

## MILITARY-CIVIL FUSION IN CHINA AND LESSONS FOR INDIA

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***“We must accelerate the formation of a full-element, multi-domain, and high-return military-civil fusion deep development pattern, and gradually build up China’s unified military-civil system of strategies and strategic capability.”***

- Xi Jinping (speaking to the Central Commission for Military-Civil Fusion Development On June 20, 2017)<sup>1</sup>

In the present era, **the standing of a nation state in the world order and its performance in the Competition-Crisis-Conflict continuum** is not merely dependent on the military prowess but also on the **Comprehensive National Power** which includes **synergetic utilisation of all the National Strategic Resources**. The ongoing Russia-Ukraine conflict is a glaring example of the same wherein synergetic utilisation of Government, Military, Cultural and International resources has given **competitive advantage to the seemingly militarily weaker side**.

People’s Republic of China (PRC) has pursued some form of **Military-Civil integration right from the Mao era itself**. According to **Chinese strategists, modern warfare is also characterized by a systems confrontation** that pits nation states’ respective defence strategies, systems and **degree of civil-military synergy against one another apart from other elements**. The competition’s outcome will be determined by a **nation’s adaptability and ability to muster the will and strength of society as a whole to support security and developmental goals**. Military-Civil Fusion (MCF), in their view, is

regarded as a state governance approach that will ensure **development of PLA into a world class military by 2049** and could **directly enable China's ability to prevail in a long-term strategic competition.**<sup>2</sup>

**As far as MCF in India is concerned, the foundational ethos are undergoing rapid changes.** The establishment of the Chief of Defence Staff (CDS) & Department of Military Affairs (DMA) has been path-breaking as it empowers **the defence services to think, articulate, design and drive changes in an integrated manner under the overarching umbrella of the national security architecture.** Historically, MCF has formed part of **India's early modern history** wherein the foundation of British Colonialism in India was laid through the successful **MCF between the British East India Company and the British Crown.**

### **Aim**

**The aim of this paper is to analyse the theoretical framework and strategic goals of China's Military-Civil Fusion Strategy and lessons for India.**

### **Preview**

This paper has been divided into the following parts :-

- **Part I.** Theoretical Framework and Strategic Goals of China's Military in Civil fusion strategy.
- **Part II.** Military-Civil Fusion in India and lessons from the Chinese model.

### **Part I : Theoretical Framework and Strategic Goals of China's Military-Civil Fusion Strategy**

**Growth of Military-Civil Fusion Strategy in China.** The Chinese strategic thought process when analysed historically has always **linked security of the state with its overall development.** Examples of Military-Civil integration in the **early Chinese history** can be found in the **Tuntian System** or "**Strategy of Military Farms**" implemented during the **reign of Western Han dynasty (206 BCE – 9 CE)**, wherein **farmers, soldiers and refugees** were utilised as a **collective human resource** to turn uncultivated land in the harsh landscapes of Chinese

frontiers into **self-sustained, agrarian settler colonies** while also **providing logistical support to the military**.<sup>3</sup> Since the founding of the People's Republic of China, each generation of leaders of the **Chinese Communist Party (CCP)** has promoted a version of this idea driven by prevailing **Geo-Strategic contours of the era**. A comparative analysis of growth of the concept during different Chinese leadership is given as under :-

