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**Foreign Fixations at the Heart of Chinese-Style Modernization**

*by Arran Hope*



Banner with the characters “Chinese-Style Modernization.” (Source: [12371.cn](http://12371.cn))

**Executive Summary:**

- A new report from two high-end PRC think-tanks details the country’s path to modernization in anticipation of July’s Third Plenum of the Twentieth Central Committee but suggests that any shifts in policy direction will be muted.
- The report emphasizes the triumph of Chinese-style modernization over the Western model and provides substantial criticisms of the failures of the West. It also suggests that the PRC’s model contains lessons for other developing countries.
- The report also leverages Western individuals and institutions to buttress its arguments for the superiority of Chinese-style modernization, which suggests that the West is still perceived as (or can be instrumentalized as) a source of legitimacy for the PRC.
- The report asserts the core message that only Chinese-style modernization led by the CCP can bring about national rejuvenation, and that this will occur through an economic program that is focused on “seizing the commanding heights in a new round of global scientific and technological revolution and industrial transformation.”

On May 4, Xinhua published an 86-page report entitled “Chinese Modernization: The Way Forward (中国式现代化发展之路)” (Xinhua, May 4: [Chinese, Official English Translation](#)). The report is the work of the Institute of Party History and Literature of the Central Committee of the Communist Party of China (CCP) (中央党史和文献研究院国家高端智库), and the Xinhua Institute (新华社国家高端智库联合课题组), two high-end think-tanks. Its four chapters cover a lot of ground, from a swift overview of modernization history starting in the West, to an exposition of Chinese-style modernization, to a focus on some defining features of the concept, and finally an argument for concept as a contribution to global development.

The report comes two months before the recently announced Third Plenum of the Twentieth Central Committee (二十届三中全会) is set to be held. One of two topics the long-postponed meeting will focus on is advancing Chinese-style modernization ([People's Daily Online](#), May 1). Whether any new direction might emerge from the meeting is unclear. On the basis of this report, the short answer for what to expect is: not much. The core tenets of the report's message are that the great rejuvenation of the Chinese nation will only occur by means of Chinese-style modernization, which is predicated on the leadership of the CCP. This modernization itself aims at achieving “common prosperity,” but through an economic program focused on “seizing the commanding heights in a new round of global scientific and technological revolution and industrial transformation.” These echo much of the other messaging from the PRC in recent months.

### **Framing the Text**

The report itself defies easy description. It contains several surprises in its sanctioned framing of history, a broad range of references stretching back to the ancient Book of Rites (禮記) and forward to twentieth century critical theorists, and a sometimes-incantatory repetition of stock Party phrases. [1] It also lacks cohesion and clarity. One more prosaic reason for this could be the scale of the endeavor. The acknowledgements at the end list two main authors, Qu Qingshan (曲青山) and Fu Hua (傅华), followed by the names of 37 others. The project has also taken over 15 months' work, during which time updates have surely been required to include references to the newest theoretical innovations of the day, such as the “new quality productive forces (新质生产力).”

One of the most interesting preoccupations of the text, however, is its treatment of the West, broadly defined. The salience of references to foreigners and foreign research could be in part due to the intended mixed audience of the report. Its availability in four languages (the other two being French and Russian) implies that it is intended for global distribution. [2] Likewise, many of the Xi Jinping quotes that adorn the beginnings of each chapter and are subsequently interspersed across the text come from speeches made at international fora. [3] Similarly, the report's cover page features the English title at the top in gold lettering, with the Chinese title (albeit in a larger font) appearing below in green. This design, and the lack of the standard revolutionary shade of red, also suggests a desire to appeal to a global audience. However, a potential clue to the choice of green for the title might be found in the text itself, which declares that “green is the background color of Chinese-style modernization (绿色是中国式现代化的鲜明底色),” a reference to

the importance of environmental and ecological protection in the PRC's vision of modernity. On the other hand, the length and breadth of the text, as well as the timing of its release, suggest that it is also intended for internal circulation, as well as for signaling and messaging the party line to cadres.

### **The West as Tragedy...**

Chinese-style modernization is characterized throughout the report in triumphant tones. For instance, it is described as “creating a new form of human civilization (中国式现代化创造人类文明新形态),” as “an historic turning point ... leading the world's new trend of modernization (引领世界现代化新潮流的历史性转变),” and as “offering a Chinese proposal for humanity's search for a better social system (为人类对更好社会制度的探索提供了中国方案).”

To assert the benefits of Chinese-style modernization, the report feels the need to define it in opposition to Western-style modernization. In the fourth chapter, five of the subsections start by explicitly summarizing the biggest relevant difference between these competing versions. These include the notions that Chinese modernization puts the people first while rejecting the primacy of capital, aims to achieve common prosperity instead of stimulating polarization between the rich and the poor, pursues a comprehensive and coordinated approach to development instead of a one-dimensional approach that leads to alienation, never severs ties with tradition and always learns from the past, and opposes unilateralism and protectionism and advocates building a community with a shared future for humanity.

The report argues at times that Chinese-style modernization is an improvement on this Western alternative. The official translation writes that “Chinese modernization has an advantage over Western modernization. It has proved the ‘end of history’ theory to be false by constantly improving its system and making innovations.”

**[4]** This is the first of several sorties into heavy criticism of the West.

First, the West is lambasted for its historical sins. A quote from Xi Jinping characterizes the “century of humiliation” as follows: “The country was humiliated, the people suffered, and civilization was left in the dust (国家蒙辱、人民蒙难、文明蒙尘).” The report then states that “this is a profound summary of the period in which China was forced to become involved in the Western-led wave of modernization (是对这一时期中国被迫卷入西方主导的现代化浪潮的深刻总结).” A historical survey of China then finds that, by contrast, “the Chinese nation does not carry aggressive or hegemonic traits in its genes (中华民族的血液中没有侵略他人、称王称霸的基因),” and is instead “influenced by a culture of peace and harmony (在“和合文化”的影响下).”

Second, the great late nineteenth and early twentieth century modernizers, from Li Hongzhang and Zeng Guofan to Liang Qichao and even Sun Yatsen, are all dismissed as failures, the former two in part for their desire to learn from the West. Instead, it was Marxism–Leninism which led to the CCP shouldering the burden in China's quest for modernization. Under the CCP's leadership, **[5]** the Chinese nation “has ushered

in a great leap from standing up and becoming rich to becoming strong (迎来了从站起来、富起来到强起来的伟大飞跃).”

Third, a warning is offered to developing countries, citing those who “pinned their hopes on imitating and copying Western paths to achieve their own modernization, but ultimately failed (一些发展中国家曾寄希望于模仿、复制西方道路来实现本国现代化, 但最终都以失败告终).” While the report concedes that “some gains were made” in these countries’ economic transitions, “many major problems emerged, such as the loss of government control over the economy and growing social polarization (但很快也产生了一系列严重问题, 如国家失去对经济控制力).” Emphasis on modernization in the PRC context being predicated on the Party’s control, particularly its control over the economy, appears frequently in the text. Above all, the verdict is that “all these achievements have been made possible due to pursuing independence and self-reliance (这一切成就的取得, 都是在独立自主的条件下实现的).”

### **...The West as Farce**

The report goes to great lengths to detail the mistakes that litter the West’s path to modernization, but it also valorizes many individuals and institutions from the West to buttress its claims. Some of these are academics and commentators who have long been sympathetic to the PRC’s worldview, such as Martin Jacques, Beat Schneider, and Robert Lawrence Kuhn. Others are well-regarded experts who might not otherwise agree to the ways in which their words have been deployed here, such as former President of the EU Chamber of Commerce in China, Joerg Wuttke. A July 2020 Harvard Kennedy School of Government public opinion survey found satisfaction with the CCP inside the country to be above 90 percent. These individuals rated the PRC government as “more capable and effective than ever before.” The Harvard poll is cited to underline the Chinese modernization report’s arguments. Other highlights include a “young foreigner” on the video-sharing platform Bilibili quoted as recommending the PRC as a safe destination for international travel, as well as online remarks from “overseas netizens.” These featured comments “expressed awe at the remarkable achievements of China over the past decade,” [6] and praised Chinese artists for their works, “some of which are even popular overseas (一些作品在海外也广受欢迎).”

These attempts to leverage the views or comments of foreigners and foreign institutions, while neglecting to cite any equivalent sages from within the PRC—at least none who have lived in the last two thousand years—suggest a strange and complicated relationship to the West within the PRC. It is true that foreigners are often used to “tell China’s story well,” forming an important part of the Party’s strategy to globalize its discourse power. But the competing impulses to both disdain the West and draw legitimacy from it seem counterintuitive. These impulses are perhaps typical of tensions within PRC policymaking more broadly, both at the present time and historically. The report is replete with praise of Deng Xiaoping for spearheading opening up to the West and a keen desire to attract investment from overseas, all the while extolling the merits of self-reliance and economic security.

The most egregious attempt to use America against America to emphasize the advantages of the PRC system comes in a section about democracy. This section argues that the term “democracy” has been “registered (注册)” by the West, leading to Western dominance in democracy narratives worldwide. The official English version is stronger, translating “注册” as “co-opted.” The United States is not only judged to have co-opted the term democracy, but to have engineered a system in which people “have lost true freedom (丧失了真正自由).” To make this argument, the report cites the German–American scholar Herbert Marcuse, whose book *One-Dimensional Man* offered a critique of consumerism in advanced capitalist societies, declaring that it puts people into a comfortable “unfreedom.”

Chinese-style modernization, in contrast, is claimed to “transcend formal democracy to promote whole-process people’s democracy (超越形式民主，推进全过程人民民主).” This Chinese style of democracy, which “breaks the ‘vote-only’ model and safeguards the people’s rights to participate in democratic elections, consultations, decision-making, administration, and oversight, covering every aspect of state and social life (打破了“唯选票”的模式，保障了人民的民主选举、民主协商、民主决策、民主管理、民主监督等权利，涵盖国家生活和社会生活的方方面面),” is described as “the most effective (最管用)” form of democracy. The irony is that Marcuse’s critique, along with much of his broader theoretical output, is equally applicable to the contemporary PRC. [7] Not only was modern technology a significant part of what Marcuse believed was repressive to human freedom—something which Chinese-style modernization doubles down on—but the idea that a totalitarian party should have unquestioned power over any society is also antithetical to his thought.

### **Conclusion**

That the West features so prominently throughout a report on Chinese-style modernization is an echo across the century that separates May 2024 with May 4, 1919. The May Fourth movement (五四运动) protests, in part a response to perceived Western betrayal at Versailles and the earlier October Revolution, were catalysts for intellectual and cultural ferment, which propelled debates about China’s place in the emergent modern world. The concerns of those protesters were predominantly introspective, as are those of this report’s researchers. Both are attempts to understand China’s position in the world, and both are expressions of a progressive desire to envisage the country’s future. At the same time, they evince an unusual preoccupation with the West, broadly defined. This preoccupation comes across as somewhat Janian—disgust at a morally bankrupt civilization perceived as working against China’s interests on the one hand, mixed with an apparent desire to seek validation from that same external civilization on the other.

