



**BEIJING-FANUC**  
**SUSTAINABILITY REPORT 2025**





Becoming a value-adding partner in the green and sustainable transformation of China's and even the world's manufacturing industry, and building a sustainable and prosperous industrial ecosystem.

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## ABOUT THIS REPORT

BEIJING-FANUC Sustainability Report 2025 is the first voluntary sustainability report released by BEIJING-FANUC MECHATRONICS CO., LTD. (hereinafter referred to as "BEIJING-FANUC" or "the company"). The report systematically discloses the company's strategic concepts, practical initiatives, and performance results in the environmental (E), social (S), and governance (G) fields during 2024. It aims to fully present the company's progress in sustainable development to stakeholders, remain subject to supervision, and promote the collaborative transformation of the industry.

All contents and data in this report are derived from the company's internal operation records, project reports, financial statistics, and various public information. The company undertakes that there are no false records, misleading statements, or major omissions in the report content, and all information is true, accurate, and complete.

### Preparation Basis

*China Corporate Sustainability Disclosure Standards General Standards - (Trial)*, Ministry of Finance of the People's Republic of China, November 2024.

*China Corporate Sustainability Disclosure Standards No. 1 - Climate (Trial)*, Ministry of Finance of the People's Republic of China, April 2025.

*GRI Sustainability Reporting Standards (2021 Edition)*, Global Sustainability Standards Board (GSSB).

### Reporting Period

This is an annual report, with information and data covering the period from January 1, 2024, to December 31, 2024. To fully present strategic planning and long-term practices, some contents (such as carbon target planning) extend to 2025 and future planning periods, while some historical practices are traced back to before the reporting period.

### Scope of Report

This report covers all operating entities, business segments, and subsidiaries of BEIJING-FANUC in the Chinese mainland, including BEIJING-FANUC's Daoxiang Lake Campus, Shangdi Campus, Shanghai Branch, Shenzhen Branch, and 21 service centers.

Exclusion Note: The report does not include data of other overseas businesses of FANUC and associated enterprises not controlled by the company.

### Language Versions

This report is published in both Chinese and English, and both versions are of equal validity. In case of any ambiguity in interpretation, the Chinese version shall prevail.

## Report Acquisition

- ① Visit BEIJING-FANUC's official website <https://www.bj-fanuc.com.cn> to browse or download the electronic version of the report.
- ② Scan the QR code below to browse or download the electronic version of the report.



## MESSAGE FROM MANAGEMENT

### Embedding Culture in Practice, Advancing Responsibly Towards Sustainability



**Jing Xirui**

General Manager, BEIJING-FANUC  
MECHATRONICS CO., LTD.

We are living in a magnificent and momentous era. As industrial restructuring accelerates and technological innovation surges forward with unprecedented power, propelling China's manufacturing industry toward the vast and promising future of "High-End, Intelligent, Green, and Integration." In this grand historical context, "Sustainable Development" has evolved from an option to a must-answer question that concerns national competitiveness and industrial future.

Having been deeply rooted in the manufacturing industry for years, I firmly believe that industrial mother machines, as the "Mother of Manufacturing," are the cornerstone of industrial upgrading. BEIJING-FANUC has always focused on endowing industrial mother machines with intelligent cores, and our responsibility is to work hand in hand with industrial chain partners to shape a greener, friendlier, and more sustainable manufacturing future. This is not only our strategic choice, but also our solemn commitment to this great era and the industry we deeply love.

Facing this era's proposition, our answer stems from more than 30 years of cultural accumulation and is achieved through mutual survival and common prosperity with industrial partners. For us, ESG is not a new campaign, but the surging and flowing of cultural lifeblood in the new era.

Looking back on our journey, BEIJING-FANUC's more than 30-year development is not only a history of striving for technological innovation, but also an evolutionary history of culture and responsibility integration. Since its establishment, the craftsmanship spirit of manufacturing and the core values of "Precise, Professional, Responsible, and Sustainable" have been deeply etched into our genes. The pursuit of extreme reliability in products is our responsibility to customers; the lifelong service for over 1.6 million products is our responsibility to society. This deep-rooted sense of responsibility is the most profound cultural foundation for our ESG practices today, and a natural extension and strategic upgrade of the concept of "Culture as the Foundation, Responsibility as the Steering Wheel."

China's manufacturing industry is in a critical stage of transforming from scale expansion to quality improvement. The sustainable development we pursue is not only about green manufacturing, but also about the health and prosperity of the entire industrial ecosystem. Therefore, BEIJING-FANUC is committed to becoming a "Value-Adding Partner" for partners in the industrial chain, achieving win-win results through technological innovation and ecosystem building, practicing the responsibility culture of "Achieve Oneself, Achieve Partners," and promoting the overall value leap of the industrial chain.

"Alone we go fast, together we go far." The power of a single enterprise is limited, and the prosperity of an ecosystem can ensure long-term success. As a "Veteran" in the manufacturing industry, I firmly believe that only by integrating enterprise development into the tide of China's manufacturing progress and merging personal ideals into the current of era development can we truly realize the long-term value of the enterprise. To this end, we have integrated ESG into the core of our corporate strategy—this is both an investment in the future and a commitment to the industry.

Standing at a new starting point, we are deeply grateful to every partner who has accompanied us; we are even more confident in embracing challenges and opportunities in the future. BEIJING-FANUC has the ability and determination to respond to the ever-changing market with an unchanging cultural original aspiration and contribute our wisdom and strength to the steady progress of China's manufacturing industry.

Facing the future, we look forward to working with more like-minded partners to drive China's manufacturing industry toward higher quality, higher efficiency, and more sustainable development with wisdom and responsibility, and jointly embark on the future of "Smart Powers Infinity!"

## Ride the Tide of the Times to Forge Intelligent Manufacturing, Gather Sustainable Momentum to Co-Create the Future



**Yu Yingxian**

Special Assistant to the General  
Manager, BEIJING-FANUC  
MECHATRONICS CO., LTD.

Currently, the world stands at a crossroads of transformation. The structural differentiation, cyclical dislocation, and disruptive innovation in technology, economy, and society are driving a profound reshaping of the global order. Manufacturing is even more depicting a new portrait of industrial competitiveness and a new future of human productivity civilization. Against this backdrop, China's manufacturing industry, with its solid industrial foundation and surging transformation momentum, continues to consolidate its central position in the global manufacturing system and steadily advances toward the sustainable development logic of "High-End, Intelligent, Green, and Integration."

Sustainable development is no longer an option, but an inevitable path for manufacturing to navigate cycles and build long-term competitiveness, as well as a new benchmark for global industrial competitiveness. ESG has evolved from a passive assessment and responsibility system to an active value creation system, becoming a strategic engine driving innovation and reshaping value. Through the restructuring of resource efficiency and the construction of circular models, we can unlock new production relations and productivity, create new growth poles, and achieve a positive interactive cycle between "Multiple Ecological Benefits" and "Economic Benefits"—this is also the underlying logic of high-quality development of manufacturing in the future.

BEIJING-FANUC has always been deeply rooted and practiced the concept of sustainable development in corporate governance. With the vision of "Becoming a value-adding partner in the green and sustainable transformation of China's and even the world's manufacturing industry, and building a sustainable and prosperous industrial ecosystem," we have comprehensively constructed BEIJING-FANUC's sustainability system around five pillars: "Innovation in Intelligent Manufacturing, Responsible Ecosystem, Green Operations, Employee-Centric, and Sustainable Governance."

**Innovation in Intelligent Manufacturing makes outstanding products and solutions "Hard Support" for sustainability.** We concentrate on the trends of high-quality development and green transformation in the manufacturing industry, focus on the industrial "Intelligent Manufacturing" value chain, and center our efforts around the three directions of "Quality and Efficiency Innovation, Energy and Low-Carbon Transition, and System Guarantee. On this basis, we provide products and solutions covering the entire industrial scenarios, full process flows, and all technical elements for the machinery manufacturing industry. At the same time, we help the manufacturing industry upgrade toward high precision, high efficiency, low consumption, high safety, and high circularity, and support customers' comprehensive carbon neutrality.

**A responsible ecosystem makes collaboration the "Strong Engine" driving sustain-**

**able industry development.** We actively build a triple ecosystem of "Talent-Industry-Society." We have established the FANUC Advanced Manufacturing Talent Training Alliance, built a multi-cooperative talent development platform involving universities, governments, industries, and enterprises, which has empowered the technical leap, career growth, and lifelong learning of millions of talents. We create full-value chain solutions, build a customer success system, establish industry technical standards, and create various ecological platforms for technological innovation and industrial integration, promoting the full connection of technology chains, supply chains, and innovation chains, and supporting industrial revitalization and transformation. We also actively participate in industrial and social public welfare activities, such as industrial overseas empowerment, social disaster assistance, and themed education assistance in remote areas.

**Green Operations makes low-carbon practices become the "Strong Cornerstone" for corporate sustainability.** From the perspective of overall operations, we have formulated a sustainable climate strategy and promoted green operations to address climate risks. Through measures such as building a digital energy management system, improving the circular economy system, promoting renewable energy and campus photovoltaic power generation, and optimizing waste management, we continue to move toward the goal of "Zero-Carbon Campus." In 2025, BEIJING-FANUC's headquarters at Daoxiang Lake Campus was awarded LEED Platinum Certification and WELL Platinum Certification by the U.S. Green Building Council (USGBC) and the International WELL Building Institute (IWBI).

**Employee-Centric makes talent the "Primary Driving Force" for corporate sustainability.** We have built a three-pillar framework—"F+HARVEST, F+OPPORTUNITIES, F+PARTNERSHIP"—to create a professional platform that offers value, growth, and warmth. We have established an incentive cycle system of "High-Value, High-Performance, High-Return," provided a comprehensive welfare system covering employees and their families, a full-career-cycle training mechanism, and promotion channels. Relying on systematic talent inventory and special training programs for new employees, potential employees, and managers, we continuously stimulate organizational vitality. At the same time, through diverse cultural activities and care mechanisms, we create an inclusive and sense-of-belonging workplace with warmth, and enhance the adaptability of enterprises and employees to external changes with a continuously evolving organizational culture.

**Sustainable Governance makes compliance the "Ballast Stone" for corporate sustainability.** We remain committed to compliance with laws and regulations, adherence to business ethics, and the promotion of safe, healthy, green, and sustainable operations. Through improving systems to ensure full-process business compliance and information and privacy security, we strive to strengthen intellectual property protection, actively build green procurement and sustainable supply chains, and steadily promote multiple certifications such as the Environmental Management System (ISO14001), Occupational Health and Safety Management System (ISO45001), and Energy Management System (ISO50001). We adopt the international SOX Act framework for comprehensive internal audits and hire well-known third-party institutions for regular financial audits to ensure transparent and standardized operations. We are committed to advocating a sound business ecosystem with our leading position in the industry, and firmly believe in a compliance culture and sustainable governance based on long-termism, and build the ultimate productivity for the future with culture and values.

The tide of the times surges forward. We witness the coexistence of challenges and opportunities, and proactively respond to changes with transformation and embrace tomorrow with innovation. In the future, BEIJING-FANUC will continue to support industrial partners to accelerate upgrading toward "High-End, Intelligent, Green, and Integration" through the five pillars of "Innovation in Intelligent Manufacturing, Responsible Ecosystem, Green Operations, Employee-Centric, and Sustainable Governance." We aim to drive the penetration and evolution of sustainable concepts and culture across the value chain and within our core values. Together with China's manufacturing industry and the global manufacturing community, we aspire to co-create a bright future where "Smart Powers Infinity" for human society!



## COMPANY OVERVIEW

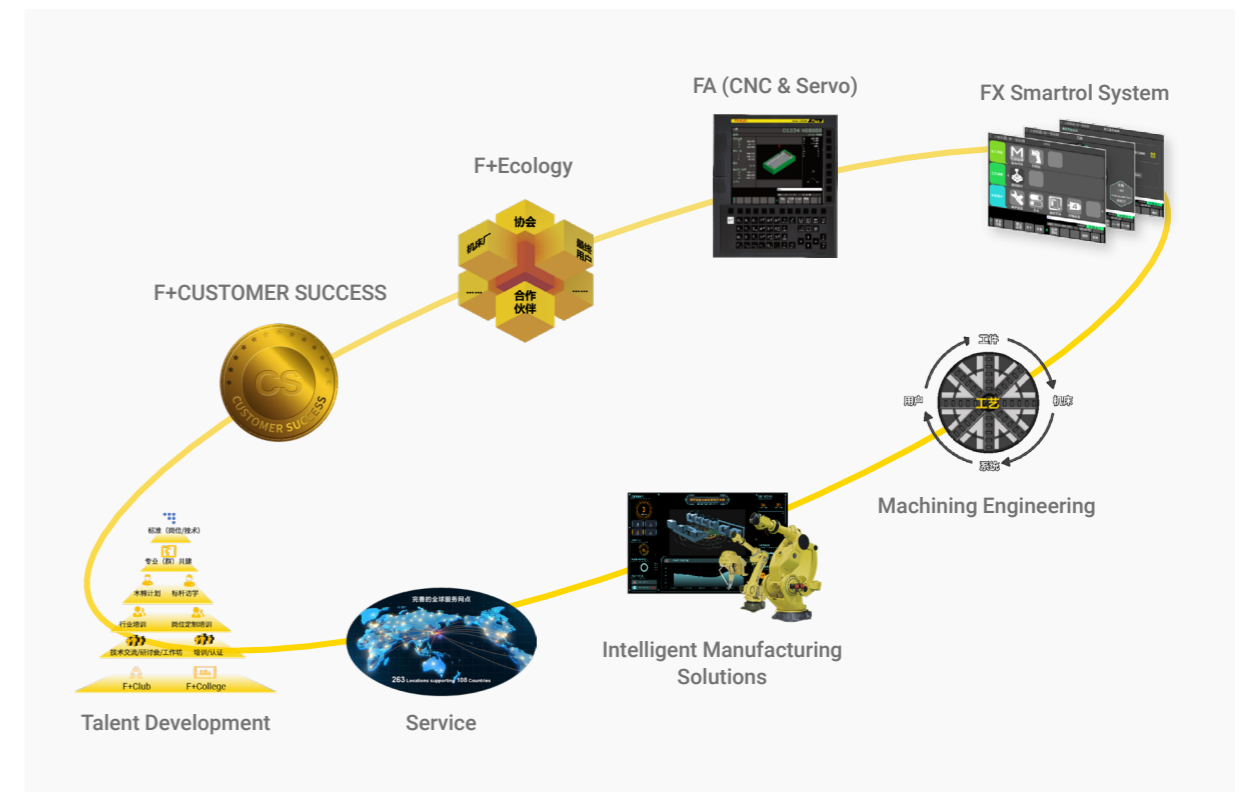
### 1.1 About BEIJING-FANUC

As a professional brand in China's CNC and factory automation field, BEIJING-FANUC has witnessed and deeply participated in the vigorous development of China's manufacturing industry for over 30 years. We are committed to promoting the application of FANUC's world-leading CNC, factory automation products, and technologies in China. Our products and services cover all fields of advanced manufacturing, such as automotive, communications, electronics, new energy, and intelligent manufacturing. More than 1.6 million products have been applied in over 100,000 enterprises across various industries, empowering the high-quality development of China's manufacturing industry. BEIJING-FANUC has established 2 branch offices (Shanghai and Shenzhen), 21 service centers, 5 training centers, and 32 application centers in China.

Adhering to practical innovation and continuous management reform, BEIJING-FANUC takes "Becoming the Best Value-Adding Partner for Intelligent Manufacturing" as its vision. With forward-looking industry insights, effective innovation methodologies, full-value chain solutions, and a professionally leading talent team, we accompany customers in their long-term growth. Together, we build an ecological alliance driving the future, realizing the interconnection and value reconstruction of people, technology, products and solutions, resources and ecology, achieving the sustainable development of the industry and co-creating "Smart Powers Infinity".

#### 1.1.1 Products & Services

Based on value chain extension and customer demand insight, BEIJING-FANUC has formed a full-value chain product and service system to comprehensively enhance industrial manufacturing productivity. BEIJING-FANUC provides comprehensive solutions covering the entire machining process, all technical elements, and various industrial scenarios, offering forward-looking CNC technology, machining processes, automation and digital services for manufacturing partners.



Beijing-Fanuc Whole Value Chain Total Solution

## 1.1.2 Company Development History

### 01 Foundation Development Period (1992-1999)

- 1992 ■ In 1980, the Beijing Machine Tool Research Institute introduced CNC from FANUC Corporation. In December 1992, BEIJING-FANUC Mechatronics Co., Ltd. was established
- 1993 ■ Launched the first CNC 0-J Series
- 1994 ■ Launched the CNC 0-TD and 0-MD Series
- 1998 ■ Introduced the CNC 0-TC/MC/TTC/PC/GCC/GSC Series
- 1999 ■ Accumulated sales of CNC exceeded 1,000 units, entering a new era of market development

### 02 Rapid Development Period (2000-2006)

- 2000 ■ Established the Technical Department
- 2001 ■ Successively carried out school-enterprise cooperation with engineering colleges and vocational technical colleges, and initiated the industry talent training program  
Launched campus recruitment for the first time
- 2002 ■ The number of employees exceeded 100
- 2003 ■ Accumulated sales of CNC exceeded 2,000 units obtained ISO9001 Quality Management System Certification
- 2004 ■ Annual sales of CNC exceeded 10,000 units  
Supported the first National CNC Skills Competition
- 2005 ■ Established an independent training organization to provide technical training for the entire industry  
Signed the first cooperation agreement with an end-user (an automobile enterprise), forming the prototype of value chain extension
- 2006 ■ Cooperated with Hay Group (a human resources consulting company) to upgrade the organizational management system

### 03 Transformation Development Period (2007-2011)

- 2007 ■ Held a strategic-level meeting to carry out self-transformation and defined BEIJING-FANUC's "Strategy and Culture 1.0"
- 2008 ■ Introduced SAP ERP software to optimize process management and enterprise informatization  
Won the "Special Contribution Award for Promoting Industry Development" (issued by China Machinery Industry Federation) at the National CNC Skills Competition
- 2009 ■ Launched special technical breakthrough projects for segmented markets such as large machine tools, grinding machines, gear machines, and high-performance machine tools
- 2010 ■ Cooperated with IBM and introduced the "BLM Business Leadership" strategic tool methodology
- 2011 ■ Confirmed with relevant departments the construction of 34 CNC Application Centers and hundreds of CNC Training Centers nationwide to carry out comprehensive training for talents in CNC and factory automation in China

### 04 Leadership Development Period (2012-2018)

- 2012 ■ Established the Marketing Department to initiate systematic strategic planning and research on the Chinese market, and move the business forward to the extensive end market of China's machining industry  
Won the Powertain automation and MES project of an automobile enterprise, entering the intelligent manufacturing field for the first time
- 2013 ■ Defined "Strategy and Culture 2.0" and extended the value chain to the final market of machining
- 2014 ■ Established a 3C market task force and launched a special CNC product package for drilling centers tailored for the Chinese market  
Established the Strategic Management Committee
- 2015 ■ Daoxiang Lake Intelligent Factory was officially put into production
- 2016 ■ Held the first F+INDUSTRY Summit during the Dongguan DMP Exhibition  
Opened up the CNC data collection and monitoring business to the public, extending digital business from internal operations to external markets
- 2017 ■ Launched secondary development business based on CNC  
Established the Technical Engineering Department to fully initiate the IoT business  
The Beijing Experience Center was officially put into operation, providing "Experience, Testing, and Training" of advanced manufacturing technologies for the industry  
Officially launched the BEIJING-FANUC F+COLLEGE APP, and fully carried out online talent cultivation  
Fully supported the first National Intelligent Manufacturing Technology Skills Competition
- 2018 ■ Released "Whole Value Chain Products and Services" for the first time at the DMC (Die & Mould China)  
Jointly established the FANUC Advanced Manufacturing Talent Training Alliance with multiple enterprises  
Launched the "FANUC Cup National Vocational and Technical Normal Colleges Teaching Capacity Competition" with relevant departments  
Upgraded the fresh graduate systematic training program "MARS Forging Program"

### 05 Innovative Development Period (2019-Present)

- 2019 ■ Won the First Prize of the National Teaching Achievement Award (issued by the Ministry of Education)  
Promoted industry ecosystem construction and established a customer success system
- 2020 ■ Released "Strategy and Culture 3.0" and clarified BEIJING-FANUC's new vision: "Becoming the Most Valuable-Adding Partner in Intelligent Manufacturing"  
Held the first "Smart Sharing Conference (China Manufacturing Industry Leaders Salon)"  
Officially established the IoT Business Department, deepening its expansion into the intelligent manufacturing field  
The first FANUC Industry College — Shanxi FANUC Industry College — was completed  
Released the secondary development product FANOVI
- 2021 ■ Annual product sales exceeded 100,000 units (a historic high)  
Established the F+LABORATORY to further provide testing and evaluation services for machine tools and machining to the industry  
Gradually launched the FX Smartrol System
- 2022 ■ Participated in the first World Vocational and Technical Education Development Conference  
Released the employer brand value proposition EVP1.0
- 2023 ■ Held the 30th anniversary "Cube Show" with the theme of "Smart Powers Infinity · Initiate the Future" at the Beijing Water Cube  
Jointly formulated the standard *Method for Evaluating CNC Machining Capability of Dies and Moulds* with China Die & Mould Industry Association  
Established the Industry Development Department, Moulding Machinery Business Department, Product Development and Management Department, F+COLLEGE, Brand Management and Promotion Department, and Strategic Management Office
- 2024 ■ Officially put into use BEIJING-FANUC Headquarters Daoxiang Lake Campus, creating an open and shared campus characterized by "Green, Healthy, Smart, and Eco-Friendly" attributes  
Launched the series of Campus Open Day activities to support partners inside and outside the industry in visiting and exchanging  
Cumulative sales of CNC in China reached 1 million units
- 2025 ■ Daoxiang Lake Campus won the LEED Platinum Certification (issued by USGBC) and WELL Platinum Certification (issued by IWBI)  
Obtained certifications for ISO14001 Environmental Management System, ISO45001 Occupational Health and Safety Management System, ISO50001 Energy Management System, and ISO27001 Information Security Management System

### 1.1.3 Corporate Culture

<b>Vision</b>	<b>Becoming your best value-adding partner in intelligent manufacturing industry</b>		
<b>Mission</b>	Focus on the promotion and application of FANUC FA products and technologies, and maintain FANUC's leading position in the CNC market.  Continuously strengthen the innovation and extension along the value chain of core products and services, providing excellent total solutions.  Maintain above-industry growth rate and profitability level to become a respected company.	<b>Core Values</b>	<b>Precise:</b> Empirical attitude with a focus on methodology and detail <b>Professional:</b> Stay focused, deliver high value through high standards <b>Responsible:</b> Empowering ourselves, empowering our partners <b>Sustainable:</b> Innovating practically, developing sustainably
<b>Business Philosophy</b>	Customer First, Employee Centric		
<b>Marketing Slogan</b>	Smart Powers Infinity	<b>Corporate Personality</b>	Openness for Innovation, Leading with Expertise, Worthy of Trust

BEIJING-FANUC Strategy and Culture 3.0

BEIJING-FANUC regards strategy and culture as the soul of the enterprise and an inexhaustible driving force for development. It always stays alert in times of peace, continuously challenges and breaks through itself through proactive transformation and innovation, and is committed to building stronger organizational capabilities and talent teams to better support our sustainable development.

In 2020, BEIJING-FANUC officially released Strategy & Culture 3.0, clarifying the vision of "Becoming the Best Value-Adding Partner for Intelligent Manufacturing" and three core missions. Guided by the core values of "Precise, Professional, Responsible, and Sustainable" as the fundamental principle for all actions, it undertakes a solemn commitment to excellent quality, ensuring the reliability and leadership of products and services; guides all employees to achieve themselves and partners, and actively fulfills social responsibilities while creating value; and inspires the organization to pursue practical innovation and sustainable development, striving for a long-term, healthy and win-win industrial ecosystem.

Adhering to the business philosophy of "Customer First, Employee Centric", BEIJING-FANUC deeply internalizes strategy and culture, unites internal employees, cooperates with partners, and jointly explores the future of "Smart Powers Infinity".

### 1.1.4 Corporate Honors

- 2021-2024: Consecutively awarded "China's Most Popular Employer Among College Students" by 51job
- July 2024: Awarded "2024 Model Enterprise for Sustainable Development" by DIGITALING Network
- 2023-2024: Won "DEI Employer Award (China Region)" by Employer Brand Research Institute
- 2023-2024: Awarded "2022-2023 China Excellent Health Employer" and "2024-2025 China Excellent Health Employer" by Mercer
- December 2023: Awarded "Beijing Intelligent Enterprise Construction Innovation Case" by Beijing Enterprise Confederation
- November 2023: Awarded "Standardization Demonstration Enterprise (China Die & Mould Industry Association)" by China Die & Mould Industry Association
- July 2023: Won the National Teaching Achievement Award (First Class) by the Ministry of Education
- December 2022: Selected as a "Beijing High-Tech Enterprise"
- May 2021: Shortlisted in the "First Batch of Beijing Pilot Enterprises for Integration of Production and Education"

December 2020: Won the "Shanxi Provincial Teaching Achievement Special Award"

September 2019: Won the "First-Class National Teaching Achievement Award (Research and Practice of Vocational Education Group School-running)" by the Ministry of Education; recognized as the "First Batch of National Vocational Education Teacher Enterprise Practice Bases" by four ministries, including the Ministry of Education

January 2019: Awarded "Beijing Intelligent Manufacturing Benchmark Enterprise (Intelligent Factory)" by the Beijing Municipal Bureau of Economy and Information Technology

December 2018: Awarded the title of "Intelligent Manufacturing Benchmark Enterprise" by the Beijing Municipal Bureau of Economy and Information Technology

## 1.2 Sustainability Philosophy

"Becoming a value-adding partner in the green and sustainable transformation of China's and even the world's manufacturing industry, and building a sustainable and prosperous industrial ecosystem," is the enduring sustainability vision and mission of BEIJING-FANUC. This vision and mission are the in-depth extension of our strategy and culture in the direction of sustainable development. For a long time, the concepts of sustainable development, long-termism, and empowering partners have been embedded in our strategic culture and daily operations. Centering on the five core pillars of "Innovation in Intelligent Manufacturing, Responsible Ecosystem, Green Operations, Employee-Centric, and Sustainable Governance", BEIJING-FANUC integrates sustainable development into the entire process of corporate strategic planning, product and technology R&D, full-value chain solution development, operation management and ecological co-construction, forming a sustainable development direction driven by technological innovation, with ecological collaboration as an important path and value coexistence as the ultimate goal.

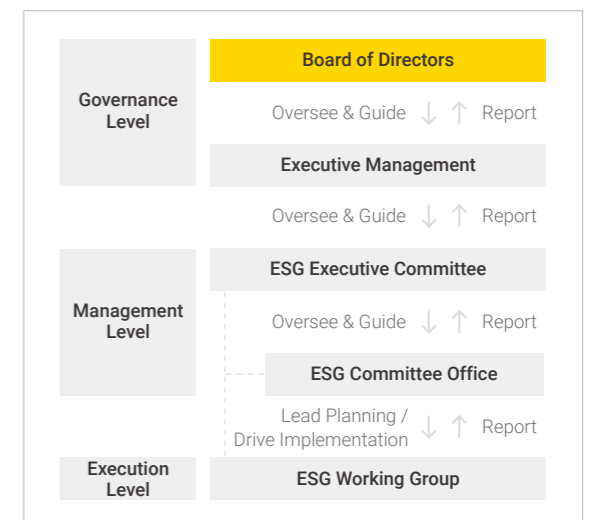
Through advanced technology leadership, industry ecological cultivation, and value chain innovation and extension, BEIJING-FANUC continuously builds its own sustainable development competitiveness and brand influence, and works with industry partners to accelerate the transformation and upgrading towards "High-End, Intelligent, Green, and Integration", speed up the penetration of sustainable concepts in the value chain, and jointly explore the path of sustainable development.

