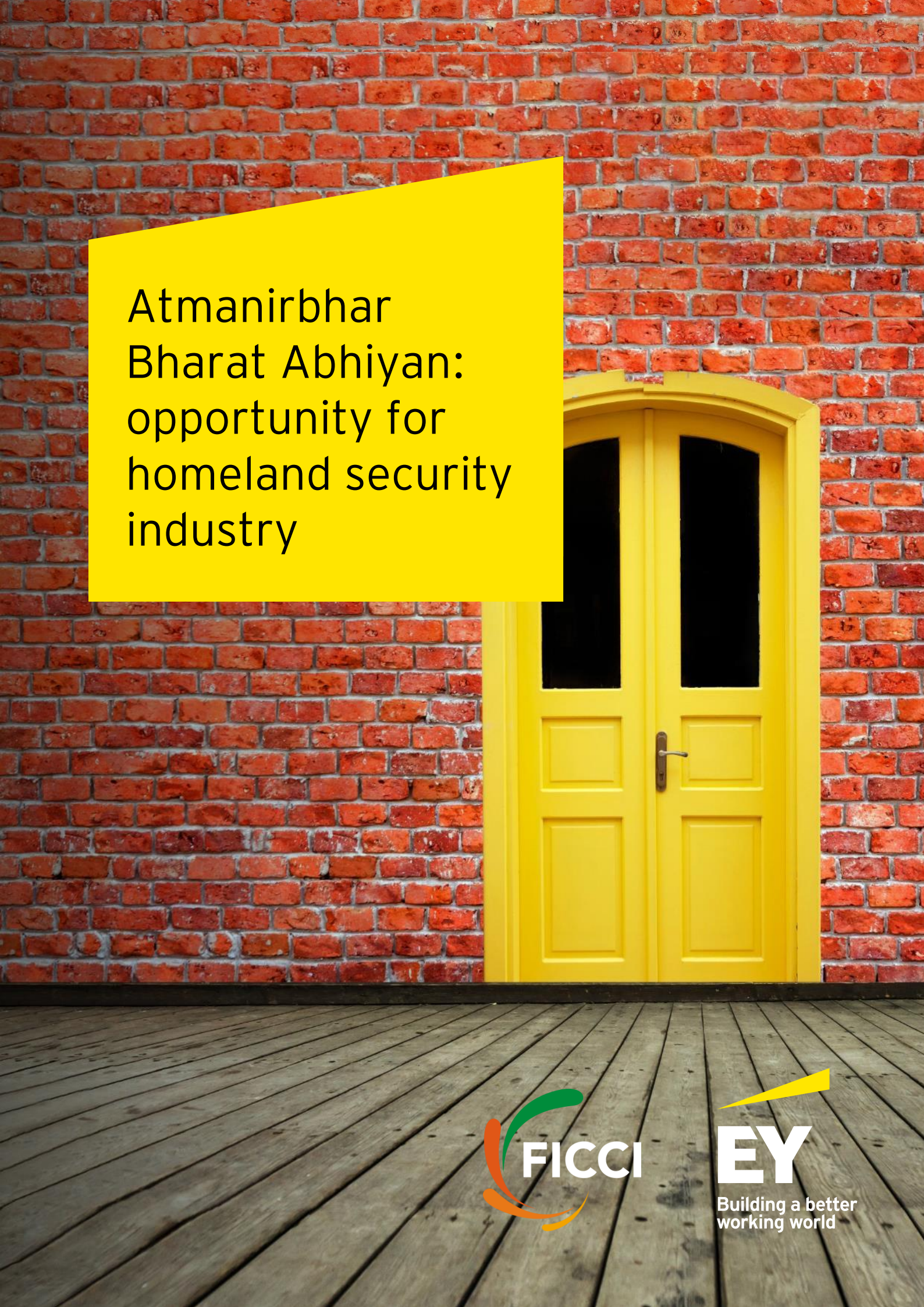
Atmanirbhar Bharat Abhiyan: opportunity for homeland security industry