The report nevertheless remains unambiguous in its central message. These are that “Chinese-style modernization is socialist modernization under the leadership of the CCP,” and that “Independence and self-reliance are the only way.” The additional emphasis given to environmental concerns and traditional Chinese culture are also aspects of this vision of the future. Taken together, there is little here that is particularly new, though the distillation of so much in one report is useful. Most of the content echoes much of the other



messaging coming out of the PRC in recent months. As such, if this report holds any clues for what is in store from the Third Plenum in July, then expectations for that meeting should probably be tempered.

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## Notes

[1] The report—at least in its Chinese version—also contains some irregularities. There are eight instances of ellipses dotted around the text. These do not appear in the official English translation, [3] and do not seem to have a consistent rationale that would explain them. (The author has not checked the French or Russian versions but would be interested to hear if discrepancies persist there, too. Similarly, if any readers have encountered such mysterious ellipses elsewhere in PRC texts and might have theories as to why and when they appear, please email the editor: [cbeditor@jamestown.org](mailto:cbeditor@jamestown.org).) The first instance appears in a sentence on the PRC's business environment: “中国 ... 营造公平竞争的市场环境, 让国企敢干、民企敢闯、外企敢投…… [sic].” The official translation puts it this way: “China ... has created a market environment of fair competition in which state-owned enterprises grow vigorously, private businesses blaze new trails, and foreign companies do not hesitate to invest [no ellipsis].” Ellipses are often deployed for dramatic or ironic effect. Although for some readers of *China Brief*, the suggestion that foreign companies do not hesitate to invest in the PRC could be construed as such, irony is not *de rigueur* in authoritative CCP discourse.

[2] Perhaps this selection of languages further underlines the report's preoccupation with the West, whether intentionally or not. It should also be noted that, while Xi, Deng Xiaoping, and Mao Zedong receive a number of mentions each, neither Jiang Zemin nor Hu Jintao are mentioned at all.

[3] These include the 2018 Bo'ao Forum, a 2021 summit with global political party leaders, and a 2019 Beijing Summit of the Forum on China–Africa Cooperation.

[4] The Chinese reads: “国式现代化与西方现代化在制度建设上的高下之分在于: 证伪“历史终结”, 不断完善革新.”

[5] In 28 of the 33 instances of the term “leadership (领导)” in the text, it is collocated with “the Party (党).”

[6] This gloss in the English translation is replaced in the Chinese with quotes of the comments themselves: “This is a real change,” “It's admirable.” “这是真正的变化” “很令人钦佩” (“This is a real change,” “It's admirable”).

[7] See for instance, Marcuse, H. *One-Dimensional Man*. Marxists Internet Archive. 2012. <https://www.marxists.org/ebooks/marcuse/one-dimensional-man.pdf>, p. 18: “This totalitarian logic ... has its

Eastern counterpart. There, freedom is the way of life instituted by a communist regime, and all other transcending modes of freedom are either capitalistic, or revisionist, or leftist sectarianism. In both camps, non-operational ideas are non-behavioral and subversive. The movement of thought is stopped at barriers which appear as the limits of Reason itself.”



**Comac's Homegrown Aircraft Goes Global**

*by Nathaniel Sher*



C919 flight demonstration over Victoria Harbor, Hong Kong. (Source: [Wikipedia](#))

**Executive Summary:**

- The Commercial Aircraft Corporation of China (Comac) will likely take many years to develop into a world-class aircraft manufacturer.
- Over 1,200 orders have been placed for the new C919, primarily from domestic state-owned airlines. Comac has delivered 5 single-aisle planes to domestic airlines and plans to scale annual production to 150 C919s by 2028.
- The company faces several challenges before entering the international market. It will need to obtain airworthiness licenses, find additional buyers, open overseas repair centers, and build resilience into its supply chain.
- Upstream and downstream aviation manufacturers in the People's Republic of China (PRC) are working to localize technology amid rising geopolitical tensions.

In March, the Commercial Aircraft Corporation of China (中国商用飞机; Comac) embarked on its first overseas demonstration tour throughout Southeast Asia ([Xinhua Daily Telegraph](#), February 24). The state-owned company showcased its new single-aisle aircraft, the C919, at a series of airshows in Singapore, Vietnam, Laos, Cambodia, Malaysia, and Indonesia. For the first time, the Civil Aviation Administration of China (CAAC) set a goal for the C919 to “go abroad (出国门)” in 2024 ([People’s Daily](#), March 24).

Several headwinds could hinder Comac’s efforts to enter the international aviation market, despite the C919’s potential. Comac’s production capacity remains limited and, so far, the company has only delivered five C919s to domestic airlines ([China News](#), April 28, 2024). Before exporting its products, Comac will need to secure overseas airworthiness licenses and build out a transnational network of service and repair centers. Finally, despite efforts to wean itself off Western technology, Comac remains highly dependent on imported components. This exposes the company to geopolitical risks. As a result, the C919 is unlikely to rival incumbents like Airbus’s A320 and Boeing’s 737 for years to come.

### **Comac’s First Stop: Southeast Asia**

The C919’s first overseas tour was intended to “lay the foundation for future market development in Southeast Asia,” according to Comac’s spokesperson ([People’s Daily Online](#), March 14). The region is a natural launching pad for the C919, since thousands of weekly flights transit to and from the People’s Republic of China (PRC) within the plane’s navigable range ([China Daily](#), January 29). By 2041, Comac forecasts the Asia-Pacific to become the world’s fourth-largest commercial aviation market behind the PRC, Europe, and North America, with a fleet of nearly 9,000 aircraft. Most of these aircraft would be single-aisle, like the C919 ([Comac](#), November 13, 2022).

Before the recent demonstration tour, Comac had already made inroads into Southeast Asia. In 2022, a PRC–Indonesia joint venture called TransNusa Aviation became the first international airline to operate the ARJ21, Comac’s smaller, regional jet ([Comac](#), December 19, 2022). China Aircraft Leasing Group (CALC; 中飞租赁), the owner of TransNusa, purchased the jets and leased them back to the airline ([CALC](#), September 12, 2023). Comac then opened its first regional office in Jakarta to support the airline’s operations. Within the first year, TransNusa transported over 100,000 passengers between five regional cities on the ARJ21 ([SASAC](#), February 29).

Last year, GallopAir (文莱骐骥航空), a Brunei-based airline, became the first regional airline to order a package of C919s in a deal valued at nearly \$2 billion ([AP News](#), February 26; [163.com](#), November 19, 2023). The purchase agreement adds to Comac’s reported backlog of 1,200 orders, primarily from domestic state-owned airlines ([The Paper](#), April 28, 2023). China’s big three domestic airlines (三大航) agreed to purchase an additional 300 C919s in late April ([Caixin](#), May 1).

To find more overseas buyers, Comac will likely look to international airlines with direct business links to the PRC, as in the case of GallopAir and TransNusa. The former, owned by Chinese businessman Yang Qiang

(杨强) and set up by the Shanxi Tianju Investment Group (陕西天驹投资集团), hopes to commence operations of the ARJ21 later this year and the C919 in future years, following regulatory approval ([Ch-Aviation](#), March 5).

### **C919 Seeks a Ticket to Ride**

Comac will need to secure overseas airworthiness certifications before it can export the C919. As early as 2018, “airworthiness standards (适航标准)” were identified as one of 35 key core technologies that the PRC should seek to master, according to an article in a Ministry of Science and Technology-affiliated newspaper ([Science and Technology Daily](#), September 24, 2020). While the plane received domestic approval in 2023, it has yet to receive certifications abroad. Cham Chi, the CEO of GallopAir, has said that the C919’s regulatory approval process in Brunei could take between two and three years, as the plane accrues more flying hours ([Reuters](#), February 23). Approval for the ARJ21 in Indonesia took over two years, following the establishment of a working group between Indonesia’s Directorate General of Civil Aviation and CAAC ([AIN](#), April 19, 2023).

The PRC has signed bilateral air services agreements with several ASEAN countries, but few certify PRC-made aircraft (see [CAAC](#)). Bilateral agreements with Laos and Cambodia are unique in that they include clauses recognizing the “airworthiness of aircraft manufactured in the People’s Republic of China” (CAAC, [November 5, 2016](#); [November 25, 2014](#)). These deals, however, only apply to an earlier model of the PRC’s regional jet, the Xi’an MA60, which subsequently suffered from safety issues ([WSJ](#), March 20, 2016). Beyond talking to Southeast Asian governments, CAAC is in consultation with administrators in Europe and the United States to facilitate Comac’s international expansion.

### **Comac’s Flightpath to Date**

The goal of developing a large passenger aircraft (大型飞机) in the PRC has been a decades-long project. Before establishing Comac in 2008, the PRC government had experimented with previous models of commercial aircraft. Examples include the Shanghai Y-10 and the MD-82, which were co-developed with the now-defunct U.S. firm McDonnell Douglas.

In 2005, the National Medium and Long-Term Science and Technology Development Plan (2006–2020) listed developing large aircraft as a major national science and technology project ([Gov.cn](#), December 20, 2005). In 2008, Comac was founded as a merger between China Aviation Industry Corporation I (AVIC I) and China Aviation Industry Corporation II (AVIC II). **[1]** The following year, the National Development and Reform Commission approved Comac’s plan to develop a large, single-body aircraft: the C919.

Comac received nearly \$7 billion in seed capital from a combination of central and local governments, state-owned banks, and other state-owned enterprises. **[1]** Up to the end of 2020, it is estimated that Comac was granted access to nearly \$72 billion of state subsidies ([CSIS](#), December 7, 2020). However, Comac’s annual reports show losses of only \$3 billion since incorporation, indicating that the company has used far less

capital than it has had access to ([Nikkei](#), June 20, 2023). As the C919 transitions from the design stage to the mass production stage, Comac will likely depend on greater state support. The company plans to scale annual production of the C919 to 150 aircraft by 2028 ([Global Times](#), January 12, 2023). In early May, AVIC announced plans to build a new, 330,000 square meter facility in Pudong to expand C919 production capacity ([Civil Aviation Resource Network](#), May 6).

### **Struggling to Lift Off From Technology Chokepoints**

Despite the C919's branding as the PRC's first "independently developed" single-aisle commercial aircraft, the plane is composed of myriad components designed and manufactured by multinational firms ([Comac](#), accessed April 30). Comac operates according to the "main manufacturer + supplier" model like Boeing and Airbus. This means that the company purchases and then assembles parts from hundreds of different suppliers ([Economic Times](#), December 17, 2023). As a result, Comac sits at the end of a vast and complex supply chain with suppliers located inside and outside of the PRC.

The rise of Comac has catalyzed an entire domestic ecosystem of "concentric circles (同心圆)" of innovation, spanning research, academic, and business organizations ([Beijing Culture Review](#), December 11, 2022). According to Zhang Jun (张军), Secretary of Comac's Board of Directors, the PRC's aircraft manufacturing industry encompasses more than 1,000 companies, 100 research institutes, 70 universities, and 300,000 workers in 24 provinces and cities ([Securities Times](#), September 21, 2023). Since Comac was established in 2008, 5,000 upstream and downstream aviation companies in the PRC have reportedly grown alongside them ([Securities Times](#), September 19, 2023).