## 1.3 Sustainability Governance Structure

BEIJING-FANUC has actively established a three-level sustainability governance structure of "Governance Level - Management Level - Execution Level" to promote the construction and goal achievement of sustainable development. By improving the ESG system, formulating annual ESG work plans, conducting risk management, and setting annual goals, it ensures the closed-loop management of ESG work from strategic planning to implementation, and continuously promotes the standardization and systematization of ESG work.

### 1.3.1 Governance Level

As the highest decision-making and supervisory body for sustainable development work, the Governance Level is composed of relevant executive directors of



BEIJING-FANUC Sustainable Development Management Organizational Structure

the Board of Directors. Its main responsibilities include reviewing our ESG management policies, ESG strategic plans, and annual goals, ensuring the legality and compliance of ESG-related management; regularly listening to special reports on ESG matters from the executive management; and reviewing our sustainability report and related disclosure content.

### 1.3.2 Management Level

As the overall planning and promotion role for sustainable development work, the ESG Executive Committee is composed of BEIJING-FANUC's responsible leaders and heads of various departments. Its core responsibilities include identifying ESG-related matters that have a significant impact on our operations and the rights and interests of stakeholders, promptly reporting operational risks and major issues to the executive management; continuously promoting the construction of the ESG system; formulating sustainability reports, determining ESG strategic plans and annual goals and submitting them to the executive management for review; and completing other ESG-related matters authorized by the executive management.

The ESG Committee Office, established under the ESG Executive Committee as a permanent institution for coordinating and managing daily affairs, has core responsibilities that include coordinating the compilation and disclosure of sustainability reports, organizing the collection, collation, and analysis of ESG-related data; decomposing ESG strategic goals, coordinating various departments to set sub-goals, tracking the achievement of goals, organizing ESG-related training, promotion, and external exchanges, and improving the awareness and capabilities of all employees in ESG.

### 1.3.3 Execution Level

The ESG Working Group is the specific execution unit for ESG work, composed of responsible people of various departments, subsidiaries and specific ESG work responsible persons. Its core responsibilities include implementing the daily management of ESG issues related to the department; collecting and reporting ESG-related data and cases of the department as required.

## 1.4 Materiality Assessment

Through a research process of "Full Stakeholder Coverage + Scientific Methodology Support", BEIJING-FANUC identifies and determines sustainable development material issues that have a significant impact on BEIJING-FANUC's business development and the rights and interests of stakeholders, ensuring that ESG work focuses on core points and achieves precise results.

### 1.4.1 Materiality Assessment Process

BEIJING-FANUC carried out ESG materiality interviews and research work from May 6 to May 9, 2025, adopting a four-stage methodology of "Goal Orientation-Multi-Dimensional Research-Scientific Evaluation-Strategic Alignment."

#### (1) Stage 1: Goal Setting and Research Tool Development

Focus on ESG issues with significant impacts, ensuring that the issues are in line with our strategic direction and respond to the core demands of stakeholders; design the *ESG Issue Importance Questionnaire and Department Interview Outline* to clarify the key points of the interview.

#### (2) Stage 2: Stakeholder Research

The research covers all types of internal and external stakeholders, including 12 core internal departments of our

company and several well-known manufacturing customers. Through in-depth interviews with senior management of our company, we carefully listen to the demands of management and customers on core ESG issues, and fully understand the focus of ESG work and issue concerns.

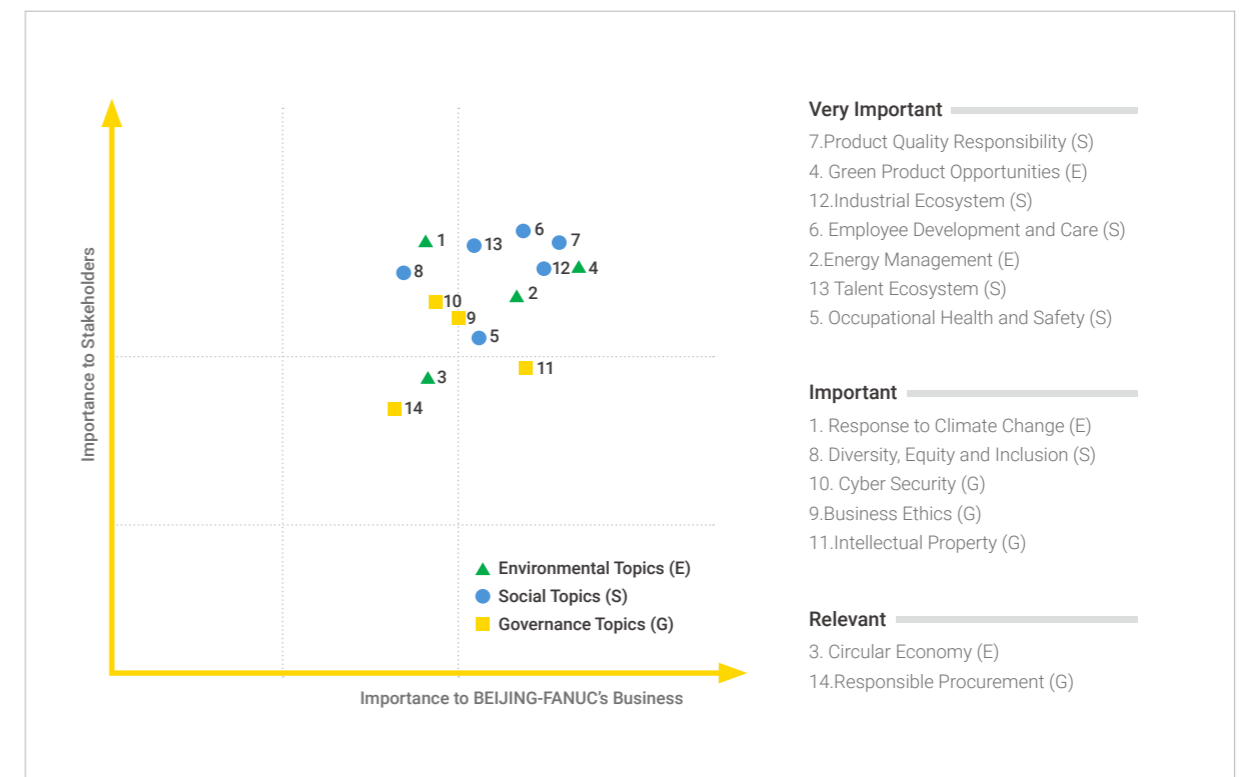
### (3) Stage 3: Materiality Calculation and Priority Ranking

Adopt the "Balanced Scorecard + Issue Importance Matrix" for evaluation, combined with the undertaking and extension of FANUC's ESG strategy in the Chinese market, ensuring that the issues are consistent with FANUC's global strategy and adapt to the needs of high-quality development and sustainable development of China's manufacturing industry.

### (4) Stage 4: Determination of Issue Matrix

Form a three-dimensional material issue matrix of "Environment - Social - Governance", clarify the priority and core focus direction of each issue, and provide a basis for setting the priority of ESG work.

### 1.4.2 Materiality Matrix



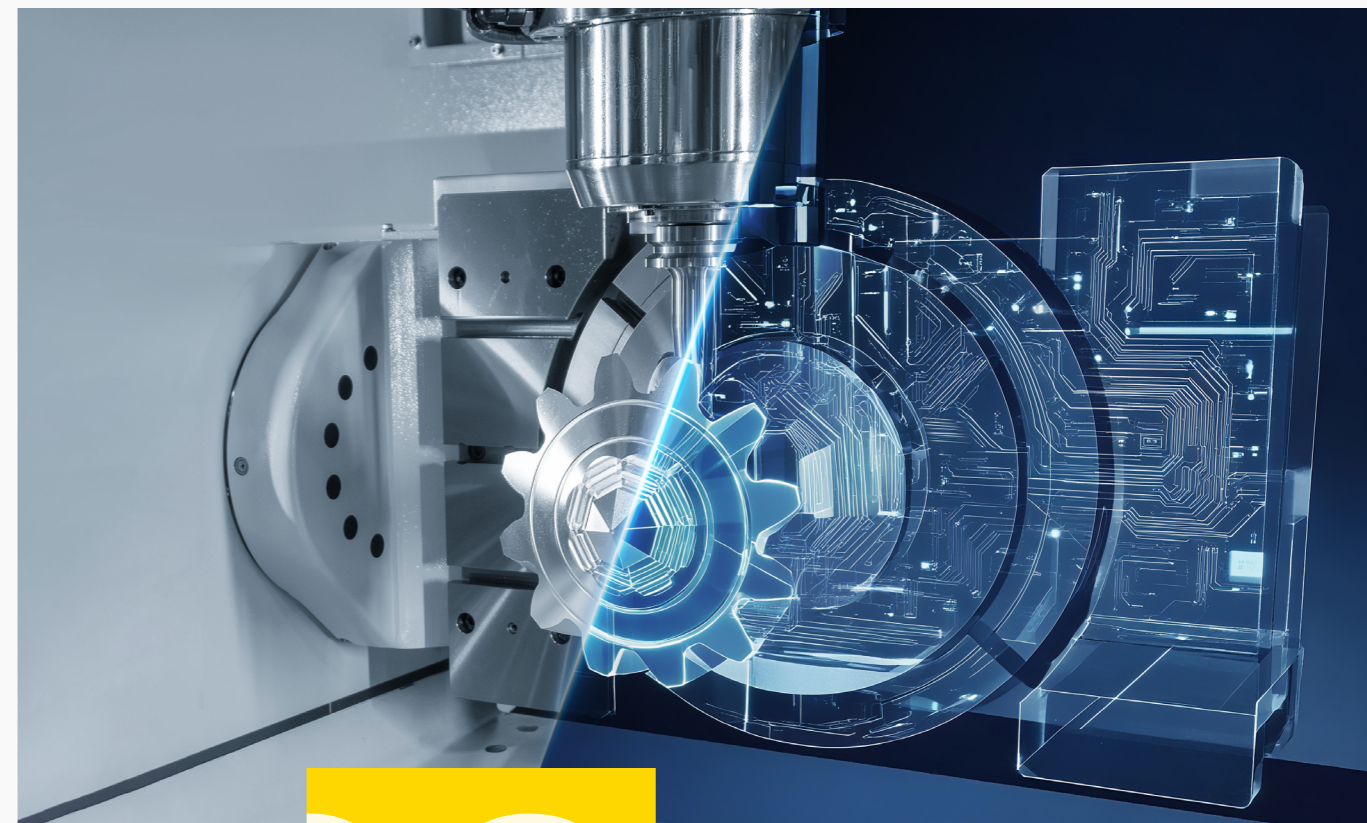
BEIJING-FANUC's Substantive Issues Matrix

## 1.5 Stakeholder Engagement

BEIJING-FANUC regularly communicates with stakeholders to understand their expectations and opinions on our sustainable development performance. The stakeholders include, but are not limited to, shareholders, customers, partners, employees, suppliers, communities, governments, and industry regulators. Communication channels include, but are not limited to, regular and irregular meetings, general meetings of shareholders, on-site research, customer activities, satisfaction surveys, news media, corporate official websites, and social media platforms.

Stakeholders	Key Concerns	Communication Channels
Shareholders	Corporate Governance, Development Strategy, Profitability, Sustainable Development, Shareholder Returns, Information Disclosure	General Meetings of Shareholders, Board of Directors, On-Site Research
Customers	Product Innovation, Product Quality Responsibility, Customer Relationship Management, Green and Low-Carbon Solutions, Sustainable Development Co-Construction, Anti-Bribery and Anti-Corruption	Customer Satisfaction Surveys, Customer Visit System, Offline Exchange Activities, Online Complaint and Communication Mechanisms, Industry Summits, Industry Ecosystem Development Dialogues
Partners	Response to Climate Change, Industrial Cooperation and Development, Talent Training and Development, Innovation Cooperation	Strategic Cooperation, Talent Ecosystem Construction, Project Communication, Industry-University-Research Cooperation Projects
Employees	Employee Rights and Welfare, Talent Training and Development, Occupational Health and Safety, Diversity, Equity and Inclusion (DEI)	Face-To-Face with General Manager, Performance Interviews, Employees' Representative Congress, Supplementary Pension Committee Meetings, Psychological Care Program
Suppliers	Supply Chain Management, Information Security and Privacy Protection, Response to Climate Change, Anti-Bribery and Anti-Corruption	Supplier Training, Annual Supplier Review Meetings, Supplier Conferences
Communities	Public Welfare and Voluntary Services, Community Communication and Development, Building a Harmonious Society	Social Welfare Activities, Community Volunteer Projects, Community Exchange Activities, Campus Open Days, Campus Visits
Governments and Industry Regulators	Corporate Governance, Business Ethics, Law-Abiding Tax Payment, Information Security and Privacy Protection, Green and Low-Carbon Transformation, Anti-Bribery and Anti-Corruption, Industrial Revitalization	Policy Seminars, Hot Policy Communication, Government-Enterprise Cooperation

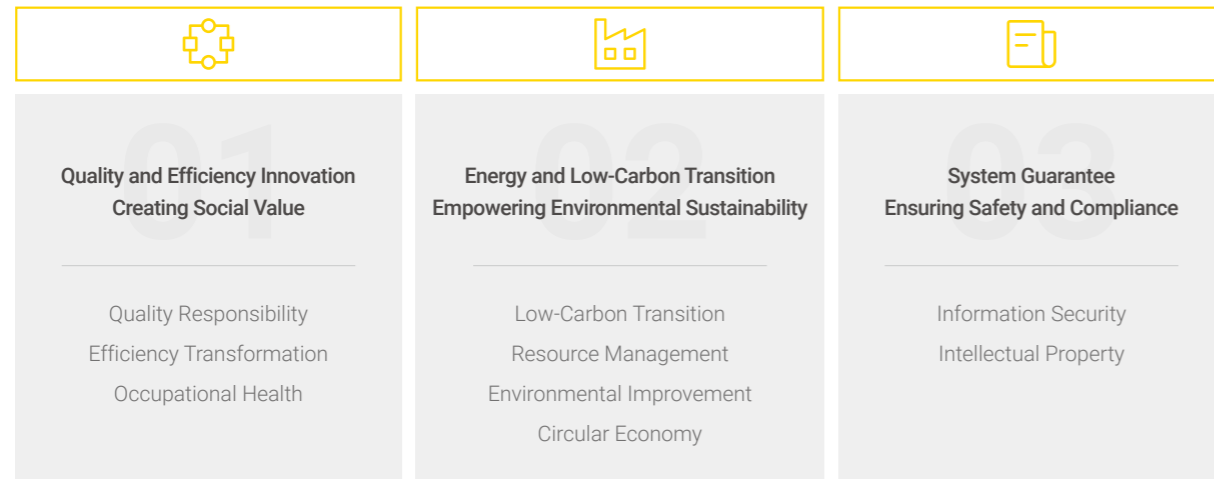
BEIJING-FANUC Stakeholder Engagement Topics and Channels Matrix



# 02

## INNOVATION IN INTELLIGENT MANUFACTURING

BEIJING-FANUC focuses on the green transformation needs of the manufacturing industry, taking "Technology-Driven Sustainability" as the core, and integrating intelligent innovation into the entire process of product R&D, production, and services. Centering on three major directions—"Quality and Efficiency Innovation, Energy and Low-Carbon Transition, and System Guarantee"—it provides scenario-based product technologies and solutions from dimensions such as quality responsibility, efficiency reform, low-carbon transition, resource management, and circular economy. While creating economic value for customers, we also provide core support for the sustainable development of society and the environment, helping the manufacturing industry upgrade towards high precision, high efficiency, low energy consumption, and high safety.



BEIJING-FANUC's Value Proposition for Empowering Customers with Innovation in Intelligent Manufacturing

## 2.1 Quality and Efficiency Innovation

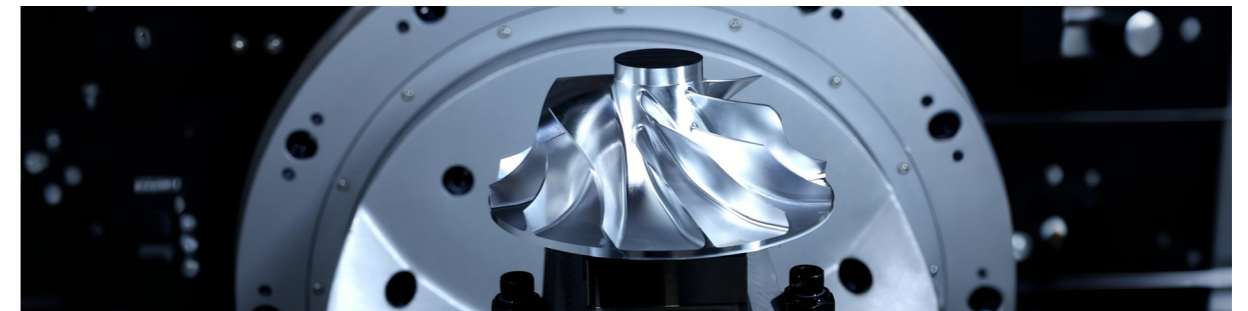
Amid the wave of green transformation and upgrading in the manufacturing industry, the dual improvement of quality and efficiency has become a common proposition for enterprises to break through and for the industry to advance. Behind the pursuit of quality and efficiency is the enterprise's pursuit and practice of sustainable and long-term development. With years of in-depth experience in the industry, BEIJING-FANUC is well aware of the challenges and difficulties enterprises face in green transformation and quality-efficiency innovation. For years, we have always anchored this core logic, adhered to "Precise and Professional", and through the in-depth integration and innovative practice of high-precision manufacturing technology, intelligent efficiency improvement solutions, and humanized safety design, promoted a leapfrog upgrade in manufacturing production quality and efficiency. We achieve the win-win of "Quality, Efficiency, Health", respond to the industry's urgent demand for high-quality development together with customers and partners, and practice the concept of sustainable development with practical actions, injecting lasting momentum into the long-term growth of the industry.

### 2.1.1 Quality Responsibility

BEIJING-FANUC has always placed quality responsibility at the core of enterprise development, taking the highly reliable FANUC CNC and the quality management system covering the entire product life cycle as the cornerstone, and earnestly fulfilling the main quality responsibility. BEIJING-FANUC adheres to the quality policy of "providing customers with high-quality CNC products and intelligent manufacturing whole-value-chain integrated solutions", and integrates quality requirements into the entire process of R&D, production, and services. By deeply integrating advanced intelligent control technology, real-time monitoring of abnormalities during machining, and accurately improving manufacturing precision and energy efficiency, we effectively prevent quality risks from the source, reduce production waste, ensure

long-term stable and efficient operation of equipment, significantly reduce failure rates and resource consumption. At the same time, we create reliable and durable industrial equipment and digital solutions.

Relying on advanced technical advantages, excellent product performance, and solutions, BEIJING-FANUC comprehensively helps customers achieve high-quality machining, earnestly fulfills the responsibility commitment to the quality of end products, promotes the green, efficient, and sustainable development of the manufacturing industry, and continuously creates long-term value for customers, firmly safeguarding the resilience of the industrial chain and social well-being.



BEIJING-FANUC Fully Helps Customers Achieve High-Quality Machining and Earnestly Practices the Main Quality Responsibility

### Action Initiatives

**Provide highly reliable products:** BEIJING-FANUC takes high reliability as the core throughout the entire product life cycle of FANUC CNC, including design, R&D, testing, manufacturing, application, recycling, and even circular utilization, and is committed to creating truly trustworthy high-reliability products. Strictly following and building a full-chain quality control system in line with ISO9001 quality management system standards (see 6.1 for details), through standardized processes, precise control, and continuous optimization, we ensure that every link from R&D to services is accurate and reliable, guaranteeing the product's excellent stability and long service life. This forms BEIJING-FANUC's differentiated competitive advantage in the field of CNC high reliability, provides a solid and sustainable equipment support for the entire industrial chain, and comprehensively helps customers achieve high-quality manufacturing.

**Ensure high-quality machining:** Based on nanometer-level computing precision, FANUC CNC can build a high-performance FANUC CNC platform combined with advanced servo technology; the product's AI contour control function can effectively optimize high-speed and high-precision machining paths, and the smooth tolerance and control technology can significantly improve the surface machining quality of components; the Smart Overlap function can shorten the machining cycle time; the high-speed and high-precision servo HRV control and high-response spindle HRV control further enhance the dynamic performance and machining efficiency of the system. With powerful control functions, FANUC CNC can help customers achieve high-speed, high-precision and high-quality manufacturing and machining, and significantly improve product machining quality.

**In-process quality monitoring:** Relying on the in-process quality monitoring, FANUC CNC dynamically optimizes parameters and accurately identifies and warns potential deviations through real-time perception and intelligent analysis of machining data. We help customers transform quality management from the traditional "Post-Inspection" model to the proactive "Pre-Prevention and In-Process Control" model, significantly improving the stability and consistency of the machining process, and fundamentally ensuring the excellent quality of products and the stable and efficient machining process.

**Quality traceability and quality management:** Establish a full-process quality management system based on a proprietary digital platform to achieve accurate full-process quality traceability of products, ensuring that any quality problems

can be quickly located and closed-loop; through intelligent analysis of quality data, driving process optimization and problem prevention, and fundamentally improving the consistency and reliability of quality. The online and in-depth traceability capability of quality allows customers to identify potential fluctuations, continuously optimize processes, and convert internal high-quality control standards into trustworthy and consistent high-quality product delivery.

### Case 1: On-site Management Optimization and Intelligent Manufacturing Technology Implementation Project for an Auto Parts Enterprise

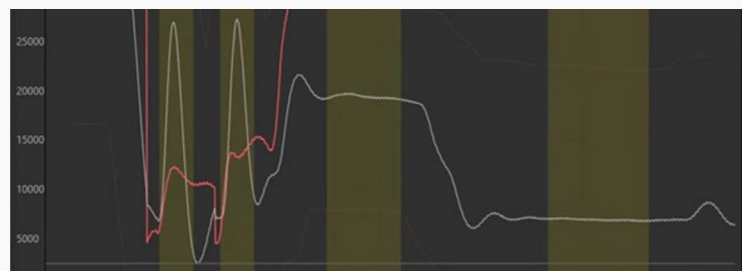
Against the background of the slowdown in the growth of the automotive industry and industrial upgrading, a certain auto parts enterprise fell into a bottleneck in the traditional production experience model. It urgently needed production management optimization and intelligent manufacturing technology implementation to solve problems such as inefficient and error-prone manual operations in multiple links, including production planning and inventory reconciliation, data distortion, delayed equipment failure response, and untimely quality feedback, while achieving capacity ramp-up.

Targeting the customer's pain points, BEIJING-FANUC built a Manufacturing Operations Management (MOM) system for it and provided full-cycle value services relying on original factory IoT collection capabilities and on-site manufacturing professionalism. By constructing a full-process quality management system, we realized accurate quality traceability and problem closed-loop, and continuously optimized processes through intelligent analysis of quality data. In this case, we helped the customer steadily achieve the capacity ramp-up target under existing conditions, and at the same time consolidated the delivery capacity with high-standard quality control, realizing the dual improvement of efficiency and quality.

### Case 2: Aluminum Alloy Wheel Production Line Monitoring Project for an Auto Parts Supplier

As the parts supplier for a well-known automotive company, the customer adopted fully automated production lines in the workshop. However, when machining aluminum alloy wheels, the customer encountered some issues. First, the turning tool inserts were prone to damage, leading to unqualified product dimensions; second, the use of robotic arms for automatic loading and unloading occasionally caused workpiece flying after rotation due to clamping deviation, which might damage machine tools and bring serious production risks. The unattended automatic production process was also prone to mass defective products, and the flow of defective products into the OEM factory would bring serious economic losses and credibility crises to the customer.

BEIJING-FANUC deployed and applied the FX Smartrol Tool Monitoring System (TMS) for this customer, which was promoted after a small-scale pilot deployment. One month after the system was put into use, it helped the customer reduce the number of mass defective products, reduce workpiece collision accidents, avoid equipment damage, and caused almost zero workpiece scrap due to tool problems. It not only ensured the quality of processed products but also saved material costs, reduced energy consumption, and ensured the continuity of production plans and the inherent safety of the workshop.



Screenshot of the Intelligent Tool Monitoring System Interface

### Case 3: Automated Unmanned Workshop Project for Aluminum Wheels of an Enterprise in Jiangsu

An enterprise in Jiangsu had been using manual operations in the operation of its automated unmanned workshop for aluminum wheels. Due to many product types and lagging process flow, production efficiency and machining quality could not be improved, and it urgently needed to introduce and implement unmanned workshop automation technology.

BEIJING-FANUC helped this customer plan and implement an automated production line for the unmanned workshop, realizing full-process automated production from blank loading to finished product machining, automatic inspection and order monitoring. This solution was adapted to the flexible production method of multi-variety and small-batch, helping this customer significantly improve production efficiency and meet capacity demand. At the same time, through strict quality control and management processes, relying on advanced production processes, technologies and equipment, we helped this customer strengthen its in-process quality inspection. Among them, wheel weighing machines, center hole testing machines, automatic online code scanning identification, on-line inspection of blank outer diameter, and automatic inspection and tool compensation realize 100% online inspection and traceability of the whole wheel process, helping customers achieve excellent product quality and high-quality delivery.

### 2.1.2 Efficiency Transformation

With more than 30 years of localized practice in China's manufacturing industry, BEIJING-FANUC, relying on FANUC CNC technology and automation solutions, on the one hand, focuses on the efficiency pain points of actual machining scenarios of manufacturing enterprises. Through the in-depth integration of intelligent edge computing and whole-process optimization, we realize precise management of the production process, accurately solve capacity bottlenecks, and help enterprises achieve a substantial leap in machining efficiency. On the other hand, relying on extensive market coverage and large-scale application of massive products, we continue to promote the comprehensive advancement and high-quality transformation of the numerical control, automation, digitalization and intelligence levels of the manufacturing industry.

From the efficiency improvement of individual enterprises to the efficiency revolution of the entire industry, BEIJING-FANUC has always taken technology empowerment as the link, helping manufacturing enterprises achieve "Acceleration" in production, leveraging large-scale practice to drive the overall industrial efficiency upgrade of Made in China, and becoming an important force promoting "Made in China Speed" towards higher quality and higher efficiency.



BEIJING-FANUC Helps Enterprises Achieve a Leap in Machining Efficiency and Promotes the Efficiency Revolution of the Manufacturing Industry

### Action Initiatives

**Promote the popularization of industrial numerical control:** The development of China's machine tool industry has experienced a transformation from "Basic Manufacturing" to "High-end Intelligent Manufacturing". In the early days of

the founding of the People's Republic of China, with the assistance of the Soviet Union, China established backbone enterprises (represented by Shenyang No.1 Machine Tool Factory and Dalian Machine Tool Factory), mainly producing ordinary manual or semi-automatic machine tools, completing the large-scale layout from scratch, and building the basic machining capacity for the domestic heavy industry system. However, the equipment was mainly ordinary machine tools with manual operation, low precision, and limited efficiency, and the technical level was relatively backward.

After the Reform and Opening Up, the market had an urgent demand for precision, efficiency, and flexible production. Traditional machine tools could not meet the requirements of modern industrial development, and the industry began to seek technical upgrading paths. Numerical control technology became the mainstream direction of global machine tool development, and the domestic numerical control transformation officially started. National policies gradually guided technical upgrading, but the independent R&D of domestic CNC lagged behind, and core technologies and components relied on imports, putting the industry in a dilemma of "having machine tools without cores".