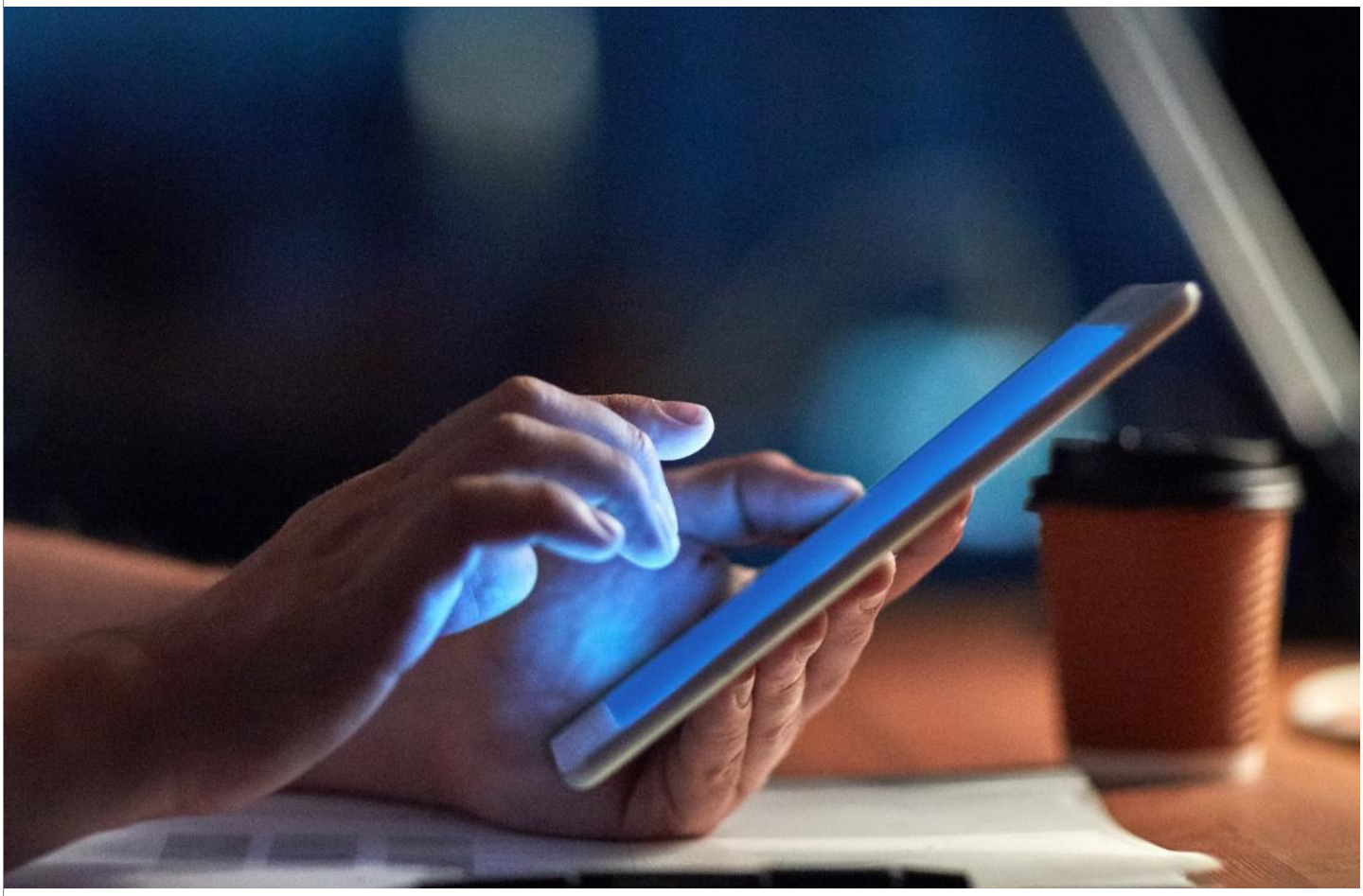


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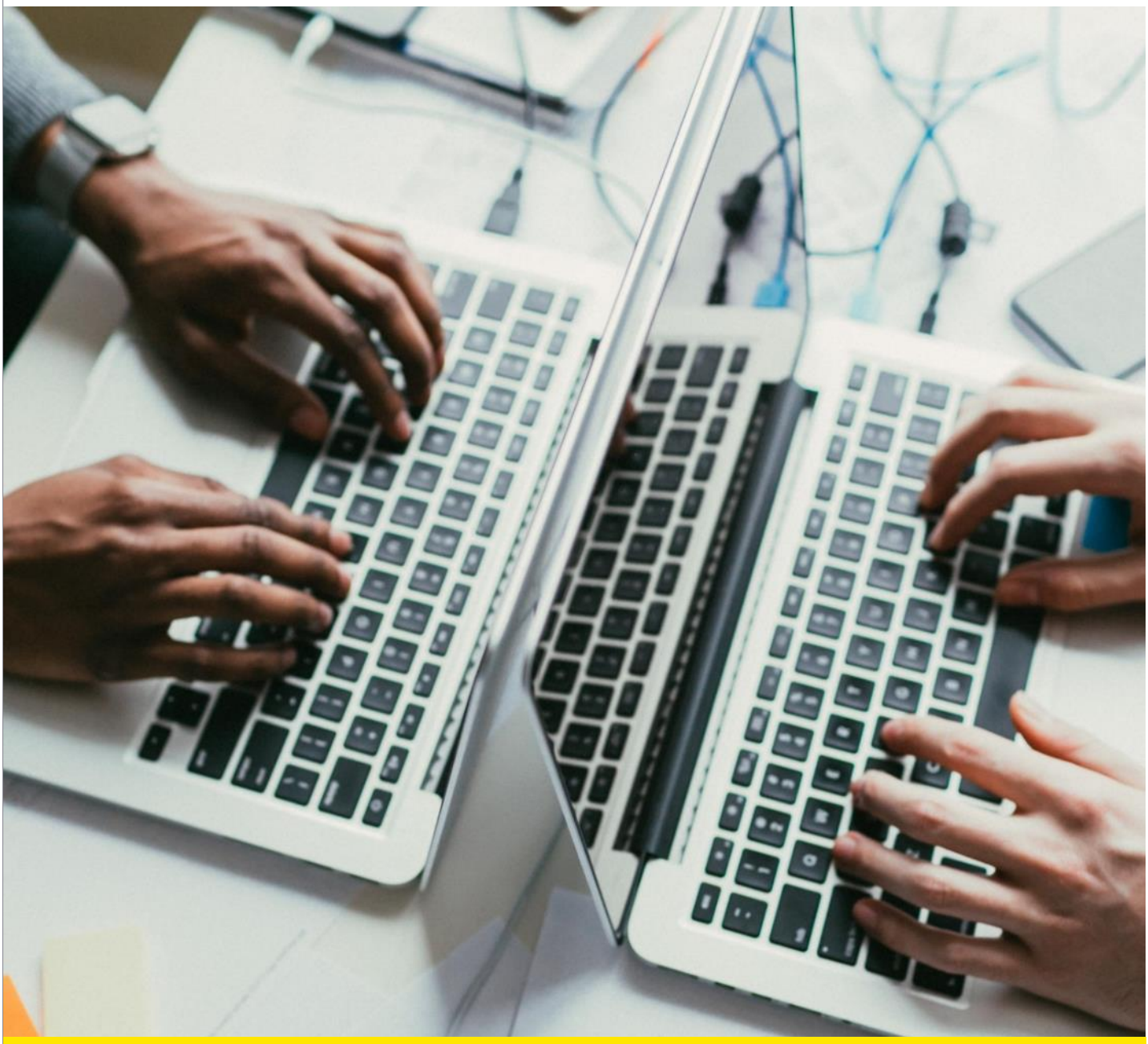
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Disclaimer



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Foreword

जी. किशन रेड्डी
G. KISHAN REDDY

सत्यमेव जयते

गृह राज्य मंत्री
भारत सरकार
MINISTER OF STATE FOR
HOME AFFAIRS
GOVERNMENT OF INDIA

MESSAGE

Dear Friends!

Over the past few years, India has vaulted into the league of emerging super powers. The growth trajectory today has however been challenged by the onslaught of COVID-19 which has impacted the economies of countries around the world. Caught unaware, the world has realized the need and strength of being self-reliant. India too is moving energetically towards Atmanirbhar Bharat with a clear objective that it will pave the way for her to lead the world in the coming times.

Hon'ble Prime Minister Narendra Modi's clarion call for 'vocal for local' must become a people's movement. An act of solidarity, which will give a push to local businesses, instil pride and glory of Made-in-India and weave the entire nation with the thread of brotherhood.

In this direction, the Ministry of Home Affairs has decided that all the Central Armed Police Forces (CAPF) canteens and stores across the country will now sell only indigenous products. With this decision, 50 lakh family members of about 10 lakh CAPF personnel will use indigenous products. Every such step, in every sector will eventually lead up to *Atmanirbharta.*

I am happy to know that FICCI-EY whitepaper has assessed the ways and means to make India's security industry self-reliant. The MHA shall work in tandem with the Industry to take all necessary measures to make India self-reliant not only in production of security products but also promoting export of security products to the global economies.

I am confident that together, we can realize the vision of the Hon'ble Prime Minister for self-reliant India and Atmanirbharta is a step towards the dream of India becoming a Vishwa Guru.

Date : 06.06.2020

(G. Kishan Reddy)

Office : Room No. 127, North Block, New Delhi-110 001 Tel. : 23094054 Fax : 23093549

Foreword

Dear Friends,

The crisis that has emerged due to COVID-19 is unprecedented, but in this battle, we not only need to protect ourselves but also have to keep moving forward. Like other sectors, homeland security industry has also been affected due to the pandemic.

The Indian Government recently announced a special economic package to the tune of INR20 lakh crore, which is equivalent to almost 10% of India's GDP, and gave a clarion call for Atmanirbhar Bharat.

FICCI fully supports the Hon'ble Prime Minister's dream of a self-dependent India and ensures all measures to make this a reality. The strengthening of the five pillars – economy, infrastructure, system, demography and demand will pave the way for India returning to a higher sustained growth path again.

In the current times, where the mere survival of the MSME sector is at stake, Atmanirbhar Bharat Abhiyan will create potential opportunities in the security industry for domestic players. It will also create new avenues for Indian companies to explore export markets.

I am happy that FICCI-EY whitepaper, has analyzed the impact of announcements made under Atmanirbhar Bharat Abhiyan and associated schemes and is providing an overview of the current state of the homeland security industry.

Hope you find the whitepaper useful and we look forward to your feedback.



Rahul Chaudhry

Chair- FICCI Committee on Homeland Security



Preface

In the wake of the global crisis caused by COVID-19, businesses around the world are grappling to find their foothold. The world is witnessing issues related to demand, supply, market and liquidity, leading to the worst economic crisis of the century. India has been under the lockdown for more than 60 days and is bringing along unseen challenges in the economy. On 12 May 2020, Hon'ble Prime Minister of India, Narendra Modi, announced an INR20 lakh crore of relief package under the *Atmanirbhar Bharat Abhiyan* to utilize country's internal strength to revive the economy.

The Indian security market has been on the path of growth since the last few years. The current crisis may prove to be a blessing in disguise for the security industry to strengthen its local manufacturing and become self-reliant with thrust of Atmanirbhar Bharat Abhiyan.

Atmanirbhar Bharat Abhiyan creates opportunities for micro, small and medium enterprises (MSMEs) to take the centerstage and dominate the security industry by supporting them financially and improving their cash flow. It also encourages indigenous manufacturing and research and development (R&D).

This paper describes the ecosystem of the security industry. It provides key principles for doing business that can be adopted to create the potential of new opportunities in this sector. These opportunities can be explored primarily in three segments, namely, manufacturing, infrastructure and R&D. The paper also explains the key challenges and suggestive measures that can be taken to overcome these roadblocks.

We would like to thank FICCI for giving us the opportunity to present this paper.



Akshya Singhal

Partner, Advisory Services, EY India





1. Executive summary

1. Executive summary

The world is experiencing an unprecedented crisis that is disrupting the global economy. Every country is working on settling the economic crisis. The Prime Minister of India too has announced INR20 lakh crores package under the Atmanirbhar Bharat Abhiyan to help the nation recover from the severe economic pressure faced due to the pandemic. In the past, India did not tap into its potential to be self-reliant to the fullest. However, Atmanirbhar Bharat Abhiyan could become the next big import-less and export heavy nation, going forward.

