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Seizing First Mover Advantage: People's Liberation Army Embracing Intelligentised Warfare

Shaheer Ahmad

Research Assistant

Working Paper

President
Air Marshal Javaid Ahmed (Retd)

Edited by:
Mashal Shahid

All correspondence pertaining to this publication should be addressed to CASS, Islamabad, through post or email at the following address:

Centre for Aerospace & Security Studies

+92 051 5405011
cass.thinkers@casstt.com
cass.thinkers
cassthinkers
@CassThinkers
Centre for Aerospace & Security Studies

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Abstract

Since its inception, the People's Liberation Army (PLA) has undergone fundamental changes in its military strategy. To anticipate the turbulent international environment and maintain a favourable balance of power, the PLA has made incremental adaptations to its military strategy, reformed its organisational structure, and modified its operational concepts. Currently, the arrival of Artificial Intelligence (AI), quantum computing, Big Data, and the Internet of Things (IoT) has compelled the PLA to capitalise on the first-mover advantage to prevail in the era of the Fourth Industrial Revolution. The paper analyses the concept of intelligentised warfare and associated impacts on China's military strategy. It highlights the organisational reforms and strategies adopted by the PLA to embrace a major change in its organisational structure. Based on these factors, the paper argues that embracing intelligentisation will enable the PLA to emerge as a formidable actor against its adversaries on the future battlefield.

Keywords: Military Strategy, PLA, Intelligentised Warfare

Introduction

National military strategy encompasses a set of principles that a military force must adopt to effectively fight future wars. Since 2010, a prevailing perception within the People's Liberation Army (PLA) has been that future wars will be fought in the information domain. In 2013, the Academy of Military Science published *the Science of Military Strategy,*[1] which outlined three critical dimensions of warfare: materials, energy, and information. The document prioritised the centrality of information and cyber domains to conduct multi-domain operations and subvert or paralyse the enemy's decision-making process. In the backdrop of these discussions, China's national defence white paper, *China's Military Strategy,*[2] emphasised that the form of war is evolving from mechanisation toward informatisation, where information and communication technologies will play a central role in the decision-making process.

However, a few years later, a new white paper in 2019, *China's National Defence in the New Era,*[3] indicated a shift in the conduct of warfare, evolving from informatisation to intelligentisation. This shift is driven by rapid advancements in Artificial Intelligence (AI), quantum computing, and Internet of Things (IoT), prompting the PLA to reassess and adapt its existing warfighting patterns. In March 2023, President Xi Jinping called on the Chinese military to simultaneously make progress in mechanisation, informatisation and intelligentisation.[4] This integrated development plan is deemed necessary to keep pace with the evolving character of warfare in the 21st century. Therefore, it is now being argued in Chinese military circles that the role of AI and other technologies will be critical to influence the command and control (C2) structures, facilitate seamless human-machine integration, and expand the existing combat domains, making warfare a complex enterprise.[5] In this retrospect, the Chinese military seems to capitalise on the first mover advantage through a

1 China Aerospace Studies Institute, "PLA's Science of Military Strategy," February 8, 2021, https://www.airuniversity.af.edu/CASI/Display/Article/2485204/plas-science-of-military-strategy-2013/

2 China's State Council Information Office, "China's Military Strategy," white paper (Beijing: Foreign Languages Press Co. Ltd., 2015) https://english.www.gov.cn/archive/white_paper/2015/05/27/content_281475115610833.htm

3 China's State Council Information Office, "China's National Defense in the New Era," white paper (Beijing: Foreign Languages Press Co. Ltd., 2019) https://www.gov.cn/zhengce/2019-07/24/content_5414325.htm

4 China Aerospace Studies Institute, "Communiqué of the Fifth Plenary Session of the 19th Central Committee of the Communist Party of China," press release, November 17, 2021, https://www.airuniversity.af.edu/CASI/In-Their-Own-Words/Article-Display/Article/2834176/itow-communiqu-of-the-fifth-plenary-session-of-the-19th-central-committee-of-th/

5 Jiayu Zhang, "China's Military Employment of Artificial Intelligence and its Security Implications," (blog), *The International Affairs Review* August 16, 2024, https://www.iar-gwu.org/print-archive/blog-post-title-four-xgtap.

comprehensive military-civil fusion (MCF) strategy,[6] research and development[7] and raising new combat forces.[8]

The study explores the concept of intelligentised warfare, its characteristics, and the organisational reforms in the PLA. It discusses the impact of intelligentised warfare on C2 structures and prospects of human-machine integration. It argues that in past, the PLA lagged in terms of technological and doctrinal adaptation due to domestic political upheavals, economic instability and a lack of a robust military industrial base; nonetheless, it now appears to capitalise on the emerging technologies of the Fourth Industrial Revolution (4IR). By embracing the intelligentisation as a new form of warfare, the PLA aims to leverage emerging technologies to plug gaps in its strength and likely employ them later against strong adversaries in a possible conflict around the South China Sea, Taiwan Straits and the Western Pacific.

Methodology

The study is based on qualitative research methods, employing qualitative content analysis to identify causal links and analyse existing data on intelligentised warfare. Data was obtained from secondary sources, primarily involving Chinese media outlets including the PLA Daily, People's Daily, Study Times, Xinhua news agency, PLA's defence white papers, and government archives. Moreover, books, journal articles, reports, and dissertations were incorporated to extract expert analysis on the emerging trends in intelligentised warfare.

PLA's Evolution from Informatised to Intelligentised Warfare

Since its inception, the People's Liberation Army (PLA) has continually adapted its military strategy in response to the evolving character of warfare. To date, the PLA has adopted nine 'military strategic guidelines,' each reflecting shifts in the global warfighting patterns.[9] During the early Chinese Communist Party (CCP) era, China's military strategists remained infatuated with positional warfare and guerrilla tactics.[10] In *On Protracted War,* Mao Zedong prioritises three forms of warfare: positional

6 U.S. Department of State, "The Chinese Communist Party's Military-Civil Fusion Policy," Accessed May 24, 2025, https://2017-2021.state.gov/military-civil-fusion/.

7 Digi China, "China's 'New Generation Artificial Intelligence Development Plan' (2027)," August 1, 2017, https://digichina.stanford.edu/work/full-translation-chinas-new-generation-artificial-intelligence-development-plan-2017/.

8 Associated Press News, "China's Xi Calls for 'More Quickly Elevating' Armed Forces," March 9, 2023, https://apnews.com/article/china-us-military-taiwan-xi-jinping-14f9c3d8fef26779f017d927aa352eeb.

9 Maris Taylor Fravel, "Shifts in Warfare and Party Unity: Explaining China's Changes in Military Strategy," *International Security* 42, no. 3 (2018): 37–83, http://hdl.handle.net/1721.1/118865

10 The National Archives, "The Chinese Civil War," accessed May 23, 2025, https://www.nationalarchives.gov.uk/education/resources/the-chinese-civil-war/.

warfare, guerrilla warfare, and mobile warfare.[11] These tactics were evident in the early Korean War campaigns,[12] Japanese resistance,[13] and the Chinese civil war.[14] However, the rapid changes on the battlefield, particularly through technological advancements, have led the PLA to rethink its positional warfare strategy and guerrilla tactics.

