

China's High-Speed Rail Dream

An Interview with Cui Dianguo,
Chairman, CRRC Corporation Limited



Cui Dianguo

EDITORS' NOTE Cui Dianguo graduated from Xian Jiaotong University in 1982. He has successively held the posts of the Director of Dalian Locomotive Research Institute, the Deputy Chairman of Dalian Locomotive and Rolling Stock Co., Ltd., the Vice President and Chief Engineer of China Railway Rolling-stock Industry Corporation, the General Manager of China CNR Group, and also the Chairman of China CNR Corporation Limited. At present, he holds the position of the Chairman of CRRC Corporation Limited, and also the Vice Chairman of China Internal Combustion Engine Industry Association, the Standing Director of China Railway Society, and the Vice Chairman of China Association of Enterprises and China Entrepreneur Association. As the main organizer and academic leader in the technological innovation and product upgrading and updating of China railway transportation equipment, Cui Dianguo enjoys special government allowance from the State Council. He successively won "First Prize of the 17th National Level Business Management Modernization Achievement Reward," "Achievement Prize of the Tenth Jeme Tien Yow Railway Science and Technology Award," "Top Ten Persons of the Year 2010 China Enterprise Innovation," "National Excellent Entrepreneur," and other honorary titles. In 2014, he won the highest prize of China business management, "Yuan Baohua Business Management Gold Award."

COMPANY BRIEF Merged and established by CNR Corporation Limited and CSR Corporation Limited according to the principle of reciprocity, CRRC Corporation Limited (en.chinacnr.com; CRRC) is an A+H stock listed company and was found on June 1, 2015. It has 46 wholly owned or holding subsidiaries and more than 170,000 staff. Its head office is in Beijing. Inheriting the whole business and assets of

CNR Corporation Limited and CSR Corporation Limited, CRRC is the largest scale of railway transportation equipment supplier in the world with the most complete range of products and leading technology. High-speed EMU manufactured by CRRC has become an important showcase of China's development achievements to the world. Its entire serial products have been exported to nearly 100 countries and on six continents. Now, it is changing from product export to technology export, capital export, and global business gradually. In the future, CRRC aims at mixing the world and surpassing expectations, carrying out the development strategies of internalization, diversification, and collaboration, and continuing to build CRRC into a leading global high-end equipment system solution provider focusing on railway transportation equipment.

In recent years, the rapid catch-up of China's high-speed rail industry has attracted the attention from all over the world. The determination to develop China's own high-speed rail had emerged since Deng Xiaoping experienced the Shinkansen during his visit to Japan in 1978. Since then, it took 30 years for China to finally open its first high-speed rail in 2008. What are some of the remarkable stories throughout this process?

The primary reason for the development of rail transportation is that it addresses one of the basic human needs. In fact, with a rich and long history, China's railway manufacturing industry gave birth to China's modern industrialization. From the earliest Tang-Xu Railway that enabled exports from Kailuan Coal Mine to the Peking-Kalgan Railway designed by pioneering engineer Jeme Tien Yow, China had its own railway manufacturing and repairing plants even back then.

One of the most important characteristics of the development of China's rail transportation is the complete self-design and production of all the related equipment, which is very different from other industries. Unlike the imported automobiles and planes in China, China's railway is completely designed and made on our own. It has satisfied the demands of China's development of railway and the construction of the cities over these years.

The trajectory of China's high-speed rail development follows the life cycle from independent R&D to the introduction of foreign

technology, joint design, and production, and eventually to building up our own brand. As you mentioned, Deng Xiaoping's visit to Japan in 1978 set up new goals for further development of China's railway equipment industry, which is what we now refer to as the "high-speed rail dream." Everyone in the sector has been working hard to realize this dream. I have been in this industry ever since I graduated from college in 1982. In the first few years, we relied entirely on ourselves for R&D, innovation, and manufacturing with the hope of making our high-speed rail dream come true. The process was really difficult with numerous trials and errors, but our technical team, equipment, and experimental conditions all improved substantially.

After 2004, in response to the trend of global resource sharing, China's policy became more open and well defined in order to accelerate the construction of China's high-speed rail. By introducing advanced foreign techniques, establishing partnerships for joint design and production, and exchanging resources, we have mutually achieved market expansion and eventually created China's own brand called "Harmony." To promote our own innovation, I believe we have been on the right track of introduction, digestion, integration, and export.

In addition, the high-speed rail technology advancement in China should also be attributed to huge market demand. China's high-speed rail has the highest operation mileage of any country with a total of 17,000 kilometers all over the world. In fact, the market demand not only required coverage as manifested by the mileage record but also motivated us to develop products that can satisfy the needs of a variety of geographic conditions such as separate temperature levels and elevations, which other countries may lack.

Do you find that creativity is usually driven by restrictions or limits because you have to find another way out?

Correct. Our technique development results exactly from the challenges of the natural environment and the demands of both our current reality and the future. Thankfully, we made some progress and thus earned worldwide respect.

As you said earlier, China's railway sector has had a transition from complete self-reliance to its current cross-border collaborations. What changes in vision are necessary for Chinese entrepreneurs during the marketization and globalization process?