Leadership	Period	Geo Strategic Compulsions / Policy decisions	Underlying Theme of Civil - Military Integration
Mao Zedong	1949-1954	<b>Conflict in the Korean peninsula</b>	Primacy of Defence expenditure in the overall budget (30% in 1953) <sup>4</sup>
	1958-1962	<b>Great Leap Forward (2<sup>nd</sup> Five year plan)</b>	Encouragement to defence industries to establish dual use production lines ( <b>74.5% civilian products of the total defence industry output in 1960</b> ) <sup>5</sup>
	1965-1976	<b>Sino-Soviet split;</b> withdrawal of soviet aid to <b>China's civilian and defence development programs</b>	Refocused efforts on defence production Civilian production lines removed from defence industry Decoupling of defence industry from soviet system
Deng Xiaoping	1978-1993	Chinese Economic Reforms – <b>Four modernisations</b>	National defence and force building took a back seat to economic development
Jiang Zemin	1993-2003	Imposition of an embargo by west on military equipment sales to China as a result of <b>Tiananmen Massacre of 1989</b> . United States' decisive victory in the <b>Gulf War</b> , the arrival of the <b>Revolution in Military Affairs (RMA)</b> , air campaigns against Bosnia (1995) and Kosovo (1999)	Need for access to advanced defence technologies  Scope of civil-military integration expanded beyond the defence industrial base to include infrastructure, logistics, education, and others sectors.  Constructing a civil-military integrated national defence technological and industrial ecosystem

Leadership	Period	Geo Strategic Compulsions / Policy decisions	Underlying Theme of Civil - Military Integration
Hu Jintao	2003-2012	Inclusion of Military-Civil fusion in the <b>12<sup>th</sup> five year plan</b>	Military-Civil fusion style development path with Chinese characteristics  Aligning the design and formulation of China's national defence strategies with its national development strategies
Xi Jinping	2012-	<b>'Made in China 2025'</b> plan released in May 2015  Opinion on the <b>Integrated Development of Economic Construction and National Defense Construction</b> released by the CCP Central Committee, the State Council, and the Central Military Commission (CMC) in 2016  First meeting of the <b>Central Commission for Military-Civil Fusion Development</b> on June 20, 2017	<b>Transition from "early-state fusion" to "deep fusion"</b>  Unified military-civil system of strategies and strategic capability

**Goals of China's MCF Strategy.** On June 20, 2017, Xi Jinping, speaking to the Central Commission for Military-Civil Fusion Development (CCMCFD), articulated his vision for the Military-Civil Fusion strategy. This was reiterated four months later during his speech delivered on October 18, 2017 during 19th Party Congress speech. The analysis of these speeches in the state run media has highlighted the goals of the strategy as under :-

- **Near Term Goal.** The near-term goal of the MCF strategy is achieving a state of “**MCF deep development**” characterized by streamlined processes and resource sharing to achieve **interconnectivity, higher efficiency, and optimal llocation of resources**. Figure I illustrates the core components of the “**military- civil fusion deep development pattern**” based on the analysis of the Xi Jinping speeches carried out by state run media.