India is a growing economy which has the potential to be self-resilient. The focus of Atmanirbhar Bharat Abhiyan is to encourage the domestic players to get into the security business ecosystem so as to reduce dependency on the foreign players.

This whitepaper will assess the ways India's security industry can be made *Atmanirbhar* in line with Atmanirbhar Bharat Abhiyan and associated schemes. It also provides an overview of the current state of the security industry.

The paper covers the following points:

- Overview of the ecosystem of the security industry
- Initiatives taken by the government such as Make in India, schemes for start-ups, smart policing, etc.
- Role of research and development in the security industry given the current situation in the country
- The role of the connected industries in effective utilization of ecosystem of the security industry
- Direct and indirect benefits due to Atmanirbhar Bharat Abhiyan in the present scenario of the security industry
- Role of MSMEs to utilize atmanirbhar Bharat opportunities in redefining the security industry
- Joint ventures and public-private partnerships that India has inked with the global companies to invest in its research and development centers and manufacturing units
- Policy reforms to fast track investments with a separate budget provisioning for indigenous capital investment as well as time-bound defence and internal security procurement process

The current economic crisis and the challenge is an opportunity for India to be self-reliant[1]. The Atmanirbhar Bharat Abhiyan is one such opportunity wherein domestic MSMEs, particularly in the security industry, will have a vital role. This whitepaper also presents the suggestive measures which the security industry can adopt to become self-reliant.

[1] Ministry of Finance, Press Report - Government reforms and enablers across seven sectors under Atmanirbhar Bharat Abhiyan, 17 May 2020



2. Introduction

2. Introduction

The prime focus of the Government of India (GoI) is on the creation of new and dedicated units to address the emerging situation for security with a proactive approach to critical infrastructure, asset protection and disaster management. Primarily, the market is being dominated by the global players but there are various government departments that are encouraging domestic players to participate by giving them additional benefits or preferences. Atmanirbhar Bharat Abhiyan (ANBA) is one such step that will encourage the domestic players to be a part of the security industry's ecosystem. It primarily targets to provide benefits to the Micro, Small and Medium Enterprises (MSMEs) to further excel their participation in the security industry. At present, they have a significant market share (~30%) in the security industry. When combined with the existing schemes such as *Make in India* and *Ease of Doing Business (EoDB)*, it can further enhance the potential of ANBA.

MSMEs represent the various stakeholders of the security industry ecosystem such as manufacturers of products like switches, fiber cable, smart meters, local fabricated items, etc. which are some of the key components of the initiatives rolled out under the security industry. The following are the key takeaways from the ANBA scheme[2]:

- It emphasizes on financial support to domestic businesses. Looking at the current situation caused due to the pandemic, there is financial stress in the country. The ANBA provides INR3 lakh crores collateral-free automatic loan for businesses to meet operational capabilities, INR20,000 crores subordinate debt for stressed MSMEs for equity support, and an additional INR50,000 crores equity infusion through MSMEs fund of funds. These provisions are likely to help the MSMEs to recover from their current financial stress and would encourage the domestic players to participate in the tendering process.
- Revision of the definition of MSMEs shall address the long-pending demand of MSMEs to pass on the benefits to worthy contenders.

Definition of MSMEs							
Classification		Micro		Small		Medium	
		Original	Revised	Original	Revised	Original	Revised
Manufacturing	Investment in INR	< 25 lakhs	<1 crore	<5 crores	<10 crores	<10 crores	<20 crores
	Turnover in INR	NA	<5 crores	NA	<50 crores	NA	<100 crores
Services	Investment in INR	<10 lakhs	<1 crore	<2 crores	<10 crores	<5 crores	<20 crores
	Turnover in INR	NA	<5 crores	NA	<50 crores	NA	<100 crores

- Government tenders for procurement will not allow any global companies to participate in tenders that are less than INR200 crores. This will encourage the domestic firms to compete at local level and participate in design, supply and roll out of opportunities within the security sector.
- Government agencies will partially release bank guarantees to improve cash flow for businesses. Further, there will be an extension provided to contractors for up to six months without any additional cost.
- A liquidity injection of INR90,000 crores is provided for the distribution companies.

The MSME industries play an important role in the Indian economy by generating large scale employment, promoting innovation, and helping rural areas urbanize. The role of MSMEs has always remained crucial in terms of employment generation for an unskilled, semi-skilled and skilled workforce. The government has also taken measures for rationalization of tariff for domestic manufacturers of electric goods by phased manufacturing and exemption of basic customs duty.

[2] Atmanirbhar presentation part-1Business including MSMEs 13-5-2020



3. Current ecosystem of the security industry

3. Current ecosystem of the security industry

Threats to India's internal security are increasing due to various internal and external factors. Incidents such as the 26/11 Mumbai terror attacks, Kashmir insurgency, cross-border terrorism, increasing Maoist insurgency, cybercrimes and cultural conflicts to name a few, have reiterated the importance of protecting our citizens from the potential maelstrom. Considering this situation, the central and state governments have modernized and upgraded India's internal security sector on priority. Internal security covers several dimensions of national interest. It relates to protecting the internal environment of the country from turbulent activities that can potentially result in a disorderly situation, loss of civilians' lives and destruction of the public or private assets.

Currently, internal security in India is handled by a host of government bodies that have intricate functional and reporting structures. India's internal security agencies primarily comprise of the state and union territories (UTs) police forces, central armed police forces, intelligence and investigative agencies, and courts. The following figure provides an overview of the various internal security agencies in India.

Ecosystem of government's internal security agencies in India

Ministry of Home Affairs			Governments of states/UTs
Central Armed Police Force	Investigation and intelligence	Naxal management	States/UTs police
CRPF	NATGRID	Bureau of Immigration	Home guards
CISF	NCB	BPR&D	Civil defence
BSF	IB	Border management	Prisons
Assam Rifles	CBI	NCRB	Department of Justice, Government of India
SSB	GEQD	Disaster management	Courts
NSG	NIA		
ITBP	CFSL		

Source: EY-FICCI report titled 'Homeland Security 2017 – Roadmap for Public Procurement of Smart Internal Security of India'

3.1 Sectors and stakeholders of the security industry

With multiple stakeholders and sectors, security industry provides businesses ample potential. This includes police modernization, critical infrastructure protection, border security and cyber security.

the following are the key sectors and stakeholders within the ecosystem of the security industry:

Sectors

Ecosystem of security industry can be classified as:



Stakeholders

Key stakeholders of security ecosystem are illustrated below:



Source: EY analysis

3.2 Key systems and solutions in security industry

Security and border protection are always a very high priority for the Government of India (GoI). Every year, large amounts of funds from the union budget are allocated for this purpose. However, major players who are part of this sector are the foreign multinational companies (MNCs). To increase the participation of indigenous players, the GoI has taken multiple initiatives in the past and is continuously taking major steps to boost Indian firms' representation in the homeland security market.