With the outbreak of the Gulf War, the PLA carefully studied several key technologies, including stealth technology, laser-guided bombs, high-speed anti-radar missiles, and third-generation Secure Telephone Units (STU-III), which played a crucial role in the allied victory.[15] The war became a harbinger of change for the PLA. According to Taylor Fravel, an authoritative commentator on Chinese military strategy, the Gulf War played a significant role in reorienting the PLA's military strategy.[16]

In hindsight, Chinese military planners understood that the PLA needed a robust air force and navy capable of conducting precision strikes and establishing a robust command, control, communications, computer, intelligence, surveillance, and reconnaissance (C4ISR) system.[17] These observations culminated in the adoption of the Active Defence strategy, grounded in the principles of Just War and Active Defence.[18] Andrew Scobell termed the propensity of the PLA toward defensive wars as 'Cult of Defence.'[19]

In the 21st century, the proliferation of emerging technologies and advanced weapon systems has led the PLA to revise its military warfighting strategy again. As outlined in the 2004 military strategic guideline, the PLA remained fixated on the local wars but emphasised the role of 'informatisation,' and regarded the 'integrated joint operations' as the main form of operations. This was further reiterated in the 2014 military strategic guideline, which set the goalpost of the PLA to prepare itself for

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11 Mao Zedong, *On Protracted War* (Oregon: University Press of the Pacific, 2001).

12 Bevin Alexander, *The Future of Warfare* (New York: WW Norton & Co, 1995).

13 Wilbur W. Dinegar, "The 'Long March' as Extended Guerilla Warfare," in *United States Naval Institute Proceedings* (Annapolis: US Naval Institute, 1952). https://www.usni.org/magazines/proceedings/1952/march/long-march-extended-guerrilla-warfare.

14 Micheal Clodfelter, *Warfare and Armed Conflicts: A Statistical Reference to Casualty and Other Figures, 1500-2000* (Jefferson: McFarland & Company, 2002).

15 Tsukamoto Katsuya, "The Gulf War as a Harbinger of a Revolution in Military Affairs (RMA)," (paper presented at International Forum on War History: Proceedings, National Institute for Defense Studies, Tokyo, September 14, 2021).

16 M. Taylor Fravel, *Active Defense: China's Military Strategy Since 1949* (Princeton: Princeton University Press, 2020), 139.

17 Commander Michael Dahm, "China's Desert Storm Education," *US Naval Institute,* March 2021, https://www.usni.org/magazines/proceedings/2021/march/chinas-desert-storm-education

18 Patrick Griffo, "Rising Tide in the Gulf: The First Gulf War and its Impact upon Chinese Strategy," (Undergraduate Diss., Bellarmine University, Kentucky, 2016) https://doi.org/10.1017/CBO9780511510502.

19 Andrew Scobell, *China's Use of Military Force: Beyond the Great Wall and Long March* (Cambridge: Cambridge University Press, 2003), 15, https://doi.org/10.1017/CBO9780511510502

fighting the informatised wars. The document also advocated a new operational concept for the PLA, centred on information dominance, precision strikes on chokepoints, and joint operations to gain victory on the battlefield.[20]

Driven by advancements in AI, quantum, and Big Data, the PLA added 'intelligentisation' as a goal in 2019. Xu Qiliang, former Vice Chairman of the Central Military Commission, notes that President Xi Jinping prioritises the harnessing of emerging technologies to advance PLA modernisation goals. Xi emphasises the integrated development of mechanisation, informatisation and intelligentisation, marking a significant shift in Chinese military modernisation concerning development direction, path and mode.[21] Insights from the contemporary conflicts have led Chinese military analysts to recognise the emergence of this new form of warfare. Drawing on the Syrian example, Chinese researchers argue that modern conflicts increasingly feature the integrated application of mechanisation, informatisation and intelligentisation; three mutually complementary dimensions of contemporary military operations.[22] Likewise, analysis of the Armenia-Azerbaijan conflict highlights the real-time use of intelligentised warfare, particularly the decisive impact of drones on the legacy battle systems such as tanks, artillery pieces and air defence systems.[23] These trends demonstrate that although the PLA continues its sweeping military reforms, the gap with its peer competitors is steadily shrinking.

Intelligentised Warfare: Breaking Away From Tradition

According to the Chinese researchers, intelligentised warfare is a new form of warfare where the salience of AI, autonomous systems, IoT and Big Data distinguishes it from the informatised warfare.[24] Informatised warfare emphasises the use of information systems to assist humans in decision-making cycles. While intelligentised warfare focuses on replacing humans' role with AI and other intelligent systems.

Chinese researchers tend to view military intelligentisation as a breakaway from the previous modalities of warfare. Chen Xiaonan and Cong Hanwen in the *PLA Daily* have explained this through the analogy of a master-slave dispute. Till now, the rational

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20 Ibid, 217.

21 Zichen Wang, "Once-in-a-Generation Change in PLA Guidelines: Intelligentization Added, Mechanization Declared 'Basically Accomplished,'" *Pekingnology,* December 8, 2020, https://www.pekingnology.com/p/once-in-a-generation-change-in-pla.

22 Yuan Yi, Xu Jinhua, and Li Zhifei, "Grasp the Essential Connotation of the Integrated Development of Mechanization, Informatization and Intelligence," *PLA Daily*, December 1, 2020, http://www.81.cn/yw/2020-12/01/content_9945084.htm.

23 Wu Zhizhong, "Accelerate the Integrated Development of Mechanization, Informatization and Intelligence——Study and Implement the Spirit of the Fifth Plenary Session of the 19th CPC Central Committee," *China News Network*, November 8, 2020, https://www.chinanews.com.cn/mil/2020/11-08/9333286.shtml.

24 Chen Xiaonan and Cong Hanwen, "Talking about the 'Intelligence' in Intelligent Warfare," *PLA Daily*, December 27, 2019, http://www.81.cn/jfjbmap/content/2019-12/27/content_250879.htm.

and emotional thinking have been regarded as inseparable features of modern warfare and far from the reach of AI systems. However, as Artificial General Intelligence (AGI) evolve, it will soon overcome this shortcoming of the AI systems. As a result, it will rather evolve into a "human-oriented and artificial intelligence-assisted" C2 method. With the permeation of the next-generation technologies, AI will play a decisive role in C2 structures, training and logistics, weapon platforms, and intelligence.[25]

Chinese research related to military intelligentisation has consistently emphasised the centrality of algorithms and computing power. In 2019, the Academy of Military Sciences published a series of articles regarding military intelligentisation that accentuated the role of Big Data in national security.[26] According to Chai Shan, algorithms, Big Data, and computing power are not only integral to the AI-enabled operations but also the key to unlocking the winning mechanism of intelligentised warfare.[27]

These trends demonstrate that intelligentised warfare is a distinct form of warfare where the role of algorithms, Big Data, and quantum computing will represent core strengths of any particular military operating in a multi-domain battlefield. Chinese policymakers and strategists emphasise leveraging cutting-edge technologies in anticipation of future warfare in the era of the 4IR.

