Just a year and a half after taking up his position as president of Nankai University, former president of the Chinese Academy of Medical Sciences Cao Xuetao has no doubt he made the right decision.

In January 2019, President Xi Jinping visited the university’s campus in Tianjin, northern China. He toured Nankai’s 100-year anniversary exhibition, which showcased its historic achievements as a center of learning, and delivered a speech emphasizing the importance of both basic and cutting-edge research. It seems that Cao’s ambition to transform Nankai into a state-of-the-art research hub that attracts global talent is in line with the President’s vision.

Deeply aware of the university’s distinctive place in China’s educational system, Cao plans to build on Nankai’s reputation for excellence with a series of reforms, including the establishment of 10 interdisciplinary research centers and 10 international research centers that partner with overseas institutes.

“President Xi praised one of our founders, Zhang Boling, who was influential in developing higher education in China and provided the basis for the development of China’s new university system. I want to continue that visionary tradition,” says Cao.

A proud history
Nankai University was founded in 1919 as one of China's first private universities by education pioneers Yan Xiu and Zhang Boling, and produced the republic’s first premier, Zhou Enlai. Famous alumni have also included the winner of the Wolf Prize in Mathematics Shiing-Shen Chern, playwright Cao Yu, and aerodynamics scientist Guo Yonghuai.

In 1937, the campus was bombed by the Japanese army, and the faculty was forced to relocate to Kunming in southern China, where it merged with Peking University and Tsinghua University to form the National Southwest Associated University until 1946, when it returned to Tianjin.

“The eight years in Kunming was a proud period in Nankai’s history: Not only was education preserved in wartime, but the university also nurtured a large number of important and influential leaders and scholars who contributed significantly to their fields and to society,” says Cao.

After the establishment of the People's Republic of China in 1949, Nankai reopened as a comprehensive university.

Growing influence
Over the past decade, the university’s reputation has continued to grow. According to the Science Citation Index, Nankai’s researchers have been published 12,564 times and cited 210,847 times in the world's most consistently high-impact journals.

“This makes Nankai the most highly cited university in China in cumulative terms, as we average 16 citations per paper,” says Cao.

As a comprehensive research university, Nankai’s 26 colleges cover a balanced representation of humanities and science disciplines, including the natural sciences, law, medicine, and art. Among these subjects, seven disciplines stand out as top performers in their fields: chemistry, mathematics, history, economics, statistics, materials science, and business administration.

In September 2017, Nankai was chosen to become part of a nationwide higher-education initiative called Double First Class—a program to accelerate the rate at which China's top universities develop their core areas of expertise and improve the quality of their research, in order to become world-class educational and research hubs.

Nankai has “12 research areas ranked in the top 1% of their fields worldwide according to Essential Science Indicators,” says Cao, including chemistry, mathematics, materials science, physics, engineering, environmental science and ecology, biology and biochemistry, molecular biology and genetics, clinical and medicine, pharmacology and toxicology, agricultural sciences, plant and animal science.

“During President Xi’s visit, he praised the university as an institution that cultivates leading academic talent, and offers a delightful academic environment and an impressive, patriotic education. He also encouraged professors and students to work for a greater cause and to step up their endeavor to help Nankai become a world-class university. This is precisely the vision I hope to support,” Cao says.

Nankai has always been known for its dedication to serving the wider needs of China and its people, adds Cao. In the 1950s, university president Yang Shixian changed his research focus from pharmaceutical chemistry to pesticides to help ensure the country’s food security during a period of economic uncertainty.

Looking to a bright future
Cao has ambitious plans for the university that start with launching the 4211 New Nankai Excellence Initiative—a program to bolster the development of four research areas: social sciences, natural sciences, engineering, and biomedical sciences.

In terms of engineering, during the past two years, Nankai has launched four new engineering schools in the areas of artificial intelligence,
cyberspace security, statistics and data science, and materials science. In May 2019, the faculty set up the CAMLINK station—a collaboration between Nankai University and the University of Cambridge that aims to attract talent from the United Kingdom to work more closely with their Chinese counterparts. This new partnership marks the deepening of research relations between the two famous universities. A three-day international seminar launched the research platform and included talks on subjects such as solar energy and lithium battery materials, photoelectric materials, and the application of artificial intelligence in materials science.

In the area of biomedical research, the university has forged an alliance with 12 hospitals in Tianjin City. It is also in the process of setting up international joint research centers in the fields of medicine and biological sciences with the University of Oxford and the University of Birmingham, respectively.

Cao, who is also an immunologist, says he wants to create a state-of-the-art pharmaceutical R&D system at Nankai: “I'm interested in fostering a culture of interdisciplinary health research and integrating teaching, research, and medical practice.”

Cao also feels that the university could benefit from the cross-fertilization of ideas between the liberal arts and natural sciences. Moving forward, the university will focus on “macro-research topics,” such as ecological civilization, big data, and media convergence, he says.

“These specialized topics will make the most of Nankai’s status as a comprehensive university,” he observes.

A global network
A cornerstone of Cao’s planned reforms is to build Nankai into a global academic leader, with the launch of his “Global Nankai” initiative. To ensure the university’s visibility on the world stage, research will focus on issues of global importance; the university will establish a global network of research partnerships; and staff and students will be encouraged to become more globally minded.

An essential element of Cao’s plan is to encourage more prominent scholars, academic leaders, and talented scientists from abroad to work and study at Nankai.

A new program called “Studying in Nankai” aims to increase the number of international students. There are also plans to enhance the attractiveness of campus culture by improving salary levels for faculty, enhancing the quality of research facilities, and improving the management of everyday services.

“We will make this a world-class university, combining Nankai’s character and Chinese attributes,” he says.

Cao went through some basics of China’s higher education system with us. In recent decades, the system has expanded quickly, with dramatic results. The government is investing 4% of GDP per year in education. The number of students in higher education is now 37.8 million—one-fifth of the total number of students in the world. Between 2012 and 2018, the number of Chinese universities ranked in the top 500 by Times Higher Education increased from 10 to 72, while the number of universities grew from 91 to 246.

“Now China’s higher education is developing from a model of scale expansion to a model of quality improvement and structure optimization,” says Cao.

He points to a recent collaboration with the University of Glasgow as an example of how to create a global academic atmosphere that produces first-rate students who are equipped to contribute to society at large. The newly established two-year postgraduate dual Master’s qualification provides students with degrees from both universities.

Anniversary celebrations
In October 2019, Nankai University will celebrate its 100-year anniversary. Alumni from all over the world will return to Tianjin to celebrate the university’s achievements with a series of lectures, workshops, and social events, during what Cao believes will be a remarkable occasion.

Since joining the university, Cao says he’s learned a great deal from his talented colleagues.

“I’ve fallen in love with Nankai,” he says. “I’ve learned so much, not only about its history but also about the research being done here. Our faculty members are the most important asset of this university, and I want to create an academic atmosphere that is conducive to top-quality research and worthy of their talents.”