

Chapter 2 The Challenge of Becoming a Top Global Player

FY2012 - FY2021

FY2012- FY2015

Growth strategies aimed at becoming a global player

In April 2012, the 10th anniversary of Hitachi Industrial Equipment Systems, Co., Ltd. (HIES), President Nagano became an advisor, and Masakazu Aoki was named the third President.

Mr. Aoki called for the courage to take on new challenges, saying that not changing amidst changing global circumstances posed a risk.

In March 2013, the company formulated its 2015 Mid-term Management Plan with the management visions of becoming an optimal “Product x Solution” supplier in the industrial equipment field and stepping up to become a global player. It set a fiscal 2015 target of 180 billion yen in sales and a global business ratio of 30%.

Fiscal 2012

Strong measures for new business development and global expansion

Development of integrated services, sales, and manufacturing under Operation Jump Up 2015

In May, a celebratory event was organized by the company to mark its 10th anniversary and introduce the new system implemented by the newly appointed President, Masakazu Aoki. The event took place at the Imperial Hotel in Tokyo and was attended by 71 domestic distributors and 52 global sales companies. This gathering served as a gesture of appreciation and an opportunity to inaugurate the company's new era under the incoming President.

In addition, one year after the Great East Japan Earthquake, the rebuilt Tohoku branch office had been leading all-out efforts to restore the Ishinomaki wharf silo, which suffered devastating tsunami damage, as well as the Urban Renaissance Agency Tohoku (Sendai) and other customers who play a key role in local communities.

In business development, under the Jump Up 2015 Strategy, product competitiveness in the company's main businesses was strengthened and production capacity increased at the company's global supply bases, including motors and switchgears at Hitachi Industrial Technology (Thailand) LTD. (HITT) and inverters and compressors at Hitachi Industrial Equipment (Nanjing) Co., Ltd (HINC). In addition to strengthening its sales and service network, HIES focused on developing new business models in the services and engineering businesses, developing new energy-related products, and cultivating new businesses such as M2M wireless communications for industrial use.

Major business initiatives

In the compressor business, HIES expanded the number of dealers in Malaysia promoting the development of the company's brand. Sixty-six energy-saving checkups were conducted in China and Southeast Asia in the cyclical business. In Mexico, the company supported key dealers and successfully won orders from Japanese companies in the automotive industry.

Regarding products, the alternate operation controller (Dual Roller III) SDR-3 was released in August 2012 and the multi-unit controller Bebicon Roller (BR-1M) in October 2012. That was followed in December by the Hitachi Bebicon NEXT Series (11/15kW) of oil-free packaged air compressors, completing the series. January 2013 saw the release of the DSP NEXT Series (22/30/37kW) of oil-free screw compressors.



3rd President:
Masakazu Aoki



Appreciation gathering for HIES' 10th Anniversary

In the inkjet printer business, HIES worked on strengthening the aftermarket to build a total marking business, while at the same time strengthening its product capabilities to increase market share both domestically and internationally. With global sales accounting for more than 50% of the inkjet printer business, HIES formed alliances with companies in Europe, the United States, and Argentina to expand its business and started to produce ink globally on a consignment basis.

The company accelerated its global expansion in the transformer business, especially in China and Southeast Asia, with amorphous transformers, which excel in energy efficiency, at the core of its business. In China, Hitachi Qiantian (Hangzhou) Transformer (HQT) strengthened its production capabilities and expanded its network to enhance its sales capabilities.

In Southeast Asia, HIES was already supplying amorphous transformer cores to a partner company in the Philippines and signed technical cooperation agreements with local companies in Thailand and Myanmar to promote local production using cores supplied by HIES.

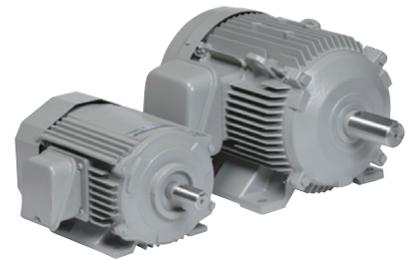
In Japan, HIES focused on expanding the market by developing products for private-sector demand.