The growing integration of AI and emerging technologies signals a transformative shift in warfare, which is a sharp departure from the paradigms of World War I, World War II, the Iran-Iraq War and the Gulf War. This form of war is likely to unfold in unanticipated ways, challenging conventional doctrines and defying even the most imaginative military forecasts.

Characteristics of Intelligentised Warfare

Intelligentised warfare is broadly defined as integrated warfare that utilises intelligent weaponry and corresponding strategies across land, sea, air, and space, as well as electromagnetic, cyber, and cognitive domains.[28] Intelligentised warfare has several distinctive characteristics, including the following:

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25 Liu Weiqei, "The Curtain on Intelligent Warfare Has Been Opened," *People's Daily*, May 17, 2018, http://www.xinhuanet.com/mil/2018-05/17/c_129874572.htm.

26 Li Xiaosong and Lei Shuai, "Awakening Dormant Military Management Data," *PLA Daily,* September 13, 2019, http://www.81.cn/jfjbmap/content/2019-09/13/content_243299.htm.

27 Chai Shan, "The Essence of Winning an Intelligent War," *PLA Daily*, June 4, 2019, http://www.81.cn/jfjbmap/content/2019-06/04/content_235225.htm.

28 Josh Baughman, "The Path to China's Intelligentized Warfare: Converging on the Metaverse Battlefield," *Cyber Defense Review,* December 19, 2024, https://cyberdefensereview.army.mil/CDR-Content/Articles/Article-View/Article/4012231/the-path-to-chinas-intelligentized-warfare-converging-on-the-metaverse-battlefi/

Sensing and Information Processing:

The development of sensing and information processing systems is the foremost characteristic of the intelligentised wars.[29] In informatised wars, information gathering is the primary roadblock which affects the intelligence, surveillance and reconnaissance (ISR) tasks. However, in intelligentised wars, protecting one's information and denying the adversary's hold of information is central to the outcomes of battles.[30] Therefore, the experts believe that the main bottleneck in intelligentised warfare is information processing.[31] It is important to process vast chunks of information, including text, video, and images, gathered across multiple dimensions, including air, land and space, simultaneously. Seizing intelligence dominance is increasingly recognised as a critical factor in shaping the outcomes of future wars.[32]

Decision-making through Cloud and AI:

While fighting intelligentised wars, swift decision-making in the algorithmic environment is central to victory and defeat. As future military operations will be conducted simultaneously in all domains, it is crucial to make decisions with swiftness and agility. Unlike informatised warfare, where decision-making remains primarily in the hands of human operators, intelligentised warfare shifts the decision-making to systems that leverage collective intelligence gathered via cloud-based servers.[33] The rapid information flow through C2 loops is impossible for a human brain to comprehend. Hereby, the advanced capabilities such as AI, cloud computing, quantum and game theory are key to assist the theatre commanders to take instant decisions in air, sea, land and space domains.[34]

Smart Offensives:

The precision strikes and smart offensives are an integral part of the intelligentised warfare. Contrary to the previous forms of warfare, the intelligentised warfare features increase collaborations between the intelligent swarms, including the AI, quantum, IoT and Big Data to conduct smart offensives against a strong adversary.[35] These

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29 Yatsuzuka Masaaki, "PLA's Intelligentized Warfare: The Politics on China's Military Strategy," *Security & Strategy* 2, (2022): 17–36.

30 Andrew W. Marshall, "Some Thoughts on Military Revolutions- Second Version," memorandum, August 23, 1993 (Washington, D.C.: *Department of Defense*, 1993) https://stacks.stanford.edu/file/druid:yx275qm3713/yx275qm3713.pdf.

31 Masaaki, "PLA's Intelligentized Warfare: The Politics on China's Military Strategy," 27.

32 Wang Peng, "Understanding the Principles of the Characteristics of Intelligentized Warfare and Promoting the Development of Intelligentized Training Innovation," *National Defence Technology* 40, no.1 (2019): 1-4.

33 China's State Council Information Office, "China's National Defense in the New Era."

34 Emelia Probasco et al., *AI for Military Decision-Making: Harnessing the Advantages and Avoiding the Risks,* issue brief (Georgetown: Center for Security and Emerging Technology, 2025), https://cset.georgetown.edu/wp-content/uploads/CSET-AI-for-Military-Decision-Making.pdf

35 Elsa Kania, "Swarms at War: Chinese Advances in Swarm Intelligence," *China Brief* 17, no. 9 (2017): 13-19, https://jamestown.org/program/swarms-war-chinese-advances-swarm-intelligence/.

systems are capable of conducting independent and joint operations at the tactical level, making them nearly impregnable to the existing defence mechanisms.

Multi-Dimensional Offence and Defence:

A distinct feature of intelligentised warfare is its conduct across both physical and non-physical domains. As computer networking technologies advance, the competition in the cognitive and cyber domains is likely to intensify. The PLA is having extensive deliberations among its military personnel to stay competitive in the psychological and cognitive domains of warfare.[36] In this regard, the PLA is increasingly focused on manipulating the adversary forces' state of mind to influence their consciousness and behaviour.[37] This view is reiterated in a commentary in the *PLA Daily,* arguing that war is not only a material contest, but also a spiritual contest.[38] Considering these factors, the PLA employs technical means to elevate the mental readiness of its troops. Relatedly, it also considers using high-stress virtual simulators to provide its soldiers and officers a real-time battle experience.

Organisational Reforms in the PLA

Since 2013, President Xi Jinping has announced a comprehensive overhaul of the PLA to enhance its capabilities for future warfare.[39] To implement 'above the neck' reforms, the PLA has adopted a multifaceted strategy involving military-civil fusion (MCF),[40] research and development, and raising new combat forces.[41] The strategy is aimed at transforming the current force posture and organisational structure of the Chinese military to align with the evolving character of warfare. Moreover, by facilitating synergy among the tri-services, the reforms revolve around improving the PLA's ability to fight and win high-tech conflicts. The organisational reforms undertaken by the PLA are as follow:

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36 IIDA Masafumi, "China's Chilling Cognitive Warfare Plans," *The Diplomat,* May 5, 2024, https://thediplomat.com/2024/05/chinas-chilling-cognitive-warfare-plans/.

37 Josh Baughman and Peter W. Singer, "China Gears Up for Cognitive Warfare," *Defense One,* April 7, 2023, https://www.defenseone.com/ideas/2023/04/china-gears-cognitive-warfare/384876/.

38 Chen Jing etal., "Cultivate a Good Combat Psychology," *PLA Daily,* December 13, 2022, http://www.81.cn/jfjbmap/content/2022-12/13/content_329724.htm

39 Kevin McCauley, "Xi's Military Reform Plan: Accelerating Construction of a Strong PLA," *China Brief XIV*, no. 23 (2014): 11-15, https://jamestown.org/program/xis-military-reform-plan-accelerating-construction-of-a-strong-pla/.

40 Nathan L. Chu, "China's Military-Civil Fusion (MCF) Strategy: How Threats and the Government Led the Drive for Technological Innovation," (Master's thesis, Naval Postgraduate School, California, 2022).

41 Meia Nouwens, "China's New Information Support Force," *IISS*, May 3, 2024, https://www.iiss.org/online-analysis/online-analysis/2024/05/chinas-new-information-support-force/.