As early as the early 1980s, FANUC introduced advanced CNC technology into China through technology export and cooperation. Beijing Machine Tool Research Institute took the lead in introducing FANUC CNC 5, 7, 3, 6 series numerical control systems, drive and servo motor technologies, becoming the source of mass supply of complete sets of numerical control products to domestic machine tool OEM factories, and laying the foundation for the take-off of China's numerical control technology.

Since then, FANUC has continuously exported upgraded core products. With the performance advantages of high stability and high precision, FANUC has become the core supporting choice of major domestic OEM factories. We not only significantly improved the machining precision and automation level of domestic machine tools, but also helped domestic enterprises quickly break through the technical bottleneck of transforming from ordinary machine tools to numerical control machine tools, realizing the leap from ordinary machine tools to numerical control machine tools. Accordingly, the numerical control upgrading of equipment was achieved without developing CNC from scratch. We also promoted the improvement of China's numerical control technology industrial chain through technical training, localized services and the joint venture establishment of BEIJING-FANUC Mechatronics Co., Ltd. and Shanghai FANUC Robotics Co., Ltd., accelerating the modernization process of China's equipment manufacturing industry. It played an indispensable role in the historical process of China's machine tool industry moving from "manufacturing" to "intelligent manufacturing".

As of the disclosure date of this report, the cumulative sales and sales volume of FANUC CNC in mainland China have exceeded 1.18 million units, and the market stock (referring to sold equipment) has reached a huge volume of about 1.6 million units. With a full range of technical solutions—covering from basic numerical control functions to AI intelligent dynamic adaptive system (FX Smartrol Dynamic Adaptive System, DAS) and multi-axis linkage, from the several-fold improvement of single equipment machining efficiency to the full implementation of automated and flexible transformation of production lines, from the efficiency improvement of individual enterprises to the popularization of numerical control in the entire industry and all industries—FANUC CNC has significantly improved the numerical control rate of China's machine tools through large-scale application. It also accelerated the transformation process of China's manufacturing industry from "Traditional Manufacturing" to "Digital Manufacturing", built a solid foundation for automated production, and continuously drove the dual leap of manufacturing efficiency and production income in the industrial field, helping to achieve "the Rapid Development of Made in China".

**Assist the automation leap of China's manufacturing industry:** The history of automation development in China's manufacturing industry is a history of industrial iteration and upgrading from "Labor-Intensive" to "Intelligent and Efficient". From the Reform and Opening Up to 2000, which is the initial stage of automation, the manufacturing industry was

dominated by labor-intensive production. At the same time, automation applications were limited to simple mechanical replacement of single equipment, and only sporadic automated production lines appeared in a few industries, such as automobiles and home appliances. The overall technical level was low, the popularity was insufficient, and the core equipment and control technologies were almost blank. From 2000 to 2015, it entered a period of rapid promotion of automation. With the rise of labor costs and the dual demands of the market for capacity and quality, "Machine Replacement" became the industry consensus. Industrial robots and automated production lines began to be applied on a large scale. Industries such as automobiles and 3C took the lead in completing the automation transformation of core processes. However, core equipment, such as industrial robots and control systems, was mostly imported, and system integration capabilities were weak.

BEIJING-FANUC has deeply participated in and helped the upgrading process of automation in China's manufacturing industry, playing the core role of "technology enabler" and "ecosystem builder". As early as the 1990s, BEIJING-FANUC and Shanghai FANUC introduced FANUC FA series products and mature industrial robot technologies into China. With the advantages of high stability and high precision, the products quickly became the core choice for automation transformation in industries such as automobiles and 3C.

With the upgrading of industry demand, after the implementation of the "Made in China 2025" strategy in 2015, automation entered a period of intelligent transformation, evolving from single equipment automation to production line collaboration, digital twin, and unmanned workshop. AGV intelligent logistics, Manufacturing Operations Management (MOM) system, and full-process digital control became the core of upgrading, and intelligent manufacturing became the core direction of industry development.

Closely following changes in market demand, BEIJING-FANUC has further innovated its products and technologies. Rooted in FANUC's more than 30 years of experience in unmanned factory operations and based on 30 years of accumulated manufacturing industry Know-How in China, we leverage cross-disciplinary expert teams and core application technologies such as IoT, ICT, automation, and big data. Supported by the above factors in helping industry clients build digital factories and upgrade their digital capabilities, we provide full value chain solutions for automation, digitalization, and intelligence. These efforts help enterprises accelerate their journey into the era of intelligent manufacturing, drive the industry's transition from "Equipment Automation" to "System-Wide Intelligence," and establish Beijing FANUC as an indispensable core force in the automation and intelligent upgrade of China's manufacturing industry.

**Promote the application of efficient machining technology clusters:** Relying on the built-in efficient machining technology function group of FANUC CNC, BEIJING-FANUC provides customers with comprehensive efficient machining support in key links such as tapping, intelligent dynamic adaptive system, feed axis acceleration and deceleration optimization, non-cutting time reduced, cycle turning, and interpolation thread machining, realizing the refinement and speed optimization of the process.

**Develop FX Smartrol System to break through efficiency bottlenecks of traditional methods:** BEIJING-FANUC's intelligent dynamic adaptive system deeply integrates intelligent perception and real-time optimization technologies. By intelligently and accurately identifying and dynamically adjusting the machine tool load, cutting state, and process cycle during machining, we break through the efficiency bottleneck of fixed parameters in traditional machining modes that are difficult to adapt to complex working conditions. The system can real-time optimize operating parameters according to different workpiece characteristics and machining processes, intelligently compress invalid waiting time, improve the fluency of process connection, and ultimately achieve an overall production line efficiency improvement of more than 3%, solving efficiency obstacles that are difficult to cope with by traditional methods.

The efficiency improvement brought by the intelligent dynamic adaptive system not only directly reduces the production energy consumption and time cost per unit product of enterprises, but also reduces resource waste and carbon emissions in the production process, helping enterprises transform to a green development model of "High Efficiency and Low Consumption" while breaking through capacity bottlenecks and strengthening market competitiveness.

**Develop digital twin platforms to significantly shorten design, R&D, and manufacturing cycles:** BEIJING-FANUC's FX Digital Double Machine System (DDMS) technology relies on virtual-real integration and full-process simulation technology to build a 1:1 mapping virtual commissioning platform with physical equipment and production lines. Through the innovative model of "virtual rehearsal replacing physical trial and error", we reshape the commissioning logic of equipment and production lines. By simulating the entire process of machine tool movement trajectory and production line layout, potential problems such as layout conflicts, trajectory interference and parameter adaptation can be found in advance without starting physical equipment, and iterative optimization can be completed in a virtual environment, changing the pain points of traditional commissioning that rely on repeated trial and error of physical equipment, long cycle and large loss.

Through this technological innovation, the commissioning cycle of new equipment and production lines can be shortened by more than 50%, which not only significantly reduces invalid energy consumption and material loss during the commissioning phase, but also avoids additional carbon emissions and resource consumption caused by frequent start-up and shutdown of equipment and repeated adjustments in traditional commissioning. While improving the commissioning efficiency of customer production lines and accelerating the release of efficiency, we promote the transformation of the manufacturing industry from "Physical Trial and Error" to "Virtual Optimization" with the green logic of "Pre-Optimization and Reduced Consumption", realizing the coordinated improvement of production efficiency and environmental benefits.

**Manufacturing engineering solutions to achieve efficiency transformation:** Through systematic research and application of manufacturing engineering, combined with cutting-edge machining technologies, we help customers provide manufacturing engineering solutions from process planning and design to machining trial production and mass production, realizing efficiency transformation.

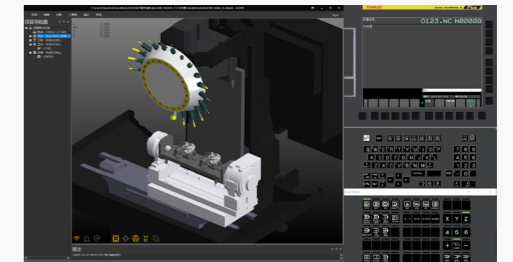
### Case 1: Flexible Production Project of Intelligent Manufacturing Production Line Control System for a Mould Manufacturing Enterprise

A customer in Zhejiang mainly focuses on two core businesses: moulds and auto parts. In production and manufacturing, this customer was still adopting the mass production model of traditional manufacturing, which was difficult to adapt to the customized demand of multi-variety and small-batch production in the market, leading to a low equipment utilization rate, efficiency bottlenecks caused by frequent model changes and insufficient capacity release. With the gradual transformation of the production model, the customer proposed to transform to multi-variety and small-batch flexible production.

BEIJING-FANUC introduced independently developed Intelligent Production Line Control System (iPCS) for this customer. Through dynamic scheduling algorithms and full-life-cycle tool management, we realized automatic adjustment of production plans according to order requirements, matched the machining processes of multi-variety products, and effectively implemented the multi-variety and small-batch flexible production model. After the project implementation, the customer's equipment utilization rate jumped from 40% to 85%, production preparation time was shortened by 30%, and labor costs were reduced by 50%, effectively solving the pain point of frequent model changes for small-batch orders, realizing a significant improvement in equipment utilization rate and production efficiency, and empowering the efficiency revolution with technology.

### Case 2: Intelligent Digital Double Machine System (DDMS) Project of a Domestic Aluminum Die Casting Machining Enterprise

As a domestic aluminum die casting machining enterprise, the customer faced bottlenecks in the traditional manufacturing model in the process of quickly responding to market changes and improving internal production efficiency. The development cycle of new products was long, and the trial production process had to occupy physical equipment, leading to frequent interruptions of existing production lines and a low machine tool utilization rate. At the same time, the process optimization of old products was difficult to deepen due to the lack of efficient simulation means, and the overall production efficiency improvement was limited.



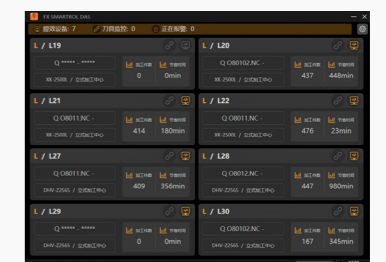
DDMS Virtual Simulation Interface

To promote efficiency reform, the customer established a group process center and introduced BEIJING-FANUC's intelligent Digital Double Machine System (DDMS) as a standard link of digital manufacturing. BEIJING-FANUC's self-developed DDMS realizes the full-process simulation and verification of products from sampling to mass production by building a 1:1 virtual environment with the physical factory. New products can be repeatedly trial-produced and process-optimized in the virtual space, and the development cycle can be shortened by 1/3; existing products can also identify bottleneck processes through simulation analysis to achieve a significant improvement in production efficiency.

After the project was put into operation, the occupation of machining equipment was greatly reduced, and the equipment utilization rate was improved by leaps and bounds. We not only helped the customer accelerate product innovation and iteration, but also tapped huge capacity potential in existing equipment, winning valuable time and cost advantages for the enterprise in the fierce market competition, and verifying that manufacturing enterprises can also achieve efficiency reform through digital means.

### Case 3: Intelligent Dynamic Adaptive System Project of a Core Supplier of Aluminum Alloy Materials for New Energy Vehicle Bodies

As a core supplier of aluminum alloy materials for new energy vehicle bodies, the enterprise has faced a surge in new energy vehicle-related orders in recent years, and urgently needed to increase capacity. However, due to site and capital constraints, this customer could not purchase new equipment on a large scale, and the efficiency of existing single machines had been close to the physical limit after multiple rounds of process optimization, falling into a capacity bottleneck of "daring not to take orders".



DAS Parameter Optimization Interface

Combined with the customer's on-site situation, after comprehensive research and judgment, BEIJING-FANUC deployed an intelligent, dynamic adaptive system for this customer. Without modifying hardware equipment, the system can realize millisecond-level real-time optimization and adaptive adjustment of cutting parameters during machining through the in-depth integration of intelligent algorithms and FANUC CNC underlying control technology, tapping the hidden efficiency potential in existing equipment. After deployment, the single-piece machining time of key



Machining Cycle Improvement

processes was significantly shortened from 18 minutes and 24 seconds to 17 minutes and 10 seconds, and the operation efficiency was improved by about 7.8%. With minimal investment and lowest risk, BEIJING-FANUC helped the customer increase current capacity to meet market demand, while significantly reducing energy consumption and carbon emissions, achieving a win-win of economic and environmental benefits.

### 2.1.3 Occupational Health

Occupational health and safety are the fundamental requirements for the high-quality development of the manufacturing industry. For a long time, the stereotypical impression of "Dirty, Messy, Tiring" and high-risk operation has become a prominent pain point restricting the industry's attractiveness and sustainable development. Improving the production environment and safeguarding the health of workers have long been important propositions for the transformation and upgrading of the manufacturing industry. BEIJING-FANUC has always believed in the power of technology for good, and firmly believes that the fundamental purpose of the development of advanced technology is not only to improve efficiency and precision, but also to safeguard human health and safety, and empower human value and dignity. Advanced product technology should become a warm force to ensure occupational health and safety and promote social sustainable development.

Over the years, BEIJING-FANUC has made continuous efforts to build a multi-dimensional collaborative practice system of "Technology Reduction, Active Protection, Prediction and Early Warning, and Environmental Optimization" supported by comprehensive intelligent technologies and systematic solutions, effectively ensuring the health and safety of the manufacturing site. BEIJING-FANUC not only frees workers from heavy and repetitive physical labor and high-risk operation scenarios through intelligent technology and machining automation, significantly reducing labor intensity and potential occupational hazards, but also optimizes the physical environment, such as light, heat, and noise on-site, through advanced processes. BEIJING-FANUC actively avoids operational risks with high-standard safety protection technologies and fault prediction and early warning capabilities, and accurately controls occupational health threats with intelligent monitoring means. This series of practices not only helps break the traditional label of "Dirty, Messy, and Tiring" in the manufacturing industry, making safety, cleanliness, and comfort the new background of the production environment, but also builds a new paradigm of safe production with man-machine collaboration, safety, and health.



BEIJING-FANUC, Supported by Comprehensive Intelligent Technologies and Systematic Solutions, has Built a Multi-dimensional Collaborative Practice System to Ensure Health and Safety at Manufacturing Sites

#### Action Initiatives

**Technology reduction:** In traditional machining scenarios, the operation of CNC is highly dependent on manual intervention. During the production process, manual real-time monitoring, manual inspection of dimensional accuracy, and manual repeated handling of material loading and unloading are required. These repetitive and labor-intensive

operations not only consume a lot of labor costs but also are prone to error accumulation or operational mistakes due to human fatigue, bringing potential safety hazards and health risks.

BEIJING-FANUC has continuously improved the intelligence level and automation integration capabilities of FANUC CNC products. Starting from core operation links, relying on the high-precision automatic programming and multi-task parallel machining functions of FANUC CNC, we convert complex machining processes into standardized program instructions, eliminating the need for manual segment-by-segment input and adjustment, significantly reducing repetitive work such as parameter setting and program debugging, and liberating workers from simple operations to higher-value planning, monitoring, and optimization positions. The continuous improvement of FANUC CNC penetration rate and automation level will effectively help operators on the production site reduce physical labor load and occupational injury risks caused by long-term repetitive operations.

**Intelligent manufacturing overall solutions to build smart factories:** Manufacturing enterprises are undergoing digital transformation, with intelligent manufacturing upgrading accelerating, moving rapidly towards intelligence, digitalization, informatization, and automation. Rooted in FANUC's more than 30 years of unmanned factory practice, BEIJING-FANUC takes IoT/ICT/automation, big data, and other application technologies as the core, and provides whole-value-chain automation, digitalization, and intelligent solutions for industry customers in the process of digital factory construction and factory digital upgrading. By building automated flexible production lines, automated loading and unloading devices, and robot collaborative operation systems, we realize the full-automated operation of material handling and workpiece loading and unloading, replacing the heavy labor of manual reciprocating handling, significantly improving the production work environment and work pressure, and ensuring occupational health.

**Active protection:** Through built-in functions such as FANUC CNC power-off protection, stroke limit detection, abnormal load detection, and feed axis emergency stop, BEIJING-FANUC ensures the safety of equipment and operators under various complex working conditions. At the same time, we develop a dual security check function in line with European safety standards, adopting dual-channel cross-signal redundancy detection, significantly reducing personal safety risks caused by hardware failures, and building a dual safety barrier for equipment and personnel.

**Prediction and early warning:** Based on the Digital Double Machine System (DDMS) platform, realize predictive maintenance of machine tool status, machining trajectory simulation, and collision monitoring, greatly improving the accuracy of fault early warning, pre-resolving risks with digital means, and helping avoid personal injury risks through technology.

**Intelligent workshop environment monitoring:** Cooperating with the intelligent workshop environment monitoring system, conduct real-time monitoring and early warning of dust, noise, harmful gas concentration, etc., realizing precise control of occupational health risks, controlling the overall occupational health risk within half of the national standard, and creating a healthy and comfortable working environment.

#### Case 1: Manufacturing Operations Management System (MOM) Project of an International Enterprise in the Construction Machinery Manufacturing Field

An enterprise from Jiangsu province focusing on the construction machinery manufacturing field has customers at home and abroad. To reduce costs, in support of the internationalization strategy and overseas business, this enterprise planned to build an intelligent factory in Xuzhou. With the support of the MOM system, this enterprise wanted to realize the full implementation of digital and intelligent concepts, and continuously optimized green carbon

reduction, occupational health, and environmental climate issues. They also wanted to solve problems such as poor working environment, prone to contamination, manual handling of heavy objects, a high risk of occupational injury for employees, and difficulty in implementing occupational health and safety management in the old factory.

BEIJING-FANUC helped the enterprise plan a smart factory from scratch, from blueprint to implementation, and deployed the Manufacturing Operations Management System (MOM), realizing full-process automated, standardized, and intelligent production. The new factory introduced automated equipment, robots, AGVs, and MOM system task scheduling. The handling during production is automatically completed by the system and automated equipment; iron chips and waste oil are recovered through pipelines to ensure the centralized treatment of metal machining waste, reducing on-site dust and odor problems caused by the overflow of iron chips and waste oil during machining; the ANDON function of the Manufacturing Operations Management System (MOM) can quickly improve the response and machining efficiency of equipment failures, effectively avoiding on-site pollution and waste overflow.

After the new factory was put into use, the workshop environmental standards were significantly improved, the working environment and workers' physical and mental health were improved, the 6S management was further consolidated, and the occupational health and safety of manufacturing workers were guaranteed.

### Case 2: Systematic Training Project for Team Leaders in the Automobile Manufacturing Field of a Large Automobile Manufacturing Enterprise

A large automobile manufacturing enterprise in East China has focused on the construction of front-line management teams for a long time. To consolidate the foundation of on-site production management and improve comprehensive efficiency, this enterprise planned to systematically promote the training of team leaders, aiming to strengthen the dual technical and management capabilities of this group. However, due to the lack of unified standards and scientific paths, talent training and evaluation had long relied on experience, making it difficult to accurately undertake BEIJING-FANUC's strategy and achieve sustainable development.

Based on the DACUM methodology, BEIJING-FANUC, through multi-dimensional research and interviews, collaborated with the enterprise to decompose strategic goals layer by layer to the team leader positions, and jointly built job descriptions and skill standard systems for production team leaders and electromechanical maintenance team leaders, clarifying their key tasks and competency requirements.

After the project was carried out, the enterprise's team leader talent training had a clear and unified basis, realizing the standardization of the entire process from selection and training to evaluation. By improving the on-site organization, safety supervision and humanistic management capabilities of front-line managers, it not only improved production efficiency and quality consistency, but also further optimized the standardization and safety of the operation site, enhanced the level of employee occupational health protection, and laid a solid foundation for the long-term healthy operation of the enterprise and the sustainable development of employees.

### Case 3: Intelligent Manufacturing Empowers the Upgrade of Occupational Health and Safety Management

With the in-depth intelligent transformation of the manufacturing industry, enterprises are increasingly focusing on

systematically ensuring employees' occupational health and operational safety through technical means. Targeting the needs of preventing human errors and reducing occupational exposure risks in high-risk production scenarios, BEIJING-FANUC has launched an occupational health and safety error-proof solution integrated with intelligent perception and digital platforms, realizing real-time monitoring and active protection of personnel operations, equipment status, and working environment.

After the implementation of the solution, we not only effectively prevented mechanical injuries and accidents through automatic identification and intervention of mis-operations, and abnormal equipment status, significantly reducing human operation risks, but also linked equipment and protective facilities to reduce exposure to harmful factors such as noise and dust, improving the on-site occupational exposure environment. At the same time, we promoted the institutionalization of health and safety management with technology-solidified safety processes, improving compliance and execution, and comprehensively building a sustainable and reliable healthy working environment for employees. Demonstrating the benevolent power of technology, we leveraged intelligent technologies to help enterprises build an employee-centric and preventive occupational health protection system, achieving coordinated development of safety and production.

## 2.2 Energy and Low-Carbon Transition

As the core pillar of the national economy, the manufacturing industry is not only a key field for industrial carbon reduction and green transformation, but also a core battlefield for practicing the circular economy and achieving the "Dual Carbon" goals. Its low-carbon transformation effect is directly related to the overall development of resource conservation and environmental friendliness.

BEIJING-FANUC deeply grasps the mission of the industry's green development, and deeply integrates the concept of "Low Carbon, High Efficiency and Circularity" into the entire product life cycle journey. With technology empowerment and reliable services as the core paths, BEIJING-FANUC comprehensively helps manufacturing enterprises reduce production carbon footprints and environmental loads through continuous tackling of core energy-saving technologies, implementation of refined resource management, promotion of low-consumption and environmentally friendly green processes, and construction of a green after-sales maintenance system for equipment throughout the life cycle. We further improve energy utilization efficiency and resource recycling rate, and promotes the transformation of the manufacturing industry to a green development model of "Resource Conservation and Environmental Friendliness" from the source of production.

### 2.2.1 Low-Carbon Transition

Industrial carbon reduction is an important link in practicing the "Dual Carbon" strategy and promoting the sustainable development of the manufacturing industry, and it is also a key measure to protect the ecological environment and achieve the harmonious coexistence of industry and nature. BEIJING-FANUC deeply recognizes this era responsibility, establishes "Energy Conservation and Low Carbon" as the core strategic anchor of product innovation, takes energy conservation as a key element of FANUC product technology, embeds energy-saving genes from the source, continuously optimizes product design, provides comprehensive green manufacturing solutions covering equipment, processes and management, promotes the application of green manufacturing technologies, and helps customers achieve low-carbon transition through dual efforts of green innovation at the product end and precise empowerment at the solution end. We systematically reduce carbon emissions, promote the formation of a green and collaborative development ecosystem upstream and downstream of the industrial chain, lead the industry to transform to a

sustainable development model of "Low Consumption, High Efficiency, and Circularity", and inject Chinese intelligent manufacturing power into the global industrial low-carbon transition.



BEIJING-FANUC Helps Customers Achieve Low-Carbon Transition through Dual Efforts of Green Innovation at the Product End and Precise Empowerment at the Solution End

### Action Initiatives

**Design and develop energy-saving components:** In traditional servo systems, when the motor decelerates or brakes, the generated electrical energy is dissipated as heat through the brake resistor, resulting in energy waste and additional heat dissipation requirements. BEIJING-FANUC solves this problem by continuously optimizing the short-term overload capacity and normal operating energy efficiency of FANUC CNC and servo systems. Among them, the servo discharge regeneration function recovers and converts the electrical energy generated during braking through a built-in regeneration unit and feeds it back to the power grid for use by other equipment, realizing the recycling and efficient recovery of energy and significantly reducing basic energy consumption. Its built-in "Optimal Torque Control" algorithm can dynamically match power output in scenarios such as automobile stamping and mould machining, achieving a single-process energy consumption reduction of 15%-25%.

**Provide green machine tools and comprehensive green manufacturing solutions:** BEIJING-FANUC's green machine tool solutions deeply integrate the concept of energy saving and consumption reduction into the entire process of product design and technological innovation, and significantly improve machine tool machining quality and production efficiency through intelligent machining and digital empowerment. The solution adopts low-power components and integrates power regeneration technology to directly reduce system operating energy consumption. Relying on FANUC CNC efficient machining technology, BEIJING-FANUC optimizes machining parameters and processes, reduces pre-machining and time redundancy, shortens the overall operation time of equipment, and indirectly achieves electricity consumption reduction. Also, combined with FANUC Digital Double Machine System (DDMS) technology, BEIJING-FANUC conducts detailed simulation and real-time optimization of the production process through the Internet of Things (IoT), and conducts power consumption analysis at the factory level to systematically reduce carbon emissions in the production process. BEIJING-FANUC emphasizes preventive maintenance and whole-life-cycle management, effectively extending the service life of equipment, reducing the number of discarded pieces of equipment, and helping enterprises build a full-chain low-carbon manufacturing system.

**Intelligent Digital Double Machine System (DDMS) and energy management system optimize carbon footprint:** Relying on 1:1 virtual-real mapping and full-process simulation capabilities, the intelligent digital twin deeply integrates the data analysis advantages of the energy management system to build a full-chain green management system of "Carbon Footprint Visualization-Process Path Optimization-Emission Reduction Effect Preview". By accurately replicating the entire production process of different process routes in a virtual environment and digitally modeling and quantifying core indicators, such as energy consumption distribution, material loss and carbon emission intensity under various process schemes, it realizes visual simulation and multi-scheme comparative analysis of carbon footprint, reduces and avoids additional carbon emissions and resource waste caused by "Physical Trial and Error" in traditional process

optimization. It provides precise technical support for carbon emission reduction from the source of production, avoids high-emission production models, helps customers optimize carbon emissions from the source planning stage, makes carbon emission reduction planning more scientific and operable, and realizes the transformation from "End-Of-Pipe Emission Reduction" to "Source Emission Control".

### Case 1: Customized Optimization Project of Linear Motor Overhead Crane Five-Axis Machine Tool for an Enterprise in Hubei

As a high-tech enterprise focusing on high-end CNC machining equipment, a customer in Hubei province faced the problem of light and dark pattern machining defects when using the first domestic FANUC linear motor overhead crane five-axis machine tool (high-speed mould machine). At the same time, to achieve green and low-carbon transformation, this customer had an urgent demand for energy consumption optimization.

BEIJING-FANUC tailored an optimization plan for this customer. By adjusting servo parameters and transforming the machine tool foundation, we solved the problem of light and dark pattern machining defects, and reduced the machine tool's standby energy consumption by 35% (saving about 270,000 kWh of electricity per year), optimized the dynamic machining energy consumption by 19%, shortened the single-process machining time by 18% in automotive lamp mould machining, and reduced carbon emissions by more than 300 tons throughout the year. This series of energy consumption optimization results not only reduced the environmental burden caused by energy consumption from the source but also promoted the industry's transformation to "Low-Carbon Production" through a significant reduction in energy consumption per unit product machining. At the same time, it achieved the win-win of "Efficient Production" and "Low-Carbon Development" through technological innovation, providing a replicable and promotable practical example for the green transformation of the high-end equipment manufacturing industry.

### Case 2: FANUC Linear Motor High-Speed Horizontal Machining Center Energy-Saving and Efficiency-Improving Project Developed for a New Energy Vehicle Enterprise

As one of the leading enterprises in the new energy vehicle industry, to meet the demand for capacity expansion of new energy vehicles, achieve the low-carbon goal of the supply chain, and fulfill the corporate sustainable development commitment, this enterprise urgently needed to reduce energy consumption and carbon emissions while improving machining efficiency.