Following are the key security systems and solution, which are currently available in the market:

Key systems and solutions in security industry

Hardware

- Surveillance equipment
- Communication equipment
- IT infrastructure
- Display monitors and video walls
- Access control systems
- Detectors and sensors
- Traffic management system
- Power backup system
- Cables and peripherals

Software

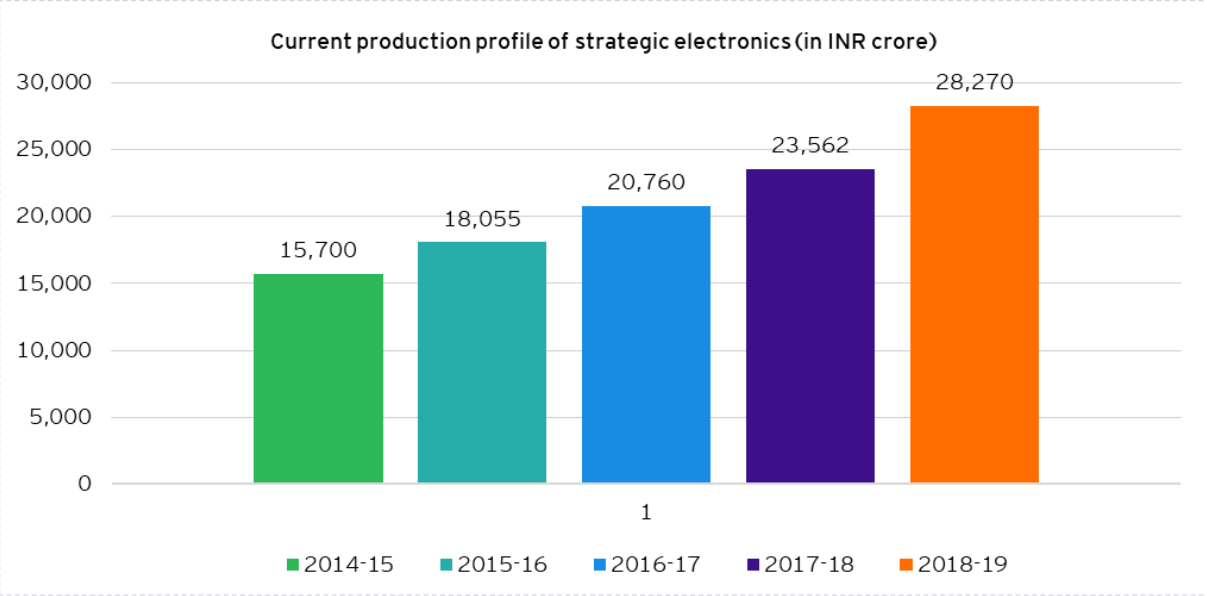
- Video management software
- Artificial Intelligence (AI), Machine Learning (ML) based analytics applications
- Automatic number plate recognition (ANPR)
- Red light violation detection system (RLVD)
- Automatic traffic congestion counting (ATCC)
- Command control software
- Cyber security solutions

Arms and protective gears for armed forces

- Armored vehicles
- Arms and ammunitions
- Night vision glasses, devices
- Bullet proof shield, armor, dress
- Dress, shoes, gloves, helmet, mask and other personal protective equipments (PPE)

Source: EY analysis

3.3 Current production profile of strategic electronics sector



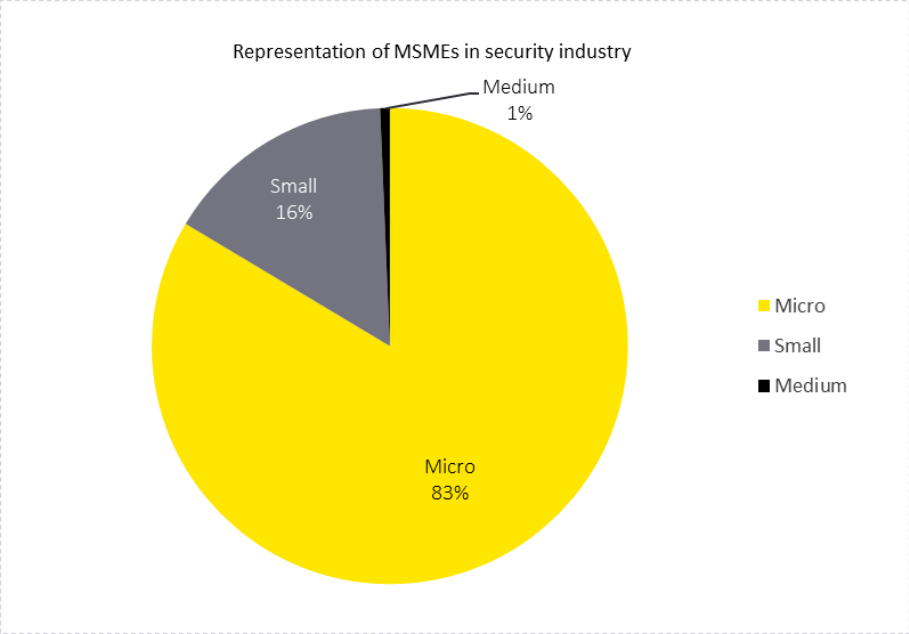
Source: Ministry of Electronic and Information Technology's annual report 2018-19

Strategic electronics

Electronics is a key area of security technologies. It is a vital component of nearly all the equipments, platforms and weapons designed and developed for security purposes. The strategic electronics segment consists of communication systems, radars and sonars, network centric systems, electronic warfare systems, weapon systems, satellite-based communication, navigation and surveillance systems, navigational aids, underwater electronic systems, infra-red (IR) based detection and ranging system, disaster management system, internal security systems, etc.

However, the sector is dependent on imports and foreign technology. Recently, a few domestic small- and medium-scale companies have come up and have shown the capability to absorb technology and meet stringent requirements of strategic electronic equipment. Some of these companies also provide emergency services and meet critical supply requirements of MNCs and PSUs.

3.4 Representation of MSMEs in the security industry



Source: Ministry of Small, Micro and Medium Enterprise - National Portal of Registration

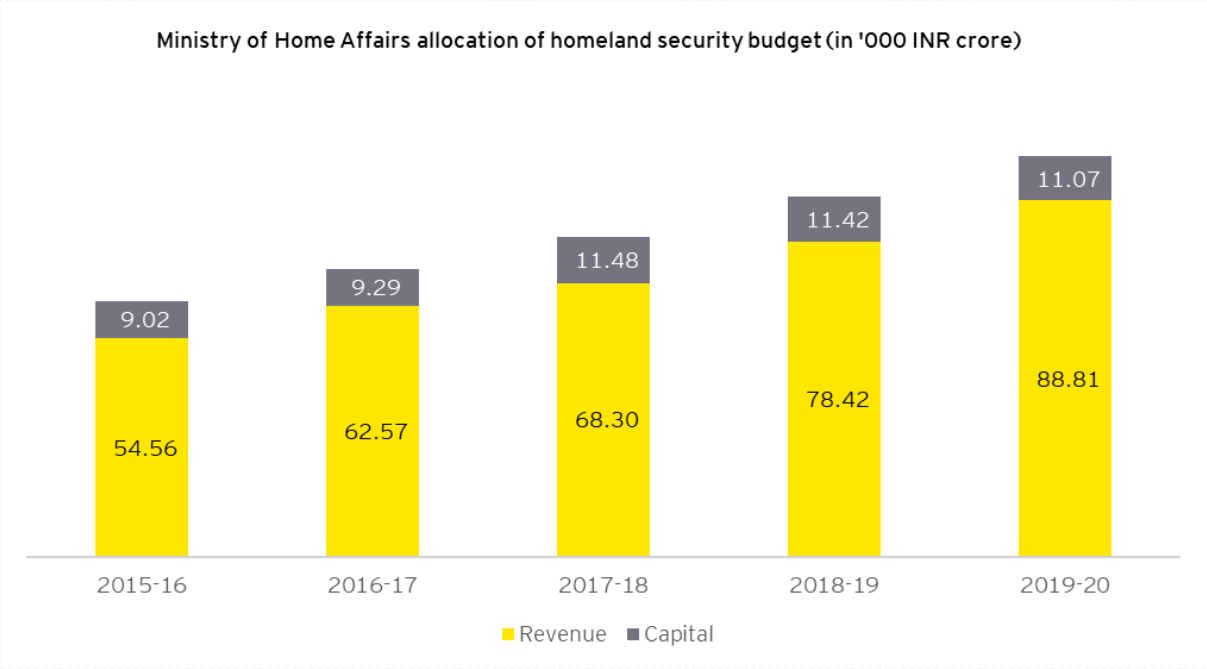


4. Opportunities for security industry led by Atmanirbhar Bharat Abhiyan

4. Opportunities for security industry led by Atmanirbhar Bharat Abhiyan

The Gross Domestic Product (GDP) in India expanded to 4.7% year-on-year (yoy) in December 2019, following a growth of 5.1% in the previous quarter. Nominal GDP of India reached US$735.3 billion in March 2020. Its GDP deflator (implicit price deflator) increased to 4.3% in March 2020. The GDP per capita in India reached US$2,139.2 in March 2020. Its gross savings rate was measured at 30.1% in March 2019[3].