Military-Civil Fusion:

In the defence sector, it is crucial to include civilian participation to foster innovation in developing military science and technology. To achieve this aim, the Xi administration has enacted a comprehensive MCF strategy to augment military capabilities and integrate them with economic activity.[42] The strategy is a whole-of-society approach incorporating the PLA, the CCP and civilian society. In 2017, five domains were regarded as priority areas of military-civil fusion: maritime, cyberspace, space, new energy and biology.[43] However, after Xi mentioned the importance of intelligentisation at the 19th National Congress of the Chinese Communist Party, AI was added as a priority area to augment the preparations for the intelligentisation of the PLA.[44]

The CCP views the MCF strategy as central to its regional and global ambitions. It believes that AI and other technologies will drive the next military revolution and states that capitalise on it, will prevail on the future battlefield. The strategy has enabled China to become the first country to develop the capabilities required for intelligentised warfare.[45] Key technologies harnessed in this process include AI, semiconductors, 5G, aerospace technology and advanced nuclear technologies.[46]

In July 2017, China laid out its *AI Development Plan for the New Era,*[47] aimed at facilitating the sharing of innovative resources among the military and civilian domains to form a multi-domain military-civilian development pattern. The plan specifically aimed at harnessing the result of AI in the defence sector and encouraging civilian researchers to participate in defence-related AI innovation. In April 2018, Xi mentioned the relationship between the market and national defence and called for the establishment of a robust and multi-domain structure of the MCF framework.[48] These developments show the anticipation of Chinese leadership to seize the advantage of

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42 Iwamoto Hiroshi and Yatsuzuka Masaaki, *China's Military-Civil Fusion Strategy,* report (Tokyo: National Institute of Defence Studies, 2021), https://www.nids.mod.go.jp/publication/chinareport/pdf/china_report_EN_web_2021_A01.pdf

43 China's State Council, " Xi Jinping Presided Over the First Plenary Meeting of the Central Commission for Integrated Military and Civilian Department," June 20, 2017, https://www.gov.cn/xinwen/2017-06/20/content_5204059.htm

44 Xinhua News, "Opening Up a New Era of In-depth Development of Military-civilian Integration," July 16, 2018, http://www.xinhuanet.com/politics/2018-07/16/c_1123133733.htm.

45 US Department of State, "Military-Civil Fusion and the People's Republic of China," Accessed April 22, 2025, https://2017-2021.state.gov/wp-content/uploads/2020/06/What-is-MCF-One-Pager.pdf

46 Richard A. Bitzinger, "China's Shift from Civil Military Integration to Military-Civil Fusion," *Asia Policy* 16, no. 1 (2021): 5–24, https://www.rsis.edu.sg/wp-content/uploads/2022/05/Asia-Policy-16.1-Jan-2021-Richard-Bitzinger.pdf

47 Digi China, "China's 'New Generation Artificial Intelligence Development Plan' (2017)."

48 P K Mallick, "Military Civil Fusion in China," *Vivekenanda International Foundation*, August 1, 2022, https://www.vifindia.org/article/2022/august/01/military-civil-fusion-in-china#_ednref13

the 4IR instead of remaining a fence-sitter as it was during the past military revolutions in 1990.[49]

To leverage the benefits of MCF, China is investing in private enterprises, launching talent hunts and recruitment programs, drafting academic and research collaborations between civilian and military domains, and conducting technology transfer and intelligence gathering.[50] The strategy allows numerous private enterprises to participate and undertake classified weapons research and technology production. Moreover, it also benefits from the global research enterprise to augment its military capabilities. This multifaceted strategy allows China to extract advantages from both the global and domestic bases.[51]

Transformation of Strategic Support Force to Information Support Force:

The change in military strategy is always measured through the reorganisation, restructuring and changes in the force postures of a particular military.[52] This transformation could be seen through the lens of technology, threat perception and mitigation. In April 2024, the PLA reorganised its Strategic Support Force (SSF) into the Information Support Force (ISF).[53] The transition toward the ISF demonstrates PLA's emphasis on seizing control of information in the multi-domain environment.[54] The rebranding of SSF into ISF reflects China's efforts to rival the US information network capabilities, as the latter has made significant advancements in network capabilities through the development of the Joint All-Domain Command and Control (JADC2) concept.[55]

As a result of the latest reforms, the PLA now has four services: the Army, the Air Force, the Navy and the Rocket Force, and four arms: including the Aerospace Force, Information Support Force and Cyber Space Force.[56] It is believed that the ISF is responsible for upholding the competitiveness of the PLA's integrated command

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49 Greg Levesque, interview by Jeremy Rausch, *Commercialized Militarization: China's Military Civil Fusion Strategy*, June 30, 2021, https://www.nbr.org/publication/commercialized-militarization-chinas-military-civil-fusion-strategy/.

50 Chu, "China's Military-Civil Fusion Strategy (MCF)."

51 U.S. Department of State, "Military-Civil Fusion and the People's Republic of China," fact sheet, May 28, 2020, https://2017-2021.state.gov/remarks-and-releases-bureau-of-international-security-and-nonproliferation/mcf-and-the-prc/

52 Berry R. Posen, *The Sources of Military Doctrine: France, Britain and Germany between the World Wars* (Ithaca: Cornell University Press, 1984).

53 Annette Lee and James Bellacqua, "The Chinese Military's New Information Support Force," *in-depth* (blog), *CNA,* August 2, 2024, https://www.cna.org/our-media/indepth/2024/08/chinese-information-support-force.

54 Gabriel Honrada, "New PLA Unit Underscores Intelligentized Warfare Shift," *Asia Times,* April 22, 2024, https://asiatimes.com/2024/04/new-pla-unit-underscores-intelligentized-warfare-shift/.

55 US Department of Defense, "Summary of the Joint All-Domain Command & Control (JADC2) Strategy," March 17, 2022, https://media.defense.gov/2022/Mar/17/2002958406/-1/-1/1/SUMMARY-OF-THE-JOINT-ALL-DOMAIN-COMMAND-AND-CONTROL-STRATEGY.pdf

56 Ministry of National Defense of the People's Republic of China, "PLA Embraces a New System of Services and Arms," April 19, 2024, http://eng.mod.gov.cn/xb/News_213114/NewsRelease/16302071.html

platforms on the battlefield.[57] Similarly, it may have the role of facilitating coordination between the cyber defence and information security of PLA networks through the Network Security and Cyber Defence Centre. In addition to these tasks, the ISF, will be overseeing the maintenance and repair of the National Defence Communication Network: PRC's defence fibre-optic cable.[58]

In the official ceremony of ISF, President Xi emphasised the significance of ISF as a newly created arm which is central in the coordination and application of network information systems.[59] Following the ceremony, a subsequent commentary in the Jamestown Foundation linked the creation of the ISF with Xi's address to the 20th Party Congress, where he emphasised network information as the largest variable to augment the operational efficiency of the PLA.[60] According to Chinese media, the rebranding of the SSF to the ISF reflects the need to guide the PLA's technology-driven integrated combat concept.[61] However, PLA aims to use the AI differently from its Western counterparts to directly influence the will of policymakers, military commanders and political leaders.[62] In this regard, the creation of the ISF is a lynchpin in the broader PLA military strategy to integrate the network information systems with the emerging technologies such as AI, quantum, IoT and Big Data into a multi-domain operational concept.