BEIJING-FANUC cooperated with a well-known domestic machine tool factory to develop FANUC linear motor high-speed horizontal machining centers for the enterprise. By adopting linear motor direct drive instead of traditional ball screw transmission, we eliminated mechanical transmission friction loss and reduced equipment energy consumption by 40%; deployed a workshop-level Energy Integration Management platform to monitor power grid load in real-time, intelligently schedule high-energy-consuming processes to avoid peak electricity consumption periods, and achieved annual electricity savings of 1.2 million kWh. In terms of efficiency, process optimization shortened the single-piece machining cycle of subframes from 150 seconds to 75 seconds, an efficiency improvement of 50%, and the energy consumption per unit output value was only 65% of the industry benchmark value. After the project implementation, carbon emissions were reduced by more than 500 tons throughout the year, strongly supporting the enterprise's capacity expansion in new energy vehicles, and bringing outstanding energy-saving and carbon reduction results, helping its supply chain achieve low-carbon development goals.

### Case 3: 6400-Ton Servo Press Line Project of a Leading Enterprise in the Domestic Hydraulic Press

In the wave of low-carbon and intelligent transformation of the automobile industry, traditional stamping production lines are facing dual challenges of efficiency bottlenecks and high carbon emissions. As a leading enterprise in the domestic hydraulic press field, a customer from Tianjin province has profound accumulation in the hydraulic press segment of forging machinery, but also faces the challenges of quality and efficiency improvement and green and low-carbon transformation.

BEIJING-FANUC joined hands with the customer to build a 6400-ton servo press line project. Through millisecond-level synchronous control of 5 servo presses and 7 sets of manipulators, we doubled the overall collaborative efficiency of the production line, broke through the efficiency bottleneck of traditional mechanical press lines, and filled the gap in the domestic "High-Precision and High-Response" servo stamping field. At the same time, we real-time optimized the production cycle through a digital master control platform, and combined with remote operation and maintenance and data visualization functions, enabling customers to accurately monitor energy consumption and equipment status, providing a data foundation for continuous optimization of energy use.

After the project was implemented, we helped the customer save 30% energy, reduce 50% lubricating grease, and achieve nearly zero use of hydraulic oil, directly reducing the customer's carbon footprint and pollution risks during production, and meeting the rigid requirements of the global automobile industry for "clean stamping". The project not only broke the monopoly of international giants in the field of high-end stamping equipment, but also redefined the efficiency and sustainability of stamping production with an innovative architecture, helping customers achieve "Dual Carbon" goals with green technology and providing a Chinese solution for "Clean Stamping" for the global automobile industry.

### 2.2.2 Resource Management

BEIJING-FANUC deeply practices the concept of the circular economy and integrates it into the core of product innovation. By building a modular and standardized product architecture, we greatly improve the maintainability, upgradeability, and component reuse rate of equipment, effectively extend the product life cycle from the design source, and fundamentally reduce waste generation caused by equipment elimination. At the same time, combined with digital solutions, we conduct refined management of resources, such as materials and tools in the production process, accurately reducing material waste and resource loss during production, and helping customers achieve the minimization of resource consumption and maximization of value creation throughout the entire value chain of R&D, production and operation and maintenance, and promoting the implementation of circular economy in the industry and production sites with technology empowerment.



BEIJING-FANUC Integrates the Concept of Circular Economy into the Core of Product Innovation, and Promotes the Implementation of Circular Economy in the Industry and Production Sites with Technology Empowerment

### Action Initiatives

**Full-chain energy efficiency solutions:** Build an energy efficiency management architecture covering from equipment control to production system layer, realize the in-depth integration of energy flow and information flow, and systematically improve energy utilization efficiency.

**Intelligent edge controlling reduces material consumption:** Real-time monitoring and optimizing the machining process through intelligent edge controlling products, effectively reduce abnormal tool wear and loss, and directly save machining consumables costs.

**Virtual commissioning avoids resource waste:** With the help of the Digital Double Machine System (DDMS), accurately simulate and verify machining procedures in a virtual environment, avoid collision risks in physical commissioning in advance, and reduce tool loss and material waste from the source.

**Energy use optimization based on electricity price strategy:** For high-energy-consuming processes, the system can intelligently identify real-time electricity price bands, automatically adjust production plans in combination with equipment load, and successfully help customers increase the proportion of off-peak electricity use by more than 40%, significantly reducing energy costs.

**Refined control of equipment-level energy consumption:** Through the in-depth integration of BEIJING-FANUC energy management and core FANUC CNC, realize precise monitoring and intelligent regulation of non-machining states such as machine tool standby and no-load, and promote a 20%-30% reduction in annual comprehensive energy consumption of single equipment.

**Data-driven energy efficiency analysis system:** Rely on the industrial IoT platform to collect real-time various energy consumption data, such as electricity, water, and gas, and use machine learning technology to build dynamic energy consumption baselines and optimization models, providing a decision-making basis for continuous energy efficiency improvement.

### Case 1: Intelligent Tool Monitoring and Process Optimization Project of an Engine Manufacturing Enterprise

An engine manufacturing enterprise faced batch quality risks and testing efficiency challenges caused by abnormal tools during the machining of core components, and urgently needed to build a more proactive and precise tool management and quality control mechanism.

BEIJING-FANUC deployed an intelligent tool monitoring system for this customer. Through real-time load monitoring and life prediction, we realized a precise perception of tool status and immediate intervention of abnormalities, effectively curbing the generation of batch defective products, and optimizing testing frequency and tool replacement strategies. While improving the stability of quality and reducing the defective product rate, the project significantly reduced tool consumption and manual intervention costs, providing systematic support for enterprises to achieve refined control of the machining process and efficient use of resources.



TMS System Tool Status Monitoring Interface

### Case 2: Dual Improvement Project of Energy Efficiency and Resources in Intelligent Aluminum Machining

Against the background of the manufacturing industry promoting green transformation and refined operation, improving production energy efficiency and resource utilization rate has become an important path for enterprises to achieve sustainable development. Targeting aluminum machining scenarios, BEIJING-FANUC implemented an intelligent machining strategy optimization, significantly reducing energy consumption and resource consumption while ensuring machining quality, helping customers promote clean production and resource conservation.

During the project implementation, by matching the system to intelligently identify the machining stage, dynamically adjust the machining mode and parameters: focus on efficiency in the rough machining stage, give full play to the machining capacity of the equipment; prioritize accuracy and stability in the finish machining stage, and reasonably control power output. At the same time, combined with the automatic energy-saving management function of the equipment, we effectively reduced energy consumption during non-machining time. Through this solution, we helped customers reduce the comprehensive energy consumption per piece machined by about 28%, significantly shortened the machining cycle, and achieved energy saving and consumption reduction while improving production efficiency. In addition, the optimized machining strategy also extended the service life of tools, reduced resource consumption and replacement frequency, and promoted material conservation from the source. By combining process optimization with intelligent control, we synergistically improved energy utilization efficiency and resource productivity in the manufacturing process, and BEIJING-FANUC provided a feasible technical path for customers to practice green manufacturing.

### Case 3: Resource Intensification and Energy Efficiency Improvement Project of a New Energy Vehicle Component Manufacturer

Against the background of the green and efficient transformation of new energy vehicle component manufacturing, how to significantly reduce equipment investment, energy consumption, and labor dependence while ensuring product quality and capacity has become one of the key challenges for the industry to achieve sustainable development. When producing core components of its thermal management system, a new energy vehicle component manufacturer faced problems such as scattered processes, redundant equipment, and high energy consumption. This customer urgently needed to achieve the dual goals of resource intensification and energy efficiency improvement through process and production model innovation.

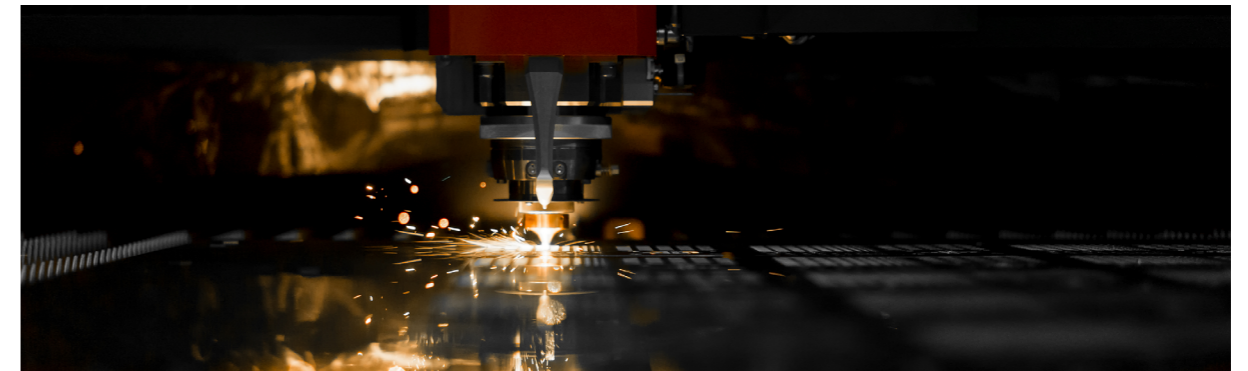
Centering on the core concept of "Resource Efficiency Optimization", BEIJING-FANUC provided the customer with an integrated machining solution based on in-depth process integration. By systematically analyzing characteristics of workpieces and reconstructing machining paths, we integrated multiple processes that originally needed to be completed on multiple pieces of equipment into a high-efficiency combined machining center with multi-task machining capabilities, realizing "One-Time Clamping and Multi-Process Completion", and greatly simplifying the production process and equipment configuration.

After the implementation of the solution, BEIJING-FANUC not only effectively reduced the number of production line equipment, reduced total equipment investment and plant occupation area, but also achieved a systematic reduction in energy consumption with the same capacity. At the same time, on the premise of ensuring production efficiency, the number of operators required for a single line was effectively reduced, realizing the optimization of human resource allocation. BEIJING-FANUC comprehensively helped customers achieve the goals of manufacturing process resource intensification, energy consumption reduction, and production process efficiency improvement, and provided a practical implementation path for green manufacturing and resource efficiency optimization.

### 2.2.3 Environmental Improvement

Pollutants such as waste, waste gas, noise, oil pollution, and waste liquid generated in the production process of the manufacturing industry are not only important load sources of the ecological environment, but also key pain points restricting the green transformation of enterprises and affecting the quality of the production environment. Effectively reducing pollutant emissions and environmental pollution is an inevitable question for the manufacturing industry to achieve sustainable development.

BEIJING-FANUC is committed to taking advanced manufacturing products, core technologies, and digital solutions as the core support, and systematically helping customers improve the production environment and move towards efficient and green development through dual measures of pollution source prevention and precise control throughout the production process. Relying on the high-precision and high-response intelligent control system (FX SMARTROL), while significantly improving equipment production efficiency and machining quality, we effectively inhibited the generation and emission of noise, oil pollution and waste liquid; through real-time monitoring, analysis and optimization of energy consumption, material consumption and emission data through a digital platform, and we helped customers significantly reduce comprehensive operation losses. This series of practices not only helped customers steadily meet the increasingly strict environmental compliance requirements, but also achieved a balance between improving productivity, improving product quality, reducing pollutant emissions, and reducing environmental pollution, helping customers achieve a win-win of economic benefits and environmental compliance.



BEIJING-FANUC Realizes the Replacement of Traditional Chemical Processes with Digital Laser Texture Machining Technology, Significantly Reducing the Impact of Pollutants on the Environment

#### Action Initiatives

**Process replacement:** The chemical etching method commonly used in traditional texture machining relies on a large number of highly polluting chemical reagents, which have environmental risks such as reagent leakage and waste liquid discharge, and is a key regulatory object in environmental assessments. The toxic and harmful substances generated will cause persistent pollution to soil and water bodies.

The digital laser texture machining technology launched by BEIJING-FANUC realizes the replacement of traditional chemical processes with a green and environmentally friendly technical path, effectively eliminating the use and emission of toxic and harmful reagents, and significantly reducing the impact of pollutants on the environment.

**Process monitoring:** Process monitoring is an important control link in the green transformation of the manufacturing industry. Its core value lies in empowering and guiding all links of the entire production process to reduce environmental impact through precise data. BEIJING-FANUC relies on the industrial IoT platform to collect, dynamically monitor, and intelligently analyze energy consumption data during equipment operation and key emission indicators, such as waste

water, waste gas, noise, and dust in real-time, build a visual monitoring interface and a hierarchical early warning mechanism. Once energy consumption exceeds the standard or emissions are abnormal, the system can issue an early warning immediately and trace the source, providing enterprises with precise optimization decision support, and promoting the transparent management and refined control of environmental impacts during the production process.

The data-driven process control model can not only timely avoid potential damage to the ecological environment caused by excessive emissions, but also make green production from an idea to a quantifiable and controllable practice.

**Active application and promotion of green process replacement technologies:** In typical application scenarios of the manufacturing industry, such as magnesium alloy machining and deburring, traditional processes are often accompanied by significant environmental burdens. For example, traditional magnesium alloy machining relies on a large amount of cutting fluid for cooling and lubrication. Waste liquid discharge is likely to cause water and soil pollution, and the recycling and treatment of cutting fluid has high costs and energy consumption; traditional deburring processes mostly adopt chemical deburring or manual grinding. Chemical methods require the use of corrosive reagents, which are prone to generating toxic and harmful waste liquid. Manual grinding will generate a lot of dust, pollute the air, and pose a threat to the ecological environment.

BEIJING-FANUC actively researches and promotes green alternative process technologies, replacing the traditional model of high consumption and high emissions with low-pollution and low-energy-consuming machining solutions, which not only significantly reduces the multiple environmental burdens of traditional machining methods, but also promotes the transformation of the upstream and downstream of the industrial chain from high-pollution machining to clean production.

### Case 1: Integrated Solution for Safety, Environmental Protection and Intelligence in Magnesium Alloy Machining

An enterprise faced systematic challenges in production safety and environmental management during magnesium alloy material machining, and needed to build an effective risk prevention and process control system.

BEIJING-FANUC built an integrated solution of "Intelligent Perception + Centralized Control" for this customer. Through multi-dimensional real-time monitoring and centralized data management, we realized early warning of safety risks and closed-loop control of process parameters. The solution effectively supported enterprises to achieve safe and green production, while improving process stability, helping customers meet environmental specifications and requirements, and achieving the synergistic improvement of safety control and environmental compliance.



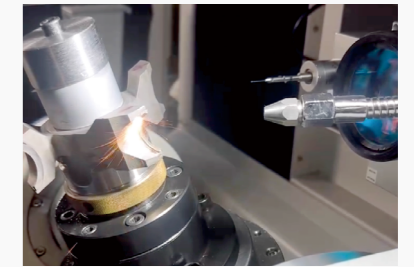
Real-Time Data Collection by Cutting Fluid PH Sensor

### Case 2: Green Tool Machining Solution Based on Laser Technology

A tool manufacturing enterprise had long adopted traditional machining processes, facing challenges in the production environment cleanliness and occupational health and safety, and urgently needed to introduce a cleaner and

more efficient new machining method.

BEIJING-FANUC innovatively introduced laser ablation technology. Through a non-contact machining method, we eliminated the generation of dust and oil pollution from the source, significantly improved the operating environment, and simultaneously achieved a significant improvement in machining efficiency. The solution not only effectively supported the construction of the enterprise's green factory, but also reduced environmental governance costs while improving production efficiency, providing a feasible path for the enterprise to achieve the dual goals of clean production and efficiency improvement.



Tool Ablation Machine Machining Scene

### Case 3: Green Machining Technology Upgrade Project for Surface Treatment

An enterprise had long adopted traditional process methods in the surface texture machining link, facing severe environmental compliance pressure and pollution governance challenges, and urgently needed to promote the transformation of clean production processes.

BEIJING-FANUC introduced digital laser texture machining technology for this customer. Through a pollution-free process path and a real-time environmental monitoring system, we eliminated the generation of pollutants from the source and achieved effective control of emission indicators. The solution successfully helped the customer pass the environmental audit, avoided compliance risks, and significantly reduced environmental governance and hazardous waste disposal costs, providing a demonstration path for the enterprise to build a green and sustainable advanced manufacturing system.

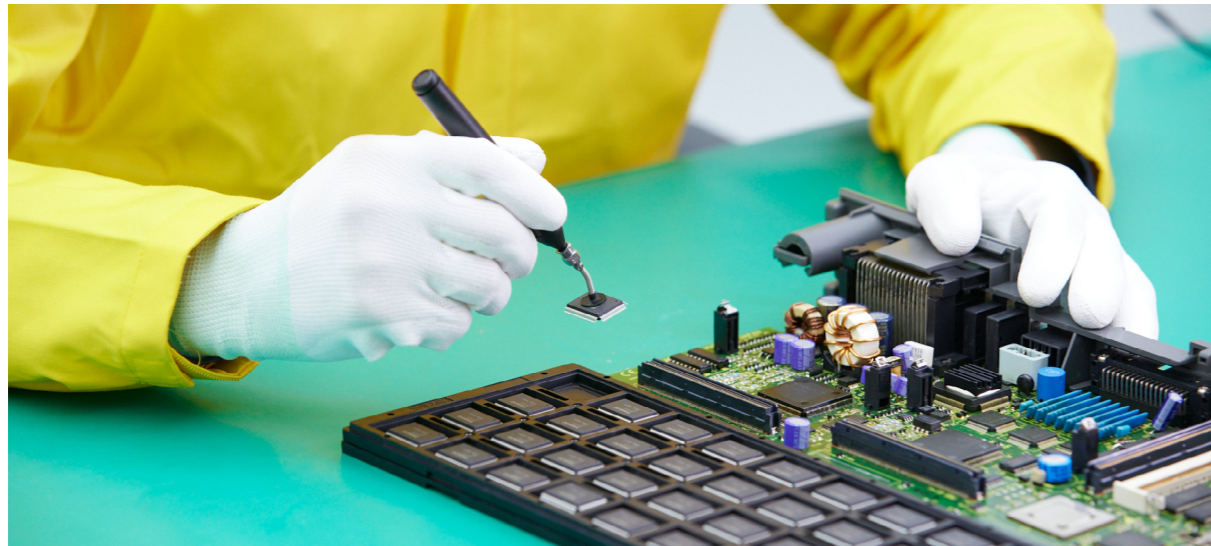
### 2.2.4 Circular Economy

The disposal links such as dismantling, sorting and landfilling of scrapped equipment often hide dual environmental hazards: on the one hand, a large number of underutilized core components and metal materials are idled and wasted, resulting in inefficient loss of valuable resources; on the other hand, non-degradable components are likely to pollute soil and water bodies, and dust and harmful gases generated during the dismantling process will directly damage air quality, bringing a continuous burden to the ecological environment. This has become a prominent pain point in the circular development of the manufacturing industry and the disposal of scrapped products.

To solve this problem at the source, BEIJING-FANUC relies on FANUC's core products and technologies in the field of automation and intelligent manufacturing to build a circular economy practice system covering the entire life cycle of equipment, and reduce the environmental burden caused by product scrapping from the source through a full-chain of green initiatives. By continuously promoting the lifelong maintenance service system, professional operation and maintenance and precise fault repair, we maximized the service life of equipment and reduced unnecessary scrapping. With the help of FANUC's whole-life-cycle parts plan, we continuously develop alternative and compatible key components to ensure the long-term stable operation of customers' equipment, avoid the elimination of the entire equipment due to the failure of a single component, and effectively optimize the product service cycle and maintenance costs, reduce resource consumption from the source; actively promote the "Replace Old with Old" maintenance model, professionally

renovate old equipment, upgrade core components and reshape functions, so that idle or inefficient equipment can regain use value, and reduce the dual environmental pressure caused by the production of new equipment and the disposal of old equipment; at the same time, widely use environmentally friendly packaging materials in the operation link, and recycle packaging boxes and pallets to reduce material waste.

Interlocking multi-dimensional initiatives help customers reduce resource loss and pollution emissions in links such as equipment scrapping frequency and subsequent dismantling and landfilling, transform from a single consumption model to a green, low-carbon, and circular manufacturing path, and effectively reduce the negative impact on the ecological environment.



BEIJING-FANUC has Established a Lifelong Service System Covering the Entire Life Cycle of Equipment, Supporting the Long-Term Utilization of Resources and the Achievement of Circular Economy Goals from the After-Sales Service Dimension

### Action Initiatives

**Component recycling:** Focus on electronic component maintenance scenarios, and implement the "Replace Old with Old" rapid exchange service. By equipping BGA chip-level professional equipment and training component-level maintenance technical teams, we achieve precise repairs such as chip re-soldering and component replacement. The repaired components are included in the spare used parts library for recycling, effectively reducing electronic waste generation and reducing customer maintenance costs and resource consumption.

**Equipment life extension:** Provide a whole-life-cycle maintenance guarantee for old equipment with stable mechanical precision. For discontinued parts, maintenance needs can be met by redesigning drawings and producing alternative parts to extend the equipment service cycle. Relying on the global spare parts library and remote diagnosis platform, accurately repair core components of machine tools that have been in service for more than 30 years, restoring the comprehensive efficiency of the equipment to more than 85% of that of new machines. Every year, provide more than 20 key maintenance services for old FANUC CNC, ensuring lifelong support for customers' equipment and promoting the efficient use of equipment resources.

**Resource efficiency improvement:** Through intelligent predictive maintenance technology, accurately evaluate the life of key components of machine tools, optimize spare parts inventory and maintenance plans, reduce equipment downtime by 40%, and extend component replacement cycles by 50%. At the same time, provide solutions such as cutting fluid recycling, chip reuse, and worn tool repair, helping enterprises reduce material costs and improve the

resource recycling rate in the production link.

**System empowerment:** Adhere to the "Architectural Stability" of FANUC CNC and intelligent products, ensuring the continuity and seamless switching of products of successive generations in terms of operating system, connection configuration, control software, and secondary development, reducing repeated development investment and improving the long-term reuse value of software systems. Promote the integration of resources upstream and downstream of the industrial chain, from material procurement to production collaboration, and advance the construction of green supply chains and material recycling, and improve the resource collaboration efficiency of the entire industry.

**Lifelong service:** Establish a lifelong service system covering the entire life cycle of equipment. Through professional maintenance, regular inspections, remote support and spare parts guarantee, ensure the long-term stable operation of equipment. This not only significantly reduces unplanned downtime, but also maximizes the use potential of equipment through continuous technical support and performance optimization, delays the scrapping node, and supports the long-term use of resources and the achievement of circular economy goals from the service dimension.

### Case 1: Safeguarding "Orphaned" Equipment, Systematic Maintenance and Upgrade Project of Imported High-End Equipment

An imported high-end machining equipment of a manufacturing enterprise faced the challenges of interrupted technical support and systematic maintenance due to the manufacturer's withdrawal from the market. The equipment suddenly shut down during operation, and there was a risk of operation caused by further aging.

BEIJING-FANUC provided a systematic diagnosis and comprehensive treatment plan. On the basis of quickly restoring the normal operation of the equipment, we further optimized the electrical structure, strengthened the safety protection mechanism, guided the completion of key component upgrades, comprehensively improved the stability and environmental adaptability of the equipment, and helped the enterprise achieve reliable operation and risk prevention of old key equipment.



BEIJING-FANUC Engineers Repairing "Orphaned" Equipment

### Case 2: FANUC Lifelong Maintenance Empowers the Renewal of a 40-Year-Old "Meritorious" Machine Tool

A core machining equipment from BEIJING-FANUC that has been in service for more than 40 years in a manufacturing enterprise faced the risk of being out of service due to core component failures. Replacing it with new equipment would incur high investment costs.

Relying on its global resource network and core component repair technology, BEIJING-FANUC successfully restored the core functions of the equipment through global deployment of scarce spare parts and in-depth component-level maintenance, and simultaneously optimized the equipment's electrical system to improve its operational stability.

With a cost significantly lower than the investment in new equipment, the project helped the customer continue the production capacity of key equipment and realize the value regeneration of existing assets.

### Case 3: AI and Digital Double Machine System (DDMS) Drive the Renewal of Old Equipment to Create an Efficient and Low-Carbon Production Line

Some in-service production equipment of an automobile manufacturing enterprise has been in operation for a long time, facing challenges in operational stability and capacity guarantee caused by equipment aging. It urgently needed to improve the comprehensive efficiency and reliability of the equipment through technical means.

BEIJING-FANUC built an intelligent operation and maintenance system for the equipment based on AI and Digital Double Machine System (DDMS) for this customer. Through data-driven real-time monitoring, fault prediction and operation optimization of equipment status, combined with targeted hardware transformation, it systematically improved the health level and production continuity of the equipment. The project helped the customer significantly reduce unplanned downtime, improve the comprehensive utilization efficiency of the production line, effectively control the capacity loss caused by equipment aging, and provided a replicable management paradigm for the efficiency improvement of similar equipment within the customer group.



Renewal and Optimization of Old Equipment

## 2.3 System Guarantee

BEIJING-FANUC regards information security and data transparency as the dual foundation of digital services. In intelligent manufacturing products, while ensuring full-link data encryption and permission control, BEIJING-FANUC is committed to building a credible and visible data circulation mechanism, and constructing a full-process guarantee system covering information security and intellectual property with "Safety, Compliance and Innovation" as the core. Through technical encryption, permission control, patent layout and compliance consulting, we comprehensively safeguard customers' core data and technical assets, ensuring that in an open and collaborative industrial ecosystem, information security and data transparency go hand in hand, and guarantee the safety and sustainability of collaborative innovation in the industrial chain.

### 2.3.1 Information Security

BEIJING-FANUC systematically ensures the confidentiality, integrity and availability of data and systems by building a proactive defense system covering the entire life cycle of product design, deployment, and operation and maintenance, constructs a safe and credible digital collaboration environment for customers and the industrial chain, and lays a solid safety foundation for the development of intelligent manufacturing.



BEIJING-FANUC Builds a Proactive Defense System Covering the Entire Life Cycle of Product Design, Deployment, and Operation and Maintenance to Systematically Ensure Information Security

### Action Initiatives

**In-depth defense at the system and network layer:** Built a multi-level information security system covering systems and networks, core data, supply chains and overall governance. At the system and network level, through PROFINET communication encryption, firmware whitelisting, and edge-side firewalls and Intrusion Detection Systems (IDS), it realizes isolation protection of production control networks and real-time analysis of abnormal behaviors, effectively resisting external attacks and unauthorized access.

**Whole-life-cycle protection of core data assets:** Provide full-process encryption for core data assets from collection and storage to transmission, and introduce blockchain technology to ensure that operation logs are tamper-proof and traceable, fully meeting international standards, such as the ISO27001 Information Security Management System.

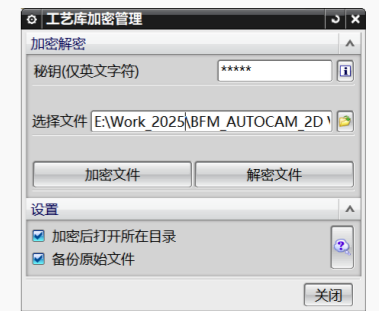
**Strengthen supplier security resilience:** For customers in highly sensitive industries such as automotive and semiconductors, provide security scanning and penetration testing covering design, delivery, and operation and maintenance stages to enhance their end-to-end risk prevention and control capabilities.

**Systematic security governance and continuous improvement:** Continuously improve the comprehensive governance mechanism covering privacy protection, supply chain audits, emergency response, and transparent disclosure, and integrate green concepts into the construction of digital infrastructure to realize the coordinated advancement of information security and sustainable development.

### Case 1: Intelligent Programming and Information Security Control Project for Non-Standard Components

An enterprise specializing in precision component manufacturing faced certain challenges in intellectual property protection and programming efficiency during the process development and program management of non-standard components, and needed to build an integrated solution that considers both information security and efficiency improvement.