The Super Amorphous Xce series of step-up amorphous transformers for photovoltaic power generation was launched in May, followed by a Scott amorphous transformer in August.

In May, the company launched the NE-S1 series of inverters for general industrial use as an economical type that featured simple operation, strengthening its lineup of applied and developed models. The RC700 series of power regeneration converters was released in October.

In addition to its other offerings, the company introduced several new products throughout the year. In April, it unveiled the BuyDen Gateway, a power conditioner system for solar power generation that featured an integrated cubicle. This was followed by the release of the Super F series 2.8t/5t motor block in May. In July, the new HS series electromagnetic contactor and switchgear was introduced; then, in September, the Micro-EHV series programmable controller was launched, which came equipped with USB memory and Ethernet ports as standard features.

Furthermore, in February 2013, the company introduced the high-efficiency "Motor Neo 100 Premium" series, which exceeded the requirements of the top runner standard.



High-efficiency "The Motor Neo 100 Premium" series

Solutions and new energy and business fields

In services and engineering, the company developed new services, such as maintenance packs, maintenance services for other companies' products, power conditioner system (PCS) maintenance services, and a one-stop service business to cultivate existing customers while also expanding the control and automation business, including with energy-saving EMS, factory automation, and automation.

In addition, in the new energy field, HIES developed and commercialized transformers for wind turbines and photovoltaic PCS/transformers, and through joint development with Shin-Kobe Electric Machinery Co., Ltd., commercialized a storage battery system that responded to load fluctuations from renewable energy sources. For new businesses, the company focused on cultivating the industrial M2M wireless communications market by leveraging the technological know-how it had accumulated in the control field.

In January 2013, the Super Amorphous XSH series of super energy-saving transformers was awarded the 2012 Energy Conservation Grand Prize.

As a result of these aggressive moves, in fiscal 2012, sales grew steadily to 142.8 billion yen, with a global business ratio of 20.4%.



Super Amorphous XSH Series, winner of the 2012 Energy Conservation Grand Prize

Fiscal 2013

Towards becoming a world-leading business group

The ideal state that the 2015 Mid-term Management Plan aimed to achieve

In March 2013, HIES formulated the 2015 Mid-term Management Plan.

President Aoki stated that the business environment surrounding the company was extremely challenging and they would be left behind if they were content to simply maintain the status quo. He said they must have a strong desire to grow to realize the goals outlined in the 2015 Mid-term Management Plan.

In the 2015 Mid-term Management Plan, the company set the management vision of becoming an optimal “Product × Solution” supplier in industrial equipment. Stepping up to become a global player was seen as the ideal state and target position to aim for in fiscal 2015. The management target was to rack up net sales of 180 billion yen in fiscal 2015, with global business accounting for 30% of the total. HIES also set a long-term goal of achieving sales of 300 billion yen and a global business ratio of more than 50% by fiscal 2020.

The growth strategy for achieving that goal was to become global contenders in four key businesses: compressors, marking, transformers, and inverters. The target position for each business was also quantified. The company’s aim was to achieve organic growth by strengthening its business structure, actively developing alliances, including through M&A, and expanding its cyclical business by strengthening its local production and service systems.

In addition, a significant focus was placed on reshaping the profit structure to achieve high profitability and transform into a financially robust company. This involved expanding key business areas, enhancing service offerings, and implementing the Smart Transformation Project promoted by the Hitachi Group. The primary objective was to drive reforms, reduce costs, strengthen the consolidated management foundation, and enhance the company’s financial position.

