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China's Challenger to Boeing and Airbus Clears Major Hurdle

'Type certification' of C919 is big step for Beijing's aviation ambitions, but experts say it will be years—if ever—before it can take significant market share



By [Rachel Liang](#) [Follow](#)

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SINGAPORE—China's first narrow-body jet has cleared a major regulatory hurdle to begin carrying passengers, marking both a big step forward in Beijing's ambitions to challenge the duopoly of Boeing Co. [BA -3.39%](#) ▼ and Airbus SE, [EADSY -0.51%](#) ▼ as well as a reality check for how far it still has to go to close the yawning gulf between them.

China's leader Xi Jinping met with a team behind the C919 project on Friday, state-owned Xinhua News Agency said, adding that the airliner had received its "type certificate" from the Civil Aviation Administration of China this month. Under CAAC regulations, the type certificate is the first in a set of three and is a major step toward manufacturer Commercial Aircraft Corp. of China, or Comac, delivering the jets to its customers.

In the meeting hosted at the Great Hall of the People in Beijing, Mr. Xi said the project shouldered the country's dreams and called for pooling national resources and strength to

conquer core technologies, Xinhua reported.

The C919 project dates back to 2007, gathering momentum from a 2014 visit by Mr. Xi to Comac, the civil aviation group carved out of China's sprawling military-industrial complex. China would never be a true power, Mr. Xi declared then, until it built its own commercial airliner. A year later, Beijing launched its 10-year strategic "Made in China 2025" policy to reduce reliance on foreign suppliers and increase domestic design and engineering capacity in high-tech industries such as semiconductors and aircraft manufacturing.

The self-designed and assembled airliner seats up to 168 passengers with a maximum range of about 3,450 miles—putting it in the short- to medium-haul category of jets that are the workhorses of global aviation.

Comac will also need to secure a CAAC certificate to mass-produce the aircraft, and an "airworthiness certificate" for each jet. State-owned China Eastern Airlines Corp. will take delivery of the first C919 this year, Xinhua said. The airline is set to take delivery of four more of the aircraft in 2023, according to an earlier company announcement.

With a price tag of about \$99 million, the C919 is cheaper than Airbus's A320neo jets that the airline bought in July at an average cost of around \$128 million. Apart from pricing, factors for airlines when buying aircraft include their reliability and safety record, which take years to build, and operating costs.

With China Eastern Airlines and government-backed aircraft leasing companies committed as early buyers, the C919 is assured a ready-made market, especially as its success is tied to national prestige as well as the reputation of the country's Communist Party rulers. The certification announcement comes as the Party prepares to meet for a congress at which Mr. Xi is all but certain to secure a third term in power.

The scale of China's aircraft needs means Comac can only cater to a fraction of demand, with three state-owned Chinese airlines agreeing in July to buy almost 300 jets from Airbus for around \$37 billion. The country's commercial fleet will double in size by 2041, with 8,485 new airplanes needed, Boeing said earlier this year. Narrow-bodies would make up the bulk of the market, it said.

While years of work have seen China improve its ability to manufacture some components for the jet as well as to assemble the finished product, analysts say the C919 remains reliant

on foreign suppliers for core parts. They include components that enable the plane to remain safely in the air—including the engines and key flight and safety systems, making the project vulnerable to any sanctions from the U.S., which has previously targeted China's tech sector.

Having the first C919 ready is just the first step in China's long march toward self sufficiency—let alone the ability to challenge for global market share.

Comac will need at least a year to smooth out its mass production process for the C919, as well as to train crews, mechanics and build out other services for airlines, said Wang Yanan, a China-based aviation expert and an editor in chief of a local aviation magazine.

“For the airlines operating the new aircraft, it could be a bumpy start,” Mr. Wang said, but Comac should be aided by the fact that most of its suppliers are based in China.

Without the ability to quickly build a fleet at scale, domestic airlines are unlikely to be able to operate the C919 profitably, said Alex Krutz, an analyst at Patriot Industrial Partners, an aerospace consulting company.

That would mean more pressure on an industry already feeling the drag of China's zero-Covid policies, rising costs and a softening economy. In the first half of 2022, China's three biggest airlines logged a combined net loss of \$7.1 billion due to surging fuel costs and the drastic drop in travel led by the country's zero-Covid policy.

Still, even with the active support of central government policy, and growing geopolitical tension between China and the West, most experts don't see the C919 taking a big slice of the domestic market in the next decade. The U.S. may have seen its national champion Boeing suffer as China has kept the Boeing 737 MAX grounded since March 2019, following two fatal crashes elsewhere, but state-owned airlines still turned to rival Airbus for their long-term fleet renewal.

“I don't think the C919 will fill that gap, even though there's going to be a need for more aircraft,” said Scott Kennedy, a senior adviser at the Washington, D.C.-based think tank the Center for Strategic and International Studies who specializes in Chinese industrial policy.

Access to the international market remains an even more distant prospect. Without certification from the U.S. or European regulators, the exports of the C919 to other countries would be restricted.

Even before C919, China's commercial-plane makers have struggled to close the gap with Western aerospace giants, despite significant state support.

In 2016, China's first home-built passenger airliner, the ARJ21 regional jet, entered commercial service, a decade later than originally planned due to production setbacks. The aircraft also hasn't received U.S. or European certifications. Meanwhile, an earlier Chinese passenger plane, the MA60 twin-turboprop based on an old Soviet design, has had tepid sales and a service record marred by a number of accidents at home and abroad.

For the C919, Comac has been working to increase the percentage of domestically made components, as part of the drive to improve indigenous technology. China's Premier Li Keqiang set a principle when the central government approved the project that the industry should do its own design and system integration using global sourcing, with the aim of eventually realizing "Made in China." While most parts are now made within China, core components rely on foreign companies based in the country.

The continued reliance on non-Chinese technologies, however, poses a risk to the project at a time of potential technological decoupling between China and the West.

The U.S. has long accused China of seeking to steal advanced technologies for use in its military—repeatedly denied by Beijing—and already restricts exports of key technologies, including precision machine tools and semiconductors needed in modern aircraft manufacturing. Such accusations are increasingly resonating among Washington's allies and leave the C919 vulnerable to possible sanctions or restrictions on exports of parts.

"If the U.S. were to place major components of the C919 provided by American suppliers on the Entity List, it could put the plane's future in doubt," Mr. Kennedy said.

Corrections & Amplifications

An accompanying photo shows a C919 jet at an air show in Nanchang in 2020. An earlier version of this article incorrectly had the year as 20202. (Corrected on Sept. 30)

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