BEIJING-FANUC deployed an integrated intelligent programming and information security system for this customer. By building a hierarchical permission control and data encryption mechanism, we realized the whole-process control of process data and traceability of operation behaviors. While ensuring



CAX System Encryption Settings Interface

ing the security of the enterprise's core processes, it significantly improved programming efficiency and accuracy, helping the enterprise achieve the synergistic improvement of zero intellectual property risks and production preparation efficiency.

### Case 2: Equipment Operation Permission and Information Security Control Project

An auto parts enterprise faced certain challenges in operation permission and information security management during equipment operation and program management, and needed to build a more reliable permission control mechanism to prevent unauthorized operation risks.

BEIJING-FANUC built an integrated permission control and information security system for this customer. Through dynamic identity verification and refined permission classification, we realized trusted operator identity, controllable permissions, and traceable behaviors, and fundamentally eliminated the risks of unauthorized operation and program tampering from the mechanism. The project helped the enterprise build a standardized operational safety line, ensured the stable operation of equipment, and met the industry information security specification requirements.



Dynamic Password Generation Interface

### Case 3: Collaborative Management Project of Production Safety and Data Protection

A manufacturing enterprise had certain on-site operational safety and core program management risks in production and operation, and needed to systematically improve safety protection and data control capabilities.

BEIJING-FANUC helped the enterprise build an integrated protection system for safety and data. Through real-time status monitoring, refined permission management, and system linkage mechanisms, we effectively prevented mis-operations and unauthorized modifications. While improving the level of on-site operational safety, we ensured the integrity and traceability of production data. This project helped the manufacturing enterprise achieve the systematic upgrade of safety management and the goal of data error prevention, providing a reliable guarantee for continuous and stable production.



Early Warning Interface of the Production Safety Error-Proof System

## 2.3.2 Intellectual Property

BEIJING-FANUC takes systematic intellectual property management as the cornerstone, conducts forward-looking patent layout in key technical fields, such as CNC and intelligence, and builds a solid moat for technological innovation. By establishing a sound intellectual property compliance and risk prevention and control system, we not only ensure our own operational safety, but also actively collaborate with upstream and downstream partners to promote intellectual

property cooperation and virtuous cycles, and jointly improve the resilience and sustainable development capabilities of the industrial chain and supply chain.

### Action Initiatives

Through intellectual property risk control services throughout the entire business process, BEIJING-FANUC builds a solid compliance framework for customers. From clarifying rights and interests at the initial stage of cooperation, to risk screening and infringement avoidance during execution, and even full support in the event of disputes, BEIJING-FANUC always ensures that customers can focus on development in a safe innovation environment and stabilize market reputation.

For high-innovation projects, through signing high-confidentiality agreements and providing professional legal and expert team support, we strictly protect the technical achievements of both parties and enhance the awareness of property rights protection among all employees.

Establish a "Two-Way Firewall" intellectual property system: The agreement clarifies that the ownership of basic technologies (such as FANUC CNC) belongs to us, and customer customized innovations (such as honing machine mechanical structure) belong to the customer; assist customers in applying for patents for innovative technologies and promote patent transformation.

BEIJING-FANUC has achieved remarkable results in collaborative innovation practices. Between 2022 and 2025, through close intellectual property cooperation, BEIJING-FANUC successfully assisted domestic machine tool factories in developing 836 new machine models. The application of related patent clusters directly promoted an 18% improvement in the average machining efficiency of the industry, transforming intellectual property into a driving force for industry progress, and continuously empowering the high-quality and sustainable development of China's manufacturing industry.

### Case 1: Knowledge Assetization and Protection Project of Non-Standard Manufacturing Machining

In the field of non-standard component manufacturing, enterprises have long faced challenges in process programming efficiency caused by multi-variety and small-batch production. At the same time, core machining processes rely on manual experience, resulting in risks of knowledge loss and insufficient protection, which restricts the construction of enterprises' sustainable innovation capabilities and the improvement of intellectual property systems.

To address this challenge, BEIJING-FANUC deployed an intelligent automatic programming system for an automated component manufacturing enterprise. By systematizing and modularizing machining process logic and expert experience, we built an enterprise-specific process knowledge base, realizing the automatic and standardized generation from drawings to machining codes. The system has built-in intelligent error prevention and simulation verification mechanisms to ensure programming accuracy; at the same time, through an advanced cyber security management architecture, we encrypted and stored core process parameters and knowledge bases and controls access, effectively preventing technology leakage. Through an intelligent and systematic solution, we assisted enterprises in improving production agility and quality consistency, realized the assetization transformation and safety control of key process technologies, and built a solid systematic support for enterprises in intellectual property protection and continuous innovation.

### Case 2: Technical Rights Definition Project of Special Machining Equipment for Automobile Calipers

A machine tool manufacturer faced challenges in technology protection and intellectual property management in a special machining equipment project for auto parts, and needed to clearly define the technical use boundary to avoid potential risks.

BEIJING-FANUC provided technical rights definition and intellectual property protection solutions, assisted in sorting out the scope of technical authorization, clarified the legal responsibilities and secondary development rights of all parties, and ensured effective protection of key technologies. The project was successfully accepted without any intellectual property disputes, strongly supporting the customer's compliant operation and steady development.



**RESPONSIBLE ECOSYSTEM**

Against the backdrop of China's manufacturing industry accelerating its transformation towards high-quality development, innovation-driven transformation and sustainable development have become key topics for the industry. Adhering to the vision of "becoming a value-adding partner in the intelligent manufacturing," BEIJING-FANUC has always been committed to accelerating technological innovation in intelligent manufacturing, empowering industrial upgrading, and actively constructing an equal, friendly, open, innovative, cooperative, and healthy manufacturing ecosystem. We join hands with upstream and downstream partners in the industrial chain to jointly build industrial, talent, and social ecosystems, contributing to the high-quality development of the industry.

### 3.1 Industrial Ecosystem

The high-quality development and transformation of the manufacturing industry cannot be separated from a healthy and sustainable industrial ecosystem. The construction and maintenance of such an ecosystem requires not only individual enterprises to set an example, but also in-depth collaboration among upstream and downstream partners to co-create and share.

BEIJING-FANUC adheres to the concept of "Becoming a value-adding partner in the green and sustainable transformation of China's and even the world's manufacturing industry, and building a sustainable and prosperous industrial ecosystem." Based on its core advantages in CNC technology and intelligent manufacturing, we extend from fulfilling our own responsibilities to leading the ecosystem. Through various initiatives, such as upholding business integrity, adhering to industry self-regulation, participating in the joint development of industry standards, building industry exchange and sharing platforms, and empowering customer success, we promote customers, suppliers, and industry partners to jointly create a co-built, symbiotic, and win-win manufacturing ecosystem.

#### 3.1.1 From "Fulfilling Our Own Responsibilities" to "Ecosystem Leadership", Advocating Sustainable Industry Development

Currently, the manufacturing industry is facing fierce competition, with rampant "price wars". Involuntary competition not only compresses the profit margins of upstream and downstream industries, but also has a negative impact on product quality, after-sales services, and technological innovation. As a pillar of national economic development, the manufacturing industry must break free from the quagmire of price wars and return to a path of healthy competition.

As an upstream enterprise in the industrial chain, BEIJING-FANUC deeply understands that an orderly, healthy, and sustainable model of benign competition is the key to surviving cycles. For a long time, we have always prioritized



During His Speech at the Annual Meeting, General Manager Jing Xirui of BEIJING-FANUC Emphasized the Concept of Value Upgrading Centered on Multi-dimensional Expansion and Systematic Development

customers and employees, adhered to the concept of sustainable development in its operations and governance, focused on long-term development and the cultivation of long-term competitiveness, and actively set an example. It also fully leverages its industry influence to radiate and encourage more industrial chain partners to join the process of building a healthy industrial ecosystem.

**Upholding Business Integrity and Adhering to Industry Self-Regulation:** In our own operations and management, we have always adhered to the principles of business integrity and long-termism, strictly followed business ethics and fair competition, and conducted business activities in accordance with laws and regulations.

**Rejecting Price Wars and Promoting Positive Industry Development through Innovative Value:** In the face of market involution, BEIJING-FANUC firmly resists short-sighted competitive behaviors, such as price wars, and puts forward the business proposition of "Value Leadership, Collaborative Achievement." It guides our operations, product R&D, and services to replace price with value, building long-term competitiveness through technological innovation, quality improvement, and service optimization, and creating more tangible benefits for partners through innovative value.

**Leveraging Industry Influence to Advocate Healthy and Orderly Development of the Industry and Partners:** BEIJING-FANUC exerts its industry influence to actively connect upstream and downstream partners in the industrial chain and technological chain, jointly establish a mutual trust mechanism, and reach a consensus on the industry concept of "Collaborative Symbiosis." Our senior management has repeatedly conveyed and shared the corporate philosophy of "Long-Termism," "Value Leadership," and "Sustainability" on public occasions and in exchanges, anchoring the direction for industry development, and reaching a consensus with more partners on viewing enterprise development from a long-term perspective.

**Continuously Extending and Innovating Product Technology and Services to Build Value-Core Competitiveness:** With the iteration of our strategy and culture, as well as the renewal of industry development and customer needs, we continuously extend and innovate our products and services, forming a full-value chain overall solution and service model. With value as the core, we achieve value-driven product innovation and service innovation.

#### Case: Providing Value-Core Customer Success Services for a Professional Enterprise in the Domestic Air Brake Valve Field

Currently, the domestic air brake valve market is highly competitive. As a core enterprise in this field, this customer urgently needs to break through competitive bottlenecks and strengthen its market advantages. In cooperation with this enterprise, aiming at its production needs and market competition pain points, BEIJING-FANUC did not adopt a low-price strategy but provided comprehensive support centered on value creation.

By conducting joint sampling for new workpieces to quickly form the optimal machining plan, we optimized the process of existing products to improve efficiency, and directly enhanced the market competitiveness of parts. At the same time, we proactively shared project experience in the field of intelligent manufacturing, put forward optimization suggestions for the planning and implementation of the enterprise's existing production lines, and provided professional guidance for subsequent production line planning, helping this customer upgrade its production model. Through long-term in-depth communication and empowerment, we have effectively helped the enterprise cope with fierce market competition, demonstrating the win-win concept centered on value cooperation.

### 3.1.2 Actively Participating in Industry Associations and Co-building Industry Standard Systems

Association Name	Participating Entity
Die Casting Branch of China Foundry Association	BEIJING-FANUC MECHATRONICS CO., LTD.
China Die & Mould Industry Association	BEIJING-FANUC MECHATRONICS CO., LTD.
China Internal Combustion Engine Industry Association	BEIJING-FANUC MECHATRONICS CO., LTD.
China Construction Machinery Industry Association	BEIJING-FANUC MECHATRONICS CO., LTD.
Aluminum Wheel Quality Association	BEIJING-FANUC MECHATRONICS CO., LTD.
Gear Transmission Industry Branch of China-Europe Association for Technical and Economic Cooperation	BEIJING-FANUC MECHATRONICS CO., LTD.
Anhui Automobile Industry Association	BEIJING-FANUC MECHATRONICS CO., LTD.
China Bearing Industry Association	BEIJING-FANUC MECHATRONICS CO., LTD.
China Machine Tool & Tool Builders' Association	BEIJING-FANUC MECHATRONICS CO., LTD.
Shenzhen Machinery Industry Association	BEIJING-FANUC MECHATRONICS CO., LTD.

Industry Associations Participated by BEIJING-FANUC (Partial)

Relying on its cutting-edge product technology and years of industry experience, BEIJING-FANUC takes the initiative to take the lead in and participate in the compilation of industry standards, transforming practical experience into industry norms and helping the industry reach a new level of standardization.

#### Case: Jointly Formulating the Assessment Methods for the CNC Machining Capability of Die & Mould with China Die & Mould Industry Association

Under the guidance of China Die & Mould Industry Association, BEIJING-FANUC took the lead in drafting the *Assessment Methods for the CNC Machining Capability of Die & Mould* (hereinafter referred to as the "Methods") in April 2022, and carried out the standard formulation work jointly with several industry partners. After multiple rounds of discussions with industry experts and visits to research many enterprises, the draft for comments of the standard was completed and submitted for review in April 2023.

In June 2023, the *Assessment Methods for the CNC Machining Capability of Die & Mould* was officially approved. This standard is applicable to defining the level of CNC machining capability of mould enterprises, which is conducive to regulating and guiding the construction of manufacturing capabilities of mould enterprises in China, guiding mould enterprises to identify shortcomings in their machining capabilities and technical application capabilities, and benchmarking against international advanced levels.

### 3.1.3 Building an Industry Integration and Exchange Platform to Activate Industry Development Momentum

At a critical stage when the manufacturing industry is transforming towards high-quality and sustainable development, isolated innovation and scattered exchanges can no longer meet the industry challenges of accelerating technological iteration and diverse ecological needs. The sustainable development of the industry is not a "Solo Performance" of a single enterprise but a "Symphony" involving the entire industry.

BEIJING-FANUC has always believed that open collaboration can break industry information barriers, and promoting resource interconnection and collaborative innovation can activate the endogenous driving force of industrial development. To this end, BEIJING-FANUC fully leverages its industry influence, adhering to the concept of "Open Innovation, Collaborative Achievement, Win-Win Co-Creation," and builds a multi-level exchange system covering "High-End Dialogue, In-Depth Discussion, Practical Sharing, Technical Tackling," promoting upstream and downstream enterprises, technical experts, industry elites, and practitioners in the industrial chain to move from "Scattered Exchanges" to "Collaborative Wisdom Creation," enabling the transmission of advanced experience, the collision of innovative ideas, and the complementarity of high-quality resources.



BEIJING-FANUC Actively Builds an Industry Integration and Exchange Platform to Promote Industrial Collaborative Innovation

**Zhixianghui (Intelligent Sharing Association):** Create a high-end dialogue platform for elite groups in China's intelligent manufacturing, regularly organizing activities, such as enterprise exchanges, joint resolution of industry development challenges, entrepreneur visits, forums, and cooperation negotiations. As of 2025, we have formed 16 Zhixianghui groups covering automotive manufacturing, moulds, wheel hubs, communications, die casting, internal combustion engines, gears and other fields, and cities including Shenzhen, Ningbo, and Chongqing.

**F+INDUSTRY Summit:** Take the lead in hosting the F+INDUSTRY Summit, gathering middle and senior customer partners, government representatives, education professionals, and media from upstream and downstream of the industrial chain, to share and exchange in-depth content, such as cutting-edge industry trends and technical insights with industry partners.

**F+CUSTOMER Salon:** Regularly organize F+CUSTOMER Salons, focusing on regional hot topics and industrial cluster development trends, and organizing thematic salon seminars around the needs of key regional customers to jointly explore solutions.

**Open Day at BEIJING-FANUC's Headquarters Daoxiang Lake Campus:** In 2023, BEIJING-FANUC's Headquarters Daoxiang Lake Campus was officially put into use. To build an industry exchange platform and promote the collaborative evolution and symbiotic development of the industry, the Daoxiang Lake Campus is open to industry partners with the core concept of "Boundless, Infinite," and launches a series of themed activities of "BEIJING-FANUC Daoxiang Lake Headquarters Campus Open Day." Partners inside and outside the industry gather here to explore the future of the manufacturing industry.

### 3.1.4 Adhering to a Customer Success Orientation and Accompanying Industrial Chain Partners in Multiple Dimensions

Guided by "Customer Success" and adhering to the concept of openness and sharing, BEIJING-FANUC accumulates and precipitates its strategic culture, management, and market insight experience over more than 30 years, combined with a profound understanding and practice of the manufacturing industry, to provide long-term, highly

customized value-adding services for customer partners. As of 2024, we have formed professional content covering strategic innovation, leadership development, talent training, market growth, digital transformation, lean production, and other aspects.

Regularly organizing technical lectures and exchange activities, BEIJING-FANUC helps small and medium-sized enterprises in the industrial chain improve their product technology R&D and management experience, and transmits enterprise value to customer sites. As of October 2025, we have organized thousands of customer activities, covering themes such as quality improvement and efficiency enhancement, hot industry insights, technical problem solving, talent training, strategic development, and industry pain points and development.



BEIJING-FANUC Promotes Open Exchanges Among Industrial Chain Partners by Regularly Organizing Technical Exchange Activities

### Case 1: Providing Forward-Moving Services for a CNC Machine Tool Enterprise in Chengdu to Empower Customer Success

Before 2019, the annual sales volume of a certain CNC machine tool enterprise in Chengdu had been stable at around 200 units, with no significant growth compared to some manufacturers in South China. At the same time, the enterprise faced many after-sales problems with its machine tools and inconsistent capabilities of marketing personnel, and had not found effective solutions.

After understanding the situation, BEIJING-FANUC continuously moved its services forward to work with the customer to solve problems. Both parties fully explored and refined after-sales data, sorted out the reliability issues of the machine tools, and proposed many effective implementation solutions to help improve the factory quality of the machine tools. At the same time, on the marketing side, by sorting out the machine tool selling point library, training the sales team, and going deep into the on-site of the enterprise's important customers to help them improve quality and efficiency, we also helped marketing personnel accumulate overall solutions experience in the die-cast aluminum industry. Finally, we realized the replication of bulk orders in the industry, helping the enterprise break through from a volume of around 200 units to more than 500 units in 2021.

### Case 2: Assisting an Intelligent Equipment Enterprise in Strategic Planning Decoding, Refining Product Value Highlights, and Enhancing Marketing Capabilities

As a listed enterprise and national-level specialized, refined, and innovative "Little Giant"(specialized SME leader) in the intelligent equipment field in South China, the enterprise has faced the dual demands of intensified industry

homogenized competition and the upgrading of its strategic and marketing systems, while its business continues to expand in recent years.

BEIJING-FANUC accurately identified its development pain points, and deeply intervened with a multi-dimensional and systematic empowerment plan to help build the overall value chain and ecological support of the business, injecting strong development momentum into the enterprise and helping this customer continuously enhance its core competitiveness in the fierce market competition.

At the strategic level, in response to the growth bottlenecks encountered by the enterprise after rapid development, as well as the demand to increase product market share and reposition the enterprise's development direction, BEIJING-FANUC introduced the BLM strategic tool, carried out strategic planning and strategic decoding training for its senior management team, organized workshops to guide the completion of enterprise strategic discussions, helping them master strategic planning tools and methods, and form a consistent future development direction and implementation path. At the marketing level, considering that the enterprise was eager to expand product market share, avoiding pure price wars, and needed to refine differentiated selling points, BEIJING-FANUC assisted in compiling enterprise brochures to showcase the enterprise's overall strength from multiple dimensions; sorted out the selling point library of a certain machine model to show the advantages of the product in mechanical design, machining capabilities, etc., compiled a sales standard script manual with the structure of "Explanation + Selling Points + Customer Value," and optimized comprehensive samples and samples of a certain machine model, which significantly improved the enterprise's marketing team capabilities and greatly increased the business opportunity acquisition rate and winning rate.

### Case 3: Joining Hands with a Representative Enterprise in the Domestic Internal Combustion Engine Industry to Build an Overseas Industrial Ecosystem and Escort the Enterprise and Its Supply Chain to Go Global

As a representative enterprise in the domestic internal combustion engine industry, this customer has not only deeply cultivated the domestic market for many years, but also actively deployed overseas businesses. In recent years, it has actively expanded to Southeast Asia and invested in building factories in an industrial zone in Thailand, becoming a core force driving upstream and downstream enterprises in the industrial chain to go global collaboratively. Currently, the enterprise is focusing on promoting overseas ecological construction, which not only requires integrating overseas supply chain resources, but also urgently needs to open up local service channels overseas to achieve the sustainable development of overseas businesses.

Based on the deep mutual trust established through long-term cooperation and an accurate grasp of customer needs, BEIJING-FANUC continuously accompanies and empowers the enterprise from both industrial ecological and overseas ecological dimensions. At the industrial ecological level, relying on in-depth cooperation in projects such as talent training, efficiency improvement, and digital consulting, we help this customer achieve core capability upgrading. At the same time, with the help of exchange platforms such as internal combustion engine industry ecological activities and Zhixianghui, we further expand the customer's influence in the industry and promote the collaborative development of the industrial ecosystem. In the face of a series of multi-dimensional assistance provided by BEIJING-FANUC, the enterprise's senior management has repeatedly expressed recognition and shared value gains on public occasions such as industry exchange meetings.

In terms of overseas ecological construction, BEIJING-FANUC actively links FANUC Thailand to provide localized production service support for the customer and the overseas enterprises it drives, effectively solving the

service delivery challenges in overseas operations. In addition, during the Thailand Economic and Trade Exhibition, BEIJING-FANUC further joined hands with the customer to promote exchanges and sharing among overseas enterprises, helping overseas enterprises deepen the collaborative connection of the overseas industrial chain, and gradually build a sustainable overseas ecological model, laying a solid foundation for the collaborative overseas development of the supply chain, and achieving a win-win situation between enterprise development and industrial ecological prosperity.

#### Case 4: Professionalism Starts from Small Things, Proactively Connecting Resources for Customers to Create Win-Win Outcomes

A customer in Suzhou, as a professional connector R&D, production, and comprehensive solution provider in China, is also a listed enterprise on the Science and Technology Innovation Board and a national-level specialized, refined, and innovative "Little Giant." With the development and large-scale application of 5G technology, the enterprise's core communication business has gained broad growth space, and multiple tracks such as new energy vehicles, energy storage, and industrial automation are expected to open up new growth curves relying on 5G empowerment.

Based on a deep understanding of the customer and long-term mutual trust, BEIJING-FANUC actively stands from the customer's perspective and focuses on the business empowerment value of 5G technology. Through professional industry research and output of in-depth insight reports, we comprehensively analyzed the 5G full industrial chain and its associated scenarios with the customer's business; combined with multiple on-site visits and detailed data support, we helped the customer deepen their understanding of 5G technology and provided a strong reference for their business layout optimization and development direction decisions.

In addition, adhering to the concept of open sharing, BEIJING-FANUC fully opens its industrial resource platform to the customer, jointly builds the industrial ecosystem with the enterprise, and efficiently connects upstream and downstream partners in the industrial chain through hosting the 5G Zhixianghui activity to explore industry development trends. These actions not only graft rich cooperation resources for the customer, but also facilitate the signing of multiple business cooperation agreements, becoming a key milestone for the enterprise to deepen the 5G field.

### 3.1.5 Actively Inheriting Industry Culture

The manufacturing industry is the foundation of the national economy, and has accumulated a profound industrial culture in its long-term development. The craftsman spirit of striving for excellence and the artisan culture of pursuing perfection are valuable assets inherited in the course of China's industrial development, and are also the spiritual core of the manufacturing industry.

BEIJING-FANUC has always accumulated industry culture with reverence, deeply understanding the far-reaching significance of industry culture for industry development. For many years, based on practice, it has taken the initiative to assume the mission of inheriting industry culture through various initiatives, striving to make it radiate new vitality in the new era, promote industry culture from "Partial Influence" to "Ecological Infiltration," and inject cultural momentum into the sustainable development of the industry.



To Promote the Inheritance and Exchange of Industry Culture, BEIJING-FANUC Organizes Rich Cultural Activities to Activate Industry Vitality

**Sponsorship and Organization of Competitions:** Participate in organizing or undertaking innovation competitions for students and teachers from institutions of higher learning and vocational and technical colleges; BEIJING-FANUC has long been a supporting unit for national skills competitions, municipal competitions, and regional competitions. Taking competitions as a link, through competition and professional empowerment, it allows the craftsman spirit to take root in skill inheritance, and further strengthens the deep connection between education and teaching and manufacturing culture. We not only sponsor teaching and training equipment, but also send professional training engineers to serve as judges for the competitions, integrating the craftsman standard of "Focus and Dedication, Pursuit of Perfection" into competition guidance. BEIJING-FANUC has supported the holding of competitions such as the National Machinery Industry Selection Competition for the 45th WorldSkills Competition, the 2020 National Industry Vocational Skills Competition - the 9th National CNC Skills Competition, the 2021 National Industry Vocational Skills Competition - the 4th National Intelligent Manufacturing Application Technology Skills Competition, and the FANUC Cup China Vocational and Technical Normal University Teaching Skills Competition.

**Building Practical Teaching Bases for Teachers and Students in Institutions:** Cooperate with institutions to undertake off-campus internships and practical tasks for teachers and students from various institutions, providing multiple resources such as teaching venues and equipment to help teachers and students in institutions improve their professional capabilities through practical teaching.

**Building Healthy Exchange Activities for Industry Partner Culture:** In 2018, BEIJING-FANUC launched the "F+HEALTH" health linkage activity. In the form of diverse activity exchanges, it conveys the concept of sustainable development to industry partners. It enhances communication and collaboration, builds confidence, and promotes innovation through sports competitions such as badminton, rugby, and rowing, and jointly builds a healthy and boundless industry cultural ecosystem with industry partners.

### 3.2 Talent Ecosystem

Overall, China's manufacturing industry is still in the stage of transformation from labor-intensive to high-quality

development. The new round of technological revolution and industrial transformation is advancing rapidly, putting forward higher requirements for talent training. The upgrading of homogeneous talents and the cultivation of high-end talents are facing severe challenges, which urgently require collaboration between enterprises, institutions, and society.

While expanding its own business, BEIJING-FANUC has been deeply engaged in the field of industry talent training for more than 20 years, accumulating rich practical experience and implementation results, and actively contributing to the widespread application of advanced manufacturing technology and the improvement of the level of technical and skilled talents. Adhering to the concept of "Symbiosis, Co-Creation, Win-Win," we carry out various types of empowerment, education, training, exchange, and ecological activities by extensively connecting partners such as advanced manufacturing technology providers, industrial enterprises, schools, governments, and associations, forming a talent training paradigm and a closed-loop talent supply and demand ecosystem with deep integration of "Education Chain-Talent Chain-Industrial Chain-Innovation Chain," helping the upgrading of industrial technical talents and the prosperity of the talent ecosystem.

### 3.2.1 From "Technical Training" to "Systematic Empowerment", Building a Lifelong Learning Talent Training System for Industrial Partners

Through systematic training tools and methods, full-technical-element curriculum content, and online and offline learning platforms, BEIJING-FANUC effectively helps enterprises overcome the dual challenges of talent shortage and skill upgrading.

#### Action Initiatives

**Leading Industry Standards and Empowering the Future of the Industry:** Based on in-depth practice in intelligent manufacturing, BEIJING-FANUC accurately identifies the gap in cutting-edge talents, takes the lead in formulating and sharing industry talent training standards, and provides partners with a forward-looking and systematic talent development blueprint.

**Integrating Ecological Wisdom and Building a Knowledge System:** Deeply extract the post-technical essence of BEIJING-FANUC and top enterprises in the field, integrate technical resources of the full value chain of machining, build a curriculum system covering all levels, positions, and elements, and transform knowledge precipitation into the human capital of customer partners.

**Deepening School-Enterprise Cooperation and Jointly Cultivating Outstanding Talents:** Taking itself as a link, integrate advanced intelligent manufacturing post standards into the education system, consolidate the connotation of school-enterprise cooperation, solve the pain point of "Difficulty in Recruiting Workers" for partner enterprises, and cultivate and transport high-quality labor sources for the industry.

**Activating Frontline Potential and Empowering Quality and Efficiency Improvement:** Carry out one-stop, systematic, and highly scenario-based practical training, build a clear employee growth path, stimulate the learning vitality of front-line employees, continuously empower the engineering team, and directly transform technical capabilities into on-site efficiency improvement and quality improvement.