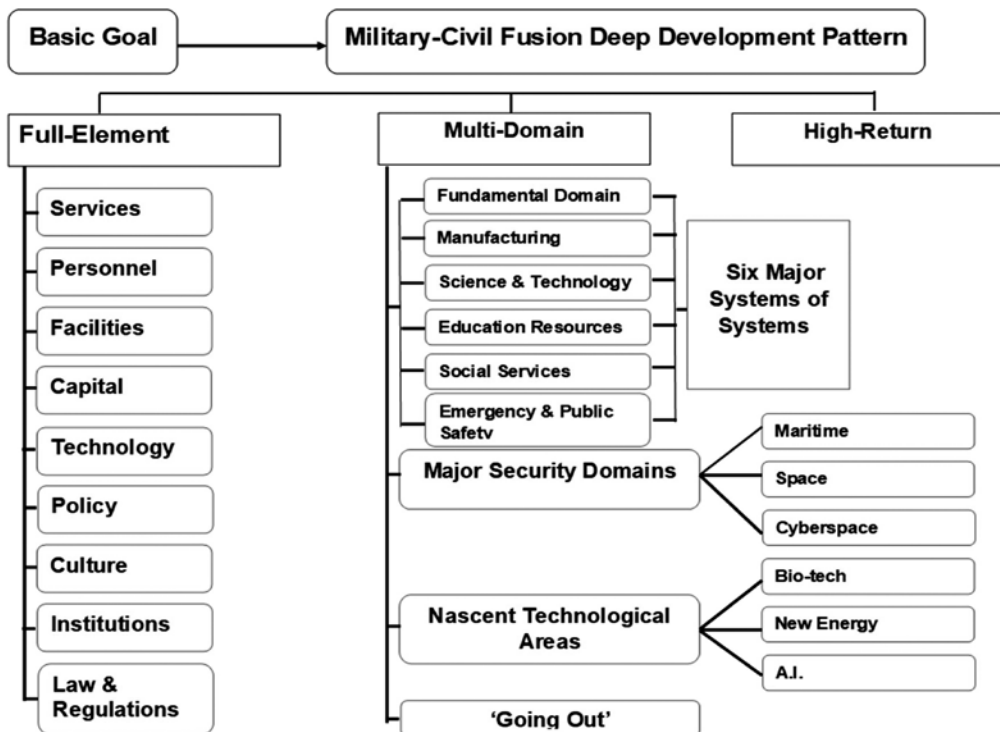


Figure I: Chinese Military - Civil Deep Development Pattern (Adopted by the author from study on ‘China Military - Civil Fusion Strategy’ published by CASI)

The three core components are described as “**full-element**,” “**multidomain**,” and “**high-return**”. The “**full-element**” attribute defines the types of resources shared between the military and civilian sectors; the “**multi-domain**” attribute identifies the domains prioritized for MCF development. Taken together, they provide a **roadmap for MCF development, explaining how China plans to achieve the deep fusion pattern**. The last attribute -“**high return**”- describes the

effects Chinese leaders and MCF strategists hope to derive from MCF development.

- **Long Term Goal.** The long term goal of the MCF strategy is to gradually build up China's "**unified military-civil system of strategies and strategic capability**" which entails gradual unification all of the various military and civilian strategies in a way that creates a strategic capability for success in a systems confrontation. **Figure II** has been adopted from a report by **Alex Stone and Peter Wood for the China Aerospace Studies Institute** and illustrates how each core component of the **MCF strategy might interact with the national strategic priorities**.

