

CHINA BUILDING LARGE PASSENGER PLANES

YANG Mu & WENG Cuifen

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Executive Summary

1. China is developing its first domestically produced large passenger plane, the C919, to compete with Boeing 737 and Airbus 320 in the global aircraft market. The first 100 orders for C919 were announced at the Eighth Zhuhai Air Show in 2010.
2. Buyers include the General Electric's aircraft leasing arm and major Chinese airlines. C919 is scheduled to make its maiden test flight in 2014 and to enter the market two years thereafter.
3. The C919 plane will be produced by Commercial Aircraft Corporation of China (COMAC) in conjunction with a global network of component suppliers. While COMAC is responsible for the assembly, research and development, marketing, and post-sale services, the manufacturing of the plane has been subcontracted to external suppliers, both domestic and foreign.
4. The fuselage of C919 is subcontracted to local manufacturers such as Xi'an Aircraft Industrial Company, Chengdu Commercial Aircraft Corporation, and Shenyang Aircraft Industrial Corporation. Major systems and equipment of the plane will be supplied by foreign companies in joint ventures with related units of the Aviation Industry Corporation of China (AVIC).
5. Shanghai is the industrial base for C919, making it the leading national civil aircraft manufacturing base in China. In the past two decades, China has focused on components subcontracts for foreign aerospace manufacturing enterprises. The launch of the C919 program shows that China has finally decided to develop its own large airplanes with independent property rights.
6. The backwardness of Chinese aero-engine remains the major bottleneck for the C919 program and the Chinese aviation industry as a whole. China does not have the technology to develop an aero-engine for C919, which will thus

be built around the aero-engine LEAP-X1C provided by CFM, a joint venture between GE Aviation of the US and Snecma of France.

7. AVIC Commercial Engine Corporation has proposed two models of turbofan engines for C919 so far. But both models are still at the preliminary stages of development.
8. The major advantage of C919 is the potentially high demand from the domestic market and the relatively low production cost. Apart from the aero-engine problem, the C919 program is also facing numerous other challenges. China lacks both key raw materials and techniques to produce composite material for its aircraft.
9. Competition is also keen. COMAC has to compete with the duopoly of Boeing and Airbus. There is also the concern about the quality and safety of Chinese-made aircraft. Even China's own airlines prefer imported aircraft.