Budgetary allocations and analysis

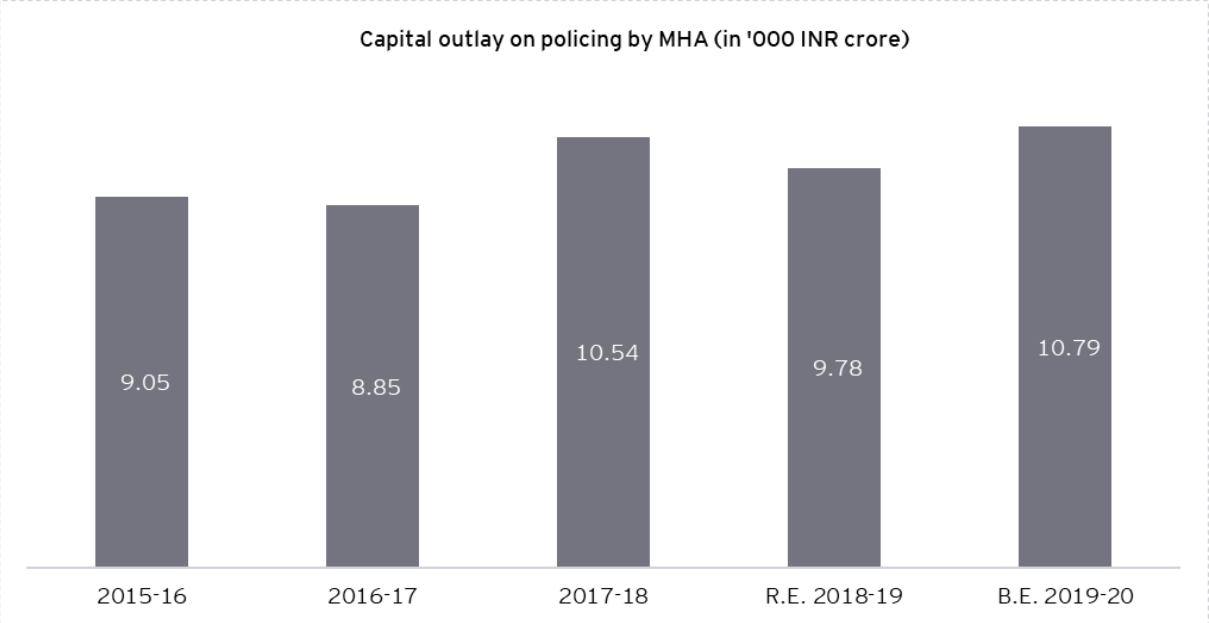


Source: EY analysis

Budgetary allocation has been steadily increasing over the years due to the growing threat on our borders as well as in hinterland, especially following the terror attacks during the last decade. During the last five years, the budget has increased from INR63,581 crores in 2015-2016 to INR99,881 crores in 2019-2020 at a CAGR of 12%. This upward trend is much higher than the rise in the defence budget, which has been growing at a CAGR of only 5%. This reflects the significance of this domain as well as the government's increasing focus towards modernizing the security apparatus in the country. During the five-year period, there has been a growth in the capital expenditure on policing provided by the Ministry of Home Affairs (MHA). It has grown at a CAGR of 4.5% to INR10,790.28 crore[4].

[3] https://www.ceicdata.com/en/indicator/india/real-gdp-growth

[4] Union Budget, July 2019; EY and FICCI analysis



Source: EY analysis

Currently, India is importing a large part of the security and safety equipments from other countries which makes it heavily dependent on its imports. imports This also negatively impacts our GDP and leads to losses pertaining to economic and employment opportunities. To boost manufacturing and generate employment opportunities, the GoI launched the *Make-In-India* campaign in 2014, followed by ANBA in 2020. Under the Make-In-India initiative, safety and security sectors are identified with the key objectives to make them self-reliant, indigenized reliant and to boost their domestic R&D and manufacturing.

Apart from the defence sector, India is importing a large part of the safety and security components for state and central law enforcement agencies, safe and smart cities, critical infrastructure, banking and retail, and transportation and maritime, both in public and private sector. The statistics on value of total imports and exports of security industry in India are given below:

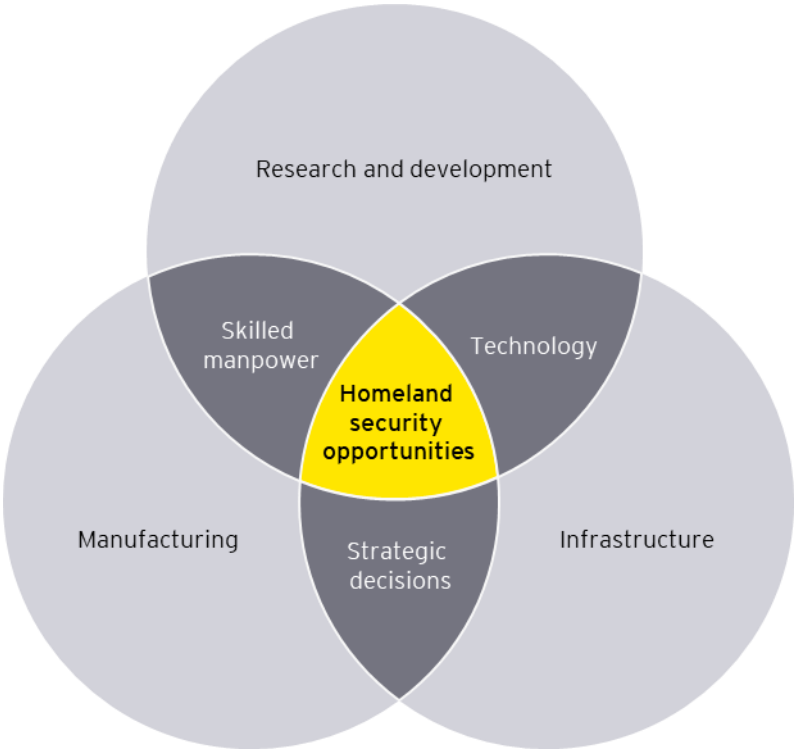
Units: in US$ millions

Total market size = (total local production + imports) - exports

Description	2016	2017	2018	2019
Total local production (estimated)	3175	3643	4021	4503
Total exports	703	752	840	1169
Total imports	1715	2186	2413	2839
Imports from the US (estimated)	78	69	66	70
Total market size (estimated)	4187	5077	5594	6173
Exchange rates	1US$ = INR 65	1US$ = INR 65	1US$ = INR 67	1US$ = INR 69

Source: Directorate General of Foreign Trade

In view of the present situation arising due to COVID-19 and various schemes being promoted by the GoI, following are some of the opportunities with respect to key sector areas:



Source: EY analysis

1. **Research and development**

India was the second largest importer of weapons between 2014 and 2018, behind Saudi Arabia, which accounted for 12% of arms imported during that period, shows a study conducted by a Sweden-based think tank. With a share of 9.5%, India, till date, has been the largest importer of weapons for more than a decade[5].

In the recent years, R&D has been the major focus area for the government. There is a need to promote investment in the R&D within the security sector to boost self-reliance. There is a potential opportunity for both public and private sectors to establish a world-class security industry base by promoting intense R&D for creating designs, systems, products and technologies to boost indigenous productivity. Investment in the following components or equipments with respect to homeland security is the need of an hour:

- Surveillance components
- Protective gears
- Sensors, scanners and detection equipment's
- Software applications
- IT and networking infrastructure

The GoI has launched a few landmark initiatives in this regard which can be leveraged to its full potential. Some of them are:

a) **Intellectual property (IP) in defence:** Mission Raksha Gyan Shakti was launched in 2018 with the aim to establish an IPR culture in Indian defence manufacturing ecosystem[6].

b) **Setting up of a Technology Development Fund (TDF):** TDF has been established to promote self-reliance in defence technology as a part of the *Make in India* initiative. This Ministry of Defence (MoD)

[5] SIPRI Annual Report 2019

[6] Press information Bureau- Intellectual Policy Rights

program is executed by DRDO that meets the requirements of tri-services (army, air force and navy), defence production and DRDO[7].

c) **Innovation for Defence Excellence (iDEX):** iDEX aims at creating an ecosystem to foster innovation and technology development in defence and aerospace by engaging industries including MSMEs, start-ups, individual innovators, R&D institutes and academia[8].