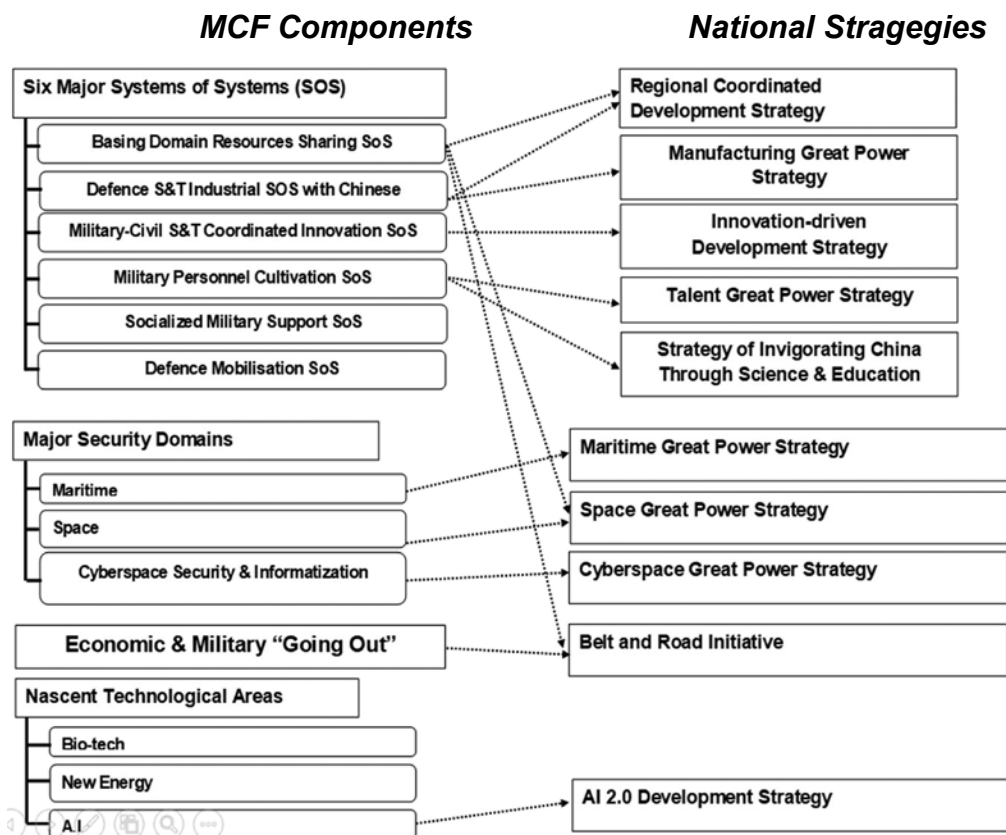


Figure II : Chinese Unified Military-Civil System of Strategies (Adopted by the author from study on 'China Military - Civil Fusion Strategy' published by CASI)

**Organisational Framework For MCF.** China had previously relied on the **Department of CMI (Civil Military Integration) Promotion of the Ministry of Industry and Information Technology** to act as the **administrative body over CMI work**. This mechanism has **proved ineffective and ill-adapted at advancing MCF development**. This department lacked the authority to oversee much of the day-to-day operations that concern various civil and military institutions whose actual management was in the hands of other **higher-ranking agencies, such as MOST, NDRC, and SASTIND**. In **January 2017, Xi Jinping unified the leadership for MCF development** by establishing the **CCP Central Commission for Military-Civil Fusion Development (CCMCFD)**, which he personally chairs.

The **CCMCFD reports to the CCP Politburo** and the Standing Committee of the Politburo and acts as the **highest level decision-making and deliberative coordination mechanism for major issues in MCF development**. Table 1 presents the 27 founding members of the CCMCFD. Four out of the seven Politburo Standing Committee members, 10 out of 25 Politburo members, and five out of the 10 CMC members served on the committee. Several heads of the central Party organs and ministers of the State Council were also represented on the committee.

**Table 1 : Founding Members of the Central Military-Civil Fusion Development Committee**

Post in the Committee	Name	Leadership Position
Head	Xi Jinping	CCP General Secretary, PRC President
Deputy Head	Li Keqiang	Premier, PSC Member
	Liu Yunshan	Executive Secretary, CCP Secretariat; PSC Member
	Zhang Gaoli	Executive Vice Premier, PSC Member
Members	MA Kai	Vice Premier, Politburo Member
	Wang Huning	Director, Central Policy Research Office; Politburo Member
	Xu Qiliang	CMC Vice Chair, Politburo Member
	Fan Changlong	CMC Vice Chair, Politburo Member
	Meng Jianzhu	Secretary, Central Political and Legal Com; Politburo Member
	Li Zhanshu	Director, General Office of the Central Com; Politburo Member
	Yang Jing	State Councilor, Secretary-General of the State Council
	Guo Shengkun	State Councilor, Minister of Public Security
	Zhang Yang	CMC Member; Director, CMC Political Work Department
	Zhao Keshi	CMC Member; Director, CMC Logistics Support Department
	Zhang Youxin	CMC Member; Director, CMC Equipment Development Dep't
	Chen Xi	Executive Deputy Director, Central Organization Department
	Huang Kunming	Executive Deputy Director, Central Propaganda Department
	Xu Lin	Director, Office of the Central Internet Info, Leading Group
	Zhang Yesui	Party Secretary, Ministry of Foreign Affairs
	He Lifeng	Minister, National Development and Reform Commission
	Chen Baosheng	Minister of Education
	Wang Zhigang	Party Secretary, Ministry of Science and Technology
	Miao Wei	Minister of Industry and Information Technology
	Huang Shuxian	Minister of Civil Affairs
	Xiao Jie	Minister of Finance
	Yin Weimin	Minister of Human Resource and Social Security
	Li Xiaopeng	Minister of Transport