Estimates suggest that the PRC's aircraft industry has been able to achieve a respectable 60 percent localization rate—measured by cost—for the C919 ([eet-China](#), May 30, 2023). While PRC firms independently design and manufacture basic features of the aircraft, such as the aluminum alloy airframe, joint ventures and foreign enterprises supply the C919's most advanced parts, from engines and avionics to air control and landing systems (Table 1). For instance, the C919's LEAP-1C engine is produced by CFM International, a joint venture between GE Aerospace and France's Safran Aircraft Engines ([Military+Aerospace Electronics](#), February 29).

In 2023, France, the United States, and Germany were the three largest aircraft and parts exporters to China (measured at the HS-2 level), accounting for 35 percent, 32 percent, and 22 percent of China's imports, respectively (Figure 1). China's imports declined sharply during the Covid-19 pandemic and have yet to recover. In 2018 and 2019, the United States lost market share to its European counterparts following two fatal Boeing 737 MAX crashes.

Five of the 35 key core technologies that the PRC government identifies as international "chokepoint (卡脖子)" technologies are directly related to modern aircraft. These include engine nacelles, avionics software, and aviation-grade steel ([S&T Daily](#), September 24, 2020). On a tour of Comac's Design and R&D Center in 2014, Xi Jinping stated that Comac should "independently develop products as soon as possible" ([SASAC](#),



August 1, 2022). Several years later, Chief designer of the C919, Wu Guanghui (吴光辉), explained that Comac seeks to “gradually improve localization” ([People.cn](http://People.cn), October 23, 2017).

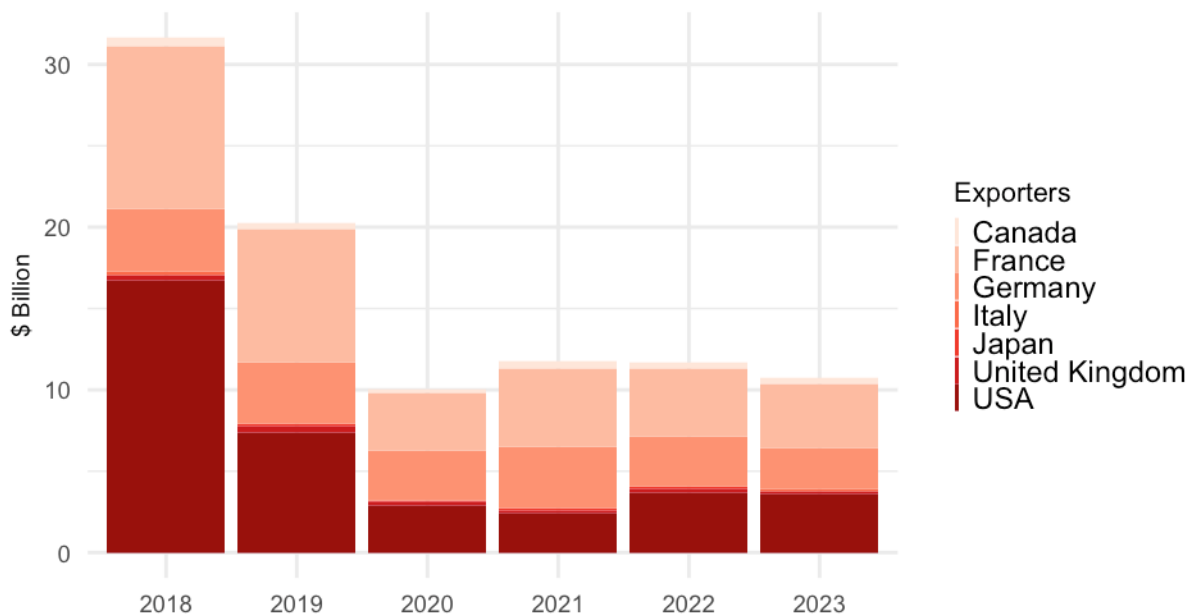


Figure 1: Top Aircraft and Parts Exporters to China and Hong Kong (HS-88), 2018-2023. (Source: UN Comtrade; Author Calculation)

Comac has an explicit goal to leverage international partnerships and joint ventures to promote indigenization and overcome technological “chokepoints.” The PRC’s pursuit of technology transfers from overseas firms in recent decades, especially in the commercial aircraft industry, has been a key part of Comac’s strategy in developing the C919. It has been described as “energetic,” and “always ... the key priority” for officials, according to recent research. [2] The ability to achieve such transfers was enhanced following the empowerment of the National Development and Reform Commission in 2004–2005, with a 2005 deal with Airbus being a case in point. Industry insiders have noted that the nature of the sector in the PRC gave the country “incredible leverage” over foreign investors. In exchange for market access, multinationals have provided domestic Chinese manufactures with critical know-how and expertise. The plane’s avionics are developed by a joint venture between the PRC’s Aviation Industry Systems (AVIC) and GE Aviation, while Honeywell and Boyun New Materials build the plane’s brake system. Airbus and Boeing also operate joint assembly plants and research ventures with local partners ([Airbus](http://Airbus), April 6, 2023; [Boeing](http://Boeing), 2022).

The PRC has also used extralegal means to acquire aerospace technology. One example made public by cybersecurity firm CrowdStrike involved a cyberthreat actor known as Turbine Panda, which was linked to the Ministry of State Security’s Jiangsu Bureau (JSSD/江苏省国家安全厅) ([Crowdstrike](http://Crowdstrike), October 2019). Turbine Panda targeted foreign component suppliers for the C919, including Ametek, Capstone Turbine, GE Aviation, Honeywell, Safran, and others via hacking and other means in order to gain access to intellectual

property and industrial process data. When this was uncovered by the U.S. Department of Justice, it ultimately led to the arrest of an MSS officer, Xu Yanjun, in 2018. [3]

In addition to partnering with foreign companies, the PRC is pursuing independent innovation across the supply chain under a project code-named “C9X9” ([Bloomberg](#), February 25). For example, Aero Engine Corporation of China (AECC) is designing a replacement engine for the C919, the CJ-1000 ([SCMP](#), February 11). Nonetheless, the CJ-1000 also relies on imported components such as the combustion chamber, manufactured by an Italian company, Avio, and the titanium alloy fan blades, produced by the UK’s Morgan Advanced Materials Group ([MERICS](#), October 26, 2023).

Given the globalized nature of the aviation industry, the PRC is unlikely to achieve anything near self-sufficiency without investing tens of billions of additional dollars and several years on research and development. In the time that it takes the PRC to master existing technologies, global aviation leaders may already be producing more advanced products.

Structural Part	Domestic Suppliers	Foreign Suppliers	Joint Venture
Nose Cone	Chengdu Aircraft (成都飞机工业集团)	X	X
Front, Middle, and Rear Fuselage	Hongdu Aviation (洪都航空工业集团)	X	X
Medium Fuselage	AVIC Shenyang Aircraft (中航沈飞); Shanghai Aircraft Manufacturing (上海飞机制造)	X	X
Front Section of Rear Fuselage, Vertical Tail	Shenfei Civil Aircraft (沈飞民机)	X	X
Rear Fuselage Section, Aileron	Seahawk Aerospace (航天海鹰)	X	X
Hatch	Hongdu Aviation (洪都航空工业集团)	X	X
Radome	AVIC Jinan Special Structure Research Institute (济南特种结构研究所)	X	X
Center Wing, Outer Wing Box	AVIC Xifei (中航西飞)	X	X
Horizontal Tail	Shanghai Aircraft Manufacturing (上海飞机制造)	X	X
Emergency Generator Door; Auxiliary Power Door	Zhejiang Xizi (浙江西子)	X	X
Nacelle System	AVIC Xifei (中航西飞)	Safran	Xi'an-Safran Electrical (西安赛威)
Engine	AVIC Design and R&D Center (中国航商研发中心)	CFM (GE-Safran)	X
Avionics System	Xi'an AVIC Research (中航西安航空计算科技研究所); AVIC Electronics (中航电子); CETC Avionics (中电科航空电子); China Aviation Optical (中航光电)	GE; Honeywell; Thales; Collins	Aviage Systems (GE-AVIC) (昂际航电)
Communication and Navigation Systems	CETC Avionics (中电科航空电子)	Collins	Collins-AVIC Electronics (中电科柯林斯)
Electromechanical System	AVIC Electromechanical (中航机电); AVIC Nanjing Jincheng (中航南京金城); Shanghai Aircraft Manufacturing (上海飞机制造)	Hamilton Sundstrand; Liebherr; Parker; Safran	X
Flight Control System	AVIC Xi'an Flight Control Research Institute (西安飞机自动控制所)	Honeywell; Parker; Moog	Honeywell-Xi'an AVIC Flight Control (鸿翔飞控技术)
Wheels and Brake Systems	Hunan Boyun New Materials (博云新材料)	Honeywell	Honeywell-Boyun (霍尼韦尔博云)
Environmental Control System	AVIC Nanjing Electromechanical (航空工业南京机电)	Liebherr	X
Fuel and Hydraulic System	Shanghai Aircraft Manufacturing (上海飞机制造); AVIC Nanjing Jincheng (中航南京金城)	Parker	Parker-AVIC (南京航鹏)
Fuel, Hydraulic, Interling System	Shanghai Aircraft Manufacturing (上海飞机制造)	Eaton	Eaton-COMAC Shanghai (伊顿上飞)

Table 1: The C919’s Primary Foreign and Domestic Suppliers. (Source: [Securities Times](#), September 19, 2022)

### Export Controls Create Drag

Comac has faced several supply chain disruptions in recent years. In 2020, “aero-engine” technologies were included on the White House’s first Critical and Emerging Technologies List ([Trump White House Archives](#), October 2020). That same year, the Bureau of Industry and Security (BIS) placed several PRC aviation firms on the newly created “Military End User” (MEU) list, including AECC, AVIC, and other aviation companies

([BIS](#), accessed April 30). While Comac was spared from the MEU list due to its official status as a “commercial” manufacturer, many of Comac’s suppliers faced restrictions ([Foreign Policy](#), February 16, 2021). Slowdowns in export licenses for Comac’s upstream vendors reportedly delayed the first delivery of the C919 by over a year ([Reuters](#), September 27, 2021).

Nonetheless, the Commerce Department continued to grant GE licenses to sell its LEAP-1C engine to the PRC manufacturer ([Reuters](#), April 7, 2021). GE argued that its engines would be difficult for Chinese manufacturers to reverse engineer ([WSJ](#), February 16, 2020). In 2021, the Department of Defense added Comac to the list of companies associated with the People’s Liberation Army, barring U.S. investors from owning equity in the company ([DoD](#), January 14, 2021).