2. **Infrastructure**

Infrastructure is a vital factor that can improve the economic development. The growth of the security industry is directly proportional to the infrastructure facilities available in a country. The GoI has also recognized the existing gaps and capacity constraints in the infrastructure sector and has planned large-scale investment and policy reforms under its self-reliant initiative. Some of these are as follows:

a) A scheme will be implemented in Indian states through a challenge mode for updating the industrial cluster, common infrastructure facilities and their connectivity.

b) Availability of industrial land/land banks for promoting new investments and making information available on Industrial Information System (IIS) with GIS mapping.

   a. Mapping of 3,376 industrial parks/estates/Special Economic Zones (SEZs) on IIS covering an area of five lakh hectares

   b. All industrial parks will be ranked in 2020-2021

c) Establishing plug-and-play infrastructure, common facility centers and anchor units (commitment: 20% land area, US$40 million+ investment) under modified Electronics Manufacturing Cluster scheme (EMC 2.0)

Various states are also actively planning the development of their roads and highways, power, ports and airports. Infrastructure will become India's new identity. To achieve the target of as US$5 trillion economy, more than INR100 lakh crores[9] will be invested in India's infrastructural development over the next five years. The GoI has also planned to invest INR1.91 trillion (US$30 billion) for the 89 cities under the Smart City initiative[9]. As per the proposed investment, 80% of the funds would be spent on area-based development (ABD) and the remaining 20% on information and communication technology solutions[9].

However, due to the COVID-19 pandemic and migration of large section of laborers/skilled and unskilled manpower to villages, the focus of the government and industry may now shift to rural areas, looking to create smart villages instead of smart cities.

3. **Manufacturing**

Manufacturing sector has been the major focus area for the GoI after it realized the sector's contribution in the overall economy and towards employment generation. The government launched the *Start-up India* initiative to build an ecosystem for entrepreneurship, innovation, R&D and to generate employment opportunities. It also introduced the following initiatives to make India self-reliant and to propel indigenous manufacturing.

a. ***Make in India* for self-reliance in production**

- Notify a list of weapons/platforms for ban on import with year-wise timelines
- Indigenization of imported spares
- Separate budget provisioning for domestic capital procurement
- Has the potential to help minimize the import bill
- Improve autonomy, accountability and efficiency in supplies

b. **FDI limit in the defence manufacturing under automatic route will be raised from 49% to 74%**

   a. Increasing the FDI cap will encourage the global firms to set up manufacturing hubs in India

   b. It will also encourage global firms to bring niche technologies and set up R&D centers in India

[7] Technology Development Fund - DRDO

[8] Ministry of Defence and Defence Production - Innovation for Defence excellence

[9] Make in India portal

c. **Time-bound procurement process and faster decision making will be ushered in by:**

- Setting up of a project management unit (PMU) to support contract management
- Realistic setting of General Staff Qualitative Requirements (GSQRs) of weapons/platforms
- Overhauling trial and testing procedures

d. While addressing the nation on India's 68th Independence Day, Narendra Modi urged the industry, especially the MSMEs of India, to manufacture goods in the country with zero defects and to ensure that the goods have zero effect on the environment.

As India is growing rapidly economically, so are its various public and private sectors (power, infrastructure, road and highways, modern airports, high-speed transportation network rail and road, special economic regions, safe and smart cities, national emergency response system, etc.), There is a potential for Indian companies to participate in the defence and security market. In the hardware domain, there is a vital need for surveillance and safety equipment, communication devices, displays and video walls, access control systems and various detectors and sensors including Internet-of-Things (IoT) devices, IT infrastructure, power backup systems and traffic management systems.

Similarly, there is a potential opportunity in arms, ammunition, training equipment, night vision devices, bulletproof shields, PPEs, safety equipment for forces, armed vehicles, mobile surveillance, and communication vehicles. Similarly, there are various opportunities in the software domain, like various software applications including command and control software, video management software, AI and ML-based analytics, e-governance applications, etc.

4. **Skilled manpower**

India is one of the youngest nations in the world, with more than 54% of the total population below 25 years of age and over 62% of the population in the working-age group (15-59 years). The country's population pyramid is expected to bulge across the 15-59 age group over the next decade. This demographic advantage is predicted to last only until 2040. India, therefore, has a very narrow time frame to harness its demographic dividend and to overcome its skill shortages.

Skills and knowledge are the driving forces of economic growth and social development for any country. Skilled manpower is a critical enabler in the growth and development of the security industry as it helps in innovation and R&D. It also contributes towards the manufacturing sector to become self-reliant.

Narendra Modi launched the Skill India mission with an aim to train people different skills. Some of the initiatives as part of this mission include the National Skill Development Mission, National Policy for Skill Development and Entrepreneurship 2015, Pradhan Mantri Kaushal Vikas Yojana (PMKVY) scheme, and the Skill Loan Scheme. The Skill India mission seeks to provide the institutional capacity to train a minimum of 300 million skilled people by 2022. These initiatives are primarily driving the need of skilling the human resource for quality, relevance, aspirations, outreach and convergence[10].

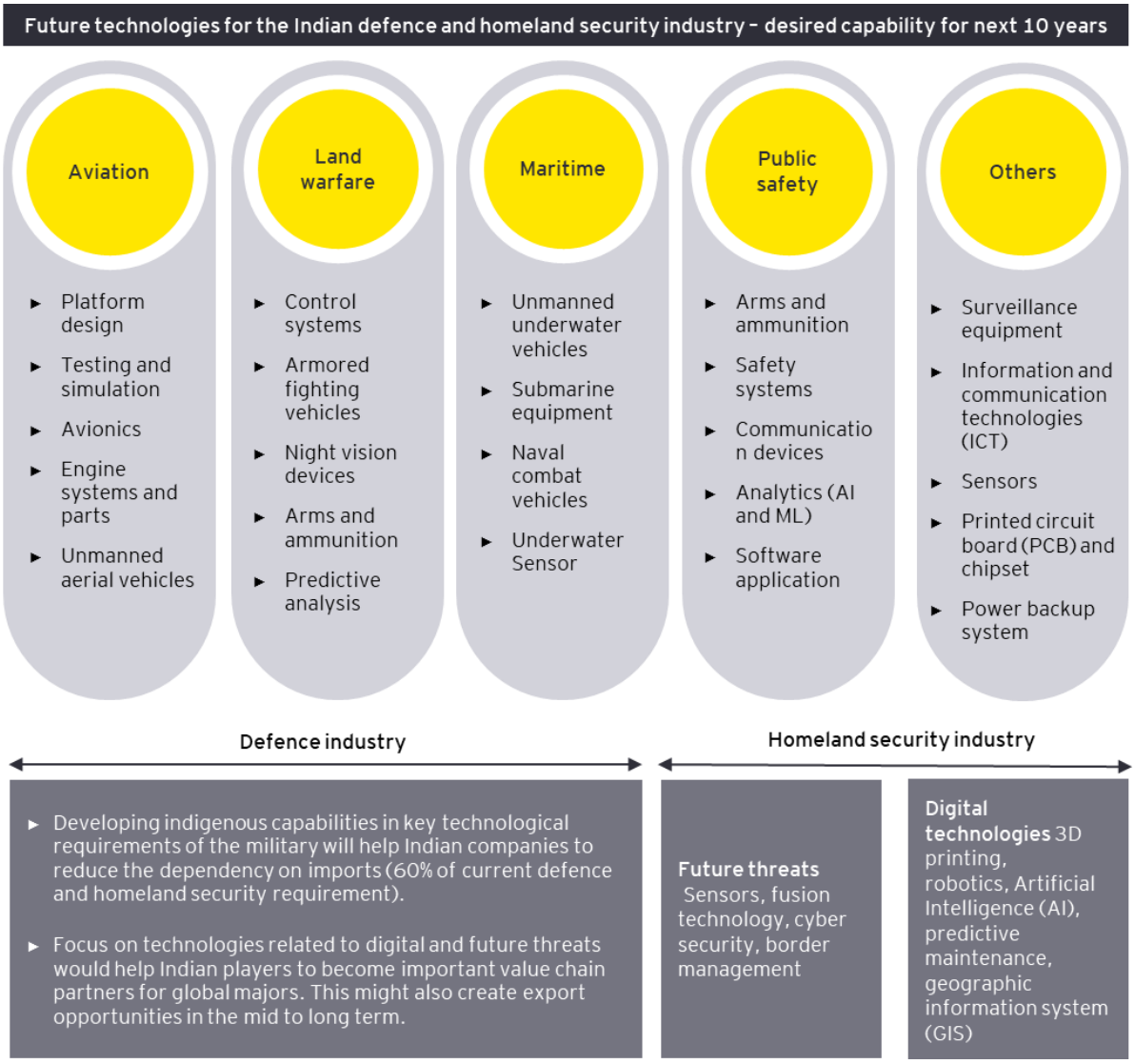
5. **Strategic decisions**

As India is growing rapidly and transforming itself into a global economic power, the security sector has assumed a crucial role in the country's long-term strategic decisions. It's a big opportunity for various ministries and consulting firms to come forward and be a part of a rapidly growing Indian economy. While OEMs have an indirect role in providing customized innovative solutions, meeting the demand with respect to Indian requirements will now be their key focus area.