**Funding For MCF.** The **MCF strategy** has emerged to be not just an **ideologically driven campaign** but one which has **institutionalised funding support** from the state. As per a study carried out by **US based Centre for Strategic and International Studies** in 2019, 42 MCF related **investment funds were identified** - among them 2 national funds, 27 created by localities, and 13 created by companies. The study calculated that these funds collectively total at least \$73 Billion. **MCF funds encapsulate the concept of China's MCF strategy.** The funds are encouraged, and often initiated, by the Chinese government with the **intention for civilian enterprises to invest in them.** **Local governments** are heavily involved in the **establishment of MCF funds**, which reflects substantial central pressure on **local officials to implement MCF.** Increased enterprise investment in MCF funds also suggests that the **private sector sees potential return of investment in the MCF strategy.** Although the provincial distribution of funds does not provide a clear trend, it indicates that actions are being taken to **implement the MCF strategy on central, local and commercial levels.** The map below depicts the total value of MCF funds within each province.



Source: Bureau of Economic Analysis, U.S. Department of Commerce.



## **Part II : Military-Civil Fusion In India And Lessons From The Chinese Model**

**Need For Military Civil Fusion In India.** India as a nation has already achieved a high degree of Civil-Military integration which is evident during the handling of disasters in the country. Prior to formulating a **MCF strategy for India**, it is imperative to understand the intended effect of the strategy or **why the pursuit of the strategy is essential**. The implementation of a **progressive and dynamic MCF strategy** is likely to result in following **positive outcomes** :-

- **Economic Growth.** India is currently at a critical stage of transformation into an economic powerhouse of the world wherein it is widely recognised as **the fifth largest economy in the world**. The MCF strategy is likely to empower continued economic growth for India due to envisaged impetus on devp of **dual use infrastructure, opening up new business opportunities** thus generating more **employment and efficient use of resources**.
- **Technological Prowess.** Development of disruptive technologies has emerged as a **major area of investment** at the Intl level. Since Military Civil fusion entails integration of the nation's military and **civilian technological R&D resources and enhancing the military-civil coordinated innovation capability** development, **MCF strategy** for India is likely to **further enhance the technological prowess of India** wherein the **Armed Forces are likely to become the harbingers of the technological developments** in the country.
- **Optimising The Governance System.** The implementation of **MCF strategy** is likely to enable **creation of a Civil-Military integrated governing system across sectors, government bodies, and domains** resulting in optimum utilisation of National resources and availability of a platform at various levels.
- **Enhanced Military Capability.** Faced with **internal and external challenges to development and security**, MCF strategy is likely to ensure **enhancement of the overall military capability** by ensuring

that any security challenge to the country is addressed by a **Whole of the Nation approach**.

**Effective Implementation of Military Civil Fusion in India.** Implementation of a MCF strategy in India requires a **MCF organization and management system** that features **unified leadership, coordination between the military and the civilian sectors, and effective pathways** of communication. Since effective implementation of the **MCF strategy in India** will require **inter-ministerial and Central Govt-State Govt coordination**, the MCF organisational structure is recommended to be **driven from the Apex level of the Governance**. A suggested model of the Organisational structure for **Military Civil fusion at the apex level** alongwith recom composition of various sub-structures is depicted at **Figure III**. The indicative lines of efforts of the various sub-structures are enumerated at **Table 1**. It entails constitution of a **Cabinet Committee on Military Civil Fusion** and **seven different National Commissions** as under :-

- National Commission for **MCF in External Affairs**.
- National Commission for **MCF in Higher Education**.
- National Commission for **MCF in Manufacturing**.
- National Commission for **MCF in External Affairs**.
- National Commission for **MCF in Strategic Mobilisatin and Operational Logistics**.
- National Commission for **MCF in Technology and Innovation**.
- National Commission for **MCF in Border Area Development**.
- National Commission for **MCF in Strategic Communications and Perception Management**.

