



Civil-Military Fusion and the PLA's Pursuit of Dominance in Emerging Technologies

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OE Watch Commentary: China is intensifying its nearly two-decade push to meld together the civil and defense economies through what officials term “civil-military fusion”. On March 2, 2018, CCP General Secretary Xi Jinping chaired the third meeting of the recently formed Central Commission for Integrated Military and Civilian Development (CCIMCD), where he emphasized the strategic importance of “unifying” national power through reducing barriers between the commercial economy and defense industrial base. Days later, speaking to a delegation from the People’s Liberation Army (PLA) and armed police at the 13th National People’s Congress, Xi called civil-military fusion (CMF) a “prerequisite” for realizing the goal of building a strong military.

China’s efforts to become a dominant “science and tech superpower” in technologies like artificial intelligence, quantum communications, robotics and smart manufacturing are well documented. Less is known about how China plans to use CMF to convert its technological push into a long-term military advantage. Although the push is, in some ways, similar to previous efforts to leverage the private sector, there are signs that this iteration is both more serious and better resourced than past attempts.

Rather than waiting for emerging technologies like AI to mature before encouraging collaboration with the defense industrial base, China’s leadership is determined to bake CMF into the overall design of emerging sectors through top-level planning. CMF is a prominent component of a number of key government initiatives, including the Next Generation Artificial Intelligence Development Plan (2017), Made in China 2025 (2015), and Promotion of a National IC Industry Development Guidelines (2014). The Next-Generation AI Development Plan, released last June, for instance, named CMF as one of the “six main duties” for AI development and called for establishing an “all-element, multi-domain, highly efficient new pattern of civil-military integrated development.”

Because of its scale and institutional background, the PLA has traditionally dealt with large, state-owned enterprises for procurement and R&D needs. It’s clear that the PLA is trying to change that. In October 2017, the PLA Air Force (PLAAF) Logistics Department signed strategic cooperation agreements with JD.com and SF Express—one of China’s largest e-commerce outlets and logistic companies, respectively—to create an intelligent logistics system, including the use of transportation UAVs to maintain supply chains.

In a further demonstration of the PLA’s genuine desire to engage the private sector, in April 2017, the Central Military Commission’s Equipment Development Department opened tenders on more than 2,000 projects to private companies. A month prior, the CMC’s National Defense Intellectual Property Office of the Equipment Development Department announced it would declassify over 3,000 defense patents for private sector use, marking the first time the PLA declassified patents in the thirty years since the PRC military patent system was created.

The Strategic Support Force (SSF), the branch of the PLA with primary responsibility for space, electronic, and cyber warfare, has been particularly forward-leaning, especially in R&D. In July 2017, the SSF signed talent and research cooperation agreements with nine research institutions and laboratories, including the Harbin Institute of Technology and Shanghai Jiaotong University, two of the country’s leading research universities.

Analysts evaluating these efforts should keep in mind the fact that China’s previous attempts to invigorate its sclerotic state-owned defense industrial base through market forces met with only limited success. China’s leaders have been trying to implement some iteration of civil-military fusion since Deng Xiaoping. But there are reasons to believe this time is different.

First, Xi Jinping has consolidated control over the CMC, placing loyalists in key positions to push forward reform of the defense industrial base. Xi has also centralized control over the implementation of CMF through the recently established CCIMCD. In a sign of the commission’s significance, last year Xi appointed then member of the Central Politburo and Vice Premier Zhang Gaoli to run the commission’s daily affairs, a role usually reserved for a lower ranking official.

Second, the inclusion of CMF in major strategic initiatives like Made in China 2025 and the Next Generation AI Development Plan all but guarantees high-visibility and financial support for enterprises working on dual-use technology of interest to the PLA. Analysts need only look to successful Chinese ‘national champions’ to appreciate the powerful nexus between commercial technology and government power. Companies like Huawei and ZTE stand out in the telecommunication space, as do with Hikvision and a handful of rising AI companies like iFlytek in the surveillance space. In both cases, these enterprises succeeded in large part because they offered a private sector solution to a Chinese government need and in exchange received lucrative government contracts.

Whether Xi can open private emerging technology sectors to the PLA remains to be seen, though the effort has the potential to energize Xi’s attempt to turn the PLA into a hi-tech, modern fighting force. **End OE Watch Commentary (Laskai)**



Emblem of People's Liberation Army Strategic Support Force.
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Continued: Civil-Military Fusion and the PLA's Pursuit of Dominance in Emerging Technologies

Source: Zhou, Laura. "China opens military contracts worth billions of yuan to private companies," *South China Morning Post*, 20 April 2017. <http://www.scmp.com/news/china/policies-politics/article/2088998/china-opens-military-contracts-worth-billions-yuan>

China's military further opened its research and development programmes to private companies, inviting them to take part in projects worth an estimated 6 billion yuan (US\$870 million), state media reported on Wednesday...The contracting is overseen by the PLA's arms procurement wing, the Equipment Development Department, which released information for more than 2,000 projects on its website, according to the PLA Daily...

Retired PLA major general Xu Guangyu said new laws were needed to clarify obligations of businesses handling classified work, as well as to define the commercial benefits they could reap from cooperation with the military. Xu, a senior researcher at Beijing-based research group the China Arms Control and Disarmament Association, said although the PLA had previously invited companies to take part in R&D, the latest round of projects was announced in a high-profile way...

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Main gate of Shanghai Jiaotong University, Xuhui campus.

Source: By Nwt1999 - Own work, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=58101184>.



China's cyber policy appears to have three vectors —peace activist, espionage activist, and attack planner— that dominate China's cyber policy. Some are always hidden from view while others are demonstrated daily. Three Faces of the Cyber Dragon is divided into sections that coincide with these vectors.

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