**Creating a Wisdom Platform and Leading Technical Leaders:** Build a high-end platform for joint research, co-creation, and sharing of technologies, and share BEIJING-FANUC's industry vision and innovative practices with middle and senior technical managers of enterprises, empowering their leadership in technical strategy, product R&D, and key problem-solving.

**Aligning with Enterprise Strategy and Building a Talent Echelon:** Benchmarking against the customer's strategic development goals, diagnose the existing technical talent training system, jointly plan post skill standards and learning maps based on business trends, and tailor a talent echelon for customers to support business take-off.

**Building a Boundless School and Practicing Lifelong Learning:** With the vision of becoming an enabler of an "Intelligent Learning Organization" around customer partners, build an efficient and flexible boundless online learning ecosystem, develop a large number of high-quality resources, and empower employees to grow personalize, and learn anytime and anywhere.

### Case 1: Construction of Competency Standards and Training System for a Leading Enterprise in the Automotive Aluminum Alloy Precision Die Casting Industry

As a leading enterprise in the automotive aluminum alloy precision die casting industry, the customer is accelerating the construction of digital factories and global layout. The rapid growth of business has spawned a great demand for talent. However, affected by the imbalance between supply and demand of high-skilled talents in the new energy vehicle industry, the enterprise was facing multiple challenges, such as shortages of management talents, high-end technical talents, and international talents.

BEIJING-FANUC joined hands with this customer to formulate a trinity solution of "Standard Construction, Precise Empowerment, Ecological Transportation." By jointly building a global integrated competency standard and a hierarchical and classified skill certification system, customizing a modular rapid empowerment training system, and launching a global talent ecological pool to accurately match urgently needed talents, we helped customers transform recruitment from "Blind Selection" to "Precision Recruitment," established a replicable global empowerment system, building a skill-oriented career development channel and a self-iterative talent governance system, providing solid talent support for its global expansion.

### Case 2: Construction Project of Intelligent Manufacturing Talent Training System for a Professional Commercial Vehicle Transmission Production Enterprise

As a commercial vehicle transmission production enterprise, in the process of building its professional production base and creating a "Transparent, Lights-out, Digital, Intelligent, Green, and Lean" intelligent manufacturing factory, the customer's talent structure and post settings had undergone structural changes, urgently needing high-quality technical and skilled talents related to intelligent manufacturing.

Combined with the actual working scenarios of intelligent manufacturing, BEIJING-FANUC adhered to the concept of "Short-Term Skill Improvement + Medium-Term Internal Training System Building + Long-Term Talent Development Internal Cycle," clarified the employee learning and growth path for the customer, helped tap and cultivate internal technical and skilled internal trainers, integrated material resources, and established skill evaluation standards to support post setting, grade setting, and salary setting. Finally, this customer achieved the reasonable allocation of personnel and positions, formed a sustainable skill improvement mechanism, and built a solid talent echelon for the customer's intelligent manufacturing transformation.

### Case 3: Technical Middle and Senior Talent Training Project for a Large State-owned Enterprise in the High-end Equipment Manufacturing Industry in Guangxi Province

As a large state-owned enterprise in the high-end equipment manufacturing industry with diversified businesses, this customer's business radiated upstream and downstream to form a complete equipment manufacturing ecosystem. In the training of traditional technical management talents within the enterprise, this customer has always focused on management capabilities, lacking resources for technical capability improvement, and cannot meet the needs of industrial transformation such as cost reduction and efficiency improvement.

BEIJING-FANUC joined hands with the customer to integrate the industry expert resources of both parties, focusing on expanding the cutting-edge technical vision and improving lean manufacturing and digital construction capabilities for technical management personnel of the customer itself and its supply chain enterprises. Relying on the understanding of the manufacturing industry and linking cutting-edge technologies such as AI, we provided diversified talent development, extending from management empowerment to technical empowerment. Finally, we broadened the cutting-edge vision of technical middle and senior management personnel of the customer and its supply chain enterprises, helped them master advanced technical trends and practical cases, assisted enterprises in overcoming technical management challenges during the transformation period, and demonstrated the industry influence of leading enterprises.

#### 3.2.2 From "Resource Output" to "Model Co-Creation", Actively Carrying Out School-Enterprise Cooperation and Integration of Production and Education

Through in-depth school-enterprise cooperation, co-building more than 40 CNC application centers and skilled talent training bases, jointly developing curriculum systems aligned with post skill improvement with schools, and carrying out various types of dual-teacher team empowerment projects, BEIJING-FANUC has achieved multi-dimensional values such as an accurate connection between talent training and industrial needs and high-quality transportation of skilled talents, forming a sustainable development paradigm with deep integration of "Education Chain-Talent Chain-Industrial Chain-Innovation Chain."



BEIJING-FANUC Actively Promotes School-Enterprise Cooperation and Sets Up "FANUC Talent Excellence Class" in Cooperation with Schools

#### Action Initiatives

**Gathering Industrial Resources and Deepening School-Enterprise Cooperation:** Based on the advanced technology application and post-talent needs of FANUC in various industries, introduce industrial standards into the talent training programs of institutions, conduct school-enterprise language conversion, and solve the core problem of disconnection between production and education supply and demand.

**Co-building Training Bases and Benchmarking Real Production:** Cooperate with institutions to build more than 40 CNC

application centers and production-oriented training bases, introducing the most cutting-edge intelligent production lines into campuses, providing students with an "Immersive" practical environment, ensuring zero distance between skills and job requirements.

**Developing Curriculum Systems and Connecting Career Growth:** Schools and enterprises jointly develop curriculum resource systems and teaching resource packages for different levels of institutions and different majors, with a full set of online and offline curriculum resources available for institutions' teaching at any time.

**Diversified Measures to Build a Dual-Teacher Echelon and Improve the Exchange Mechanism between School and Enterprise Famous Teachers:** According to the training needs of teachers in different positions, match diversified practical scenarios and improvement projects to help institutions build a sound teacher echelon. By building a two-way exchange mechanism between enterprise craftsmen and school-famous teachers, a significant improvement in teacher quality can be achieved.

**Implementing Standard Certification Systems and Conducting Skilled Talent Certification:** In accordance with FANUC's globally unified and locally adapted engineer certification standards, build an S1-L3 certification system, and set up "FANUC Talent Excellence Class" in cooperation with schools to improve the adaptability between students' skills and enterprise post capabilities, effectively helping skilled talents quickly take up posts, and providing a basis and standard for enterprise talent echelon construction.

### Case 1: University-Enterprise Cooperation Project with a National "Double First-Class" Construction University

As a university under China's 985, 211 project and a national "Double First-Class" construction university, the innovative practice center of the institution lagged behind industry development in intelligent manufacturing training conditions, urgently needing to introduce advanced technologies and industries for high-end talent training and build a demonstration benchmark for intelligent manufacturing practice bases.



On-Site of The Intelligent Manufacturing Production Line of The Institution



Interface of The Digital Twin Training Module

BEIJING-FANUC customized a "Teaching-Production" dual-mode intelligent manufacturing demonstration project for this university, integrated a digital twin training module, realized "Visualization and Interaction" of equipment operation guides, and built an immersive teaching environment. This project provided a replicable paradigm for the integration of production and education in high-level research universities, deepened the collaborative interaction between education and industry, and served the national manufacturing power strategy.

### Case 2: "FANUC Talent Excellence Class" Project with a Vocational and Technical College in Shenzhen

In teaching practice, a vocational and technical college in Shenzhen faced the pain points of "Large Gap in High-Skilled Talents and Insufficient Coordination of School-Enterprise Resources" in the intelligent transformation of

the manufacturing industry. The training in the institution was disconnected from the needs of enterprise posts, the "Skill Shortage" in regional manufacturing was prominent, and the skill adaptability of students was difficult to meet the requirements of intelligent manufacturing posts.

In accordance with FANUC's globally unified and locally adapted certification system, BEIJING-FANUC set up a "FANUC Talent Excellence Class" in cooperation with the institution, implemented a school-enterprise dual-tutor teaching model, introduced real enterprise cases, and promoted the synchronization of professional construction with industrial technology upgrading. The project has targeted training hundreds of intelligent manufacturing technical backbones, significantly improved the high-quality employment rate of students, alleviated the regional "Skill Shortage," and provided a "Technology + Talent" dual engine for industrial transformation.

### Case 3: A School-Enterprise Cooperation Industrial College in Shanxi, Co-building the Largest Intelligent Manufacturing Talent Training Base in the West

In the development of industrial clusters in Shanxi, the supply of high-end manufacturing talents has been insufficient for a long time. The professional construction of institutions is disconnected from enterprise needs, and enterprises face high employee training costs and large downtime losses.

BEIJING-FANUC collaborated with the institution to build a Western Intelligent Manufacturing Talent Training Base. Through curriculum system construction, dual-teacher team training, and "FANUC Talent Excellence Class" construction, we jointly improved the professional connotation construction of the school; jointly carried out technical skill improvement training and enterprise-oriented training for regional enterprises, and served many well-known industry enterprises. It arranged employee training and certification at the base and co-built an enterprise internal trainer training system. After assessment and certification, the employment rate of students in the "FANUC Talent Excellence Class" reached 100%, and many students joined many well-known industry enterprises. It helped improve the technical practice ability of teachers in the institution, assisted the institution in integrating "Double High" professional construction while serving regional industrial transformation and upgrading. Among them, the professional group construction and practice project cooperated by BEIJING-FANUC and the institution won the "First Prize of National Teaching Achievement Award."

### 3.2.3 Building an Open Empowerment Talent Ecosystem Platform to Promote the Upgrade of Advanced Manufacturing Technology and Talents

Under the guidance of relevant departments and industry associations, BEIJING-FANUC, together with relevant departments, industry associations, leading enterprises in intelligent manufacturing technology, high-quality institutions, and industrial manufacturing enterprises, established the Machinery Industry FANUC advanced manufacturing talent cultivation alliance (hereinafter referred to as the "Alliance") in 2018 in accordance with the principles of "Voluntariness, Platform, Cooperation."

With the vision of "Connection is Greater than Ownership, Co-creating the Future of Intelligent Manufacturing," the Alliance is committed to building a talent development platform in the advanced manufacturing industry, constructing a diversified talent training system, promoting the upgrade of advanced manufacturing and intelligent manufacturing technology and talents, forming a closed-loop of supply, demand, and training of technical and skilled talents, and meeting the new needs of industrial transformation, upgrading, and high-quality development for talents.

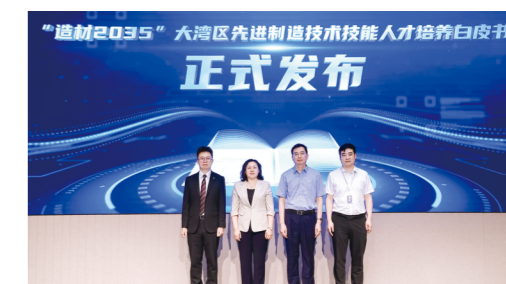


Scene of The Alliance Establishment Ceremony

The Alliance has established a Council, a Secretariat, an Expert Group, and 5 special working committees, forming a multi-party linkage mechanism of "Government Guidance-Enterprise Leadership-School Participation-Association Coordination."

### Action Initiatives

**Jointly Releasing the "Zaocai 2035" White Paper (Strategic Document Outlining Beijing-Fanuc's Vision and Roadmap For Talent Cultivation) with a Vocational and Technical College in Shenzhen to Accurately Anchor the Direction of Advanced Manufacturing Talent Training in the Greater Bay Area:** To accurately meet the talent needs of industrial development and explore effective strategies and paths for skilled talent training, BEIJING-FANUC, together with a vocational and technical college in Shenzhen, took the lead, and united with technical representative enterprises and industry benchmark enterprises in the advanced manufacturing field in the Greater Bay Area. Through in-depth insight into the development trends of advanced manufacturing in the Greater Bay Area and the demand trends of technical and skilled talents, the company prospectively predicted and systematically sorted out the post capability requirements of future talents, and officially released the "Zaocai 2035" Greater Bay Area Advanced Manufacturing Technical and Skilled Talent Training White Paper in 2024. This white paper will accurately guide industry enterprises to clarify the direction of core post talent reserves, help schools and enterprises collaboratively build a production-education integration talent training path, and dynamically optimize talent training programs.



Official Release of The Greater Bay Area Advanced Manufacturing Technical and Skilled Talent Training White Paper Jointly Released by Multiple Parties in Beijing in 2024

**Promoting Regional Collaboration and Ecological Co-construction and Innovating Characteristic Talent Training Mechanisms:** The Alliance deeply connects local industrial resources, creates differentiated and precise talent training models according to the needs of regional economic and manufacturing upgrading, effectively supports the supply of high-skilled talents in the region, realizes the deep integration of the education chain, industrial chain, and innovation chain, and injects sustained momentum into the transformation and upgrading of local manufacturing.

### Case 1: Ecological Cooperation in a Region in South China

92% of the shortage occupations in the manufacturing industry in a city in South China are related to manufacturing. With technology-driven industrial upgrading, enterprises in the region have an urgent demand for "Quality Improvement, Cost Reduction, Efficiency Enhancement," and the demand for talents has shifted from quantitative growth to

qualitative improvement. However, the upgrading of regional industry was not synchronized with the improvement of talent quality; there was a lack of key technical training resources for machining, and the connection between enterprise talent training needs and ecological resources was not smooth.

BEIJING-FANUC accurately met the needs of machine tool factories and end users in the region, introduced key technical elements such as drilling and tapping centers (钻功中心) and mould machine tools into the regional high-level training center, and built a "Work Process-Based" curriculum system; joined hands with the high-level training center and associations to integrate alliance resources to carry out various training and teaching practices. From 2023 to 2025, a total of 37 training activities were carried out at the South China Experience Center in the region, covering 626 enterprises and more than 1,200 people, becoming a benchmark practice of "Training - Certification - Employment" in South China, helping the region build a talent highland and realize "Manufacturing as the Backbone."

### Case 2: Building a Production-Education Integration Community in a Region in East China

The adaptability between vocational education and industrial needs in a region in East China is insufficient, the ability to incubate production-education integration achievements was weak, and there was a lack of a long-term collaborative mechanism for school-enterprise cooperation. BEIJING-FANUC explored a multi-party joint school-operation mechanism of "Government, School, Industry, Enterprise." Based on the upgrading of the JIANGSU-FANUC CNC Vocational Education Group, it proposed a stepped cooperation structure to gather and share advantageous resources. Through a series of measures, we helped enhance the adaptability of vocational education in the region, incubate a number of production-education integration achievements, transport high-quality talents for regional manufacturing, set a benchmark for government-school-industry-enterprise collaboration, and serve national strategies and regional economic development, which is a typical paradigm of production-education integration practice.

### Case 3: Establishing the FANUC Advanced Manufacturing Talent Training Alliance (Anhui)

As an important engine of the integrated development of the Yangtze River Delta, Anhui's industrial clusters such as new energy vehicles and high-end equipment, have developed rapidly in recent years. Talent training, echelon construction, and the supply of compound talents have become key issues for regional development. Enterprises in the region have prominent pain points in educating and employing talents; the quantity and quality of talents were difficult to meet the needs of industrial innovation, and there was a lack of characteristic talent training models.



Scene of the Establishment Ceremony of the FANUC Advanced Manufacturing Talent Training Alliance (Anhui)

BEIJING-FANUC took the initiative to establish the FANUC Advanced Manufacturing Talent Training Alliance (Anhui), integrated alliance resources to focus on enterprise pain points, created an "Anhui characteristic" talent training model, accurately met the regional industrial talent needs, cultivated high-quality technical and skilled talents, and injected talent momentum into the high-quality development of advanced manufacturing in Anhui.

### Building an Online-Offline Integrated Platform to Create a Three-Dimensional Empowerment Ecosystem

**Organizing Diversified Thematic Activities to Build a High-Value Dialogue Platform:** By holding various activities such as industry summits, technical exchange meetings, professional construction seminars, and talent training forums, the Alliance builds a high-value dialogue platform for multi-party collaboration between government, industry, enterprises, and schools. The activities gather authorities and front-line practitioners in the field of vocational education, share advanced manufacturing talent training experience, judge future trends, and jointly explore and build a virtuous cycle and a continuously evolving talent ecosystem.

**Building an Online Learning Ecosystem to Promote Innovative Practices of Online Learning Platforms in the Manufacturing Industry:** With Industry 4.0 driving the digital transformation of the manufacturing industry, online learning has become a key carrier for talent self-evolution and professional improvement. BEIJING-FANUC builds a systematic and interactive online learning platform, forming a dual online platform system: ① F+COLLEGE online learning platform, gathering more than 1,500 courses, supporting the closed loop of "Teaching-Learning-Practicing-Testing-Evaluating"; ② F+CLUB technical community, building channels for communication, collaboration, and industry-university-research collaboration, and jointly developing micro-courses such as the "Analysis Series of Typical Machining Production Cases" with enterprises. The dual online platform system has served a total of 5 million person-times, with a training pass rate of 98%, realizing a 50% reduction in the onboarding time of new employees.



F+COLLEGE Online Learning Platform

### 3.3 Social Ecosystem

BEIJING-FANUC actively pays attention to social issues, gives full play to its advantages in product technology, services, talents, and funds, and enthusiastically participates in various social welfare activities such as social disaster support, educational assistance, career enlightenment, and green ecological education. Through "targeted public welfare projects, regular volunteer actions, and emergency disaster support," we earnestly fulfill our corporate social responsibility and contribute to enhancing social well-being.

#### 3.3.1 Education Empowerment: Starting with Educational Public Welfare and Actively Undertaking Social Responsibility

Focusing on the all-round development of students and the improvement of teachers' capabilities, BEIJING-FANUC launches multi-level and cross-stage educational activities, covering primary schools, high schools, vocational high schools, universities, and other school stages, including themes such as green ecological education and career enlightenment.

While providing students with practical and growth platforms, it empowers teachers with innovative momentum.



BEIJING-FANUC Actively Supports University Students' Sustainable Innovation Practice Activities

### Primary School Education Empowerment: Green Ecology and Intelligent Manufacturing Enlightenment

**Targeted Assistance:** In 2022, BEIJING-FANUC organized the F+SIXIANG Study Tour Public Welfare Activity, donating multiple laptop computers, stationery gift packages, and other educational and teaching materials to Baishuitai Primary School in Shangri-La, Yunnan; at the same time, it launched "Career Enlightenment Series" dual-teacher classes for Baishuitai Primary School in Yunnan, helping more than 320 students understand the core values of more than 10 occupations such as doctors and engineers through courses such as "Making Newspapers" and "Career Cognitive Maps." The interactive classes help improve students' technological cognition and inject innovative resources into rural education.

**Entering Campuses:** Organize volunteers to enter the Primary School Affiliated to China Agricultural University, and organize the "Green New City" workshop activity to help students understand green ecology and sustainable development through interesting game interactions.

**Social Research:** Organize the Beijing News junior journalist group to visit BEIJING-FANUC's digital factory, allowing them to intuitively feel the real scene of intelligent manufacturing through visits to the wisdom exhibition hall, assembly of machine tool models, and PMC control practical operations.

### Career Exploration in High Schools and Vocational High Schools: Vocational Internship and Planning Guidance

**High School Vocational Internship:** Cooperate with Peking University Affiliated High School Chaoyang Future School to carry out vocational internship activities, organizing first-year high school students to experience in real workplace environments to help them recognize the characteristics of occupations related to the intelligent manufacturing industry in advance.

**Vocational High School Exhibition Research:** Lead students from Shanghai Industrial and Commercial Foreign Language School to visit the Shanghai CCMT Exhibition, helping students from secondary vocational colleges understand the cutting-edge trends of intelligent manufacturing and explore the technological charm of intelligent manufacturing.

### University-Enterprise Linkage: Open Day and Innovative Practice

**Vocational Guidance and University-Enterprise Open Day:** Hold university-enterprise open day activities to build a docking platform between enterprises and universities, broaden students' industry perspectives, and promote students' research and attention to the field of intelligent manufacturing.

**College Students' Sustainable Innovation Practice:** Jointly launch the "Carbon Cycle Future" Hackathon Youth Empowerment Program with industry partners, focusing on sustainable development issues such as the circular economy and

green low-carbon. Adopting a model combining real enterprise propositions, in-depth mentor guidance, and student practical projects, promote the organic connection between education and relevant industrial resources.

### Teachers' Professional Development: "Education" Meets the Future Summit and Cross-Border Exchange

**Teachers' Summit:** BEIJING-FANUC participates in the JA "Education" Meets the Future Teachers' Summit, shares years of talent training experience, and promotes the exchange of resources between the education and industrial sectors.

**Cross-Border Empowerment:** Organize teachers from Chaoyang Experimental Primary School to conduct research and visits, conduct cross-border communication and discussions on talent training topics, helping primary school teachers broaden their industry horizons and improve their teaching innovation and practical capabilities.

### 3.3.2 Disaster Relief and Resumption of Production: Responding Quickly to Disasters, Supporting Customers in Resuming Production, and Ensuring Industrial Chain Resilience

In the face of major natural disasters, BEIJING-FANUC has always adhered to the proposition of "Customer First" and the service concept of "Fast, High-Quality, Efficient." Through an efficient service model of 24/7 acceptance and full business response, a complete warehousing network covering the whole country and sharing global spare parts resources, and the supply of high-quality original spare parts, we promptly provides equipment rescue support for customers when major disasters occur, reduces disaster losses, helps customers quickly resume production, ensures the stability and rapid recovery of the regional industrial chain and supply chain, and earnestly fulfills its corporate social responsibility with practical actions.

#### Case 1: Assisting in the Wenchuan Earthquake, Disaster Response, Recovery, and Post-Disaster Reconstruction

After the Wenchuan Earthquake in 2008, BEIJING-FANUC actively responded to disaster relief, donating 1 million yuan to the disaster-stricken areas and purchasing materials for assistance.

For affected customers in the disaster area, BEIJING-FANUC actively helped them resume production and reconstruction. After the disaster, we established the "Wenchuan Post-Earthquake Customer Emergency Care Team," and went deep into key affected enterprises in the disaster area to diagnose damaged CNC equipment; at the same time, we promised and fulfilled "Free Testing and Priority Maintenance" to effectively reduce the burden on customers. The technical team worked day and night to quickly and professionally repair the equipment. Within two months, BEIJING-FANUC successfully helped customers wake up more than 50 damaged machine tools worth nearly 100 million yuan, retrieved huge assets, helped customers save key productivity, and contributed to the "Post-Disaster Rebirth" of the disaster area.



BEIJING-FANUC Made a Donation of CNY 1 Million



Purchased and Sent Relief Materials to Affected Regions

### Case 2: Responding to Typhoon "Moranti", Equipment Emergency Repair and Rapid Resumption of Production

In September 2016, Super Typhoon "Moranti" made landfall in Fujian, paralyzing transportation and electricity in Xiamen, a manufacturing base. BEIJING-FANUC immediately activated the emergency plan, raced against time to complete the investigation of the customer disaster situation, accurately identified the types of equipment failures by completing the classification of disaster situations of more than 500 customers for the first time, providing data support for resource allocation. At the same time, we broke regional boundaries, coordinated resources, upgraded "Single-Point Rescue" to "Systematic Operations," and shortened the repair preparation cycle; through remote technical expert guidance and on-site repair by local service engineers with parts, it delivered services to where customers needed them most, fulfilling the commitment of "Uninterrupted Quality Assurance in Disasters"; before the resumption of transportation, it "remotely guided customers for temporary emergency response + prepared on-site repair plans" to lock the service rhythm in advance.

With efficient plans, innovative models, and boundless collaboration, BEIJING-FANUC successfully helped customers significantly reduce production suspension losses and secondary risks. Its post-disaster response speed far exceeded the industry average, protecting more than 5,000 FANUC machine tools, safeguarding customers' core assets, and maintaining regional supply chain resilience.

### Case 3: Donating Anti-Epidemic Materials During the COVID-19 Pandemic and "Retrograding" to Stand Firm on the Frontlines

After the outbreak of the COVID-19 pandemic in 2020, the whole country entered an anti-epidemic state, and customers faced severe difficulties in resuming work and a serious shortage of anti-epidemic materials. BEIJING-FANUC acted quickly, regarding ensuring customer operations and promoting industry recovery as its own responsibility. In addition to ensuring product logistics support, combined with the shortage of anti-epidemic materials for customers, we donated masks, infrared thermometers, thermometers, and other materials to enterprises in urgent need of business guarantee despite their limited materials. This timely assistance allowed customer employees to safely enter the factory, ensuring the smooth resumption of enterprises and the normal operation of the industrial chain.



BEIJING-FANUC Engineers Investigating Equipment at The Customer's Site

During the lockdown in Wuhan, the team of BEIJING-FANUC Wuhan Office adhered to their posts to ensure the operation of the customer's supply chain in accordance with the action guidelines of "Strict Prevention and Control, Professional Services, Responsibility in Mind, Perpetual Commitment." The team insisted on caring for customers online every day, keenly captured the opportunity of the first batch of resumption of work, and all members took action quickly to complete all procedures in advance. To open the "Resumption of Work Channel," facing the complete suspension of public transportation, employees chose shared bicycles, riding more than 8 hours a day, totaling 50 kilometers, to efficiently complete various resumption of work preparations. At the same time, through remote diagnosis and on-site tackling, they quickly repaired equipment. Faced with major customer equipment failures and resource difficulties under the pandemic, we innovatively adopted the "Remote Diagnosis + On-Site Tackling" model to help customers quickly resume production and accelerate the restart of the regional industrial chain.

### Case 4: Emergency Support for the Zhuozhou Flood in Hebei

In 2023, heavy rains in Beijing, Tianjin, and Hebei caused floods in Zhuozhou. Many local customers in mechanical manufacturing, auto parts, and other fields suffered severe damage to their production equipment due to flooding, seriously affecting their normal production and operation.

BEIJING-FANUC activated the emergency response immediately: formed a 10-person emergency technical team, arrived at the disaster area within 24 hours to complete the equipment damage assessment of more than 30 key customers, accurately identifying fault types such as spindle motor water ingress and CNC short circuits; at the same time, we provided customers with free equipment testing and priority spare parts allocation services, urgently allocated more than 200 core spare parts such as servo drives and sensors, and engineers carried out on-site maintenance of flooded equipment. In response to the post-disaster equipment commissioning needs, we compiled the "Flood Equipment Resumption Operation Guide" to help customers quickly resume production. This emergency support not only helped an auto parts customer resume production 5 days in advance, reducing order losses by more than 3 million yuan, but also fulfilled our social responsibility with efficient response and practical measures, deepened the trust bond with customers, and demonstrated BEIJING-FANUC's service guarantee capability and industry responsibility in emergencies.



# D4

## GREEN OPERATIONS

BEIJING-FANUC aims for "Green, Healthy, Intelligent, and Ecological" operations, systematically advancing the green operation of industrial parks to create a sustainable office and production space integrating efficient energy use, healthy environment, circular economy, and intelligent collaboration. Taking the Daoxiang Lake Campus as a model, BEIJING-FANUC has built a modern operation system featuring resource conservation, environmental friendliness, and healthy livability through system construction, technological upgrading, and cultural cultivation. While improving energy efficiency and employees' health experience, the company provides reusable practical experience for the green transformation of industrial enterprises' operations.

### ■ 4.1 Energy Management

BEIJING-FANUC regards energy management as the core of green operations, promoting energy management from post-event governance to pre-event planning and from individual-point energy saving to systematic coordination, forming a closed-loop management path of "Design - Construction - Operation and maintenance - Optimization." By means of institutional responsibility assignment, precise measurement, intelligent regulation, technological upgrading, and green power supplementation, the company has established a replicable energy efficiency improvement system.