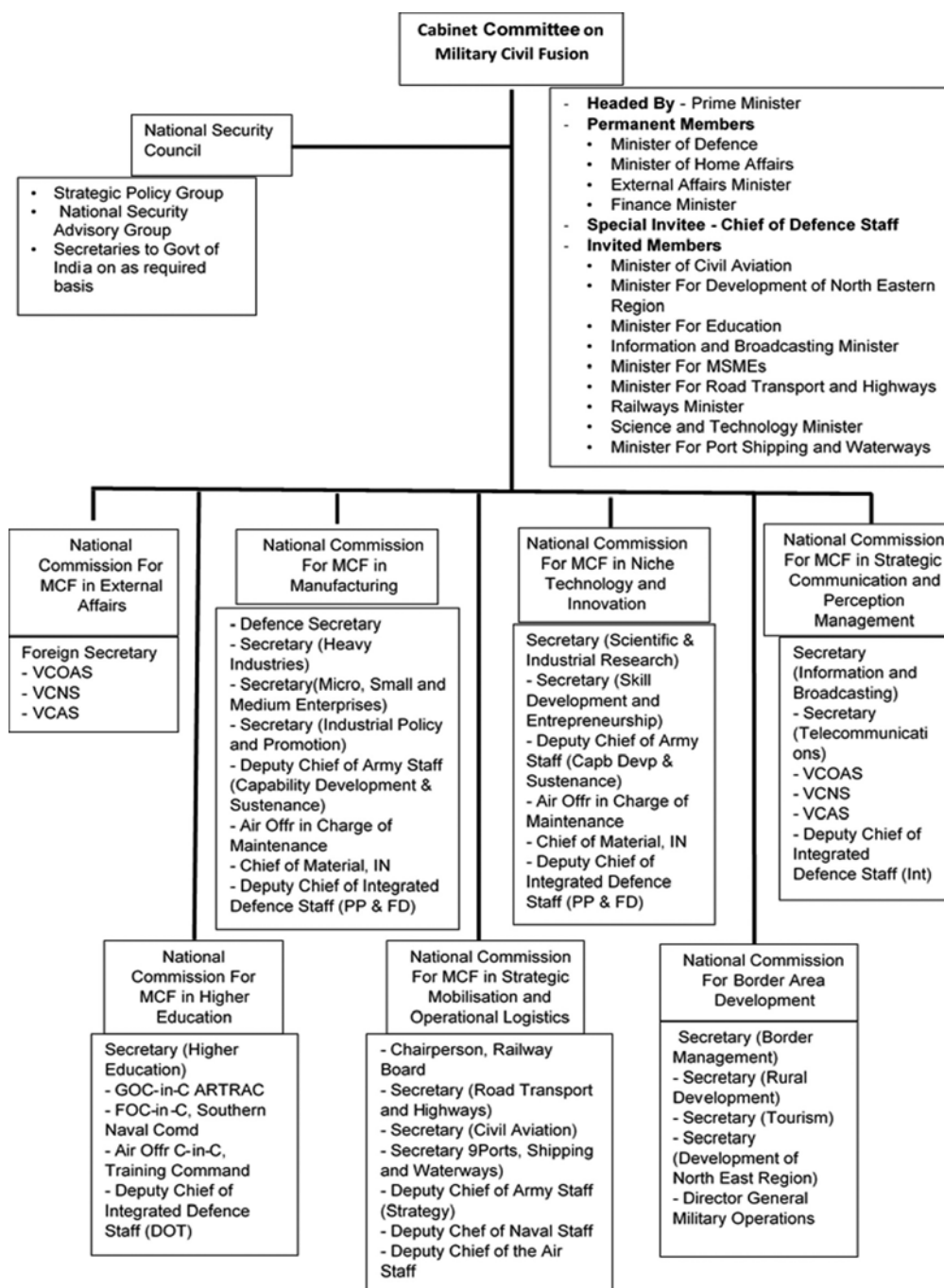


Figure-III : Organisational Structure for MCF in India

**Taba –II : Suggested Lines of Effort of National Commissions For MCF**

National Commissions	Lines of Effort
National Commission For MCF in External Affairs	<p>-Formulate <b>regulatory framework</b> to encourage <b>cooperation with internationally renowned scientific research institutions</b>, establish <b>R&amp;D institutions overseas</b>, and build international cooperation platforms such as <b>joint research centres</b>, technology transfer centres, <b>technology demonstration promotion bases</b>, and <b>science and technology hubs</b> with countries with innovative advantages in niche domains.</p> <p>-Promote construction of <b>overseas logistics support and sustainment systems</b> with a view to enhance <b>strategic footprint of India</b>.</p> <p>-<b>Deepening of International military exchanges</b> and defence cooperation by empowering of Offices of Defence Attaches / Military Attaches and Overseas Military Training teams</p>
National Commission For MCF in Higher Education	<p>-Expansion in the scope of universities, IITs and other technical institutes with national defense characteristics to include funding to <b>strengthen individual faculty departments, disciplines with defense characteristics and development of defense oriented laboratories</b></p> <p>- Formulate <b>regulatory framework</b> to leverage <b>civilian education resources</b> to complement and improve the <b>Professional Military Education in the Armed Forces</b></p> <p>-Preparation and implementation of a <b>long term plan to leverage Agniveers and retired military personals</b> to support India's economic development by suitably empowering them with relevant skill sets</p>

National Commissions	Lines of Effort
<b>National Commission For MCF in Manufacturing</b>	<p><b>Formulate Regulatory Framework for uniting the Defense Technology and Industrial Base and the larger Commercial Technology and Industrial Base to utilise common technologies, processes, labor, equipment, material, and/ or facilities for both defense and commercial needs.