More recently, the objective of U.S. export controls has begun to shift. In 2022, National Security Adviser Jake Sullivan stated that the United States is seeking “as large of a lead as possible” in key technologies ([White House](#), September 16, 2022). In 2023, U.S. Senators Marco Rubio and Rick Scott sent a letter to the Under Secretary of BIS requesting that Comac be added to the MEU list ([Marco Rubio Senate Office](#), April 24, 2023).

Going forward, Comac faces the risk that supplies of U.S. components will be cut off, especially if bilateral relations continue to deteriorate. These risks are likely to accelerate Comac’s drive for self-sufficiency.

### **Signs of Turbulence**

Potential supply chain disruptions are one risk among several that international customers must consider when deciding whether to buy and operate the C919. So far, Comac does not run any overseas maintenance, repair, and overhaul (MRO) centers—unlike Boeing, which operates five ([Boeing](#), April 26, 2022). Comac has stated that it will “rely on customer’s own MRO” centers for servicing, but has offered to open new MRO centers in countries where airlines purchase at least 30 planes ([Comac SAMC](#), February 20; [Reuters](#), February 23).

There is no guarantee that Comac’s products will find overseas buyers, even if it expands its international MRO presence. One problem is that many airlines already operate Boeing and Airbus products, and adding a third aircraft line would add to maintenance and repair costs in a notoriously low-margin industry. For this reason, Comac is likely to find more success with newly established airlines, such as TransNusa and Gallop-air, than with traditional airlines that may already be locked-in with Comac’s competitors ([VOA](#), March 14).

The C919 does not offer much in the way of a cost or quality advantage. It is not fundamentally superior to Western aircraft, since Comac still imports its most advanced components. Listed at \$99 million per plane, the price of the C919 is also comparable to that of the 737 or the A320, which range between \$110 and \$120 million ([Simple Flying](#), June 9, 2023). Since aircraft production is highly capital-intensive, Comac has been unable to translate the PRC’s labor-cost advantage into significant savings.



Finally, attempts to master existing aviation technologies could hinder Comac's ability to create leading-edge technology. This problem is endemic to the PRC's goal to move up the value chain more broadly. In the time that it takes Comac to scale production of the C919's current design, Boeing and Airbus could already be producing more advanced products.

### **Conclusion**

There may still be room for the C919 to carve out market share in the global aviation industry. Airbus and Boeing currently have order backlogs extending out well into the next decade. If neither company ramps up production capacity, the C919 may be able to make a dent in the international market. Furthermore, Boeing's spate of safety challenges could persuade some customers to shift suppliers ([CNBC](#), March 22). Chinese blogging sites like Weibo and Zhihu have been filled with schadenfreude over Boeing's recent setbacks and the potential opportunity it presents to Comac ([Weibo](#), March 17; [Zhihu](#), January 6). The PRC may also be able to leverage its diplomatic influence and international business ties to find foreign buyers—several of Comac's early international customers maintain direct connections to PRC investors.

Considering the many challenges Comac faces, however, it will likely be years before the manufacturer develops into a truly world-class aircraft enterprise. Comac's voyage abroad, in other words, is just beginning.

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### **Notes**

[1] Crane, Keith, et al. "China's Industrial Policy and Its Commercial Aircraft Manufacturing Industry." *The Effectiveness of China's Industrial Policies in Commercial Aviation Manufacturing*, RAND Corporation, 2014, pp. 23–34. *JSTOR*, <http://www.jstor.org/stable/10.7249/j.ctt6wq85j.10>. Accessed 30 Apr. 2024.

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[3] United States of America v. Yanjun Xu, 1:18-cr-43-TSB (2018). <https://nsarchive.gwu.edu/sites/default/files/documents/5513700/United-States-v-Xu-Indictment-in-the-United.pdf>

**Open-Source Technology and PRC National Strategy: Part I**

*by Sunny Cheung*



AI-generated image from prompts relating to China and open-source technology. (Source: AI-generated)

**Executive Summary:**

- The OpenAtom Foundation supports open-source technology in areas such as RISC-V architecture and electronic design automation. These efforts are part of a strategy by the People's Republic of China (PRC) to navigate and overcome technological containment by the United States, showcasing the foundation's role in leveraging open-source as a strategic asset.
- OpenHarmony, an open-source version of Huawei's HarmonyOS, and openEuler, a Linux distribution developed by Huawei, are the foundation's flagship projects. They are part of a strategy to reduce reliance on foreign technologies and enhance self-reliance and innovation.
- OpenAtom's alignment with state objectives is evident in its governance and strategic direction. Despite being a non-governmental organization, at least 45 percent of its employees are affiliated with the Chinese Communist Party (CCP). This alignment is particularly visible in the foundation's efforts to develop and promote open-source ecosystems as a tool for technological and geopolitical advancement.
- Open-source technology allows for global collaboration and innovation, but organizations like OpenAtom existing within the PRC are influenced by the agendas and strategies of the PRC's government. The openness of these technologies makes them susceptible to manipulation.

**Editor's Note: This article is the first in a two-part series. The second part, which will focus on the open-source operating system OpenHarmony and its links to the PRC's military-civil fusion development strategy will appear in Issue 11.**

In mid-April, a series of technology challenges, competitions, and seminars took place in Suzhou Industrial Park, hosted by the OpenAtom Foundation and the organization openDACS ([OpenAtom](#), April 14). The event explored the application of emerging technologies, including the open-source RISC-V architecture and EDA—areas particularly sensitive due to U.S. export controls (see *China Brief*, [December 15, 2023](#); [March 15](#)). Challenges focused on integration and industrial applications of open-source technology. These included electromagnetic simulation software, the latest simulation software for aviation engines, and computational mechanics software for integrated circuit design tools ([OpenAtom](#), April 16).

The event, held across several days, provides a window on the eagerness of both government and industry in the People's Republic of China (PRC) to leverage open-source technologies to address real-world challenges. The desire to nurture an open-source ecosystem is part of a broader strategy, and open-source technology is being leveraged as a dual-use tool for advancing the PRC's technological capabilities and, by extension, its geopolitical power.

### **The Party-State Opens up to Open-Source**

Data from the Academy of Information and Communications Technology reveals the extent of open-source technology in domestic industry ([Ximalaya](#), July 19, 2023). Over 90 percent of PRC enterprises currently use open-source technology, with thousands of open-source components employed in sectors like finance and telecommunications. The adoption rate of open-source tech for cloud computing and big data exceeds 40 percent. The widespread application of open-source tools is critical. Even by 2021, Dong Dajian (董大健), Deputy Director at the National Industrial Information Security Development Research Center, noted that virtually all software with more than one thousand lines of code now relies on open-source components ([Baijiahao](#), July 31, 2021).

This emphasis on open-source technology can be traced to 2020, when geopolitical tensions prompted the PRC to develop its own open-source ecosystem due to concerns about an overreliance on Western platforms. A Huawei executive emphasized the PRC software industry's vulnerability to external factors in the absence of local open-source infrastructure ([Baijiahao](#), August 24, 2020). Gitee was founded shortly after this by a consortium led by OSCHINA (深圳市奥思网络科技有限公司), Huawei, and national research institutes.

In March 2021, open-source technology was included in PRC's 14th Five-Year Plan for the first time. This plan highlights the government's support for the development of digital technology, open-source communities, and innovative consortia, signaling the strategic importance of open-source tech to national development ([Xinhua](#), March 13, 2021). Later that year, two other related plans were released. MIIT's "14th Five-Year Plan for the Development of the Software and Information Technology Services Industry ('十四五'

软件和信息技术服务业发展规划)” articulated an expansion of the open-source ecosystem, underlining the critical role open-source software plays in navigating economic and trade challenges ([MIT](#), November 15, 2021). And the State Council’s “14th Five-Year Plan for the Development of the Digital Economy (‘十四五’数字经济发展规划)” advocated for the growth of open-source communities, platforms, and projects that feature indigenous core technologies ([State Council](#), December 12, 2021). These strategic documents underscore the importance the PRC government has put on using open-source tools to help it achieve technological independence.

### **OpenAtom Foundation Shapes the Open-Source Ecosystem**

The OpenAtom Foundation is a relatively new but influential player in the PRC’s tech sector. Founded in June 2020 in Beijing by Alibaba, Baidu, Huawei, Inspur, Tencent, China Merchants Bank, and 30 others, the OpenAtom Foundation is the first non-profit in the PRC dedicated to advancing the open-source movement. Its mission includes incubating open-source projects, fostering international cooperation, and enhancing technological philanthropy ([OpenAtom](#), accessed May 2).



The official logo of the OpenAtom Foundation. (Source: [Wikipedia](#))

OpenAtom co-hosted the April competitions alongside openDACS. Established on October 16, 2021, openDACS is an initiative that brings together leading academic and research institutions in the PRC under one banner. One of its aims is to develop an open-source-based electronic design automation (EDA) platform. Spearheaded by the Chinese Computer Society’s Integrated Circuit Design Group (中国计算机学会集成电路设计专业组) and Open Source Development Committee (中国计算机学会开源发展委员会) in partnership with the OpenAtom Foundation, the project also includes contributors such as the Institutes of Computing and Microelectronics of the Chinese Academy of Sciences (CAS), Peking University, Fudan University, and Wuhan University of Technology ([WHUT](#), October 27, 2021).

The foundation operates an open-source, distributed operating system (OS) framework known as OpenHarmony, which was donated by Huawei, as an open-source version of the company’s closed-source HarmonyOS (鸿蒙系统) ([Gitee](#), accessed May 2). HarmonyOS is considered the keystone for Huawei to achieve its independence from Google’s Android OS and to further help the PRC enhance its goals of technological self-reliance ([Nikkei Asia](#), May 8). Its open-source offshoot, OpenHarmony, is hosted on Gitee (码云), the PRC’s largest code-hosting platform with 12 million users, where it has become highly influential ([Gitee](#), December 2023). OpenHarmony already powers devices ranging from smartphones to cars, and is enabled for multi-device integration, creating seamlessly connected ecosystems ([Aliyun](#), August 16, 2022). It

can run on diverse hardware architectures including ARM, RISC-V, and x86, as well as on a wide range of smart devices ([OpenHarmony](#), last accessed April 30).



OpenHarmony is listed as a “project in incubation” on the OpenAtom platform. (Source: [OpenAtom](#))

The OpenAtom Foundation is home to other open-source projects, too. One such project is openEuler, also developed by Huawei. This platform operates as a Linux distribution, meaning it is based on the Linux kernel—a core component of the operating system that manages hardware resources. openEuler is tailored to leverage and extend Linux’s robust, secure, and versatile characteristics to meet specialized digital infrastructure needs. It has been adopted by various state-owned enterprises in the PRC, spanning sectors such as energy, telecommunications, and finance ([openEuler](#), accessed May 2). openEuler supports a broad spectrum of applications, including cloud computing ([OpenAtom](#), last accessed April 30). openEuler was prominently featured at the Open Source Summit Europe 2023. This event, organized by the Linux Foundation in Spain, included multiple discussions covering topics ranging from artificial intelligence (AI) to software supply chain security and community governance ([OpenAtom](#), September 25, 2023).