■ The ideal state and target position to aim for in fiscal 2015

■ Management Vision

- Become an optimal “Product × Solution” supplier in the industrial equipment field
- Step up to become a global player

■ Management Objectives

- 2015 Net sales of 180 billion yen with a global business ratio of 30%.
- 2020 Take on the challenge of achieving sales of 300 billion yen and a global business ratio of more than 50%

■ Management Policy and Key Policies

■ Management Policy

Execution of growth strategies aimed at becoming a global player

■ Key Policies

- Establishment of key businesses and concentration of management resources
 - Compressors ● Marking ● Transformers ● Inverters
 - Accelerate growth through a combination of organic growth and alliances
 - (Hitachi) Development through component enhancement measures
- Expansion of cyclical business
 - Strengthen service business and globalize value chains
- Strengthen consolidated management base and improve financial position by promoting Smart Transformation Project
 - Thoroughly consolidate management by business segment
 - Strengthen consolidated cashflow management
 - Strengthen global governance structure

Four priority business initiatives

In September 2013, HIES took a 30% stake in China's Shanghai United OSD Compressor Co., Ltd. (United OSD) to speed up product development and strengthen its compressor manufacturing.

Also, the company began producing oil-free compressors at Hitachi Industrial Equipment (Nanjing), and in Japan, maintenance menus were enhanced to expand the service business.

In products, the HISCREW NEXT series of oil-flooded screw compressors was released, starting with a 160 kW version (single-stage inverter models) in October 2013 and a 100 kW version in December 2013. In February 2014, the DSP NEXT series of oil-free screw compressors followed in 15/22/37/55 kW versions (single-stage models).

In the marking business, the theme was to deepen the European market, strengthen ink development capabilities, and enhance the product lineup to acquire the top share of inkjet printers globally. HIES sought to expand its business beyond food & beverage, pharmaceuticals and cosmetics. To gain access to automotive, construction materials, electronic components, and cable fields, the company expanded its product portfolio of marking products such as laser markers, thermal transfer overprinters, and drop-on-demand through M&A and alliances, with a primary goal of rapidly building a total marking business.

In fiscal 2013, along with strengthening domestic dealerships, the company strengthened its sales capabilities in India, China, and Asia. It also acquired distributors in Europe (Germany and France) and the United States (Chicago and California).

Alliances included an OEM supply agreement with Spanish laser marker manufacturer M in February 2014. An ink development and manufacturing base was established in Charlotte, North Carolina, USA, where Hitachi America, Ltd. (HAL) is located. It began mass-production operations in August 2014.

In the area of product development, the company released the MC-20S print inspection system in January 2014 and developed an inkjet printer with an integrated print inspection system, which was marketed in Japan and globally.

In the transformers business, HIES worked on global expansion centered on amorphous transformers in response to growing energy-saving needs. In Japan, the company worked to strengthen product capabilities and reduce costs in preparation for the introduction of the next top runner system in 2014, while also developing new solar, wind, and other energy-related markets.

Globally, to strengthen its sales network in China, a market which was expected to undergo significant growth, HIES built a relationship with China's national power grid and signed an OEM contract for supplying amorphous transformers to a local company, Company K. Elsewhere in Asia, the company negotiated technical tie-ups with local manufacturers in Thailand, Myanmar, and South Korea.



United OSD Compressor Co., Ltd.



Oil-free compressor manufactured by Hitachi Industrial Machinery (Nanjing)



Printing Inspection System MC-20S

■ Target positioning of key businesses

Business	Key product	Target position (2020)
Compressors	Screw compressors	In world top 4 (8% market share)
Marking	Inkjet printers	World No. 1 (30% market share)
Transformers	Amorphous transformers	In world top 3 (12% market share)
Inverters	Inverters	In world top 7 (5% market share)

The Super Top Runner II series of top runner transformers underwent a complete remodeling and was launched in August 2013, featuring upgraded products. These transformers found applications in various renewable energy projects, such as the Nakajo Works' solar power generation facility, which commenced operation in January 2014, and Hitachi, Ltd.'s wind power generation facility at the Nakajo Works, which began operation in March. These transformers have played a pivotal role in spearheading the advancement of the new energy business.