Moreover, a media report suggested that China's Multi-domain Precision Warfare Concept employs AI and Big Data to identify the gaps in the US operational systems and launch precision strikes in a conflict scenario.[63] The concept could be positioned as a counterweight to the US Combined Joint All-Domain Command and Control (CJADC-2) system, a tech-driven plan to enhance the US military's interoperability and AI integration across all domains.[64] The available information suggests that the ISF is tasked to build a network information system to cater to the needs of modern

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57 Global Times, "PLA Sets up Information Support Force, to Advance Chinese Military's Competitiveness in Modern Warfare," April 20, 2024, https://www.globaltimes.cn/page/202404/1310932.shtml

58 J. Michael Dahm, "A Disturbance in the Force: The Reorganization of People's Liberation Army Command and Elimination of China's Strategic Support Force," *China Brief* 24, no. 9 *(*2024): 15-21 https://jamestown.org/program/a-disturbance-in-the-force-the-reorganization-of-peoples-liberation-army-command-and-elimination-of-chinas-strategic-support-force/.

59 Global Times, "PLA Sets up Information Support Force."

60 Dahm, "A Disturbance in Force."

61 Ministry of National Defense, "Information Support Force: A Brand-New Strategic Arm of the PLA," April 19, 2024, http://eng.mod.gov.cn/xb/News_213114/TopStories/16302051.html

62 Koichiro Takagi, "New Tech, New Concepts: China's Plans for AI and Cognitive Warfare," *War on the Rocks,* April 13, 2022, https://warontherocks.com/2022/04/new-tech-new-concepts-chinas-plans-for-ai-and-cognitive-warfare/.

63 Gabriel Honrada, "US DoD Report a Warning of China's AI War Powers," *Asia Times,* October 24, 2023, https://asiatimes.com/2023/10/us-dod-report-a-warning-of-chinas-ai-war-powers/

64 Gabriel Honrada, "Pentagon's AI-integrated War System Ready to Roll," *Asia Times,* February 27, 2024, https://asiatimes.com/2024/02/pentagons-ai-integrated-war-system-ready-to-roll/

warfare.[65] Considering the growing significance of next-generation technologies, the newly raised PLA unit is a better fit to integrate emerging technologies into a multi-domain operational concept against its adversaries.

Research and Development:

The education system and research and development ecosystem stay at the forefront of intelligentised warfare. The Chinese government tends to involve the top-of-the-line educational institutes in national defence projects. Currently, several Chinese universities, notably Wuhan University, are working in collaboration with the government on numerous sensitive military projects.[66] In 2017, Zhao Changlu, Party Secretary of Beijing Institute of Technology, emphasised that universities should lead efforts in military-civilian integration.[67] This aligns with the state's long-term ambition to transform 98 of its best universities into world-class institutions by 2050.[68]

In this regard, various laboratories and research collaborations have been established with the military, defence industry, academia and commercial enterprises. In October 2018, Tianjin Municipal Authorities and PLA Academy of Military Sciences established a Tianjin AI Military-Civil Fusion Innovation Centre. The centre focuses on facilitating the seamless integration of AI and other technologies in the civil and military sectors. Currently, the centre leads the military science research of the PLA and related defence research initiatives.[69] Moreover, in Beijing, the high-tech zone of Zhongguancun, often called 'China's Silicon Valley', is aimed at the establishment of special technology zones, industrial parks, and initiating projects in the field of robotics and intelligent equipment.[70]

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65 The Economic Times, "President Xi Launches Information Support Force for Chinese Military, a New Wing to Fight Cyber Wars," April 19, 2024, http://economictimes.indiatimes.com/news/defence/president-xi-launches-information-support-force-for-chinese-military-a-new-wing-to-fight-cyber-wars/articleshow/109441027.cms?from=mdr.

66 Alex Joske, *The China Defence Universities Tracker*, report (Canberra: Australian Strategic Policy Institute, 2019) https://www.aspi.org.au/report/china-defence-universities-tracker/.

67 Zhao Changlu, "Universities should be at the Forefront of Military-civilian Integration," *People's Daily,* March 14, 2017, https://web.archive.org/web/20191115030044/http:/edu.people.com.cn/n1/2017/0314/c105329143864.html.

68 Yang Xuan and Xiong Xu, eds., "2018 China Double-First Class University Rankings: 87 Universities Ranked among the Top 100 in the Country," *People's Daily*, December 27, 2017, https://web.archive.org/web/20191115031725/http:/edu.people.com.cn/n1/2017/1227/c9320-29732098.html.

69 Tianjin Municipal Bureau of Industry and Information Technology, "Tianjin Municipal Action Plan for Military-Civil Fusion Special Projects in Intelligent Technology," trans., Ben Murphy. October 14, 2019, https://cset.georgetown.edu/publication/tianjin-municipal-action-plan-for-military-civil-fusion-special-projects-in-intelligent-technology/.

70 The State Council of the People's Republic of China, "Chinese High-tech Zones Collaborate to Boost AI Industry Innovation," October 23, 2024, https://english.www.gov.cn/news/202410/23/content_WS6718dfeec6d0868f4e8ec37e.html.

Moreover, as a part of ongoing military reforms, the Xi administration has established a new military academy system within the PLA Academy of Military Science, PLA National Defence University, and the National University of Defence Technology. In this system, various institutes related to the development of intelligentised warfare are established. It includes the National Defence Science and Technology Innovation Research Institute under the PLA Academy of Military Science. Similarly, the College of Intelligence Science and Technology and the scientific research department have been established under the National University of Defence Technology and the PLA National Defence University. The executive and leadership positions of these institutions are filled with qualified individuals. For instance, Yang Xuejun, originally a supercomputer researcher, served as the president of the National University of Defence Technology from 2011 and was later transferred to the PLA Academy of Military Science in 2017.[71]

In 2019, the Xi administration laid down the 'military education policy in the new era',[72] which called for the acceleration of the development of mechanisation, informatisation and intelligentisation of the PLA. On the training side, the provisional regulations of the PLA military training were revised and enforced for the first time in 17 years.[73] These changes demonstrate that the military education policy and structural reforms in educational institutions are in line with the *military strategic guideline of the new era.* These reforms are a phase leap for the PLA to proceed toward intelligentisation.

Intelligentised Warfare, Human-Machine Teaming and Impacts on Command Structures

The PLA's intelligentisation efforts will have a profound impact on the command and control (C2) and decision-making processes. Chinese researchers believe that the military intelligentisation will partially replace humans by AI and other technologies in decision-making, military planning and troop deployment.[74] Some even call for the command intelligentisation by granting machines a greater degree of autonomy, while humans maintain minimal control, such as deploying capabilities, assigning missions and defining the success of tasks. This will allow the AI-enabled systems to autonomously perform the ISR, strike roles and damage assessment tasks.[75]

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71 Masaaki, "PLA's Intelligentized Warfare: The Politics on China's Military Strategy."