OpenEuler and OpenHarmony serve different but complementary roles. OpenEuler is primarily designed for server and cloud environments. This makes it ideal for high-performance computing and enterprise applications. OpenAtom claims that by leveraging what it refers to as heterogeneous computing to boost AI system performance, openEuler can increase training efficiency by over 20 percent and inference concurrency by more than 50 percent ([OpenAtom](#), January 15). OpenHarmony, meanwhile, is tailored to a broader spectrum of smart devices, from IoT gadgets to complex systems like smart vehicles, where flexibility and multi-device integration are prevalent. Together, these two platforms provide a foundation for seamlessly interconnected digital infrastructure and expansive technology ecosystems ([Baijiahao](#), October 31, 2023).

The OpenAtom Foundation’s commitment to building an extensive open-source ecosystem is not just limited to software. It has embarked on strategic collaborations in various sectors. One such partnership is with the China Association of Automobile Manufacturers (中国汽车工业协会). This alliance focuses on six key areas: joint development of open-source projects and technology, co-building of an open-source ecosystem for automotive software, academic research, cultural promotion of open source, talent development, and



ecosystem construction. This initiative is poised to explore the full potential of using open-source tech and to contribute to the digital transformation of the automotive industry ([OpenAtom](#), November 16, 2023). Similar policy discussions surround the application of the RISC-V architecture to produce affordable yet powerful chips for the next generation of vehicles in the PRC ([CYZone](#), December 26, 2023).

Through projects like OpenHarmony and openEuler, the OpenAtom Foundation is actively reshaping the open-source ecosystem, centralizing and mobilizing manpower as well as resources to mold and transform these initiatives to serve the dual goals of technological advancement and broader national objectives.



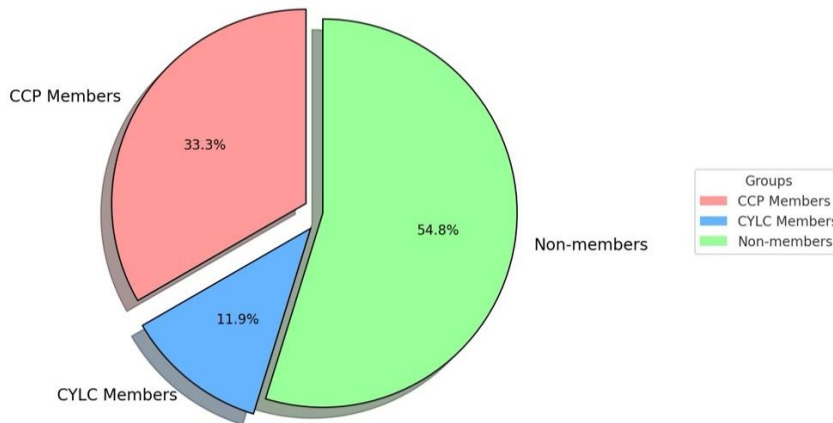
“openEuler and OpenHarmony, sharing capabilities, and ecosystem interconnection.” (Source: [163](#))

### The Party is the Core for OpenAtom

At first glance, the OpenAtom Foundation appears to mirror the operational ethos of Western open-source counterparts like the Linux and Apache Software Foundations. It embraces the common rhetoric of building international open-source communities, enhancing collaboration across industries, and offering neutral intellectual property custodianship to safeguard the independence and ongoing development of various open-source projects ([OpenAtom](#), last accessed April 30). It professes a commitment to maintaining a sense of neutrality and to contributing positively to the global community—ideals that align it with the broader open-source movement.

A closer examination of the foundation’s structure and affiliations reveal a more nuanced reality, raising questions about the true independence of such an organization. According to its 2022 Annual Report submitted to the PRC government, which adheres to the regulations set forth by the Ministry of Civil Affairs

and the Charity Law of the PRC, a significant number of the foundation’s employees are affiliated with the Chinese Communist Party (CCP) ([OpenAtom](#), last accessed April 30). The 2022 report discloses that 33.3 percent of the foundation’s employees are members of the CCP. If one includes the 11.9 percent who are members of the Communist Youth League of China (CYLC), this figure rises to over 45 percent.



OpenAtom Foundation’s employee affiliation. (Source: OpenAtom Foundation’s 2022 Annual Report)

This holds true for the higher echelons within the foundation. OpenAtom’s board was updated in the last two weeks, and information on the new members is yet to be disclosed in detail. However, the foundational structure, patterns, and representation within the board remain unchanged. [1] The previous board of directors included several party members—most notably, the two vice-chairmen, Liu Xiangwen (刘湘雯) and Wang Juhong (王巨宏). Even board members who do not claim any political affiliation have significant ties to government and corporations connected to the state’s strategic priorities. For instance, Sun Wenlong (孙文龙), the board chair, previously held a director position within the Ministry of Industry and Information Technology (MIIT), where he was involved in software industry regulation ([OpenAtom](#), December 27, 2023; [BIT](#), January 23, 2014). Similarly, board members Xiao Ran (肖然) and Hou Zhenyu (侯震宇) hold senior positions at Huawei and Baidu, respectively—companies are known for their close alignment with state objectives ([Baijiahao](#), July 31, 2021; [iheima](#), July 10, 2021). Zhang Hui (张晖), managing director at the IT conglomerate Inspur, serves on the foundation’s board and represents a company who contributes to party and governmental digital transformation and informatization projects ([PRC Daily](#), May 16 2023; [Inspur](#), last accessed April 30).

The OpenAtom Foundation’s relationship with the PRC’s state apparatus is further cemented by the OpenAtom Foundation Party Branch (开放原子开源基金会党支部). This organization operates under the direct supervision of the Party Committee of MIIT’s Talent Exchange Center. The secretary of the Party organization within the foundation, Liu Jingjuan (刘京娟), plays a pivotal role in aligning the foundation’s activities with the Party’s agenda. In 2022, Liu organized nine Party member meetings and facilitated 11 educational sessions for members, focusing on indoctrination and adherence to the Party’s policies and doctrines.



## 开放原子开源基金会章程

### 第一章 总则

**第一条** 本基金会的名称是开放原子开源基金会，英文译名为 OpenAtom Foundation。

**第二条** 本基金会属于不具有公开募捐资格的基金会。

**第三条** 本基金会的宗旨：专注于开源软件的推广传播、法务协助、资金支持、技术支撑及开放治理等公益性事业；促进、保护、推广开源软件的发展与应用；以开放、共享、共建、共治为原则，鼓励开源项目自治，致力于推进开源生态繁荣和可持续发展，提升我国对全球开源事业的贡献。

本基金会遵守宪法、法律、法规和国家政策，践行社会主义核心价值观，弘扬爱国主义精神，遵守社会道德风尚，自觉加强诚信自律建设。

**第四条** 本基金会坚持中国共产党的全面领导，根据中国共产党章程的规定，设立中国共产党的组织，开展党的活动，为党组织的活动提供必要条件。

The constitution of the OpenAtom Foundation. (Source: [OpenAtom](#))

The foundation’s bylaws explicitly emphasize its commitment to “socialist core values” and the “spirit of patriotism,” which are fundamental to its operations and mission. Article Four of the foundation’s constitution declares the organization’s adherence to the “comprehensive leadership of the Chinese Communist Party.” It stipulates the establishment of Party organizations within the foundation to conduct Party activities and provide necessary conditions for these activities. This highlights its role as an instrument for executing Party directives within the broader tech ecosystem.

组织名称	开放原子开源基金会
统一社会信用代码	
宗旨	专注于开源软件的推广传播、法务协助、资金支持、技术支撑及开放治理等公益性事业；促进、保护、推广开源软件的发展与应用；致力于推进开源项目、开源生态的繁荣和可持续发展，提升我国企业全球开源治理话语权。

The mission statement of The OpenAtom Foundation reported to the PRC government. (Source: [OpenAtom](#))

OpenAtom Foundation’s mission, as submitted to the government on paper in 2022, espouses dual objectives. While it is committed to advancing the prosperity and sustainable development of open-source projects and ecosystems, it also aims to “enhance the global discourse power of our country’s enterprises in open-source governance.” At the same time, in response to an enquiry by the National People’s Congress, MIIT acknowledged efforts to enhance mobile operating systems through the establishment of open-source foundations, starting with the OpenAtom Foundation ([MIIT](#), October 28, 2022). These efforts intend to

encourage Huawei to help accelerate the development of key open-source projects, aiming to advance operating system research and development.

The OpenAtom Foundation is bolstered by its network of significant affiliated organizations and contributors. These include foreign tech leaders such as Intel, which is a platinum donor. The foundation is also supported by the China Industrial Control Systems Cyber Emergency Response Team (国家工业信息安全发展研究中心), a direct unit under MIIT. This unit, central to the PRC's industrial information security sector, has led numerous national projects aimed at enhancing industrial transformation and security. It is involved in areas like technology innovation for national defense, cybersecurity evaluations, and software testing, positioning it as an essential player in advancing Xi Jinping's agenda and the country's industrial digital infrastructure ([CICS](#), last accessed April 30).

OpenAtom Foundation's candid statement of purpose aligns with CCP doctrine. The PRC's approach to open-source technology aims to transform the nation from a "major open-source player (开源大国)" to a "strong open-source nation (开源强国)." As articulated by Ni Guangnan (倪光南), a leading academician at the Chinese Academy of Engineering, the country's open-source strategy has matured significantly, with future prospects centered on leveraging its extensive market scale, rich talent pool, and comprehensive national system to refine the ecosystem for open-source technologies ([Shanghai Observer](#), May 27, 2023).

### **Conclusion**

The OpenAtom Foundation, OpenHarmony, and openEuler are all prominent results of the PRC's concerted focus on and efforts to develop open-source technologies. The use of supposedly neutral non-governmental organizations—which in fact have unusually strong ties to the Party-state—to attract international collaboration is a clear part of the PRC's national strategy. International collaboration in open-source projects is generally viewed positively, as it contributes to global knowledge production and technological advancement. But through this focus on building out from open-source technologies, the PRC can accelerate indigenous innovation through the incorporation of global technological expertise. In this way, instead of a reciprocal exchange in the spirit of open collaboration, there is cause for concern that key beneficiaries of the PRC's efforts here are the military-industrial complex, something that could have implications for international security and the global tech ecosystem as it is currently constituted.

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### **Notes**

[1] The new board (see Table 1 below) continues to maintain significant presence from major tech giants such as Huawei, Tencent (腾讯), and Inspur (浪潮), among others. Notably, three board members from the previous term have continued into the new term: Liu Xiangwen (刘湘雯), Vice Chair; Wang Juhong (王巨

宏), Vice Chair; and Gao Sumei (高素梅), Supervisor and Secretary-General of the China Electronic Information Industry Federation. All three are confirmed members of CCP, based on previous documentation. The newly appointed chair of the OpenAtom Foundation, Cheng Xiaoming (程晓明), previously worked for MIT and the China Industrial Control Systems (CICS), just as his predecessor Sun Wenlong (孙文龙) did.