The theme of the inverter business was to develop the European and U.S. markets, which account for more than 50% of the global market, and to deepen the Chinese and Asian markets, which are expected to grow significantly. Along with strengthening the product lineup, the company also worked to strengthen its sales and service structures in global markets.

In fiscal 2013, European Hitachi brand sales agents expanded to 12, and the Italian distributor was consolidated. In addition, the company promoted a wide range of initiatives in collaboration with the Hitachi Group, including sales collaborations with Hitachi Consulting Corporation (HCC) and Hitachi High-Tech in South America and Hitachi Hi-Rel Power Electronics (HHPE), developing the Indian market.

In the areas of development and production, the company strengthened the system of Hitachi Industrial Equipment (Nanjing) by stationing production and quality control instructors from Narashino Works to improve quality, reduce costs and cultivate the Chinese market by transferring products to Hitachi Industrial Equipment (Nanjing).

In motors, 41 high-efficiency IE3 motor models were introduced ahead of the top runner standard. In addition, Hitachi Industrial Technology (Thailand) worked to expand direct global sales by cultivating set manufacturers for specialized products. The company also improved its submersible motor production capacity, establishing a monthly production system of 2,000 units.

Furthermore, orders for the highly efficient and energy-saving all-in-one HE Pump in model ratings from 1.5 kW to 3.7 kW began in May 2013; a new hoist product with a regenerative converter was launched in June; and the H-NET Simple Monitoring System was launched in December.

Achievements related to IoT and new energy

The company focused on enhancing its parts business in the service industry by developing high-value genuine parts. It also aimed to centralize parts management functions in Japan while strengthening parts operations globally. A particular emphasis was placed on the rebuilding service business to address the growing energy and resource conservation demand.

Regarding innovative solutions and new business ventures, the company pursued an aggressive market strategy. In July 2013, it introduced a wireless temperature monitoring system and followed up in September with the launch of the CPTrans-EX2, an M2M packet communication terminal.

In the realm of new energy, the company expanded its sales of BuyDen Gateways, Power Conditioning Systems (PCS), and power generation systems for micro-hydroelectric power generation. This expansion was driven by the emergence of the Feed-In-Tariff (FIT) market. A notable accomplishment was the delivery of a 100kW BuyDen Gateway to Jidosha Seiko Co., Ltd. Additionally, the company supplied a control panel charging/discharging CS for peak shift/cut for demonstration tests at Waseda University, focusing on control systems for energy storage systems.

In fiscal 2013, the company achieved sales of 153.9 billion yen, with global business accounting for 24.1% of total sales.



Fiscal 2014

Accelerating globalization through alliances

Establishment of Hitachi Industrial Equipment Systems (China)

President Aoki stated that the economic situation surrounding the company in Japan had continued to recover moderately due to government economic policies (Abenomics), a weak yen, and a rush of demand before the consumption tax hike, but the global situation was uncertain due to continued low growth in Europe, slowing growth in emerging countries, and currency depreciation as the U.S. reduced its quantitative monetary easing program. However, he continued, Japan would remain the company's base for the future and would steadily capture market demand. In response, HIES worked to further strengthen its domestic business by expanding its operations into the social infrastructure business domain based on general industry.

Meanwhile, the company aggressively accelerated its global expansion, aiming for a global business ratio of 30%.

In April 2014, the company established a local subsidiary in Mexico, Hitachi Industrial Equipment Mexico, SA. de C.V., to strengthen compressor sales to the booming Japanese auto manufacturers and major parts companies in Mexico.

In October, Hitachi Industrial Equipment Systems (China) (HIEC) was established as the headquarters for China operations as HIES worked to structure a locally self-contained management system. This would clarify the responsibilities of the business in China and realize speedy management through integrated services, sales, and manufacturing. In addition, a signing ceremony was held in November for the establishment of a joint venture sales company, Shanghai Sunary Electromechanical System Technology Co., Ltd., linked with Hitachi Industrial Equipment (Nanjing), Hitachi Qiantian (Hangzhou) Transformer, and United OSD Group companies.