This systematic management elevates energy management from a simple energy-saving transformation to a strategic level, making it an important support for our own sustainable development. In a specific implementation, it balances experience and energy efficiency, with all business units participating collaboratively, relying on the IoT to achieve data collection and intelligent regulation, thereby reducing energy consumption.

#### ■ 4.1.1 Energy Management Policy and Framework

Based on the ISO50001 Energy Management System, BEIJING-FANUC has established a four-dimensional policy framework of "Management principles - Management mechanisms - Energy use and energy-saving management - Energy supervision and assessment" to ensure the compliance and effectiveness of energy management.

**Management Principles:** Energy conservation first, overall planning, technology leadership, and full participation.

**Management Mechanism:** Implement closed-loop management in accordance with the annual direction setting (setting indicators at the beginning of the year and assessing and summarizing results at the end of the year) → daily implementation (data recording and energy-saving measure implementation) → monthly analysis (report analysis and abnormal troubleshooting) → result transformation (incorporation into sustainability reports and ISO50001 Energy Management System audits). Establish energy management departments and energy-using departments with clear responsibilities.

**Energy Use and Energy-Saving Management:** Clarify requirements for economical use of office energy and public area energy, set management and process requirements for energy-using equipment in production, maintenance, exhibition halls, and data centers, define energy-saving target management (target setting rules, target decomposition, and benchmark setting rules), and set energy-saving assessment requirements (specify the timing and assessment methods for energy-saving assessment after energy-saving projects and equipment transformation).

**Energy Supervision and Assessment:** Clarify assessment mechanisms, assessment responsibilities, assessment objects, key indicators, and reference benchmarks.

#### ■ 4.1.2 Key Actions and Achievements

BEIJING-FANUC has achieved precise energy consumption control and efficiency improvement through five major actions: "Measurement Visualization, Platform Intelligence, Equipment Energy-Saving, Refined Operation and Maintenance, Green Energy".

**Energy-Saving Transformation of Equipment and Systems:** Promote a number of energy-saving technological transformations, including variable-frequency water pump group control, direct-fired machine group control strategies, waste heat recovery pilots, and refrigeration/cooling system optimization, to reduce energy consumption at the equipment end.

**Renewable Energy Utilization:** Promote rooftop photovoltaic grid-connected projects in various industrial parks and implement the "Self-Generation and Self-Consumption" strategy. The total photovoltaic power generation of our campus accounts for 32% of the total electricity consumption.

**Operation and Maintenance and Behavioral Management:** Establish a closed loop of "System - Tools - Implementation," including regular calibration of measuring instruments, energy efficiency inspections, maintenance of energy-saving SOPs, and employee energy-saving publicity, promoting the integration of energy-saving concepts into daily operations.

**Deployment of Intelligent Energy Management Platform:** Complete the measurement access of key energy-consuming circuits, such as office areas, maintenance areas, computer rooms, production lines, automated warehouses, high-temperature aging rooms, air compression equipment, forklift and pallet jack charging, and supply chain lighting and air conditioning. Establish a monthly energy consumption account and an abnormal alarm mechanism to ensure real-time traceability of energy consumption data and early warning of abnormalities. Build an energy consumption monitoring system supporting real-time energy consumption monitoring, automatic generation of daily/weekly/monthly reports, regional energy consumption comparison, and abnormal alarm functions; the platform is deeply linked with the Building Management System (BMS), which can automatically adjust the operation status of lighting, air conditioning and other equipment according to energy consumption data, effectively reducing invalid energy consumption. Preliminary audit data shows that the annual energy consumption of the Daoxiang Lake Campus has decreased by approximately 15%.

Serial Number	Energy Efficiency Improvement Action	Category	Description of Implementation Results
1	Replacement of lighting fixtures in Shangdi Campus	Energy-saving and carbon reduction technological transformation	A total of 905 sets were replaced, achieving an annual energy saving of approximately 80,000 kWh
2	Elimination of old air conditioning hosts and replacement of fixed-frequency AC fans with variable-frequency EC fans in Shanghai Industrial Campus	Energy-saving and carbon reduction technological transformation	Annual energy saving of 20% for HVAC systems
3	Upgrade and transformation of high-efficiency cooling towers in Daoxiang Lake Campus (Headquarters)	Energy-saving and carbon reduction technological transformation	Annual energy saving of approximately 20,600 kWh, water saving of 3,000 tons, and natural gas saving of 34,300 cubic meters
4	Construction of rooftop photovoltaic power generation system and solar streetlights in Shanghai Industrial Campus	Renewable energy utilization	Installed a 148.5 kW rooftop photovoltaic system with an annual power generation of 180,000 kWh, of which about 76% is self-consumed, accounting for approximately 19% of the industrial park's total electricity consumption
5	Construction of rooftop photovoltaic power generation system and solar streetlights in Daoxiang Lake Campus (Headquarters)	Renewable energy utilization	Installed capacity of about 1.263 MW with an annual power generation of approximately 1.33 million kWh, of which about 85% is self-consumed, accounting for approximately 34% of the industrial park's total electricity consumption
6	Provision of new energy shuttle buses and route optimization to reduce carbon emissions from employee commuting	Operation optimization and improvement	Indirectly reducing carbon emissions by approximately 30 tons per year
7	Replacement of company-owned vehicles with new energy vehicles	Operation optimization and improvement	Promotion started in 2024 and was fully completed in 2025

Statistics of BEIJING-FANUC's Energy Efficiency Improvement Measures and Implementation Results

## 4.2 Green and Healthy Industrial Park

BEIJING-FANUC has constructed and put into operation the Daoxiang Lake Campus (Headquarters) in accordance with the standards of LEED Platinum Certification issued by the U.S. Green Building Council (USGBC) and WELL Platinum Certification issued by the International WELL Building Institute (IWBI). Integrating green building concepts with employees' health needs around ten dimensions, including air, water, nutrition, light, movement, thermal comfort, acoustic environment, materials, spirit, and community, it has created a healthy, comfortable, and intelligent working environment for employees, achieving the synergy of "Green" and "Healthy."



LEED Platinum Certification Issued by the U.S. Green Building Council (USGBC)



WELL Platinum Certification Issued by the International WELL Building Institute (IWBI)

### Health Environment Control: Multi-dimensional Management for Employees' Health

Starting from core elements such as air, water, sound, light, and temperature, establish refined control standards, with all indicators meeting or exceeding the requirements of LEED Platinum Certification by USGBC and WELL Platinum Certification by IWBI.

### Air Quality Management

**Above National Standard Fresh Air System:** The per capita fresh air volume far exceeds the national standard of 30 m<sup>3</sup>/h, effectively removing formaldehyde, bacteria, and other pollutants, and reducing indoor CO<sub>2</sub> concentration.

**Five-Level Filtration of Fresh Air System:** Adopt a combination of "Primary G4 Filter + Metal Filter + Electrostatic Dust Collection + Activated Carbon Filter + F8 Medium-Efficiency Filter Bag," with regular cleaning and replacement of filters to ensure the cleanliness of fresh air.

**Real-Time Monitoring and Disclosure:** Install detectors for PM<sub>2.5</sub>, CO<sub>2</sub>, temperature, humidity, TVOC (Total Volatile Organic Compounds), and HCHO (formaldehyde), and display data in real time through office software. The indoor air quality strictly complies with the standards of WELL Platinum Certification by IWBI: PM<sub>2.5</sub> ≤ 15 μg/m<sup>3</sup>, CO<sub>2</sub> ≤ 900 ppm, formaldehyde ≤ 0.05 mg/m<sup>3</sup>, TVOC ≤ 0.5 mg/m<sup>3</sup>.

### Green Materials and Sustainable Design in the Campus's Interior Decoration

**Healthy Material Selection to Ensure Indoor Environment:** Prefer low-pollution building materials, use formaldehyde-free and low-VOC environmentally friendly latex paint for walls; use ultra-high standard boards for wood veneers with formaldehyde emission far better than the national standard; use mineral wool boards with China Environmental Label Certification for ceiling systems, which have both sound absorption and energy-saving performance; interior decoration materials reach flame-retardant grade with the best level of smoke toxicity; some boards have built-in VOC purification factors with formaldehyde purification efficiency ≥ 80%.

**Circular Low-Carbon to Promote Resource Regeneration:** Prioritize materials with high recycled content, such as ceiling systems with recycled content exceeding 40%; use reconstituted decorative veneers instead of solid wood for wood veneers to reduce forest resource consumption; select floor materials with full-life cycle environmental certification to ensure recyclability and material health, reducing the full-cycle ecological impact.

**Preferred Procurement of Green Furniture and Carpets:** Office furniture is purchased from suppliers meeting high-

level environmental standards. Wooden and panel furniture use ENF-grade boards (formaldehyde  $\leq 0.025$  mg/m<sup>3</sup>), fully adopting water-based paint and glue-free laser edge banding technology; steel components are treated with VOC-free and sprayed with environmentally friendly coatings. Carpets are preferably products from carbon-neutral factories with 100% recyclable yarn, and the backing of the carpets is the world's first environmentally friendly building material with full-life cycle environmental certification.

#### Acoustic Optimization

**Noise Control:** The campus adopts various measures to optimize the acoustic environment. The carpet coverage rate in office areas exceeds 80%, effectively absorbing footsteps and office equipment noise; meeting rooms use sound-absorbing panels, noise-reducing ceilings, and double-glazed partitions certified by European full-life cycle green environmental protection, with indoor noise controlled within 45 decibels, the optimal sound insulation value in the industry, ensuring clear communication in meetings without interference; each office area is equipped with phone booths to meet the needs of private communication and convenient space use.

**Separation of Dynamic and Static Areas:** The spatial layout achieves "Separation of Dynamic and Static Areas," isolating "High-Noise Areas" such as pantries from "Low-Noise Areas" such as workstations and meeting rooms, reducing interference while ensuring employees' focused work and privacy, meeting diverse work needs.

#### Drinking Water Safety

**Reverse Osmosis Direct Drinking Water System:** Adopt RO membrane filtration + mineral retention technology to achieve "Instant Heating and On-Demand Production," eliminating "Repeated Boiling Water"; the system is equipped with real-time water quality monitoring devices, and filter elements are replaced regularly to ensure drinking water safety.

**Full-Scenario Coverage:** Professional water purification equipment is deployed in restaurants, coffee areas, and pantries to provide comprehensive drinking water guarantee for employees.

#### Refined Temperature Control

**Intelligent Temperature Control:** The indoor ambient temperature is controlled at 24-26°C in summer and 22-24°C in winter, balancing comfort and energy saving.

**Customized Adjustment:** Adjust the management principles of different spaces according to the physiological characteristics of different groups. For example, the temperature of office floors with more female employees is 0.5-1°C higher than that with more male employees, and separate overtime areas are set to provide targeted air conditioning services.

**Intelligent Zone Control:** Through the Johnson Controls Building Control System platform, realize zone control, remote control, and automatic adjustment of indoor fans, and display real-time temperature on each floor to ensure transparent management.

#### Lighting and Office Space Optimization

**Intelligent Lighting:** Adopt an intelligent lighting linkage system to automatically adjust lighting as needed. The office area uses neutral white light color temperature, which is more conducive to relieving visual fatigue and improving work efficiency.

**Low-Density Workstations:** Adopt a low-density workstation layout with 12 m<sup>2</sup> per capita. While improving spatial comfort and air quality, provide height-adjustable desks for employees to promote free movement and reduce health risks caused by prolonged sitting.

#### Healthy Catering Management

**7S Flagship Kitchen Management:** Fully implement seven management principles, including sorting, straightening, sweeping, cleaning, literacy, safety, and saving, creating a standardized, safe, and clean kitchen operation environment to ensure food hygiene.

**Fresh Food Supply Chain from Field to Table:** Implement the origin direct procurement model, realizing that vegetables are delivered from the field to the restaurant within 8 hours through efficient cold chain logistics, maximizing the freshness of ingredients and reducing losses. Use household-grade raw materials to control employees' health from the source.

**Standardization and Nutrition Management of Dishes:** Formulate unified standards for raw materials, machining processes, and quality of ingredients, forming more than 60 standardized dishes to ensure stable taste and quality. Cooperate with a team of nutritionists to customize menus, dynamically disclose nutritional data of ingredients, strictly control oil, salt, and sugar intake, and mark allergen information to guide employees to eat scientifically.

**Innovation in Food Recycling and Saving:** Launch practices such as "Turning Vegetable Roots into Pickles" and "Making Steamed Buns from Soybean Milk," converting cooking by-products into side dishes to achieve full utilization of ingredients and reduce food waste from the source.

#### Promotion of Health Activities

**Comprehensive and Energy-Saving Fitness Space:** The indoor gym uses energy-saving lighting and air conditioning systems, equipped with high-energy efficiency equipment; the outdoor sports field uses energy-saving lamps to create a green sports environment and improve the fitness experience.

**Lightweight Midday Leisure:** Organize light sports such as shuttlecock kicking, badminton, pickleball, and table tennis during lunch breaks to help employees relax and promote communication.

**Regular Work Exercises:** Organize 10–15 minutes of work exercises regularly in the afternoon, integrating movements such as Baduanjin, boxing, and shoulder and neck relaxation to relieve fatigue from prolonged sitting and prevent cervical and lumbar problems.

**Various Activities:** Offer various classes such as mindfulness yoga, kickboxing, Zumba, and functional training to meet the sports needs of different employees and promote physical and mental health and team cohesion.

### 4.3 Response to Climate Change

BEIJING-FANUC has incorporated a response to climate change into the core strategy of sustainable development. Relying on its own technological advantages and ecological resources, we have systematically built a governance structure, clarified strategic directions, strengthened risk management, set quantitative targets, promoted the low-carbon transformation of its own operations, and empowered the industrial chain through technology output to help achieve the "Dual Carbon" goals.

This part refers to the requirements of the *Enterprise Sustainable Disclosure Standards No. 1 - Climate (Trial)* issued by the Ministry of Finance of the People's Republic of China and other departments in April 2025, comprehensively presenting our management system and practice plan for responding to climate change from four dimensions: governance, strategy, risk management, and indicators and targets.

Dimension	Core Content
Governance	<p>Relying on BEIJING-FANUC's three-level ESG management structure, establish a climate change response governance system including "Board of Directors - Executive Management - ESG Executive Committee - Carbon Special Working Group":</p> <ol style="list-style-type: none"> <li>1. Board of Directors: Approve climate change response strategies, carbon targets, and major initiatives, and supervise the achievement of targets.</li> <li>2. Executive Management: Overall formulate climate change response policies, coordinate cross-departmental resources, and report progress to the Board of Directors.</li> <li>3. ESG Executive Committee: Organize the decomposition of carbon targets, planning of carbon reduction paths, and supervise the implementation of special work.</li> <li>4. Carbon Reduction Special Working Group: Responsible for the daily promotion of carbon reduction work, including carbon inventory, action implementation, and effect evaluation.</li> </ol>
Strategy	<p>Adopt a climate change response strategy of "taking low-carbon operation as the foundation and technology empowerment of the industry as the core," focusing on two directions:</p> <ol style="list-style-type: none"> <li>1. Own operation level: Reduce carbon emissions through energy structure optimization, energy efficiency improvement, and renewable energy application.</li> <li>2. Industrial chain empowerment level: Provide customers with low-carbon products and solutions relying on our product technology and solutions to promote carbon reduction across the entire value chain of the manufacturing industry and help the industry's low-carbon transformation.</li> </ol>
Risk Management	<p>Establish a full-cycle climate risk management mechanism:</p> <ol style="list-style-type: none"> <li>1. Risk identification: Regularly conduct climate risk inspections covering physical risks and transition risks.</li> <li>2. Risk assessment: Determine risk levels using an assessment matrix and identify high-priority risks.</li> <li>3. Risk response: Formulate special plans for high-priority risks, such as extreme weather emergency plans.</li> <li>4. Risk monitoring: Review risk changes quarterly and dynamically adjust response measures to ensure controllable risks.</li> </ol>
Indicators and Targets	<p>Set short-term, medium-term, and long-term climate change response indicators and targets to ensure quantifiability and implementability:</p> <ol style="list-style-type: none"> <li>1. Carbon targets: Reduce own operation carbon emissions by 70% by 2030 (taking 2024 as the base year), and empower the value chain to achieve carbon neutrality by 2050.</li> <li>2. Operation indicators: Completed the first enterprise-level carbon inventory in 2024, and will gradually promote the continuous reduction of energy consumption indicators and carbon emission indicators compared with the base year.</li> </ol>

Statistics of BEIJING-FANUC's Response to Climate Change Management System and Practice Plan

### 4.3.1 Organizational Level Carbon Footprint

BEIJING-FANUC conducted the 2024 organizational carbon inventory (from January 1, 2024 to December 31, 2024) in accordance with the standards of ISO14064-1:2018 (*Greenhouse Gases - Part 1: Specification with Guidance at the Organizational Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals*) and GHG Protocol (*Greenhouse Gas Accounting and Reporting Standard for Companies*), including Scope 1: Direct Greenhouse Gas Emissions, Scope 2: Indirect Greenhouse Gas Emissions from Purchased Energy, and Scope 3: Other Indirect Greenhouse Gas Emissions within the organizational boundary.

Emission Scope	Unit	2024 Data
Scope 1: Direct Emissions	Tonnes of Carbon Dioxide Equivalent	1,443.84
Scope 2: Indirect Emissions	Tonnes of Carbon Dioxide Equivalent	2,482.54
Total Operational Scope Emissions	Tonnes of Carbon Dioxide Equivalent	3,926.38
Scope 3: Other Indirect Emissions	Tonnes of Carbon Dioxide Equivalent	4,551,662.22

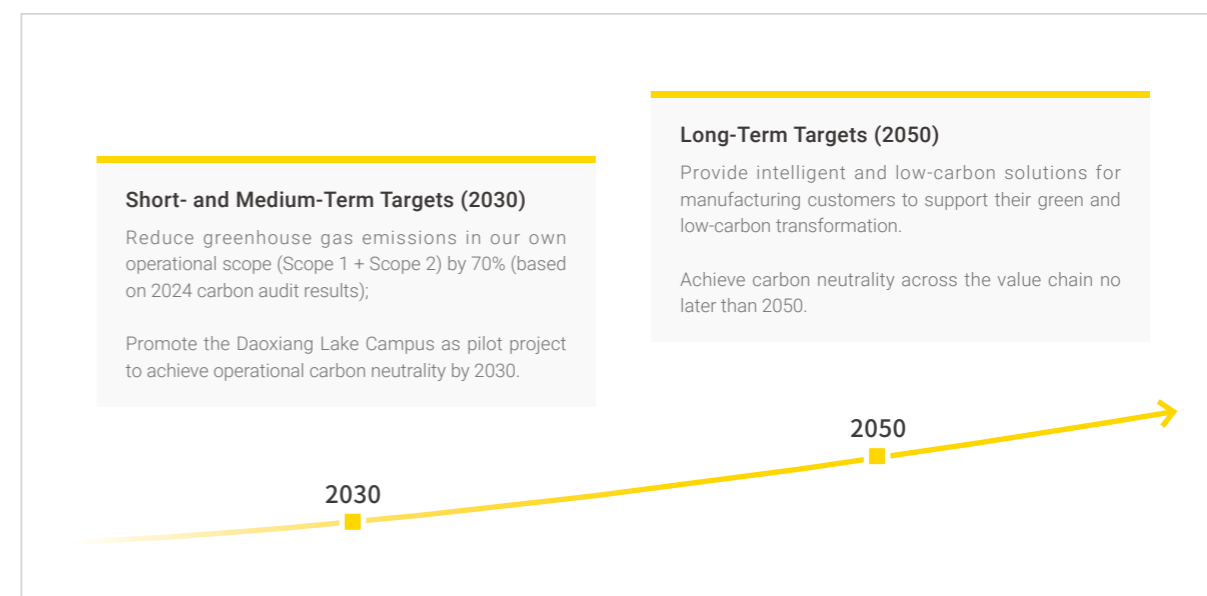
Statistics of Greenhouse Gas Emissions in Scope 1, 2, and 3 within BEIJING-FANUC's Organizational Boundary

\*Note: Scope 3: Other indirect emissions include indirect emissions from the upstream and downstream of the supply chain, employee business trips, and the full life cycle of products. The large amount of data in this inventory is due to the large amount of carbon emissions generated by the use of numerous products downstream, accounting for more than 99% of the carbon emissions in this category.

### 4.3.2 Carbon Reduction Roadmap and Targets

Combined with the results of the carbon inventory and technical feasibility analysis, BEIJING-FANUC has formulated clear carbon reduction action targets and a full-cycle roadmap, defining short-term, medium-term, and long-term targets.

We focus on carbon reduction actions and the carbon reduction roadmap. The short-term and medium-term (2030) target is to significantly reduce greenhouse gas emissions related to our own operations compared with 2024 baseline, achieving a 70% reduction in total greenhouse gas emissions in Scope 1 and Scope 2, and promoting the Daoxiang Lake Campus to achieve operational carbon neutrality; the long-term (2050) target is to explore technical paths for intelligent manufacturing to empower the industry's carbon neutrality, provide innovative solutions for the industry, and help achieve value chain carbon neutrality.



BEIJING-FANUC's Carbon Neutrality Targets

The short-term target is to continuously deepen our green operations through a range of initiatives, including conducting energy audits, implementing targeted energy-saving technology upgrades, increasing the share of renewable energy, adopting smart building management, and optimizing equipment energy efficiency.

In the medium-term, we will focus on building an industry carbon neutrality benchmark, advocating and practically implementing a low-carbon culture. By promoting the Daoxiang Lake Headquarters Campus to achieve zero-carbon operation by 2030, embracing and using AI intelligent algorithms to further optimize energy scheduling, air conditioning group control, intelligent lighting, etc., to promote intelligent upgrading. At the same time, establish a supplier sustainable rating system and link it closely with cooperation depth, and guide employees to practice low-carbon commuting through carbon inclusion incentive measures, promoting the cognition, recognition, and action of sustainable development concepts and awareness.

### 4.3.3 Climate Risk Assessment

Based on its own business characteristics and operations, BEIJING-FANUC has built a climate risk matrix from two dimensions: physical risks and transition risks, and conducted risk assessment and action planning.

Type	Subtype	Risk Description	Potential Impact	Response Action Plan
Physical Risks	Extreme Weather Events	Frequent extreme weather, such as heavy rains, high temperatures, and typhoons, may affect industrial park operations, normal equipment operation, and supply chain stability.	1. The campus production interruption, equipment water ingress due to heavy rains, or malfunctions due to high temperatures; 2. Supply chain logistics disruption, affecting spare parts and product delivery; 3. Customer factory shutdown, indirectly affecting our business development.	1. Improve emergency plans for extreme weather on the campus. 2. Establish a supply chain backup mechanism, reserve key spare parts, and reduce the impact of logistics disruption. 3. Provide customers with emergency equipment maintenance plans under extreme weather to help them quickly resume production.
	Long-Term Climate Trends	Rising temperatures and changes in precipitation patterns may lead to increased industrial park energy consumption and higher environmental governance costs.	1. Increased air conditioning energy consumption in summer, raising operational costs. 2. Uneven precipitation may affect water supply and increase water treatment costs. 3. Long-term high temperatures may accelerate equipment aging and increase maintenance frequency.	1. Optimize the energy-saving design of industrial park buildings to reduce air conditioning dependence. 2. Promote rainwater recycling in the industrial park to improve water use efficiency. 3. Strengthen preventive equipment maintenance, optimize equipment parameters for high-temperature environments, and extend equipment service life.
Transition Risks	Changes in Policies and Regulations	Tightening national and local carbon policies may increase operational costs and compliance pressure.	1. Fines or production restrictions for failing to meet carbon emission requirements. 2. Increased costs related to carbon allowances. 3. Policies require disclosure of more climate information, increasing management costs.	1. Ensure compliant information disclosure based on completed carbon inventory data. 2. Accelerate carbon reduction actions to reduce dependence on carbon allowances and lower carbon costs. 3. Establish a policy tracking mechanism and adjust response strategies in a timely manner to adapt to policy changes.
	Technology Substitution Risks	Rapid iteration of low-carbon technologies, if failing to reserve or upgrade technologies in a timely manner, may lead to loss of market competitiveness.	1. Existing energy-saving technologies become outdated, and customers switch to competitors adopting more low-carbon technologies. 2. Increased technology substitution costs and greater R&D investment pressure.	1. Increase investment in low-carbon technology R&D, establish a technology reserve library, and track cutting-edge industry technologies. 2. Implement a technology iteration plan to gradually upgrade existing products to ensure technological competitiveness.
	Changes in Market Demand	Increased customer demand for low-carbon products, if unable to provide adaptive solutions, may affect cooperation.	1. Loss of orders for failing to meet customers' low-carbon procurement requirements. 2. Customers require the provision of carbon footprint data, which may affect cooperation if not met. 3. Market preference shifts to low-carbon products, and existing products face the risk of unsold inventory.	1. Launch green and low-carbon product solutions to match customer needs. 2. Establish product carbon footprint accounting capabilities to provide customers with transparent carbon footprint information. 3. Strengthen communication with customers on low-carbon needs and conduct adaptive product R&D.

BEIJING-FANUC's Climate Risk Assessment Table

## 4.4 Circular Economy

Circular economy has long been one of the core directions practiced by BEIJING-FANUC in industrial park operations and production practices. Guided by the core principles of "Reduction, Recycling, and Harmlessness," we have built a full-chain circular economy system of "Source reduction - Classified collection - Professional disposal - Recycling," promoting the transformation of waste management to "Normalization."

Solid waste is a top priority of our environmental management. For solid wastes such as office supplies, electronic components, equipment, metals, plastics, packaging materials, and construction waste, we cooperate with professional recycling institutions to achieve safe disposal and resource recycling. At the same time, through cross-departmental collaboration and information sharing within the company, the efficient operation of the circular system is ensured.

### 4.4.1 Management System Set-Up

BEIJING-FANUC ensures the implementation of circular economy practices by issuing special systems and clarifying responsibility division:

**System Documents:** Based on the ISO14001 Environmental Management System certification standards, issue the *Company Solid Waste Management Regulations*, clarifying the "Three Principles" goals and implementation paths, forming closed-loop management. On this basis, formulate the Waste Management Manual, detailing classification standards, disposal methods, collection processes, garbage room layout, secondary sorting accounts, and supplier qualification requirements in combination with actual conditions.

**Organizational Division of Labor:** Coordinated by the Administration and Logistics Support Department, implemented by property management, canteen suppliers, and multiple internal relevant departments, with full employee participation.

**Supplier Management:** Waste recycling and disposal are entrusted to qualified professional companies, and data feedback agreements are signed to ensure full-process traceability; establish a strict supplier selection and audit mechanism, conduct qualification reviews on waste disposal partners, requiring cooperative suppliers to have operation licenses for domestic waste, construction waste, kitchen waste, hazardous waste, etc., and participate in on-site evaluations to eliminate the risk of secondary pollution and ensure that environmental commitments run through the entire life cycle.

### 4.4.2 Full-Chain Initiatives

BEIJING-FANUC has implemented a number of quantifiable and promotable initiatives around three directions: "facility upgrading, refined classification, and waste reduction":

#### Refined Classification of Waste

**Customized Classification Standards:** Combined with the business characteristics of each department, refine 11 categories and 53 sub-items of waste. For example, office areas emphasize the classification of ink cartridges and toner cartridges, and production areas highlight the classification of electronic waste and metal scraps. Each type of waste has a clear disposal process, a responsible department, and a resource recycling path.

**100% Compliant Disposal of Hazardous Waste:** After refined classification, the standardized disposal rate of hazardous waste (such as waste batteries, waste fluorescent lamps, and waste ink cartridges) reaches 100%, avoiding environmental risks.