**Table 1: 2024 OpenAtom Foundation Board Members:**

Name	Title	Affiliation
程晓明 (Cheng Xiaoming)	理事长 (Chairman)	Open Atom Foundation, Former Deputy Director of the Office of the Ministry of Industry and Information Technology, Party Secretary of the National Industrial Information Security Development Research Center, Former Standing Committee Member of Harbin Municipal Committee
张顺茂 (Zhang Shunmao)	副理事长 (Vice Chairman)	Senior Vice President, Huawei Technologies Co., Ltd.
王巨宏 (Wang Juhong)	副理事长 (Vice Chairman)	Director of the Tencent Technology Committee
刘湘雯 (Liu Xiangwen)	副理事长 (Vice Chairman)	Vice President, Alibaba Cloud Intelligence Group
李锐 (Li Rui)	副理事长 (Vice Chairman)	Chairman and Dean, Inspur Science Research Institute Co., Ltd.
彭江 (Peng Jiang)	理事 (Board Member)	Senior Vice President, Chinasoft International
韩乃平 (Han Naiping)	理事 (Board Member)	Chief Scientist, Kirin Software Co., Ltd.
王成录 (Wang Chenglu)	理事 (Board Member)	CEO, Shenzhen Kaihong Digital Industry Development Co., Ltd.
蒋涛 (Jiang Tao)	理事 (Board Member)	Founder & Chairman, CSDN
黄东旭 (Huang Dongxu)	理事 (Board Member)	Co-founder & CTO, PingCAP
刘闻欢 (Liu Wenhuan)	理事 (Board Member)	General Manager, Uniontech Software Technology Co., Ltd.
高素梅 (Gao Sumei)	监事 (Supervisor)	Secretary-General, China Electronic Information Industry Federation

(Source: [OpenAtom](#), last updated April 30)

**Graphene Among New Materials Intended to Unlock New Productive Forces**

*by Michael Laha*

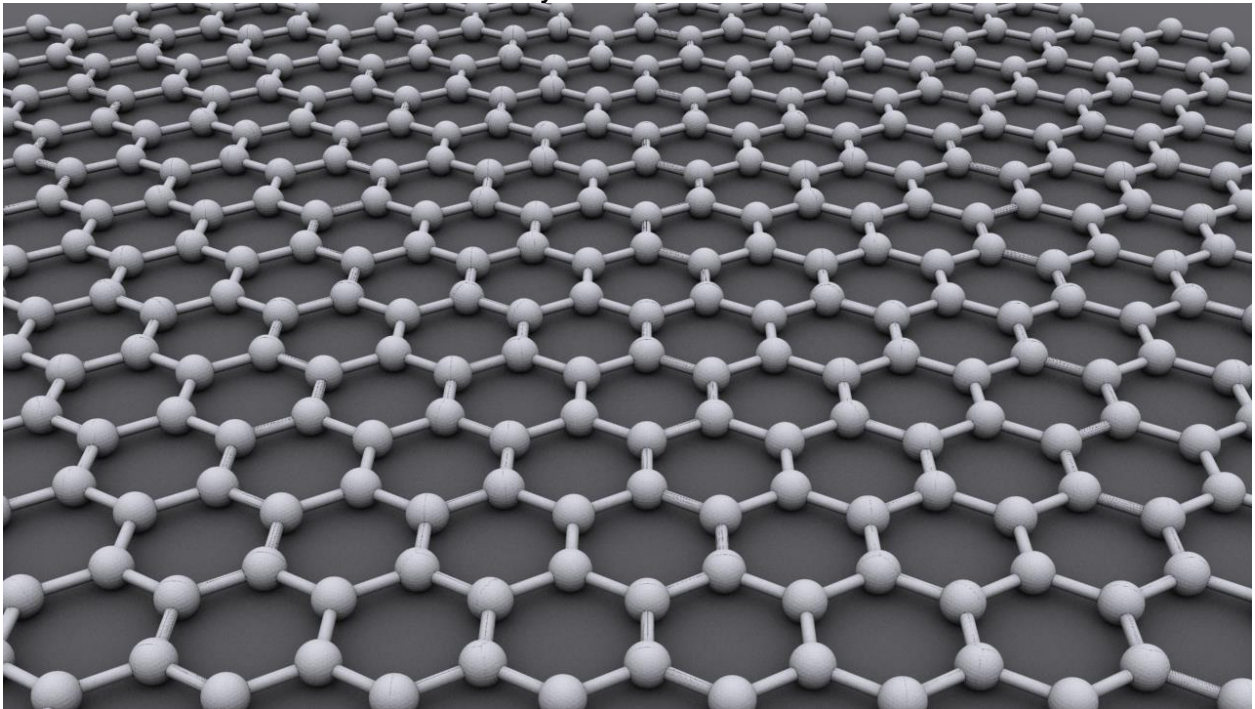


Illustration of the crystalline structure of graphene. (Source: [Wikipedia](#))

**Executive Summary:**

- Graphene is one of the most promising candidates to boost the new materials sector, which has been the focus of high-level strategic planning in the People’s Republic of China (PRC) for some time. The material’s unique properties make it suitable for applications in the critical aeronautics and electronics sectors.
- In 2016, the Chinese Communist Party (CCP) established a leading small group dedicated to the new materials industry. Such a cross-ministerial steering body is only rarely dedicated to just a single economic sector.
- Last year, the Chinese Ministry of Industry and Information Technology released a list of 15 new materials, including graphene, that the Chinese government hopes will create new sources of economic growth. These have been folded into the recent drive for “new productive forces,” aimed at finding new sources of economic dynamism.
- A prominent graphene researcher, Liu Zhongfan, shows how experts can be adept at linking their research to strategic goals, while also advising caution about the potential for quick and easy answers to complex economic issues.

In official economic discourse in the People's Republic of China (PRC), the so-called “new productive forces (新质生产力)” are all the rage. The term was inaugurated by President Xi Jinping last September on a visit to Heilongjiang, a province in the country's northeastern rustbelt ([Xinhua](#), September 10, 2023). The Party's leaders hope that the innovative industries of the future will lift a sagging economy. One of the more extensive treatments of the new productive forces has come in a special six-part series of articles launched by the Chinese Communist Party (CCP) mouthpiece the *People's Daily*, entitled “Science & Technology Perspectives—Approaching New Productive Forces (科技视点·走近新质生产力).”

The first in this series was on the PRC's new materials industry ([People's Daily](#), February 26). These refer to materials with new chemical formulations that lead to improved product performance or manufacturing efficiency. New materials are seen as crucial in the country's broader scientific and technological developments, as advances in this field underpin everything from artificial intelligence to quantum computing to synthetic biology. As many of the PRC's policy documents indicate, these are the areas which they believe will help the country achieve its broader strategic goals.

### **New Materials as a Long-Term Strategic Priority**

The first article in the *People's Daily* series details some of the expectations for new materials. It cites Gan Yong (干勇), director of the National New Materials Industry Development Expert Advisory Committee (国家新材料产业发展专家咨询委员会), a body composed of scientists and industry representatives that first convened in 2017 ([Xinhua](#), February 28, 2017). He is quoted as saying that “the wide application of new materials technology in industries such as next generation information technology, new energy, equipment manufacturing, aerospace, rail transport, marine engineering, and healthcare demonstrates the good market opportunities and development prospects of the new materials industry” ([People's Daily](#), February 26). The article lists a host of promising new materials, including superconductivity materials, materials used for 3D printing technology, as well as carbon nanotubes and graphene, which have led to improved performance of electronic devices.

The subsequent articles in the series highlighted other promising industries, including aerospace ([People's Daily](#), March 12), energy storage ([People's Daily](#), March 18), drug development ([People's Daily](#), March 25), and bio-manufacturing ([People's Daily](#), April 1). The sixth and final instalment, which ran in early April, discussed the possible applications of brain–computer interfaces as a source of “new productive forces” ([People's Daily](#), April 8). Mention of the digital economy was notably absent, though in Xi's speeches it has not disappeared entirely.

Already in 2016, the PRC leadership had set up a “Leading Small Group for the Development of the New Materials Sector.” This high-level body was entrusted with broad cross-ministerial coordination capabilities usually reserved for only the highest political priorities—and rarely dedicated to just one industrial sector ([State Council](#), December 28, 2016). This body was set up with then-Vice Premier Ma Kai (马凯) as leader and then-Minister of Industry and Information Technology Miao Wei (苗圩) as his deputy.



Materials science has been a focal point in key planning documents, as work by scholars at University of California, San Diego's Institute on Global Conflict and Cooperation identifies ([UCGICC](#), July, 2022). The 13th Five-Year Plan notes six new materials-based technologies. Meanwhile, new materials are listed in the 13th Five-Year National Science, Technology and Innovation Plan as one of 15 “science, technology, and innovation 2030 Megaprojects (科技创新 2030-重大项目)” ([Gov.cn](#), August 8, 2016). Between 2012 and 2016, new materials also moved from sixth to third in the PRC's ranked priority list of Strategic Emerging Industries (SEI). The current (14th) five-year plan lists “high-end new materials (高端新材料)” as the first of eight core manufacturing capabilities to increase (see Table 4 in [Gov.cn](#), March 13, 2021). These include rare earth functional materials (required for semiconductor production) and high-performance alloys (used in advanced aeronautical equipment).

The fact that new materials led the group of *People's Daily* articles discussing new productive forces should not be a surprise. They hold the promise of helping the PRC enhance its comprehensive national power and achieve greater so-called technological self-reliance. A Xi Jinping text from 2022 titled “Accelerating the Construction of a Modern Industrial System (加快建设现代化产业体系)” is pertinent here. In it, he emphasizes the importance of focusing on the real economy in order to bring about, among other things “a strong country (强国)” ([Xinhua](#), May, 28, 2023). New materials is listed as one of seven areas that are seen as future growth engines that will “improve social productivity and comprehensive national strength (提高社会生产力和综合国力).” To Xi, this is crucial, stating that “competition for comprehensive national power in today's world is, in the final analysis, a competition for scientific and technological strength (今世界的综合国力竞争，说到底就是科技实力竞争).”

### **Increased Emphasis on Graphene**

In the summer of last year, the Ministry of Industry and Information Technology (MIIT) and the State-owned Assets Supervision and Administration Commission (SASAC) took another step by releasing the first batch of items in a catalog of “cutting-edge materials” which the government hopes will drive growth ([MIIT & SASAC](#), August 30, 2023). The list contains 15 new materials, including a number of superconductors, 3D printing materials, carbon nanotubes, specialized alloys, and graphene (石墨烯). When the MIIT list was released, the group of materials were hailed as being the basis of future “growth engines (增长引擎).” In the months following the release of the list, advanced materials like graphene were reframed as part of Xi's “new productive forces.”