Together, they expanded their business in China through marketing, sales, services, and procurement.

Then in November, Hitachi Industrial Equipment Systems (Hong Kong) Ltd. was established in Hong Kong as a sales company to serve the Chinese market.

Major business initiatives

In compressor products, the company launched the N2 Pack NEXT Series of V-type nitrogen gas generators in May 2014, and from November to February 2015, launched a further five models as the HISCREW NEXT II series of oil-injected screw compressors, rated at 22/37 kW and 7.5/11/15 kW.

In July 2014, the opening ceremony was held for a Hitachi America ink development and manufacturing facility, which will be the ink development and manufacturing base for inkjet printers in the United States. In addition, sales support was strengthened to develop the India market.

In the transformer business, HIES strengthened the production system for large transformers at the Nakajo Works. Globally, the company expanded its sales channels to expand its business in China.

Also, in April, the company developed and launched the Super Amorphous Zero series of ultra-high-efficiency transformers.

In the inverter business, in November, the company invested in the Chinese distributor, Shanghai Sunary Electromechanical System Technology. In product development, the company strengthened the development system of Hitachi Industrial Equipment (Nanjing). In products, the company worked on the development of its next core models, including the SJ700D series of high-performance inverters, for which it began taking orders in April 2014.

Regarding IoT products, the company enhanced and launched the CPTrans series lineup of LTE-enabled IoT/M2M terminals in February 2015.



Hitachi Industrial Equipment Mexico



Newly-renovated office in Hitachi Industrial Equipment Systems (China) Co. Ltd.



Opening ceremony of Hitachi America, Ltd. ink development and manufacturing facility

Super Amorphous Zero series
(Left: oil-filled transformer, right: molded transformer)

CPTrans series of LTE-enabled IoT/M2M terminals

Steady improvement in results in the second year of the 2015 Mid-term Management Plan

In November 2014 Masao Imaizumi of the Taga Works and Seizo Shirai of the Nakajo Works received the Minister of Health, Labor and Welfare Award for Outstandingly Skilled Workers (Contemporary Master Craftsman), and Naohiro Igarashi of the Nakajo Works won the bronze prize at the 28th Technical Grand Prix Machine Assembly Category in February 2015.

Fiscal 2014 sales came to 168.4 billion yen, and the ratio of global business was 24.0%.

Fiscal 2015

Establishment of a strong industrial products business under One Hitachi

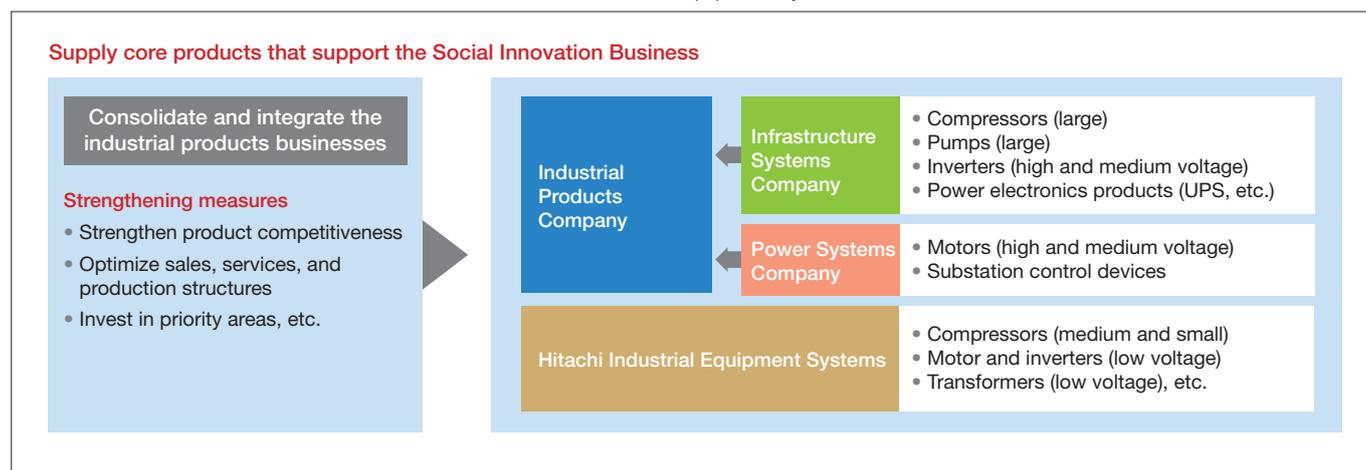
Responsibility for the Hitachi Group's industrial products business