6. **Technology-driven enablers**

A focus on emerging technologies would enable the Indian security sector to cater to both the domestic and international markets.

[10] Ministry of Skill Development and Entrepreneurship - National Skill Development Mission, a framework for implementation



Source: EY analysis

The government has also launched some of the other key initiatives to enhance the manufacturing sector with -state-of-the-art products in defence and security industry. These are:

a. DPP Policy for indigenization of components and spares used in defence platforms aims to create an ecosystem which can indigenize the imported components (including alloys and special materials) and sub-assemblies for defence equipment and platform manufactured in India. It is estimated that defence PSUs will reduce the import bill more than INR15,000 crores by 2022 through indigenization of product and services[11].

b. The manufacturing of arms and ammunition is governed by the Arms Act, 1959 and the Arms Rules, 1962. till 2002, only Ordnance Factory Board had the license to manufacture arms and ammunition for the armed forces. Indian private industry was only allowed to produce single barrel and double barrel guns and associated cartridges. The Department of Industrial Policy and Promotion (DIPP, now DPIIT) finally opened the manufacturing of small arms and ammunition in the private sector with nil or up to 26% FDI in 2002. In 2005, DIPP further liberalized the sector when it started issuing industrial licenses to a few companies to manufacture arms and ammunition.

[11] Department of Defence Production, Ministry of Defence - notification of policy for indigenization of components and spares used in defence platforms for DPSUs/OFB – 8 March 2019

c. The MHA revised Arms Rules, 1962 (now called as the Arms Rules, 2016, published on 15 July 2016) to allow Indian companies to manufacture and proof test the firearms. Subsequently in 2017, the Arms Rules were amended again to boost the *Make in India*' initiative.

d. Initiatives like increasing the participation of NITI Aayog in industry consultations and publishing the discussion papers will help in bridging the gaps in between the government and the security industry. In June 2018, NITI Aayog has published a discussion paper on Artificial Intelligence, namely, *National Strategy for Artificial Intelligence*, focusing on how transformative technologies can help in economic growth in the key sectors like infrastructure, smart and safe cities, transportation, education, cities transportation education healthcare and agriculture[12].

e. The GoI has come up with an initiative *GI Cloud,* which has been named as *MeghRaj*. The main objective of this initiative is to accelerate delivery of e-services in the country and to optimize ICT spending of the government by fulfilling a variety of service requirements like Platform as a Service (PaaS), Infrastructure as a Service (IaaS) and Software as a Service (SaaS).

f. Digital India was also launched with a vision to transform India into a digital empowered society and knowledge economy with three key vision areas:

- Digital infrastructure as a core utility to every citizen
- Government and services on demand
- To digitally empower the citizens[13]

[12] Niti Aayog discussion paper - National Strategy for Artificial Intelligence #AIFORALL - June2018

[13] DigitalIndia.gov.in



5. Suggestive measures and recommendations

5. Suggestive measures and recommendations

The security industry has two main pillars, namely, manufacturing, and research and development. The Make in India concept was launched to place India as the manufacturing hub of the world. There is also a focus on investing in the creation of research and development centers in the country. However, opening manufacturing and research and development centers remains an obstacle owing to the challenges faced during the setup of the facilities (land, water and power). Finding the right manpower to operate the facility, preserving the intellectual property and getting the material on time are the other barriers.

Going forward, following are the key suggestive measures and recommendations for an atmanirbhar security industry:

1. **Developing skilled manpower:** skilled manpower not only supports the system integrators in the implementation and maintenance phase of the projects but also provides support to associated industries such as manufacturing, telecom and transport. Multi-phased nationwide lockdown due to COVID-19 has resulted in a large migration of skilled human resources. The following are some of the key measures that can be adapted to retain or develop new skilled manpower:

    a) Businesses should partner or initiate joint ventures with global organizations for research and development centers in the country. Businesses should consider training their employees through online courses and by involving lobal leaders to provide certifications to enable growth.

    b) Increased collaborations between all the key stakeholders including academic institutions, training organizations, policymakers and the industry can help in enhancing the skills requirements of the market.

2. **Reducing brain drains: b**rain drain causes a substantial migration of individuals due to existence of favorable professional opportunities in other countries or from a desire to seek a higher standard of living.

3. **Coordinated interface with the industry:** there is a need to increase the participation of industries to make revenue procurement and outsourcing of services progressively competitive. One of the ways this can be achieved is by establishing long-term strategic partnerships between the government and the Indian entities through a transparent and competitive process, wherein such Indian entities would tie-up with global OEMs to seek technology transfers to set up domestic manufacturing infrastructure and supply chains. A coordinated interface with industry shall ensure that there is no gap between the government and the industries with regards to understanding the aggregated procurement requirements, technology adoption and its planning, or getting a hand holding support from the government in case of MSMEs. The government can also enhance their outreach programs so as to strengthen its relationship with the industries and can consider this a platform to address the concerns or issues of the industry stakeholders.

4. **Standardization of product requirements:** the government should under map the competency of the private security industry, including the MSMEs, to establish their core competence. The quality control process needs to be reviewed and aligned with the best global practices with zero defect policy to ensure a higher rate of acceptance at a global level. There is a need to ensure the aggregation of demand over the medium- to long-term for attracting investment in the major production areas enabling the MSMEs to do a long-term planning. There is also a need to encourage existing industrial units in the small-scale sector to modernize their production facilities so that they can adopt improved and updated technology to strengthen their manufacturing facilities.

5. **Setting up innovation cells to promote the adoption of smart technology innovations and R&D:** there is a need to create an active and healthy innovation and R&D ecosystem for smart technologies in partnership with the industry. This can be done while promoting the public sector-based R&D ecosystem developed through government labs. This is to be achieved by promoting the start-ups in strategic areas to monetize the newly developed technologies. Going ahead, India needs more R&D, innovation and the creation of cutting-edge technologies to become self-reliant. Continuous innovation is the key to success for any nation; therefore, technological developments must be promoted. To encourage innovation, the *Make in India* initiative is providing opportunities to industries, especially the MSMEs and start-ups. Similarly, the *Start-up India* initiative is also providing a platform to new entrepreneurs to achieve success by transforming their ideas into a niche technology and sharing their relevant application. Such innovation cells shall provide a platform to effectively forge industry, R&D labs, academia linkages, and collaborations.

6. **Long-term sustenance of indigenous R&D and production:** while the focus remains on developing the indigenous products and solutions, it is also important to safeguard the Intellectual Property Rights (IPR) of the developed work products. Missions such as Raksha Gyan Shakti was launched by the defence minister in 2018 with an objective to foster innovations as well as inventions in the IPR regime[14]. India is also in the middle of revising its intellectual property protection rights which make it complicated for businesses. It is recommended to take an opinion from intellectual property rights experts from the industry to avoid issues at a later stage. Carrying out a periodic risk assessment and due diligence is likely to help reduce the risk. Additionally, it is also important to ensure that the security industry has the visibility to the long-term aggregated demands to plan for production, research and development aligned with the evolving technologies. This will also help in ensuring the work products are meeting all the standards and quality norms at a global level.