Graphene is an excellent conductor of electricity and is incredibly strong, which makes it useful in reinforcing other materials. These special properties were recognized instantly when the material was first isolated in 2004 by Andre Geim and Kostya Novoselov, earning the scientists the Nobel Prize in 2010. One of the main ways of producing graphene is through chemical vapor deposition, whereby a chamber is filled with a vapor version of the chemical and attached to a heated surface or substrate to which the graphene then adheres. It has a number of valuable applications in semiconductors as a replacement for (or in conjunction with) silicon

([The Global Times](#), January 15). Its lightness and anti-corrosive and hardening properties make graphene an ideal material for use in aeronautics. Xi has previously highlighted a desire to become “a strong aerospace country (航天强国),” something which this emphasis on graphene will likely help to achieve ([Xinhua](#), May, 28, 2023).

The PRC’s graphene sector—as well as its new materials sector writ large—has many things going for it. From 2012 to 2022, the country’s new materials industry grew nearly six fold. As of October 2023, the PRC was home to 20,000 new materials companies, of which 1,972 of them were so-called “Little Giants”—promising SMEs that receive preferential treatment from the government. Some of these companies collected around seven national advanced manufacturing clusters ([People’s Daily](#), February 26).

These developments follow a burst of policymaking during Xi’s first term. Graphene was referenced in the Made in China 2025 plan and concurrently thought on the matter was shaped by a document titled “Certain opinions on accelerating the innovation and development of the graphene industry (关于加快石墨烯产业创新发展的若干意见)” ([CAAM](#), November 20, 2015). The uptick in policy documents discussing the substance around the year 2016 has persisted ever since. New materials are addressed third in a recent 2023–2035 industry pilot standardization plan, for instance ([MIIT](#), August 3, 2023).

A 2021 analysis conducted by the Consultative Group of the Chinese Academy of Sciences (CAS) proposes recommendations for the PRC’s graphene industry ([Bulletin of the Chinese Academy of Sciences](#), February 2022). It argued that the industry lacked clear national, top-down guidance, and was dominated by small players, with inadequate synergy between researchers and industry. The report therefore proposed the establishment of a National Graphene Innovation Center to help integrate pure research with commercial applications. Such a center was set up the following year in Ningbo, Zhejiang ([National Graphene Innovation Center](#), November 2022).

### **‘Graphene Craze’ Tempered by Lack of Results**

One of the report’s consultative group co-leaders is Liu Zhongfan (刘忠范), a widely respected graphene researcher. Having done his graduate work in Japan, he rose to become a professor at Peking University, and was the founding head of the Beijing Graphene Institute when it opened its doors in 2018. He is also an academician at CAS. It is in this latter capacity that he contributed to the industry report. He regularly speaks about and promotes graphene and its prospects for unlocking the industries of the future. However, he also regularly warns about exaggerating hopes for the material’s prospects and that any productive outcome would be the result of slow, steady, and hard-won research.

In 2017, Liu gave a talk on graphene research and expressed his concerns about excessively high expectations. “There are even ‘graphene underwear’ and ‘graphene belts’ on the market now. We can’t just rush into the graphene industry as if it was ‘The Great Leap Forward,’” he was quoted as saying, while pointing at an image of a steel furnace on the screen. The audience, understanding the reference to Mao Zedong’s ill-fated economic campaign of the late 1950s and early 1960s, chuckled, according to a report in



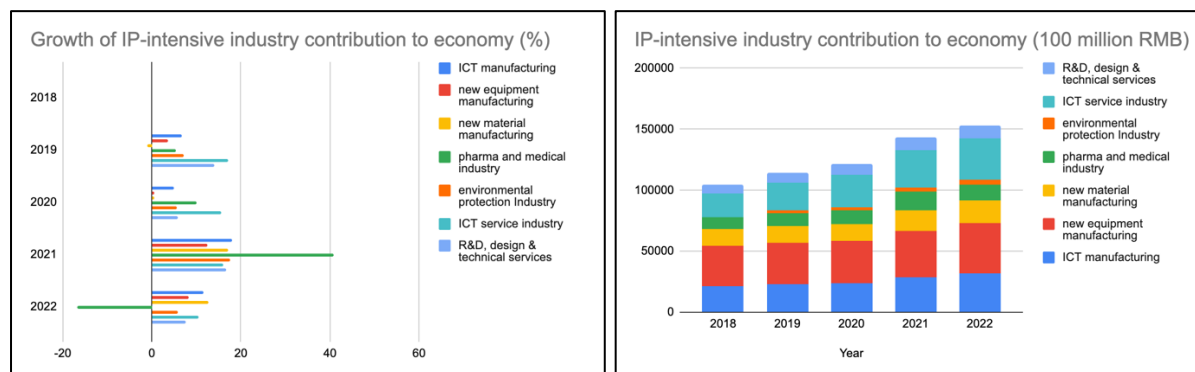
the S&T Daily ([S&T Daily](#), January 17, 2017). Indeed, in the early to mid-2010s, patent filings for graphene-related inventions surged in the PRC. At the time, however, official media cited experts questioning the value of these patents, given that only a tiny fraction of them were filed internationally, which suggested they were of dubious merit ([China Daily](#), July 27, 2016).

In 2021, Liu warned again about an out of control “graphene craze (石墨烯热),” noting that the 30th Graphene Industrial Park had been opened recently in Shenzhen. Again he complained that “So far, our graphene industry has focused more on specific products and how to make quick money” ([S&T Daily](#), April 28, 2021). He also advised that “scientific researchers, especially young scientists, must calm down and produce something of real value ... there is no need to rush.” Last month, he said that “if silicon was the strategic new material in the 20th century, then graphene should be the strategic new material in the 21st” ([Sina.cn](#), April 12). Seizing on another slogan, he warned that if the PRC did not move away from its fixation on quick wins, it would continue to suffer from the “chokehold (卡脖子)” problem in hard technologies ([Security Times](#), April 10).

Liu’s point about dependencies on foreign tech imports, focusing specifically on those originating from the U.S., aligns with current national strategic concerns. By using a term like “chokeholds”—generally used to describe the PRC’s dependence on high-performance computer chips currently subject to U.S. export controls—he is suggesting that if the PRC does not invest in graphene research today then at some point in the future the United States might develop graphene-based products that it could similarly deny the PRC through the imposition of further export bans.

Liu Zhongfan is clearly skilled at forging connections between his work and the evolving considerations of the Party. He serves as a Standing Member of the National Committee of the Chinese People’s Political Consultative Conference (CPPCC) ([21st Century Business Herald](#), March 12). In March, he weighed in on the CPPCC’s deliberations during its annual session, at which “new productive forces” were discussed. It is in this capacity he promoted graphene’s prospects as a new productive force ([Security Times](#), March 16).

By its own measures, the PRC’s new materials sector struggled for a long time. A new statistical category tracking “patent or IP [intellectual property]-intensive industries” provides some insight into the challenges. “New materials manufacturing” is the fourth-largest IP-intensive contributor to the PRC economy, following new equipment manufacturing, ICT [information and communications technology] services, and ICT manufacturing, respectively (see the yellow section in Figure 1). The medical and pharmaceutical industries come in fifth. Moreover, in 2019, the new materials sector shrank, and experienced only miniscule growth in 2020. It was only in 2021 that the sector matched the levels of growth seen in other sectors (see the yellow section in Figure 2) (National Bureau of Statistics, [2018](#), [2019](#), [2020](#), [2021](#)). This early malaise followed may reflect the fact that special policy focus on the sector only began in the mid-2010s and did not bear fruit until several years later.



Growth of China’s new material industry had a slow start and only in 2021 matched that of most other industries. The new materials manufacturing sector is the fourth-largest contributor in a list of seven intellectual property-intensive industries to the Chinese economy. (Source: National Bureau of Statistics of China)

## Conclusion

High-profile scientists like Liu Zhongfan have become adept at linking their work to shifting political imperatives, such as connecting long-simmering anxieties about dependence on the United States for high-tech imports with supporting campaigns to boost the PRC’s economy. Liu does this by simply grafting his own research priorities onto watchwords of the political zeitgeist such as “chokepoints,” “chokeholds,” or “new productive forces.” In his role as the co-leader of a Chinese Academy of Sciences consultative group he was able to contribute to high-level policy recommendations, and in his role as a member of the national CPPCC, he has one more access point to promote the importance of graphene. By leveraging these various roles, he can ensure that graphene remains front of mind in the CCP’s deliberations in science and technology policymaking.

Liu reveals a more cautious stance about hopes for graphene as a source of economic growth by regularly emphasizing the gradual nature of research and of subsequently developing industrial applications for the material. Such voices will be important given the enormous amount of political attention, bureaucratic energy, and public visibility accorded to new materials. While graphene enjoys a particular focus, its ability to perform the functions that the PRC government desires remains uncertain. Nevertheless, it is clear that graphene, and new materials more broadly, will continue to be prioritized by the PRC—as long as they remain integral to the country’s national strategy.

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**Article 23 Legislation and the Export of Hong Kong's Human Rights Violations**

by Anouk Wear 華穆清 and Athena Tong



Principal Officials of the Sixth-Term HKSAR Government in 2022. (Source: [Wikipedia](#))

**Executive Summary:**

- The Safeguarding National Security Ordinance (SNSO) introduced under Article 23 of the Basic Law prohibits five types of activities which Hong Kong Special Administrative Region (HKSAR) officials intend to declare as “offenses,” and has proposed provisions which are vague, criminalize the peaceful exercise of human rights, and undermine the right to due process and a fair trial in the HKSAR.
- The SNSO is designed to specifically target collaboration with foreigners and foreign organizations and increases the power of the PRC to interpret the law in the HKSAR, further eroding the city’s judicial independence and once-high degree of autonomy. The SNSO’s global jurisdiction and extraterritorial clauses also echo PRC laws.
- The HKSAR conforms to broader trends in the PRC’s approach to human rights and international norms by echoing tactics the PRC has used on its own dissidents both at home and abroad. These approaches may also serve as a playbook for other authoritarian and authoritarian-aspiring regimes.
- The HKSAR and PRC employ several identical narratives in rebutting external criticism. This includes “whataboutism” and the idea that international human rights discourse is merely a derivative of Western hegemony.

This week, the Hong Kong Special Administrative Region (HKSAR) Court of Appeals ruled that the pro-democracy song “Glory to Hong Kong” should be banned on the grounds of safeguarding national security. The court asked platforms to ban the song in the HKSAR and the rest of the world, arguing, “A much more effective way to safeguard national security in such circumstances is to ask the [online platforms] to stop facilitating the acts being carried out on their platforms” ([HKSAR Judiciary](#), May 8). Within hours, the song was unavailable and appears to have been removed from platforms in the HKSAR, and indeed, around the world ([X.com/@BakaChocolate](#), May 8). This attempt at global censorship is the latest development in the HKSAR’s export of its human rights violations. It is also the latest evidence of the instrumentalization of the HKSAR by the government of the People’s Republic of China (PRC) to promote its human rights diplomacy. This case could be used as a legal precedent for subsequent national security-related cases.