</b></p> <ul style="list-style-type: none"> <li>- <b>Oversee implementation of ‘Atmanirbhar Bharat’ in the defence manufacturing sector and formulate mechanisms to promote indigenous defence manufacturing industry</b></li> <li>- <b>Formulating regulatory framework to make structural adjustments to the defense product R&amp;D ecosystem nationwide, regardless of the nature of ownership</b></li> <li>- <b>Oversee corporatisation of Ordnance Factories</b></li> <li>- <b>Initiate and oversee reorganization, restructuring, privatization, asset sales, mergers and acquisitions in Defence Public Sector Undertakings including DRDO</b></li> <li>- <b>Preparation and implementation of a long term plan to develop dual use capability of state owned / public sector manufacturing industry</b></li> <li>- <b>Study the barriers to participation in Defense Production and initiate reforms</b></li> <li>- <b>Promote integration of the indigenous defense industry and regional economies under the framework of India’s regional development strategies like SAGAR</b></li> </ul>

National Commissions	Lines of Effort
<b>National Commission For MCF in Strategic Mobilisation and Operational Logistics</b>	<p>Formulate regulatory framework for the Defence Forces to rely on large and medium-sized transportation enterprises (both public and private) to organize and build strategic delivery support forces, enhance strategic delivery capabilities, and provide effective support for the rapid organization of long-distance and large-scale defense transportation.</p> <p>leveraging the national social service system and private sector resources to support the logistics functions—such as health services, housing, utilities, provisions of food—that help improve the quality of life of military personnel.</p> <p>Establish strategic cooperation with leading logistics and delivery service private sector companies to enable a civil-military integrated logistical delivery system capable of supporting and sustaining integrated joint wartime operations, HADR and OOAC operations.</p> <p>Leverage technologies such as cloud computing, big data, and the Internet of Things to innovate support models, upgrade support methods, and improve the quality and efficiency of logistics support.</p> <p><b>Airways :</b></p> <ul style="list-style-type: none"> <li>- Establish Joint working mechanism between DGCA, BCAS and Defence Forces</li> <li>- Enhance airport compatibility; build military-civilian airports</li> <li>- Optimize airspace usage</li> </ul>