7. **Availability of power:** the 24x7 availability of power is required for any facility setup. There is a challenge of power availability for 24 hours a day, which reduces productivity and efficiency. This increases fixed costs for the facility. In 2019-20, the requirement of power reached 12,90,247 MU with a deficit of 6557 MU which is 0.5% of the total requirement v/s deficit of 10.1% in 2009-10. This shows that there is a lot of emphasis by the government on the 24x7 availability of power. There are various other sources of power such as biogas, the solar, wind, etc. that can be used to reduce the dependency on power service providers and to stabilize productivity[15].

8. **Logistic challenges:** according to the World Bank's Logistics Performance Index – 2018, India is ranked 44th out of 167 countries in the infrastructure sector[16]. This is because the transportation of material from one place to another takes days to weeks. India is yet to develop a strong road network, waterways are still unexplored and air transport is very expensive. In the union budget 2020-21, the GoI has given a massive push to the infrastructure sector by allocating INR1,69,637 crores (US$24.27 billion) for transport infrastructure. The government is also in the middle of launching a national logistics policy which aims at reducing the logistics cost and improving the time between destinations.

9. **Other key measures:** Besides these, there are some other key measures which can be undertaken to increase the participation of MSMEs in the security ecosystem. These are:

   - Increase in frequency of programs imparting awareness and information about opportunities to MSMEs under the Atmanirbhar Bharat Abhiyan.
   - Facilitation to MSMEs in terms of ease of regulations, access to raw materials at reasonable costs, availability of quality infrastructure and adoption of research and development to innovate products may be encouraged.
   - There should be a focus on promotion of ease of doing business in terms of flexibility to hire contract labor, getting access to indirect tax benefits, simplification of land acquisition procedures, enhancing intellectual property rights and reduction in logistics costs, among others.
   - Identifying key components and systems for the security industry and encouraging global investors to set up a manufacturing base in India by providing them with more incentives.
   - Leveraging government purchases particularly for technology transfer, where applicable.
   - Collaborating with engineering/technical colleges and industrial training institutes to ensure that security-relevant technologies and skills are part of their curriculum.
   - Providing companies and R&D labs as well as academia to the latest global technologies.
   - Enhancing priority sectors' funding and encouraging long-term funding mechanisms to them.
   - Preparing a roadmap for making India a global hub of emerging technologies such as in the application of Artificial Intelligence in the security industry.

[14] www.drdo.gov.in/sites/default/files/drdo-news-documents/din-05july2019.pdf

[15] Ministry of Power

[16] World Bank



6. Way forward

6. Way forward

The strong macroeconomic fundamentals and the underlying strengths indicate India's potential to achieve a US$5 trillion economy in the next few years. Out of this target, US$1 trillion is expected out of the manufacturing sector[17]. Therefore, the security sector would play a crucial role in contributing to the manufacturing sector of India. This is one of the reasons that the security industry was one of the most prominent sectors under the *Make in India* program.

Even though the nationwide lockdown in the country due to ongoing COVID-19 pandemic has put the economy under extreme stress, GoI has been able to come up with required boosters. These are in the form of initiatives like *Atmanirbhar Bharat Abhiyan* supported by Make in India and Ease of Doing Business to create a better environment for start-ups, MSMEs and other stakeholders of the security industry in developing skilled human resource and a world-class R&D and manufacturing facilities in the country. Furthermore, there is an emphasis to build strategic partnership and public-private partnership as they are the key drivers of innovation in the security industry and has the potential to enhance partnership with global players in research and manufacturing. At the same time, the security industry should also try to welcome and adopt the initiatives and measures launched by the government and provide timely consultations, feedbacks and investments in supporting the government for creating sustainable opportunities in the security industry to achieve the larger goal of atmanirbhar Bharat.

[17] Year End Review 2018 - Ministry of Commerce and Industry



Abbreviations

Abbreviations

Acronym	Term
ABD	area based development
AI	Artificial Intelligence
BPR&D	Bureau of Police Research and Development
BSF	Border Security Force
CAGR	Compound Annual Growth Rate
CBI	Central Bureau of Intelligence
CFSL	Central Forensic Science Laboratory
CISF	Central Industrial Security Force
CRPF	Central Reserve Police Force
DDP	Department of Defence Protection
DISCOM	distribution companies
DPSU	defence public sector undertaking
DRDO	Defence Research and Development Organisation
EMC	electronic manufacture cluster
EoDB	ease of doing business
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GeM	government e-market
GEQD	Government Examiner of Questioned Documents
GIS	Geographic Information System
GoI	Government of India
GSQR	General Staff Qualitative Requirements
IB	Intelligence Bureau
ICT	information and communication technology
iDEX	Innovation for Defence Excellence
IIS	industrial information system
INR	Indian Rupee

Acronym	Term
IPR	intellectual property rights
ITBP	Indo Tibetan Border Police
ITI	industrial training institute
MHA	Ministry of Home Affairs
MNC	multi-national company
MSME	Micro, Small and Medium Enterprise
NATGRID	National Intelligence Grid
NCB	Narcotics Control Bureau
NIA	National Intelligence Agency
NSG	National Security Guard
OEM	Original Equipment Manufacturer
OFB	Ordinance Factory Board
PMU	project management unit
PSU	public sector undertaking
PPE	personal protective equipment
PPP	Public Private Partnership
R&D	research and development
SEZ	Special Economic Zone
SP	strategic partnership
SSB	Sashastra Seema Bal
TDF	Technology Development Fund
ToT	transfer of technology
US$	United States Dollar
UT	union territory
YoY	year-on-year

FICCI Homeland Security Department

FICCI has many specialised committees where key concerns of the industry are debated and discussed with the specific aim of presenting the recommendations to the Government for favourable decisions.

Considering internal security is the backbone of growth and overall development of the nation, FICCI has constituted a Committee on Homeland Security (HLS), which is working towards bridging the gap between policing and technology.

Some of the focus areas:

SMART Policing: FICCI has instituted the first ever SMART Policing Awards in India for best practices in SMART Policing, with the objective to promote initiatives taken by the Police for safety and security of Indian citizens. This can change public perception and build positive and progressive image of the police among people. FICCI SMART Policing Awards provide a platform to police officials across India to learn from the experiences of other states and also for possible adoption of the best practices to further enhance policing in their respective states.

Police Modernisation: FICCI is working towards bridging the gap between policing and technology. We engage with various enforcement agencies and provide them a platform to interact with industry, to articulate their requirements and to understand new technologies for security. This

initiative is under our umbrella theme of *"Modernisation of India's Internal Security Mechanism"*.

Smart Border Management: FICCI is working towards addressing the emerging challenges faced by India in smart border management, by bringing stakeholders together to discuss how India can create smart borders that, on the one hand, allow enhanced trans-border movement of peoples, goods and ideas, and on the other, minimise potential for cross-border security challenges.

Policy for Public Procurement in Internal Security: FICCI is working towards advocacy for bringing well-defined procedures for fair and transparent procurement of security products and solutions, so as to provide level playing field to the industry. Although the Central Armed Police Forces (CAPFs) and State Police Forces are guided by the same policies and guidelines for public procurement as other government organizations, the nature and requirements of public procurement process for police forces is different from that of the general government departments. FICCI has provided policy inputs to the Government of India for numerous challenges in regard to procurement by Internal Security forces, in the areas of policies and regulations, processes, technological advancements and capacity-building.

Cyber Crime Management: FICCI has initiated working towards promoting development and implementation, of systems and concepts to combat cyber-crime as well as improve cyber security.

Road Safety: United Nations has proclaimed 2011-20 as the Decade of Action on Road Safety. FICCI feels that the Indian Industry can play a significant role in addressing the issue of road safety.

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About FICCI

Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialization, and its emergence as one of the most rapidly growing global economies.

A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry. From influencing policy to encouraging debate, engaging with policy makers and civil society, FICCI articulates the views and concerns of industry. It serves its members from the Indian private and public corporate sectors and multinational companies, drawing its strength from diverse regional chambers of commerce and industry across states, reaching out to over 2,50,000 companies.

FICCI provides a platform for networking and consensus building within and across sectors and is the first port of call for Indian industry, policy makers and the international business community.