72 People's Daily, "Xi Stresses Cultivating New Type of Military Personnel," November 28, 2019, https://en.people.cn/n3/2019/1128/c90000-9636115.html.

73 Meng-Li Yang, "China Revises PLA Regulations Prioritizing War Readiness," *VOA,* March 13, 2025, https://www.voanews.com/a/voa-mandarin-china-revises-pla-regulations-prioritizing-war-readiness-/8010375.html.

74 He Lei, "Intelligent Warfare is Not Far Away," *Qiushi,* August 8, 2019, http://www.qstheory.cn/llwx/2019-08/08/c_1124851802.htm.

75 Dong Wei Gao Kai, "Intelligent Warfare Calls for Intelligent Command," *Ministry of National Defense,* June 26, 2019, http://www.mod.gov.cn/jmsd/2019-06/26/content_4844369.htm.

Human-machine teaming remains at the forefront of intelligentising the C2 structures. Chinese sources present a diverse spectrum of views on the extent of human control over the algorithmically powered systems and robotics. Most of the Chinese researchers support a hybrid decision-making process, where humans remain the central actors while the intelligent systems play an auxiliary role. They contend that regardless of a robotic system's level of intelligence, the central role of humans remains unchanged.[76] Another factor affecting Chinese researchers' bias for centrality of humans in combat traces back to Marxist and Maoist teaching that no matter how advanced the technologies, like AI, become, humans will remain decisive in future warfare. This determines that technology does help militaries in winning wars, but technology cannot become a standalone tactic; rather, it will be employed in conjunction with the subjective interpretation of the military commanders.

Likewise, numerous Chinese practitioners believe that machines cannot replace the human subjective qualities essential to winning wars. This is in part because warfare is not only a science but also an art, which machines struggle to replicate. Intelligent systems' immense computational power makes them better at executing the 'scientific' aspect of war. Similarly, humans' subjective capabilities and ingenuity make them better at performing the 'art' of war. As a result, the intelligent systems will operate in a hybrid setting, providing commanders with critical information and chalk out plans to deal with numerous contingencies.[77]

However, the incremental advancements in AI and autonomy suggest that at some point, the hybrid blend of C2 will be replaced by the AI-centric models. The growing significance of data links, networks, and communication systems suggests that future warfare will become too rapid for humans without the aid of machines. Although humans will remain in the command loop but the cutting-edge advancements in AI and other technologies will make it impossible for human brains to efficiently accommodate the rapid information processing. As a result, the intelligent systems composed of AI, IoT and Big Data will autonomously access data links, potentially reversing the role of humans and machines on the battlefield. [78]

At present, machines serve to assist humans; however, a time may come when humans will be in auxiliary roles. The incremental adaptation of intelligent systems will enable them to execute John Boyd's OODA (observe, orient, decide, act) loop at a pace inconceivable for human beings.[79] This is evident through the Go match in 2016, where Google's Alpha Go defeated South Korea's Go Champion Lee Sadol, demonstrating that the self-evolution of AI-based systems will systematically edge out

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76 Zhao Yun and Zhang Huang, "An Ethical Review of Intelligent Warfare," *China Social Sciences Today,* July 19, 2018, http://news.cssn.cn/zx/bwyc/201807/t20180719_4505575.shtml.

77 People's Daily, "Drawing a Picture for Future Intelligent Warfare," October 18, 2018, http://military.people.com.cn/n1/2018/1018/c1011-30348113.html.

78 Xiaonan and Hanwen, "Talking about the 'Intelligence' in Intelligent Warfare."

79 Shan, "The Essence of Winning an Intelligent War."

humans from the decision-making loops. Concomitantly, the weapon systems supported by the high-end AI capabilities will autonomously coordinate operations, enhancing situational awareness and making swift decisions.

AI and Unmanned Systems

Much has been written on the role of unmanned systems in altering the dynamics of modern warfare.[80] The increasing significance and adaptability of these systems have expanded the battlefield to areas impossible for humans to operate in. Presently, swarm drones have become a subject of interest for military strategists. John Chen and Emilie B. Stewart argue that the intelligent unmanned systems will organise the swarm operations through self-organisation, self-communication and self-adaptation between the platforms performing the swarm algorithmic controls through the applications of IoT.[81]

A Chinese author has predicted in *Study Times* that the nature of swarm warfare will result in a war of attrition of swarms.[82] Recently, Ukraine has conducted an unprecedented swarm offensive codenamed *Operation Spider Web,* targeting four key Russian airbases housing Russian strategic aviation assets. The coordinated strikes struck nearly 40 high-value aircraft, including strategic bombers Tu-95MS, Tu-22M3, and A-50 planes, primarily used for coordinating and launching missile attacks on Ukrainian cities.[83] The meticulously planned operation has unmasked critical vulnerabilities in Russia's rear defences, which failed to anticipate and mount a credible defence against the drones flicking through the skies. This is similar to what the Chinese call *mumashi zuozhan* (Trojan horse operations), where unmanned systems covertly manoeuvre to a predetermined position to achieve surprise.

Currently, the PLA is focused on the development of AI-enabled drones. To achieve this aim, several contracts are awarded to national entities to support PLA goals for intelligentisation. More recently, the *South China Morning Post* reported that the PLA is rapidly expanding the use of AI-powered drones on the battlefield. A visual from

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80 Sarah Kreps and Paul Lushenko, "Drones in Modern War: Evolutionary, Revolutionary, or both?" *Defense & Security Analysis* 39, no. 2 (2023): 271-274, https://doi.org/10.1080/14751798.2023.2178599

81 John Chen and Emilie B. Stewart, *PLA Concepts of UAV Swarms and Manned/Unmanned Teamin*g, (Montgomery: China Aerospace Studies Institute, 2025) https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/Other-Topics/2025-04-21%20PLA%20Concepts%20of%20UAV%20Swarms%20and%20Manned-Unmanned%20Teaming.pdf?ver=DX_fUEHnazoQWBacTdFM4Q%3D%3D.

82 Tao Liang, "Grasp the Winning Mechanism of Intelligent Warfare," *Study Times,* August 22, 2018, https://www.sohu.com/a/249445093_465915.

83 Kateryna Bondar, "How Ukraine's Operation "Spider's Web" Redefines Asymmetric Warfare", *CSIS,* June 2, 2025, https://www.csis.org/analysis/how-ukraines-spider-web-operation-redefines-asymmetric-warfare.

the state broadcaster showed a micro drone designed for the infantry units.[84] The drone is capable of hitting high-value targets in an urban warfare setting. Taking on further, Chinese strategists are stressing the need to develop stealthier drones, autonomous ground logistics systems flanked by incremental innovations such as drone swarming and anti-armour piercing operations.[85]

In a recent development, China has introduced a miniature drone resembling a thermal flask, designed to be used by the Chinese infantry. Despite its miniature size, the drone is equipped with a neural processor that employs AI-powered targeting systems, enabling it to operate silently. The drone can be armed with three grenades and could be launched by a 35mm grenade launcher for rapid take-offs and travelling at longer ranges.[86] These advancements are part of the PLA's phased leaps in the unmanned aerial systems. This also augments China's efforts to gain a first mover advantage in the intelligentised domain. Additionally, these assets will assist China to mount swarm offensives to perform Suppression of Enemy Air Defences/Destruction of Enemy Air Defences (SEAD/DEAD) tasks in a possible Taiwan Strait Crisis and future conflicts in the East and South China Seas.