At the end of March 2024, the HKSAR passed the Safeguarding National Security Ordinance (SNSO) under Article 23 of the Basic Law (the HKSAR’s “mini constitution”) (see Hong Kong eLegislation, March 23: [English](#), [Traditional Chinese](#)). Its introduction was met with no protests within the city and saw little public criticism. Instead, the legislation entered into law in record time following a rushed, one-month public consultation period ([Hong Kong Free Press](#), March 19). It prohibits five types of activities and includes vague provisions that criminalize the peaceful exercise of human rights. The law will have a chilling effect on many Hong Kongers. Those accused of violating Article 23 may have their HKSAR passports canceled, their professional qualifications revoked, and may be temporarily removed as company board directors. The law also provides a basis to freeze the accounts of individuals found providing access to assets for people labeled “absconders.” These sections of the law are yet to be enforced, but the legal basis for doing so now exists.

### **International Law Violations and Extraterritorial Provisions**

By enforcing the 2020 National Security Law (NSL), the PRC and HKSAR are in violation of their international legal obligations and erode the rules-based international order. They have also disregarded concerns and recommendations raised by the United Nations (UN) and UN member states. Since 2020, the UN Human Rights Committee and others ([United Nations](#), November 15, 2023) have urged the HKSAR to repeal and refrain from applying the NSL. However, the new SNSO will further violate fundamental rights and freedoms by going beyond the NSL ([HKSAR](#), March 17, 2021).

In March, six UN Special Rapporteurs published a letter expressing concerns that the SNSO violates human rights ([United Nations](#), March 22). They warn that it:

includes numerous measures that would significantly and unduly limit the exercise of human rights and fundamental freedoms and would be incompatible with the Universal Declaration of Human Rights (UDHR), the International Covenant on Civil and Political Rights (ICCPR), and the International Covenant on Economic, Social, and Cultural Rights (ICESCR).

The SNSO will violate freedoms of opinion and expression, peaceful assembly and association, freedom from arbitrary detention, the right to a fair trial, freedom of movement, the right to privacy, the right to take part in the conduct of participation in public affairs, and the right to academic freedom, all of which are protected under international law.

The SNSO also violates the laws of other sovereign jurisdictions by claiming global jurisdiction. This is something the HKSAR has used increasingly for its transnational repression. The NSL constitutes the most prominent example of such a law, under which arrest warrants were issued in both July and December 2023 with bounties worth millions of dollars for overseas activists. At least 31 of these activists' family members in the HKSAR have been brought in for "national security investigations" ([CHRD](#), April 15). Activists have also faced intimidation tactics while engaging in UN human rights review sessions ([ChinaFile](#), December 20, 2023).

The enactment of the SNSO will exacerbate this activity, as it exceeds previous legislation in terms of extraterritorial impact. Extraterritoriality is baked into the SNSO's legal framework. Sections of the law pertaining to Treason (Section 14), Insurrection (Section 16), Incitement, Sedition (Section 28), Offenses in Connection with State Secrets (Section 40), Espionage (Section 48), Sabotage (Section 51), and External Interference (Section 57) all make clear that offenses committed by HKSAR citizens or bodies outside of the HKSAR violate the SNSO.

The vague and ambiguous application of the SNSO, alongside the deteriorating rule of law, can increase risks for foreign businesses in the HKSAR. Many businesses are still debating how to interpret the SNSO. Anticipated additional costs for liability and compliance evaluation are resulting in consultancies avoiding HKSAR government projects altogether due to the legislation's vague definition of "state secrets" ([CNA](#), March 20). The wording of the SNSO suggests that if part of a business operates in Hong Kong, any other part of the business—including those parts outside the territory—are beholden to the legislation (Section 14). Other businesses anticipate shuttering their operations in the city should the risks prove too high ([Reuters](#), March 22).

The HKSAR's extraterritorial clauses double down on the PRC's attempts to shape human rights and international law abroad and could lead to further transnational arrest operations like the infamous Operation Fox Hunt. (see [China Brief](#), May 13, 2022; [Safeguard Defenders](#), April 16).

### **The SNSO's Impact on Human Rights Diplomacy**

The HKSAR participates in human rights diplomacy through its role as a member of international organizations, or as a subsidiary to the PRC's membership in organizations such as the UN that require sovereign states' memberships. This is the case despite HKSAR foreign affairs and defense matters falling under the purview of the PRC, as the city does not have its own official diplomatic arm, as stipulated under the HKSAR Basic Law.



The HKSAR has recently taken on a harsher and more proactive stance in response to criticism (see, for example HKSAR, April 20: [English](#), [Traditional Chinese](#)). This includes targeting international media outlets, ignoring UN experts, and even condemning states for changing their own policies regarding how they interact with the HKSAR. This demonstrates an increasing similarity with the PRC's own concerning approach to human rights diplomacy.

The HKSAR and PRC governments employ several identical narratives in rebutting external criticism. "Whataboutism," by which criticisms are answered by leveling similar criticisms in return, has long been a technique used by the PRC. Recently, the HKSAR responded to the U.S. Department of State's publication of its Country Report on Human Rights Practices by arguing that the United States "will only expose its own weakness and faulty arguments and be doomed to fail" (HKSAR, March 30: [English](#), [Traditional Chinese](#), March 30). This response would have been unimaginable just a few years ago.

Characterizing the overall international human rights discourse as derivative of "Western hegemony" is another common narrative. The framing has been used by the PRC since the Mao era, where it was used in anti-imperialist rhetoric. Deng Xiaoping elaborated on the concept, for instance at the New International Economic Order at 6th Special Session United Nations General Assembly in 1974 ([CCP Members Net](#), September 28, 2015). Since the end of the Cold War, the PRC has used the term to refer to North American and European countries. While "hegemony" is understood to usually refer to predominance in political, economic, and military matters, the Chinese term (霸权) specifically includes the negative connotation of forcing others to accede to one's preferences.

In 2023, the PRC sent Vice President Han Zheng (韓正) to the United Nations General Assembly, where he tried to frame the PRC as the new leader of the Global South, and as an alternative to "hegemonism, power politics, unilateralism, and Cold War mentality" ([Ministry of Foreign Affairs of the PRC](#), September 22, 2023). Party media have also framed Beijing's recent Foreign Relations Law as a tool to fight against "Western hegemony with unilateral sanctions and long-arm jurisdiction" (see [Global Times](#), June 28, 2023). The HKSAR has started to follow this narrative in its response to a recent U.S. State Department report, the "2024 Hong Kong Policy Act Report." A government press release complained that the report was compiled "to serve the political purpose of maintaining the U.S. hegemony" ([HKSAR](#), March 30). In that vein, any attempt to condemn Beijing is seen as an exercise of Western hegemony.

The PRC insists that the issue of human rights has been politicized and used to impede its development. As a result, it has established the concept of "human rights with Chinese characteristics." HKSAR press releases now include phrases such as "false reports" and "fake news" to condemn what they view as the Western media's hegemony over the information space (for example in [HKSAR](#), March 6).

The PRC has engaged diverse groups to support its agenda. This includes developing countries, many of whom are members of the Belt and Road Initiative (see [China Brief](#), February 2). The HKSAR has also established government-organized NGOs (GONGOs) to engage in recent human rights reviews at the UN.

These entities, recognized at the UN level, are allowed to present independent evaluations to UN bodies. However, their reports predominantly endorse the narratives of both the HKSAR and PRC. The use of GONGOs is particularly noticeable when UN committees assess the PRC's adherence to the treaties it has ratified. According to the UN database ([ECOSOC](#), undated), as of 2023, there are 102 accredited NGOs from mainland China, Hong Kong, and Macau.

Of these, 48 have gained United Nations Economic and Social Council (ECOSOC) accreditation status since 2018 and more than half of them are GONGOs, which means they are overseen by government ministries or Communist Party bodies or have current or former Party or government officials in leadership positions.

No HKSAR pro-democracy NGO has been able to gain accreditation at the UN and many have refrained from making applications under the current circumstances. [1] Applications can be blocked by votes in the Committee on NGOs, where the PRC is a member, and where most other members have not been critical of the PRC's human rights abuses. It is rare for a motion to be raised to revisit the evaluations made by the NGO Committee. Reprisals for NGOs and activists seeking to engage in the UN process are also common. The HKSAR has not dispelled such a possibility and the UN High Commissioner for Human Rights has warned of human rights organizations being discouraged from engaging with UN bodies due to the newly enacted SNSO ([United Nations](#), March 19)

### **The SNSO's Impact on Hong Kong**

The SNSO signifies more extensive and direct control by the PRC over Hong Kong. The NSL, written and approved in Beijing without any input from Hong Kongers, marked a significant shift in this direction. Three new institutions were also established and staffed either exclusively or in part by people from the PRC with mandates to support the implementation of the NSL. The SNSO takes this even further by also introducing the PRC's definition of "holistic national security" into domestic law ([China Brief](#), March 1; see also, [China Brief](#), April 26). The term is defined so broadly as to constitute a systematic reduction of the HKSAR's high degree of autonomy and marks a worrying new chapter in the HKSAR's human rights diplomacy.

Since the introduction of the 2020 NSL and the damage to domestic civil society, NGOs based overseas have been the only organizations that appear willing to act as watchdogs. However, their inability to observe developments on the ground limits their efficacy, as does their branding by the HKSAR as "anti-China organizations". The SNSO exacerbates these trends. For instance, as a result of restrictions on press freedom, Radio Free Asia officially closed its HKSAR bureau after 28 years in the city ([Radio Free Asia](#), March 29). Aleksandra Bielakowska, Advocacy Officer for Reporters Without Borders, was also denied entry into the city, where she was planning to attend the court hearing for Jimmy Lai, the HKSAR media mogul currently on trial for political charges. Instead, she was detained for six hours, searched, and questioned before being deported ([RSE](#), April 10). The PRC remains in the bottom ten countries for press freedom, according to Reporters Without Borders ([RSE](#), accessed May 7).



## Conclusion

The introduction of the SNSO signifies a shift in the HKSAR's political landscape and its human rights diplomacy. The PRC now has a much stronger hand in the territory's governance. With the erosion of the rule of law and judicial independence, the legislation not only infringes upon HKSAR's autonomy and its fundamental freedoms, but also threatens the rules-based international order.

The PRC and HKSAR governments continue to violate international law with impunity and assert that domestic laws can be applied within other jurisdictions, violating those jurisdictions' sovereignty. This erodes international legal norms and the international order more broadly. It also risks providing a playbook to other governments who may be emboldened to follow suit. The consequences of inaction to protect human rights and to respond to human rights diplomacy in this case could be far-reaching and deleterious for the global civic space, businesses, and for external countries' jurisdictions. As such, these developments should not be viewed in isolation.

The HKSAR and PRC have faced very few consequences for their violations of international law to date. For instance, the U.S. Department of State's response to the SNSO only extended to updating their travel advisory for Hong Kong and announcing that it is "taking steps to impose new visa restrictions on multiple HKSAR officials responsible for the intensifying crackdown" ([U.S. Department of State](#), March 29). The lack of meaningful response is likely to embolden the HKSAR or PRC, perhaps including action in the South China Sea or over Taiwan.

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## Notes

[1] Based on the authors' own experiences and observations.