President Aoki began to concurrently serve as the general manager of the Industrial Products Strategy division, a newly-established position at Hitachi, Ltd., starting in October 2014. It was expected that the industrial products business of the Hitachi Group, including HIES, would make further progress and that the role of HIES had become even more important.

In May 2015, the Industrial Products Company was established in Hitachi, Ltd. through the reorganization and integration of the departments of the Hitachi Group that handle industrial equipment. Mr. Aoki also served as president of the new in-house company. Thus, HIES and the Industrial Products Company of Hitachi, Ltd. became the two wheels of the Hitachi Group's industrial products business.

President Aoki said that the company's vision was to establish a strong products business that met a wide range of industrial needs and to become a strong business entity that could compete on products alone. HIES would play an increasingly important role in this effort. He concluded by urging all employees to move forward powerfully, sharing the philosophy and values of One Hitachi.

■ Coordination between Hitachi Industrial Products and Hitachi Industrial Equipment Systems



Aggressive global expansion of transformers and marking

Regarding global expansion, Hitachi Soe Electric & Machinery Co., Ltd. (HISEM), a transformer joint venture with the Myanmar company Soe Electric & Machinery Co., Ltd. (SEM), was established in July 2015 and began operations in October. The joint venture was to contribute to the development of Myanmar's power infrastructure by combining Hitachi's transformer design and manufacturing technologies with SEM's business foundation.

In July 2015, HIES acquired a U.S. sales company and established a marking business sales and service company, Hitachi Industrial Equipment Marking Solutions Inc. Furthermore, in January 2016, the company acquired L.A. Supply Corporation, a U.S. marking and labeling equipment sales company, which began operations as a Hitachi Group company.

In January 2016, a sales and service organization was established at Hitachi Industrial Equipment (Malaysia) Sdn Bhd (HIEM), a manufacturing base in Malaysia, creating an integrated system of sales, services, and manufacturing.

Major Business Initiatives

In the compressors business, the company launched the HISCREW NEXT II series of 55/75kW oil-injected screw compressors in September 2015, and the NEXT II series of oil-free scroll compressors in October. This was followed in January 2016 by the launch of the DSP NEXT II series of two-stage oil-free screw compressors (22 - 120kW), and in February by the launch of the N2 Pack NEXT II series of nitrogen gas generators.

In February 2016, the company held an event at Sagami Works to commemorate the production of three million Bebicon compressors.

In the marking system business, the Gravis UX series of industrial inkjet printers, featuring improved environmental performance and IoT compatibility, was launched in May 2015.

For IoT-related businesses, in October 2015, the company launched the H Series dimension compatible hybrid base, a programmable controller replacement support device, and in November, announced the UbiCube-GW, an all-in-one, high-performance communication terminal.

In other product businesses, the company strengthened its product portfolio with the May 2015 release of the BuyDen Gateway 250/500kW cubicle-integrated photo-voltaic power conditioner system.