National Commissions	Lines of Effort
	<ul style="list-style-type: none"> <li>- low-altitude airspace management reform;</li> <li>- establish dynamic airspace management and flexible use mechanisms</li> </ul> <p><b>Railways :</b></p> <ul style="list-style-type: none"> <li>- Strengthen the construction of major railway corridors in strategic directions</li> <li>- implement national defense requirements in railway construction and transformation</li> </ul> <p><b>Highways :</b></p> <ul style="list-style-type: none"> <li>- Dual use capability of Highways as auxiliary runways for aircraft</li> <li>- Strengthen Border Roads infrastructure to enhance strategic mobilization capacity</li> </ul> <p><b>Sea lanes and Waterways :</b></p> <ul style="list-style-type: none"> <li>- Regulatory framework for repurposing civilian vessels for Naval usage</li> <li>- Plan the security of Sea Lanes of Communication, and build corresponding logistics support facilities in line with Sagarmala initiative</li> </ul>
<p><b>National Commission For MCF in Niche Technology and Innovation</b></p>	<ul style="list-style-type: none"> <li>-Promote Two way transfer of mature technologies</li> <li>-Promote sharing of military and civilian resources including research facilities and collaborative innovation among industries</li> <li>-Setting up of military-civilian collaborative innovation research institutions to jointly promote high-tech R&amp;D and commercialization of the resulting technologies</li> </ul>

National Commissions	Lines of Effort
	<p><b>- Space :</b></p> <ul style="list-style-type: none"> <li>- Oversee the coordination and promote data sharing between ISRO and Defence Space Agency</li> <li>- Promote the sharing of satellite resources between military and civilian entities</li> <li>- Promote military utilisation of GAGAN and NavIC services of ISRO</li> <li>-Promotion of space scientific research, enhancing space weather monitoring, early warning capabilities and improving civil-military coordinated response to space security threats</li> </ul> <p><b>Cyber :</b></p> <ul style="list-style-type: none"> <li>-Create and maintain a cybersecurity joint defense and control mechanism (cyber security monitoring, early warning capabilities and emergency responses) between Defence Cyber Agency and civilian resources.</li> </ul>
	<p><b>AI :</b></p> <ul style="list-style-type: none"> <li>-Effective utilisation of AI technology towards defense applications, encourage civilian researchers to participate in major national defense-related AI research, promulgating common standards for military and civilian AI technologies and setting up of shared platforms to promote AI based innovation</li> </ul>
National Commission For Border Area Development	<p><b>-Effective utilisation of ‘Vibrant Villages’ initiative to amalgamate the Border area population in the overall operational construct of the Armed Forces</b></p> <p><b>-Strengthen the Border area infrastructure to be utilised during conflict</b></p>



National Commissions	Lines of Effort
<b>National Commission For MCF in Strategic Communication and Perception Management</b>	<b>Strategic Communications :</b> <ul style="list-style-type: none"> <li>- Optimize the layout of satellite communication system</li> <li>- Oversee implementation of National Geo-Referencing Framework</li> <li>- Coordinate Military Electromagnetic Spectrum Management System</li> </ul> <b>Perception Management</b> <ul style="list-style-type: none"> <li>-Establishing a civil-military coordinated response mechanism to routinely guide public opinions, monitor and manage opinions during major news outbreaks, and strengthen screening of sensitive military information online to avoid leaking military secrets.</li> </ul>

It is clear from the **Chinese experience** that the **leadership required to set in motion the goal of MCF** must be at the **very apex** level of the Governance. This has also been **validated by India's own experience in its nuclear and space programmes**. Due to the **inherent federal and parliamentary nature** of the **governing system** of the country, it is imperative that the **Military Civil Fusion is implemented in a tiered manner** wherein the first tier can be the **Cabinet Committee For MCF at the Apex** decision making level, the second tier can be the National Commissions For MCF at the policy formulation level and the **third tier can be the Departmental / Agencies / State Government level** responsible for effective implementation of the MCF policies.

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### Endnotes

1. See "CCP Central, State Council, CMC release Opinion on the Integrated Development of Economic Construction and National Defense Construction", Xinhua, 21 July 2016, [http://www.xinhuanet.com/politics/2016-07/21/c\\_1119259282.htm](http://www.xinhuanet.com/politics/2016-07/21/c_1119259282.htm).
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<https://www.csis.org/blogs/trustee-china-hand/chinas-military-civil-fusion-funds-big-not-necessarily-effective>.
10. *ibid.*