

# COMAC, Shanghai, China

## Immersive ground floor training for a high-level job

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*Mr. Zhenwei Wang, minister of pilot training department at COMAC Shanghai Aircraft Customer Service Co., Ltd*



Looking for ways to optimize and enhance the day-to-day training of its aerospace engineers, the Commercial Aircraft Corporation of China (COMAC) has chosen Barco to provide an immersive simulation and virtual reality system in its subsidiary customer service company, which also named Shanghai Aircraft Customer Service Co., Ltd. The customized solution, which consists of Barco's HoloSpace L-shaped stereoscopic environment and five Galaxy NW-12 active 3D stereo projectors, is the first virtual reality installation in China's commercial aviation industry. In addition, by special request of the customer, the training area can be used as a conference- and reporting room for the Management.

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## Customer

Commercial Aircraft Corporation of China Ltd (COMAC)  
Shanghai Aircraft Customer Service Co., Ltd  
Industry: Commercial aviation  
Website: <http://english.comac.cc>

## Challenges and objectives

- Providing aerospace engineers with a simulation and virtual reality training system for daily practice.

## Barco solution and services

- Hologspace L-shaped stereoscopic environment
- 5 Galaxy NW-12 active 3D stereo projectors

## Why Barco

- High quality of the products
- Versatility of the system
- Customized solution from design to implementation



The state-owned Commercial Aircraft Corporation of China (COMAC) was established in 2008 with the mission to build large commercial aircraft. Since then, a team of dedicated engineers has worked hard on designing and testing the ARJ21, a regional jet, and the C919 short-medium range commercial trunk line. The development and testing process involves a wide array of engineering and design challenges to ensure the ultimate quality and safety. Intensive training is, therefore, of utmost importance.

It is crucial for engineers to be able to visualize and analyse the complex mechanical set-up of aircraft. Yet, hands-on aircraft training is often a very costly and inconvenient undertaking. Moreover, the opportunities to handle real-life situations are – luckily – few and far between. To handle these issues, COMAC looked into the possibilities of simulation and virtual training. It soon teamed up with global visualization expert Barco to develop a customized solution for daily practice for aerospace engineers, including assembly, disassembly and maintenance.

## Full immersion

After identifying COMAC's needs – which included virtual training as well as meeting and reporting systems – Barco proposed a solution consisting of a Hologspace L-shaped stereoscopic environment, five Galaxy NW-12 active 3D stereo projectors and state-of-the-art assembly software applications. Three screen types have been installed – main, floor and side – on which the interior design of the aircraft and engineering training information are displayed on a 1:1 scale, providing users with a life-like, physical environment in which to enhance their skills.

## Dual-system scenario

The virtual display system allows training of up to four people at once thanks to its stereoscopic environment with broad visual field and interactive operating scenarios. In addition, the Hologspace can also be used as a conference- and reporting room for experts and the company's Management.

## Unique in the industry

"In China's commercial aviation industry, we are the first to integrate simulation and virtual reality technology into the training program," says Mr. Zhenwei Wang, minister of pilot training department at COMAC Shanghai Aircraft Customer Service Co., Ltd. "Based on leading design and rich installation experience, the Barco system provides full immersion into life-like physical environments and helps us improve our existing operation expertise significantly."

"Covering project design, application and installation, Barco proved to be the best partner for this project from start to finish," Ms. Qiang added. "We are very happy that our requirements for the different applications were met and are very satisfied with the result."