Strengthening consolidated management and improving financial structure through the Smart Transformation Project

The Hitachi Group actively promoted the Smart Transformation Project reforms since fiscal 2013. To establish a global presence, HIES promoted multifaceted development and initiatives through its Project Promotion Division, carrying out cost-cutting measures and implementing business process reforms as it worked to reform operations, strengthen the consolidated management base, and improve its financial position.

HIES continued activities to generate cash, which was indispensable for the realization of its growth strategy to become a global player.

In fiscal 2015, the company reported net sales of 173.9 billion yen and a global business ratio of 25.0%.



Signing Ceremony for the Establishment of Hitachi Soe Electric & Machinery



Members of the Bebicon production department at the Sagami Works; the event commemorated the production of 3 million Bebicon compressors



UbiCube-GW all-in-one high-performance communication terminal

Smart Transformation Project Promotion Division (Corporate Policy Coordination)	<ul style="list-style-type: none"> ● Cost structure reforms, etc. <ol style="list-style-type: none"> (1) Production project: Expansion of SCM effectiveness, support for MD introduction (2) Direct materials procurement project: Centralized purchasing, introduction of cost planning (3) Intermediate materials procurement project: Via specialized departments of domestic and global group companies (4) Intercompany Project: Expansion of BPO Scope of Work (5) Others: Consolidation of common operations within the group
Business Process Reform Center	<ul style="list-style-type: none"> ● Business Process Reform <ol style="list-style-type: none"> (1) Common infrastructure for production process <ul style="list-style-type: none"> ● May 2003: Nakajo Works, January 2004: Narashino, Shimizu, and Ebina Works (2) Production/sales information sharing (information visualization) ● Improvement of manufacturing capabilities through S-JIT activities
Global Business Promotion Center	<ul style="list-style-type: none"> ● Execution of growth strategies aimed at becoming a global player <p><Target for FY2015> global business ratio of 30%</p> <ol style="list-style-type: none"> (1) Achieve global cost competitiveness (2) Expand sales by establishing a global SCM (3) Contribute to global value chain
C Project	<ul style="list-style-type: none"> ● Generate cash flows to realize growth strategies

Five Years of Pursuing “Existence Value”



Masakazu Aoki
Representative Executive Officer and
Executive Vice President, Hitachi, Ltd.
(3rd President of Hitachi Industrial
Equipment Systems)

I would like to extend my heartfelt congratulations to Hitachi Industrial Equipment Systems (HIES) on the 20th anniversary of its establishment.

Looking back, the five years I served as president of HIES — eight years when my term as chairman is included, was a time of growth for the company. Someone once told me that those years were also a period of personal growth for me. Indeed, I have great feelings towards HIES for the opportunity it gave me.

On April 3, 2012, when I had just assumed the position of president, Hiroaki Nakanishi, then president of Hitachi, Ltd. called me up and asked me, what was the value of Hitachi Industrial Equipment Systems? My answer was the usual one: “To contribute to our customers by providing them with strong, traditional products and services.” But he forcefully stated that that alone wasn’t enough.

At a brainstorming session, Hitachi executives cited issues such as company management based on global standards, sales and operating profit, and overseas business development. Rather than just settling for the tradition and stability of Hitachi Industrial Equipment Systems, we racked our brains to really think

things through. Ideally, economic value as well as social and environmental value needed to be enhanced. and in order to achieve that, the decision was taken to increase the global value of the company. To achieve this, goals were set for using profits to grow in the global market, creating growth businesses by doing away with stereotypes, and opening up new business areas even in our traditional base businesses. The entire company, and all employees, worked together to achieve these goals.

The result was that sales doubled, and profits increased fivefold by 2019, a major step toward being recognized as a company that had the ability to grow.

I have also been concurrently responsible for Hitachi’s overall industrial products business since October 2014, and have taken on challenges to become a global leader, including the acquisition of Sullair.

Today, HIES plays an even more important role in Hitachi’s Connective Industries business. I look forward to HIES’s continued creation of strong products with digitalization and solution development, and to its strong and further growth.