High-Speed Rail from Beijing to Shanghai on Yangcheng Lake

We are now facing an open market and society. The development of the Internet and other advanced technologies interconnects people, countries, and industries, which provides a platform for our utilization of global resources. Personally speaking, I would like to regard the development of China's rail transportation as a significant landmark for China's entire advanced manufacturing industry rather than only for the rail industry itself. I noticed that the products made in China are very prevalent in the foreign countries, but they are usually labeled as cheap and low-end. We are determined to change the stereotypical image of China's products by promoting our high-speed rail with the most advanced techniques and the highest quality.

“Made in China” is nothing but a label indicating China as the place of manufacturing, yet “Created in China” is a true symbol of the quality of China's brand. How do you understand both concepts in the era of globalization?

First, we should not interpret “Made in China” in a narrow sense. For any country in the world, high-end equipment manufacturing reflects the country's overall strength and industrialization level. For example, Boeing represents the advanced level of the manufacturing industry of U.S., BMW is one of the representatives of the German equipment manufacturing, and Japan's automobile manufacturing has advanced characteristics of fuel economy and light weight. Since we have such huge market demand, high-speed rail should grow into excellence in order to represent the Chinese high-end equipment manufacturing industry. We are approaching that goal given that our production scale, R&D, and technology levels have all reached a top-tier standard. Therefore, “Made in China” can also be turned into a well-received national brand.

Of course, it would be too general to understand the concept of “Created in China” if we solely define it as the manufacturing industry. However, if we talk specifically about the high-end equipment manufacturing, we can see a whole lifecycle from the introduction of existing technology, to digestion and absorption, and on to innovation; basically, from following the trend to eventually starting to lead it. From my perspective, the concept of “Created in China” shall be realized through leading the whole industry. When we stand at the front of our field, then we should lead its development and push it forward globally; that can be

called creation. In the context of globalization, we definitely hope to expand our market by launching our high-end equipment manufacturing technology worldwide and helping to generate a multiplier effect in other countries – just like the four great inventions in ancient China, which have already become the common heritages of human beings.

Since competition plays a crucial role in a market economy, why should corporations unite today?

We might understand our merger from three perspectives. First, from a national development strategy perspective, it is the Chinese Dream. In this dream-chasing process, some industries and companies have to stand at the cutting edge, representing the development of China. After more than a decade, CSR and CNR have both reached world-class status through technology transfer and consistent R&D efforts. Under such circumstances, the regrouping of the two companies will generate a more powerful and competitive brand representing China. One vivid example of this strategy is that, when visiting other countries, our political leaders have always helped market our high-speed rail technology and product.

Second, from an industry perspective, the merger gave birth to the largest company in the railway industry, just like the merger of Boeing and McDonnell Douglas did for the aircraft industry, which yielded substantial economies of scale, lifted their voice, and changed the dynamics of whole industry to some extent. We would definitely like to have more leverage in the process of setting industry standards, developing industrial technology, and acknowledging future trends.

Third, from the enterprise's perspective, the benefits outweighed potential drawbacks. Previously, since the two groups formed their own development systems that unexpectedly caused problems such as overcapacity, vicious competition, and repetitive construction. Also, the construction of subway lines does not entirely follow market rules for perfect competition due to its government procurement process. In that sense, local authorities may often propose preconditions for corporate investors such as employment creation, investment opportunities, and local plant construction. This could have easily led to redundancy if we continued the CSR-CNR separation. Therefore, I believe the combined company will not only empower us with stronger R & D capability and

more competitiveness but will also engender optimized allocation of resources to address the problem of overcapacity. This is a huge benefit for both the industry and the enterprises.

Could you share the relationship between CRRC's internationalized strategy and China's “One Belt, One Road” strategy?

There are three main goals of CRRC: multinational operation, worldwide industrial leadership, and a high technical level. We have sold our products to hundreds of countries and regions so far, but mainly on the export side; we are still lacking influence in global resource allocation and operational process. We have more than 5,000 people working overseas on manufacturing and research. Compared to our total count of 180,000, the ratio is quite low compared with other multinational corporations. We hope that we will be able to get more involved in global resource allocation to better utilize foreign resources. We also hope to market both our products and technologies globally, as well as to localize our production to create more employment opportunities and integrate different cultures. For example, we invested in constructing our factory in Boston, which offered 150 jobs during the first phase. Going global is an essential part of our long-term development strategy, and we will work towards it under the guidance of our nation's 13th five-year plan.

As for China's “One Belt, One Road” strategy, we regard it as an encouragement for global production cooperation. Is there any contribution that can be made by CRRC to China's goal of “going out”? We certainly think so. No matter whether it's the old Silk Road or the new Silk Road, the neighboring countries have always been important markets and partners for us.

The idea of “One Belt, One Road” was brought up by the Chinese government and it will give China an advantage and more time to take on other responsibilities. This is very important for our industry. There are a lot of infrastructure construction in China's “One Belt, One Road” strategy to promote economic development. In fact, China has already had a series of actions to improve our transportation network. Collaborating with our local partners, CRRC will seek opportunities for development of both local communities and CRRC itself. Besides, CRRC has competitiveness quality, techniques, and cost effectiveness, which help us stand out in the market. ●