

CENIT Japan KK

German company CENIT, a software and consulting firm for the manufacturing industry and financial service providers, established CENIT Japan KK in Tokyo in July 2011. The company aims to build smart factory systems that enable its customers to monitor their overseas factories from their primary factories in Japan and to respond immediately to any problems that may occur. Yoshiaki Higashi, who is the country director and serves as the President of the Japanese subsidiary, tells the story behind CENIT's incorporation in Japan and its business development.

CENIT Japan KK, the Japanese subsidiary of CENIT headquartered in Stuttgart, Germany, was established in Tokyo in July 2011. Founded in 1988, the parent company CENIT is a global company that has 17 offices in six countries in Europe, North America and Asia with about 700 employees worldwide.

CENIT is engaged in IT software development and consulting, primarily for manufacturers and financial service providers. It places special emphasis on the development of software that makes it possible to predict equipment failures through 3D simulations of entire factories. The company received subsidies from the German government for the development of 3D simulation technology to be used in automated aircraft assembly. This technology was used for experimental studies with Daimler to build fully automated factories for car manufacturing.

CENIT is also involved in research projects for Industry 4.0, a strategy by the German government to enhance the country's position as a leading nation in the global manufacturing industry by making manufacturing smarter through use of the Internet of Things (IoT).

Japanese subsidiary to collaborate with Japanese companies

In July 2011, CENIT established its Japanese subsidiary CENIT Japan KK in Minato Ward, Tokyo. Currently staffed with seven people including five engineers, the company customizes their software according to the



CENIT Japan's software product

needs of Japanese clients. According to President Yoshiaki Higashi, there were three reasons behind the establishment of the subsidiary. First, CENIT already had a track record in providing services to Japanese companies from its headquarters or via CENIT North America, proving that there was a certain number of customers in Japan. Second, more than half of global industrial robot makers and machinery manufacturers are Japanese, and Industry 4.0 could not truly be achieved without collaborating with them. And third, establishing a subsidiary in Japan was considered more reasonable than suddenly entering China's large market, taking into account elements such as human resources, business partners and intellectual property.

As the application of 3D simulation technology in production lines is yet to progress in Japan's manufacturing factories, CENIT Japan is working on spreading the technology to build smart factory systems in collaboration with Japanese companies. One of the objectives of a smart factory system is to enable

users to monitor their overseas factories from their primary factories in Japan and to respond promptly to problems as they occur.

CENIT has developed and commercialized the software "FASTSUITE Edition 2" to build virtual factories in cyberspace. Each virtual factory in cyberspace performs the same operations as the actual factory it is modeled after using actual data on factory equipment, products, processing and controls. The software conducts verification and analysis that is necessary before actual production and proposes an optimal production line based on the data collected via the network. Its aim is to improve productivity, reduce costs by decreasing the number of problems that can occur during the manufacturing process and eventually make factories fully automated in the future.

Emphasis on ease of use to differentiate the software from competitor products

CENIT's product is highly open and flexible in connecting to existing machines and software. "It is important that we can collaborate with as many hardware and software manufacturers as possible," says President Higashi. Indeed, developing software that can be used by any company in any country, ensuring compatibility with programming languages and network standards that differ from country to country or company to company, is the key to enhancing Japanese companies' competitiveness to expand their business globally. CENIT's manufacturing engineering software differentiates itself from its competitor products by adopting "object-oriented" user interface that enables any person to use it. The term "object-oriented" means that a computer shows available options to an operator by inferring what the operator needs to do next and prompting the person to perform the necessary operation. In other words, only necessary icons are shown on screen. For example, only an



Mr. Yoshiaki Higashi
President of CENIT Japan KK

input icon is shown on the data input screen, an icon to calculate data when data processing is necessary, or an icon for analysis when it is time to analyze the data. As its software updates do not affect the basic method of operation or icons, operations can be performed by anyone, anytime without the need of an instruction manual.

Experimental studies supported by JETRO's subsidy program

In June 2016, CENIT Japan was chosen for JETRO's "Subsidy Program for Global Innovation Centers," a project to support foreign companies in conducting IoT projects in Japan in cooperation with Japanese companies. As part of its project, in autumn 2016, CENIT Japan conducted experimental studies in partnership with HIROTEC Corporation, one of Japan's leading automobile body parts manufacturers headquartered in Hiroshima. HIROTEC not only manufactures automotive body parts, but also develops and designs molds and jigs. In the experimental studies, they built a digital equipment line to collect data by connecting a computer with equipment, such as robots and jigs, used for welding in the car door production line. They worked to build a 3D simulation system for the entire factory using the data collected from the equipment. The two companies met when they both participated in the JETRO event, "2016 International High-

Tech Business Matching in Hiroshima," and started talks on a partnership.

The system, when put into practical use, will make it possible to quickly work out in cyberspace the best responses to problems or emergencies that may occur at the actual factory. It will also enable predictions about potential equipment failures. Running simulations in advance helps shorten the time necessary to conduct machinery repairs or respond to emergencies. Quick installation of new production lines and swift replacement of existing lines will help Japanese companies survive in the global market, where a wide variety of responses are required, and further increase their global competitiveness.

Hoping to innovate Japan's manufacturing industry

Regarding the future of Japan's manufacturing industry, President Higashi predicts that "24-hour-fully-automated factories that can quickly respond to customer requests will increase in Japan in the next 10 years." These quick responses require mass customization where customized products can be manufactured at the same price and quality that mass production offers. Until now, customized products have required longer times and higher prices. However, "new production systems will be established where customized products can be manufactured in shorter periods of time with affordable prices and high quality," he explains. 24-hour fully automated factories will free Japanese companies from the need to expand their operations into foreign countries in search of cheaper labor costs. "For instance, even if you need to construct a factory in India to sell products in India, you can remotely control the factory from Japan. This system is suitable for Japan's manufacturing industry, which is required to maintain its competitiveness in the

midst of a declining population," adds Higashi. "Our software makes it possible to control overseas productions from Japan, instead of exporting products manufactured in Japan. This will eliminate trade friction while maintaining local employment." With this software, he hopes to bring innovation to Japan's manufacturing industry.

JETRO's support

CENIT Japan participated in JETRO's event "2016 International High-Tech Business Matching in Hiroshima" and carried out experimental studies with HIROTEC after having been selected for JETRO's "Subsidy Program for Global Innovation Centers." The president states that "the partnership with HIROTEC was an opportunity to make their suppliers, such as machinery and robot manufacturers, interested in the system, and talks about future joint projects with the suppliers are underway. JETRO's subsidy program helped us carry out our experimental studies to verify the application of the system to Japan's manufacturing industry. I hope that this is the first step toward spreading the system in the country."

(Interviewed in September 2017)

Corporate history

April 1988	Establishment of CENIT AG in Germany
2001	Establishment of CENIT North America Inc.
2007	Establishment of French subsidiary established
July 2011	Establishment of CENIT Japan KK in Minato Ward, Tokyo
Autumn 2016	Experimental studies with HIROTEC Corporation

CENIT Japan KK

Establishment:	July 2011
Business:	Developing IT software and providing services related to its use
Parent company:	CENIT AG (Germany)
Address:	Teiken Tokyo BLDG 8F, 2-17-13 Takanawa, Minato Ward, Tokyo 108-0074 JAPAN
URL:	http://www.cenit.com/ja_JP.html

Support from JETRO

- Participation in "2016 International High-Tech Business Matching in Hiroshima"
- Selected for JETRO's "Subsidy Program for Global Innovation Centers"