Combat Domains in Intelligentised Warfare

Unlike traditional warfare fought in the five domains of air, land, sea, cyber and space, intelligentised warfare is seen as an expanded battlefield encompassing physical and non-physical dimensions. Among these expanded domains, cognitive warfare has become central in the expanded battlefield. As warfare fundamentally remains a political contest waged by humans, cognitive warfare presents new opportunities for reducing the enemy's morale and will to fight.[87] Operations in the cognitive domain are carried out in numerous ways. It involves manipulation and denying access to data to falsify the enemy's perception, degrade its judgment and reduce its situational awareness. As outlined in *Unrestricted Warfare*[88] and *Russian Hybrid Warfare,*[89] such

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84 Enoch Wong, "China's Military Rapidly Expands Use of Low-Cost AI-Powered Drones in 'Phase Leap'," *South China Morning Post,* April 29, 2025, https://www.scmp.com/news/china/military/article/3308152/chinas-military-rapidly-expands-use-low-cost-ai-powered-drones-phased-leap.

85 Sunny Cheung and Joe McReynolds, "Autonomous Battlefield: PLA Lessons from Russia's Invasion of Ukraine," *China Brief* 25, no. 6 *(*March 2025) http://jamestown.org/program/autonomous-battlefield-pla-lessons-from-russias-invasion-of-ukraine/.

86 Christine Casimiro, "China Unveils Micro-Drone to 'Gain Early Edge in Intelligent Warfare'," *The Defense Post,* May 2, 2025, https://thedefensepost.com/2025/05/02/china-micro-drone-intelligent-warfare/

87 Zhu Xueling and Zeng Huafeng, "Mental Control Operations: New Models of Future Wars," *People's Daily,* October 17, 2017, http://military.people.com.cn/n1/2017/1017/c1011-29592326.html.

88 Qiao Liang and Wang Xiangsui, *Unrestricted Warfare: China's Master Plan to Destroy America* (Los Angeles: Pan American Publishing, 2002).

89 Ofer Fridman, *Russian 'Hybrid Warfare': Resurgence and Politicisation* (London: Hurst Publishers, 2019).

a war is aimed at diminishing the enemy's will to resist and the commander's decision-making capabilities.

According to Racheal Burton, the Chinese PLA has developed its concept of 'cognitive domain operations', which seeks to impair or manipulate the opponent's cognitive functions both in peace and wartime conditions. The objective is to control the enemy's decision-making strength.[90] PLA has outlined an operational framework of cognitive domain operations that involves six key technologies divided into two broader categories: cognitive influence technologies and subliminal cognitive influence technologies. Cognitive influence technologies quantify the enemy's psychological disposition, enabling the attack through lethal and non-lethal means. Microwave and laser weapons are a primary mode of attack which can inflict psychological damage and even cause hallucinations. While the latter category employs information means to imitate real information by manipulating data and content.[91]

To prevail in the cognitive domain, China has geared the development of New Concept Weapons (NCW), which involves Directed Energy Weapons (DEW), information weapons and biological and chemical weapons designed to achieve cognitive superiority against strong adversaries.[92] Among these, the DEWS will likely be used to disorient enemy minds and influence their will to fight. The US military has already accused China of using laser weapons to blind its pilots flying near the PLA base at Djibouti.[93] Similarly, the US diplomatic staff was evacuated from the Guangzhou consulate after experiencing mysterious illnesses considered brain injuries as part of a famous controversy known as *Havana Syndrome.* The cause of this mystery was attributed to a possible use of a microwave weapon, which affirms the notion of cognitive domain operations carried out by the PLA and other militaries.[94]

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90 Rachael Burton, "Disinformation in Taiwan and Cognitive Warfare," *Global Taiwan Brief* 3, no. 22*,* (2018) https://globaltaiwan.org/2018/11/disinformation-in-taiwan-and-cognitive-warfare/.

91 Nathan Beauchamp-Mustafaga, "Cognitive Domain Operations: The PLA's New Holistic Concept for Influence Operations," *China Brief* 19, no. 16, (2019) https://jamestown.org/program/cognitive-domain-operations-the-plas-new-holistic-concept-for-influence-operations/.

92 Shaheer Ahmad, "Neural Frontlines: Exploring Future Battlefield amid Rise of Neurowarfare," *Journal of Aerospace and Security Studies* 3, (2024): 1-34, https://www.jassjournal.casstt.com/wp-content/uploads/2025/01/TOC-JASS-Vol3-HM-ED-SSA-WEB.pdf.

93 Gordon Lubold and Jeremy Page, "Laser from Chinese Base Aimed at US Military Pilots in Africa's Skies, Pentagon Charges," The *Wall Street Journal, updated* May 3, 2018, https://www.wsj.com/articles/laser-from-chinese-base-aimed-at-u-s-military-pilots-in-africas-skies-pentagon-charges-1525351775.

94 William J. Broad, "Microwave Weapons are Prime Suspect in Ills of U.S. Embassy Workers," *The New York Times*, September 1, 2018, https://www.nytimes.com/2018/09/01/science/sonic-attack-cuba-microwave.html.

Challenges

The PLA's push for intelligentisation should not be taken for granted. However, there are certain potential downsides which could potentially hinder PLA's path toward intelligentisation. It is important to note that PLA has formidably enhanced its firepower during the past decade. The notable increase in missile arsenal poses a threat to the US power projection in the Asia-Pacific. However, these figures alone cannot determine the actual warfighting capability. There are certain bureaucratic and structural shortcomings which are listed below.

Bureaucratic Hurdles:

Traditionally, the PLA is highly hierarchical, operating in a top-down manner with a higher degree of centralisation. Although the PLA has made significant improvements in elevating the training and operational readiness. The top-down hierarchy, including the tightened grip of top commanders on the military brass, can hinder the junior cadres from seizing the initiative and experimenting with newer technologies. These bureaucratic hurdles seemingly offer resistance to the structural changes and implementation of military intelligentisation.[95]

Shortcomings in Human Capital:

The PLA frequently encounters challenges in recruiting skilled personnel. In response, it has sought to attract highly educated candidates by reducing recruitment barriers and offering competitive incentives. Statistical evidence suggests that PLA has actively conducted talent hunting drives in universities and job fairs, enhancing the appeal of military positions by incentivising these positions with lucrative perks. However, these efforts have yielded limited success, primarily due to intense competition from the private sector and persistent challenges in securing expertise in fields such as AI and computer science.[96] Although the military-civil fusion is expected to enhance the PLA's ability to attract skilled human resources, tangible progress remains limited.

Inadequate Training:

Chinese sources express uncertainty about transforming the PLA into a formidable integrated force. This is due to the lack of competent commanders and political factors which impede the PLA from capitalising on its actual warfighting potential. Nonetheless, the PLA acknowledges the significance of innovation and its integration into military doctrines. The adoption and integration of intelligentisation, particularly in fields such as AI and quantum technologies, would prove challenging. Effectively

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95 Timothy R. Heath, "The Chinese Military's Doubtful Combat Readiness," *RAND,* January 27,2025, http://rand.org/pubs/perspectives/PEA830-1.htmlss.

96 Ibid.

managing human factors and preparing personnel to operate within these advanced intelligentised systems necessitates the development of a robust training ecosystem.[97]

Lack of Combat Experience:

Generally, the PLA approaches warfare through the science of conventional operations. Therefore, the ability to innovate in peacetime remains a daunting task for the military that lacks formidable combat experience. The changing dynamics in future warfare can stretch beyond conventional operations. Conversely, the US military's focus on the revolution in military affairs rests on the successes and failures of numerous capabilities. This provides the US a real-time opportunity to introspect its weapon systems and doctrinal shortcomings. For PLA, this lack of exposure to active combat poses a significant hurdle in achieving its push for intelligentisation.[98]

How will the Future PLA look like?

In 2018, a retiring PLA general drew significant attention by asserting that the Chinese military is at a notable disadvantage due to its lack of active combat experience. On the contrary, the US military and its advanced weapon systems have been combat-tested.[99] This bias has long been shared by international military experts across the world in light of the fact that very few militaries share the same breadth of combat experience attained by the US military. However, this experience will be of little relevance in the upcoming war of the 4IR.

By integrating emerging technologies in the contemporary force structures, the PLA will emerge as a formidable force in East Asia and the South China Sea. Considering China's goals regarding national rejuvenation, the intelligentisation of the PLA will enable it to conduct seamless operations around the Taiwan Straits, Western Pacific and South China Sea. Conventional warfare typically incurs significant costs for China. It involves the deployment of missile launchers, aircraft, frigates, tanks, infantry troops and armoured vehicles.

Considering these factors, intelligence-enabled tactics will enable the PLA to fight a war distinct from conventional conflict. The extensive use of AI, swarm of unmanned systems and cognitive operations will enable China to wage an integrated warfare simultaneously on land, sea, air, electromagnetic, space, cyber and cognitive

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97 Gabriel Honrada, "Questioning China's Ability to Actually Fight," *Asia Times,* February 3, 2025, https://asiatimes.com/2025/02/questioning-chinas-ability-to-fight/#.

98 David Roza, "Not 10 Feet Tall: Experts Say China's Military Faces Major Issues," *Air & Space Forces Magazine,* January 31, 2025, https://www.airandspaceforces.com/could-china-win-war-against-us/

99 Alex Lockie, "A Retiring Chinese General Revealed that China's Greatest Military Weakness is a US Strength," *Business Insider,* June 7, 2018, https://www.businessinsider.com/retiring-chinese-general-reveals-chinas-greatest-military-weakness-2018-6.

domains.[100] The Department of Defence's 2021 report notes that the PLA is capable of waging high-tech war at every level of warfare.[101] Considering these factors, the PLA holds a greater incentive to integrate AI into military simulations and enhance its intelligentised capabilities.[102]

Moreover, with the capability of rapid information processing and AI-based decision making, the PLA will be able to manipulate the adversary's cognition and subdue the enemy's will to fight. Chinese military strategists believe that if intelligentised warfare is operational, it will make the current cutting-edge technologies obsolete.[103] Just as Germany enacted the new operational framework in the form of *Blitzkrieg,* China's use of AI will lead to the development of a new operational framework capable of delivering strategic surprise.

The South China Sea and Taiwan Straits are regarded as a priority mission for the PLA in future. Maintaining a favourable balance of power in the Pacific theatre is necessary for China's grand strategic designs. Hereby, China can leverage the AI-powered unmanned systems to saturate the US and its allies' air defence systems in case of contingency. These assets, when combined with other technologies, will make the fog of war denser for the adversaries. Moreover, by creating synthetic information through the assistance of AI, China will be able to manipulate the perceptions and beliefs of the policymakers of the regional states. In the expanded battlespace, the intelligent technologies would play a crucial role in shaping the domestic and international opinion during the crisis.

Conclusion

In 1998, Arthur K. Cebrowski noted that, in a networked organisation, rapid decision-making is possible due to unprecedented speed and agility.[104] Just as Germany's *Blitzkrieg* had caught the French off guard across the Maginot Line, China's intelligentised strategy would be unprecedented in scope and magnitude, making it hard for the adversaries to anticipate and respond. Unlike the past, the modern PLA

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100 Jeremy (Yen-Ming) Chen, "The Challenges Taiwan Faces in Cognitive Warfare and its Impact on US-Taiwan Relations," *Journal of Indo-Pacific Affairs* 8 no.1, (2025): 89-102, https://www.airuniversity.af.edu/JIPA/Display/Article/4171199/the-challenges-taiwan-faces-in-cognitive-warfare-and-its-impact-on-ustaiwan-rel/.

101 Office of the Secretary of Defense, "Military and Security Developments Involving The People's Republic of China," report (Virginia: US Department of Defense, 2021) https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF.

102 Elsa B. Kania, *Battlefield Singularity: Artificial Intelligence, Military Revolution, and China's Future Military Power* (Washington DC.: Centre for a New American Security, 2017) https://www.cnas.org/publications/reports/battlefield-singularity-artificial-intelligence-military-revolution-and-chinas-future-military-power.

103 Hong Liang, *A Chinese soldier's view of a new "human-friendly" war: intelligent warfare,* (Tokyo: Satsuki Shobo Shinsha, 2021).

104 Arthur K. Cebrowski, USN, and John Garstka, "Network-Centric Warfare - Its Origin and Future," in *United States Naval Institute Proceedings* (Annapolis: US Naval Institute, 1998) https://www.usni.org/magazines/proceedings/1998/january/network-centric-warfare-its-origin-and-future.

is fighting to innovate, not to emulate. The major reforms undertaken at the organisational and industrial level serve as a significant impetus to leverage peacetime innovation to enhance wartime readiness.

The establishment of new operational frameworks and the development of NCWs to embrace intelligentisation reflect the PLA's anticipation of how future warfare will unfold. Akin to a strategic bomber in aerial warfare and a tank in the Blitzkrieg, AI and associated technologies will enable the PLA to inflict an 'information blitz' on the adversary forces. The live fire drills around Taiwan, roaring military might in the South China Sea and successful demonstration of Chinese weaponry in the India-Pakistan military crisis shuns the doubts of PLA as a 'paper tiger.' Instead, it has become a 'Great Wall of Steel,' demonstrating its resilience to achieve national rejuvenation and maintain a favourable balance of power around its territories.

ABOUT THE AUTHOR

Shaheer Ahmad *is a Research Assistant at the Centre for Aerospace & Security Studies (CASS), Islamabad, with prior experience at the Institute of Strategic Studies, Islamabad, and the Consortium of Indo-Pacific Researchers in New Jersey. He holds a Bachelor's in International Relations from the National Defence University (NDU). His research focuses on the intersection of international relations, geopolitics, military strategy, and emerging technologies, with regional emphasis on the Asia-Pacific, Arctic, and South Asia. His current work explores the impact of emerging technologies on geopolitics, warfare, and military strategy.*

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