#### Systematic Management and Waste Reduction

**Intelligent Platform Empowerment:** Introduce an "Intelligent Waste Management Platform" to realize digitalization of the entire process of waste classification, weighing, and traceability. After the system was put into use in April 2025, management efficiency increased by more than 40%, and data supported waste reduction decision-making.

**Source Reduction Actions:** Cancel workstation trash cans and replace them with centralized floor disposal points to encourage employees to reduce waste generation; carry out activities such as the Clean Plate Campaign, Earth Day promotion, and green relocation. Achieve a 40% reduction in kitchen waste, a 23% reduction in other waste, and efficient

recycling of recyclable waste.

**Third-Party Audit Verification:** Audited by professional institutions in 2024, the resource recycling rate of waste in the Daoxiang Lake Headquarters Campus reached 90.37%, leading the industry.

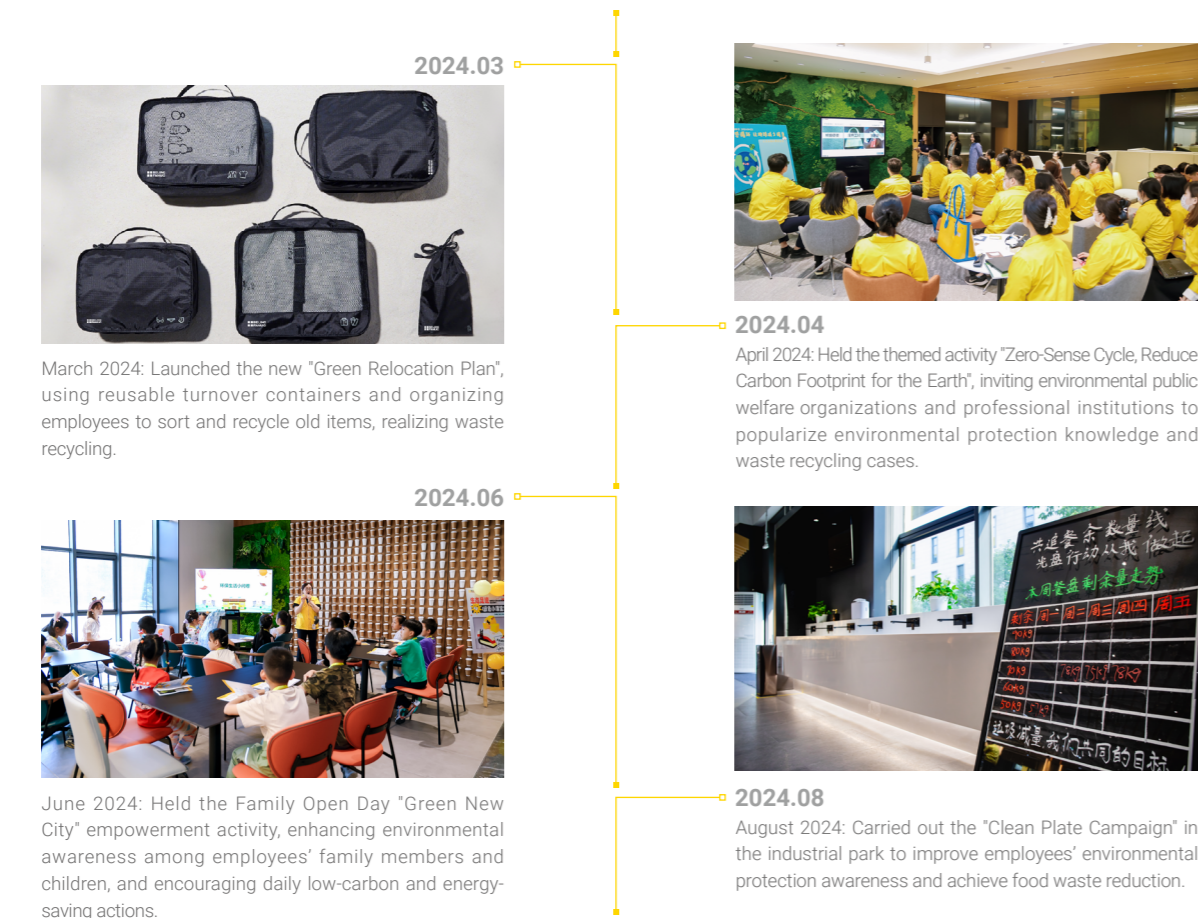
#### Upgrading of Waste Management Infrastructure

**Functional Transformation:** Complete the comprehensive upgrading of the garbage room, achieving "Standardized Classification by Zone, Regular Cleaning, Intelligent Temperature control, and Digital Weighing," eliminating odors and safety hazards, and beautifying the industrial park environment.

**Data Linkage:** Weighing data is connected to the intelligent platform to enhance data accuracy, transforming the garbage room from a "Traditional Collection Point" to a "Modern Environmental Management Node."

#### Promotion of Concept and Awareness Cultivation

The effective practice of the circular economy relies not only on technical and management means but also on the awakening of employees' awareness and behavioral changes. To transform the principles of "Reduction, Recycling, and Harmlessness" from institutional requirements into behavioral habits, BEIJING-FANUC guides employees to move from cognition and recognition to conscious practice through systematic and continuous thematic activities, gradually achieving in-depth transformation from "Knowledge" to "Action" and forming an endogenous driving force for green culture.



## 4.5 Intelligent Operations

The full application of the intelligent collaboration system has promoted the systematic improvement of the industrial park in terms of operational efficiency, energy saving, and employee experience, forming a virtuous cycle of "Efficiency - Energy Saving - Experience."

In terms of operation and energy efficiency collaboration, the system reduces manual intervention through multi-scenario automated linkage. The meeting reservation system is seamlessly connected with lighting, air conditioning, and projection equipment, which are automatically turned on before the meeting and off after the meeting, effectively reducing no-load energy consumption, improving office and operation and maintenance efficiency. Based on real-time data monitoring and dynamic regulation, the energy efficiency of lighting and air conditioning systems is continuously optimized, achieving dual goals of energy saving and efficiency.

In terms of employee experience optimization, the system promotes a number of intelligent upgrades around space convenience and environmental comfort. Employees can query real-time data such as air quality, temperature and humidity, and noise through mobile terminals, book meeting rooms online, and submit personalized environmental adjustment requests. Internal surveys show that employee satisfaction with the industrial park's intelligent environment reaches 92%, and the system has effectively improved employee's sense of belonging and work efficiency.

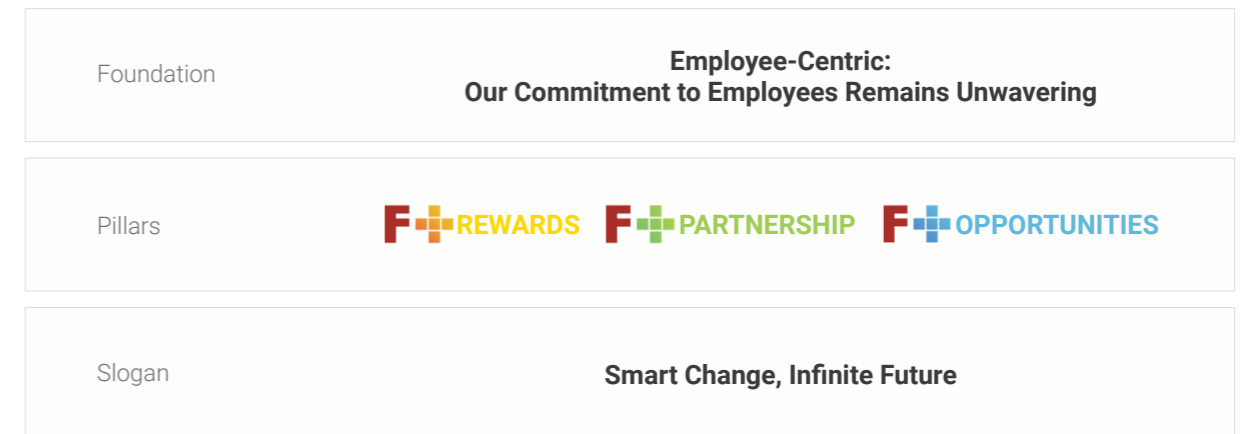


## EMPLOYEE-CENTRIC

BEIJING-FANUC firmly believes that an organization's greatest asset is its talents, and every step of our growth is closely linked to each employee's progress. Adhering to the employer philosophy of "Employee-Centric: Our Commitment to Employees Remains Unwavering," BEIJING-FANUC continuously builds and improves an employer value system encompassing comprehensive happiness, unlimited growth opportunities, and professional camaraderie, helping every employee truly achieve "Work Happily and Live Healthily."

### 5.1 Employer Brand Philosophy

For a long time, BEIJING-FANUC has earnestly fulfilled its commitment to being an ideal employer. In 2022, we officially launched our employer brand, putting forward the philosophy of "Employee-Centric: Our Commitment to Employees Remains Unwavering" and establishing a comprehensive employer brand building system.



BEIJING-FANUC Employer Brand System Diagram

**F+REWARDS:** Build a "High-Value, High-Performance, High-Return" compensation management system and a welfare security system covering employees' entire career cycle and their families; continuously create an open, caring, and dynamic work experience. Here, employees' outstanding work and tangible innovations are valued and rewarded, professionalism is respected, and talents are unrestricted.

**F+PARTNERSHIP:** Advocate and foster a workplace ecology of open communication, sincere sharing, experience inheritance, in-depth collaboration, and mutual achievement. Under a flat communication and management mechanism, managers, colleagues, workplace mentors, industry experts, and technical elites are all partners walking side by side.

**F+OPPORTUNITIES:** Tailor more than 20 types of development programs covering different employee development stages; build a "T-Shaped Development Path" for employees to "deepen professionally vertically and expand boundaries horizontally," broaden industry perspectives, and support employees in achieving full-career-cycle capability development.

### 5.2 Employee Development

Regarding employees' career development and growth, BEIJING-FANUC adheres to long-termism centered on its employer philosophy and invests in employees' full-career-cycle growth. Focusing on our strategy, phased business needs, and organizational requirements, we have established a sound talent training system covering employees of different positions and levels, and built a hierarchical curriculum system to empower employees' all-round development, realizing mutual growth between the organization and employees.

Type	Systematic Empowerment Resources	Targeted Empowerment Programs
Leadership	Empowerment resources for building a high-performance leadership pipeline based on a leadership framework	F-Men Elite, F-Men Outstanding, New Manager 100-Day Program, F+MANAGEMENT Round Table
	Grassroots Leadership, Middle Management Leadership, Senior Leadership	Cadre Training
Professional Competence	Full-career-cycle talent empowerment standards and pathways based on work scenarios across different professional tracks	A/R Program, Elite Shark Program, Cavalry Company Program, Terraced Field Program
	Sales Sequence, Engineer Sequence, Operation Sequence, Professional Function Sequence, Support Sequence	Cloud Ladder Program, Xi Dian Military Academy, Overseas Learning, Industry Summits
General Competence	Empowerment resources for diverse and transferable general professional competencies based on competency models	F+LECTURE HALL, F+GROWTH CAMP
	Project Management, Innovative Thinking, Communication & Influence, Presentation Skills, Professionalism, .....	
Cultural Competence	Cultural empowerment resources aligned with strategic development and business success	F+SHARING (Sessions), F+SIXIANG Study Tour, F+SELECTED (Sharing), Annual Kick-Off Meeting (Sharing)
	Strategic and Cultural Promotion, Cultural Co-creation, Business Practice, F+HONOR System	
	Targeted empowerment resources to help campus recruits transition professionally and lateral recruits integrate smoothly	The Growth Story of Xiao Huangren (Social Recruitment), MARS Forging Program (for fresh graduates), "Transformer" Elite Program (for lateral hires)
Empowerment Capability	Empowerment resources based on the accumulation and development of company experience and methodologies, the organization, design, and implementation of learning programs, and facilitation and instruction	Internal Trainers/Mentor Companion Programs, Learning Operators Empowerment Programs, Excellence Manufacturing Collaborative Growth Extractor Empowerment Organizational Experience Precipitation
	Experience Extraction/Course Development, Learning Program Design and Implementation/Course Teaching	

BEIJING-FANUC Talent Training System Diagram

### Case 1: "MARS Forging Program"

A one-year paid training program for campus recruits, consisting of four phases: "Navigation-Guidance-Continuation-Leadership." The Navigation phase focuses on onboarding integration to help campus recruits familiarize themselves with the company culture and build team cohesion; the Guidance phase promotes knowledge restructuring to achieve competency advancement with professional competence standards; the Continuation phase accelerates on-the-job skill training to meet targeted job skill requirements and familiarize themselves with work scenarios and processes; the Leadership phase aims to enable campus recruits to work independently, reaching the technical level of assistant engineers, deeply understanding the company culture, and solving work problems independently. Meanwhile, a "Five-To-One" mentor system is established across multiple departments to help campus recruits quickly transition from campus to workplace, and break professional barriers through job rotation and external training to grow into compound talents.

### Case 2: "Transformer" Elite Program

To build a platform for mutual communication and connection among new experienced hires joining the company in the same period, and to let them deeply perceive the open, inclusive, respectful, and caring organizational atmosphere, BEIJING-FANUC empowers them through methodology training, strengthens their understanding and mastery of the BEIJING-FANUC's typical methodologies, rapidly improves communication and work efficiency, focuses on the promotion and advocacy of Strategy and Culture 3.0, and organizes thematic activities such as "Face-To-Face with General Manager" to build a direct communication bridge between new employees and management, enhancing emotional resonance and value transmission.

## 5.2.1 Customized Systematic Training

### New Employee Empowerment

To help new employees integrate quickly, BEIJING-FANUC has created various training programs for them and continuously optimized the training system to support new employees in adapting to the company and their positions.



BEIJING-FANUC Conducts the "MARS Forging Program" Special Training for New Employees

### Special Programs for Professional Competence Improvement of Key Positions

To help key positions and business experts continuously improve their professional competence, ensure that employees' professional skills and knowledge systems can keep pace with technological iteration and business innovation, BEIJING-FANUC focuses on key departmental tasks and provides targeted empowerment for employees at different competence levels, including internal department training programs (supporting more than 20 technical training programs on themes such as "Marketing, PMC, Process, R&D, and Products") and external public courses/certification courses (supporting external public course learning related to "Product R&D, Production, Equipment Management, and Finance").

### General Competence Improvement for Incumbent Employees

To meet the general competence improvement and learning needs of incumbent employees, BEIJING-FANUC has established a dynamic empowerment mechanism of "Demand-Supply-Feedback," continuously creating rich learning and training resources for employees to support their vertical professional deepening and horizontal capability expansion, growing into "T-Shaped Talents."

**Online Special Empowerment:** In response to employees' personalized development needs, targeting high-frequency learning themes in employees' Individual Development Plans (IDP), we launched the "One Person, One Course" online learning project. In 2024, 4 courses were offered, focusing on project management and marketing practice, covering 140 employees with a total learning time of over 450 hours. The courses feature "Lightweight Learning + Practical

Application,” combining systematic knowledge input with practical tasks to help employees achieve competence advancement and business value transformation.

**Offline Practical Training:** As an offline face-to-face training project for all employees, the “F+LECTURE HALL” continuously focuses on workplace general competence improvement. To closely align with business needs, we have launched core courses such as “From Logic to Presentation: Redefine PPT” and “Value Presentation: Effective Public Speaking,” covering Beijing, Shanghai, Shenzhen, and other places, with 220 frontline employees actively participating. Multiple internal trainers were trained to realize the internal inheritance of methodologies. There are also various general competence themes such as “The 7 Habits of Highly Effective People,” “Scenario-Based Retrospection: Learn and Apply Immediately,” and “Personal Extraction: Step by Step to Success.”

**Fragmented Learning Tools:** As a lightweight and transferable fragmented learning tool, the “Knowledge Alchemy Card” training project covers multiple practical themes such as project management, questioning skills, and experience extraction, with a total of 5 sets and 74 issues released. As of September 2025, the total number of visits to the Alchemy Cards exceeded 2,100, with the highest number of visits per issue reaching 170.

### Leadership Enhancement for Managers

In terms of leadership, BEIJING-FANUC empowers managers at all levels through systematic leadership training programs, comprehensively improving their professional quality and leadership capabilities, systematically enhancing strategic implementation capabilities, driving business development, and helping build high-performance teams.

**“Red Brick Program”:** A systematic empowerment project built by the company based on the cadre management standard model, focusing on three core capabilities: goal management, systematic thinking, and talent identification and utilization, to systematically improve cadres’ practical management capabilities. Through the closed-loop design of “Tools-Scenarios-Mechanisms,” it provides systematic support for managers at all levels to continuously build a high-combat effectiveness cadre team.

**“Manager Acceleration Camp”:** As an online special sub-product of the “Red Brick Program,” it focuses on new managers’ role transition and team leadership. Through a closed-loop training system of “Micro-Courses + Cases + Tools,” it helps new managers quickly build a management cognitive system, master core management methods, and achieve an accurate transition and capability upgrading from business backbones to team leaders.

**“F+MANAGEMENT Round-table Discussion”:** Focusing on common, typical, and challenging management problems faced by managers in daily work (such as intergenerational management, lateral leadership, and cross-departmental collaboration), it promotes experience precipitation and method upgrading for managers in an open field through guided discussions, case sharing, and tool co-creation, forming an organizational empowerment ecology of “Co-Learning, Sharing, Co-Creation, Common Growth.”

### 5.2.2 Internal Trainer System

To promote the precipitation and inheritance of knowledge and skills, BEIJING-FANUC has established a sound internal trainer management and incentive system, independently developing learning resources to build a self-cultivating organization. On the one hand, it encourages and identifies potential internal trainers, guiding them to develop thematic courses. On the other hand, it incentivizes and empowers the internal trainer group, conducting thematic empowerment activities such as coach training, professional course teaching skills, and teaching interaction skills on Teachers’ Day every year. In 2024, more than 100 internal trainers were selected, and the precipitation and inheritance of organizational experience were realized through a series of promotional reports.



Celebrate Teachers’ Day with Internal Trainers

### Case: Original Development of the “Priority to Important Matters” Methodology

The “Priority to Important Matters” methodology is an originally developed methodology by BEIJING-FANUC, targeting core cadres and managers. Through systematic promotion of co-learning, consensus-building, and co-creation, and scientific and systematic methodology extraction, BEIJING-FANUC helps all employees accurately identify key tasks and core goals, driving resources to focus on high-value areas. This innovative practice not only significantly improves strategic execution efficiency, but also achieves breakthrough results in three dimensions: promoting the organization’s digital and intelligent transformation, facilitating the collaborative evolution of individuals and the organization, and building a new ecology for employee growth.

The methodology has been widely implemented within the company, covering major business departments. In the process of agile iteration with small steps, it has gradually been replicated and promoted to a wider range of frontline employees for practical application. It won the “2024 HRA China Human Resource Management Best Practice Award” at the “2025 Super A Conference and the 3rd Chief Talent Officer Leadership Summit.”

### 5.2.3 Employee Promotion and Incentives

#### Fair and Transparent Career Development Channels and Promotion Mechanisms

BEIJING-FANUC is committed to establishing and maintaining a fair promotion system oriented by strategy and evaluated through multiple dimensions. The promotion mechanism aims to identify and incentivize outstanding talents who not only excel in competence and performance but also deeply recognize our core values.

**Two-Track Promotion System:** BEIJING-FANUC has established a dual-track career development path of “Professional Promotion” and “Management Promotion,” endowing employees with diverse opportunities for vertical deepening and horizontal development.

**Diversified Evaluation Dimensions:** Employee promotion evaluation is a comprehensive process. BEIJING-FANUC not only focuses on the matching degree between their professional competence and job requirements, but also incorporates their performance, value alignment, and our annual strategic orientation into core evaluation standards to ensure the comprehensiveness and forward-looking nature of promotion.

### Build a Comprehensive Incentive System Combining Material and Spiritual Rewards

BEIJING-FANUC firmly believes that timely and effective recognition of employees' value contributions is the core driving force for our sustainable development. To this end, we have built a comprehensive incentive system based on the principle of "High-Value, High-Performance, High-Return," combining material and spiritual rewards.



BEIJING-FANUC 2024 F+SIXIANG Study Tour-Journey to Quanzhou, Fujian Province

**Performance Bonuses:** Adhere to the value distribution orientation of "High-Value, High-Performance, High-Return," providing performance bonuses closely linked to individual, departmental, and company performance, so that employees' contributions are fairly reflected in material rewards.

**F+SELECTED Awards:** The excellence awards fully cover all business value contribution scenarios, with each award focusing on value priorities in different dimensions to accurately identify and recognize various value contributions. In addition to retaining annual excellence awards, more frequent and timely incentives will be considered in combination with business rhythms; at the same time, differentiated configurations of material, spiritual, and growth incentives will be implemented based on group characteristics and value contribution types to accurately match employees' recognition.

**F+SIXIANG Study Tour:** Linking the company's annual strategic and cultural keywords, balancing value acquisition and exploration experience, it creates a personalized "Travel + Customized Learning" open growth journey with cross-industry, cross-field, and cross-cultural experiences, promoting the high-dimensional, in-depth, and diversified value derivation of exclusive incentives for excellence awardees.

**Flowers and Youth Program:** Outstanding employees who receive excellence awards will embark on an in-depth study tour to FANUC. Participants not only have the opportunity to closely contact and experience the CNC technology and precision manufacturing system of FANUC headquarters, fully understand the essence of operation and management of the headquarters, but also achieve resonance between personal values and corporate culture through in-depth cross-cultural and cross-departmental communication.

## 5.3 Employee Welfare and Health

BEIJING-FANUC continuously deepens the employee welfare security system and corporate culture building. By in-depth analyzing and exploring employees' needs throughout their career cycle, we continuously invest resources to expand the scope of welfare coverage. Especially in terms of health, we lead to the configuration of welfare and health security for employees and their families with professionalism.

### 5.3.1 Employee Welfare and Care

BEIJING-FANUC focuses on employees' real experiences, building a welfare security system covering individuals' entire career cycle and their families, enhancing employees' sense of happiness and belonging.



BEIJING-FANUC Creates Exclusive Service Anniversary Activities for Employees to Revisit Beautiful Moments Together

#### Health Moments

Work happily and live healthily. From prevention and health care to treatment, BEIJING-FANUC pays attention to every link of employees' health management, guarding the physical and mental health of employees and their families.

**Prevention, Maintain Optimal Health Status:** Organize physical and mental health lectures, focusing on common health risks of employees, helping everyone establish a scientific health concept through explanations and case sharing by professional physicians; launch the EAP psychological care program, providing professional services such as one-on-one psychological counseling and stress reduction, building a private and safe psychological support platform for employees; organize health exercise activities, integrating simple and easy stretching and rhythmic movements, encouraging employees to activate their physical vitality in fragmented time and relieve discomfort caused by prolonged sitting in the office; regularly organize employee walking activities, promoting employees to exercise through departmental step ranking competitions, maintaining exercise habits, and enhancing physical and mental health.

**Health Care, Continuous Health Protection:** BEIJING-FANUC provides annual physical examination benefits for employees and their parents. The annual employee physical examination benchmarks high market standards and innovates customized items every year. In 2024, new customized items such as "Tumor Early Screening" and "Cardiovascular and Cerebrovascular Specialist" were added, with a physical examination coverage rate of 100% and an abnormal indicator follow-up rate of 100%; at the same time, we provide parent physical examination benefits for employees' parents, realizing "Employees Join The Company, Parents Benefit," and guarding family health together with employees. As of 2025, we have provided parent physical examination services for 5 consecutive years.

**Treatment, Comprehensive Health Backing:** BEIJING-FANUC provides rich insurance benefits for employees and their families. Every year, we additionally invest funds to purchase supplementary commercial insurance for employees, their parents, spouses, and children, covering employees' own critical illness and accident insurance, spouses' critical illness insurance, children's accident insurance, parents' hospitalization medical insurance, and accident insurance. In 2024, there were 32 cumulative claims with an average response time of ≤24 hours. There is also a major illness assistance program to provide one-time medical assistance for employees with special needs.

### Happy Moments

BEIJING-FANUC pays attention to employees' emotions and experiences, striving to create a happy workplace full of rituals, fostering a positive, dynamic, and caring organizational atmosphere, and supporting employees to feel a sense of achievement in their struggles and joy in their growth.

**F+TIME:** F+TIME is an exclusive service anniversary activity created by the company. Employees who have worked for 3 years or more can receive customized commemorative gifts. Through ritualistic activity planning and design, our senior management and employees revisit stories, recall growth, and commemorate service years together, allowing employees to feel the temperature of corporate culture while leaving long-cherished memories.

**Open Day:** BEIJING-FANUC holds a family open day every year, inviting employees and their families to enter the enterprise, experience corporate culture, daily work, and fun activities, enhancing employees' families' understanding of the enterprise, creating more family time memories, and extending and condensing the "Family" culture.

### Quality Moments

Centering on employees' life needs outside of work, BEIJING-FANUC integrates resources to provide rich life care and "Uncompromised" services, supporting employees to live happily, healthily, and happily.

**Work Environment:** Equipped with public facilities such as gyms, fitness trails, restaurants, pantries, showers, and maternal and child rooms, and offering group courses such as yoga, Pilates, and kickboxing, with a total of more than 200 participants.

**High-Quality Public Rental Housing:** Cover high-quality public rental housing resources in first-tier cities, providing qualifications for children's enrollment.

**Supplementary Pension Plan:** Increase retirement security on the basis of the social basic pension insurance.

### 5.3.2 Employee Activities

To promote employees' physical and mental health, encourage them to exert diverse talents, and cultivate hobbies, BEIJING-FANUC organizes rich and creative employee experience activities every year, fostering a positive, dynamic, and caring work atmosphere.



Every department of BEIJING-FANUC Organizes Colorful Team-building Activities Every Year, Working Happily and Living More Happily

### Employee Clubs

BEIJING-FANUC currently has 8 themed clubs, including football, basketball, badminton, table tennis, tennis, photography, food, and flower arrangement. We support each club to organize regular activities and link external resources to help employees improve their skills and cultivate personal interests and hobbies. The 8 clubs are headquartered in Beijing, with branches in various locations carrying out activities together.

### Employee Activities

**Team-Building Activities:** Regularly organize colorful team-building activities, allowing employees to leave their workstations and enter natural or interesting scenes. Everyone communicates in depth, collaborates and creates, quickly builds trust, and sublimates friendship.

**Annual Party:** Before the Spring Festival every year, BEIJING-FANUC holds a grand annual party. All employees gather to review the struggles and achievements of the past year, jointly clarify the key tasks, core goals, and direction for the new year, make a good start, and embark on a new journey together.

**Annual KOM:** The annual KOM (Kick-Off Meeting) is a key node for the company to unify goals and align strategies every year. Through company-level and department-level meetings, it ensures that every employee can deeply understand our goals, integrate personal values into the organizational development blueprint, unite forces, and start a new journey together.

## 5.4 Diversity, Equity, and Inclusion (DEI)

### 5.4.1 Systems and Policies

#### Comply with Laws and Policies

BEIJING-FANUC strictly abides by laws and regulations such as the *Labor Law of the People's Republic of China* and the *Labor Contract Law of the People's Republic of China*, adheres to equal and diversified employment, strictly prohibits any discriminatory practices based on nationality, gender, race, religion, etc., as well as improper behaviors such as workplace sexual harassment, and respects and legally protects employees' legitimate rights and interests in terms of remuneration, employment, working hours, and leave.

#### Ensure Recruitment Fairness

BEIJING-FANUC has established a sound recruitment standard and process, issued relevant systems for "Social Recruitment" and "Campus Recruitment," and relies on the recruitment system to ensure the fairness, impartiality, compliance, and transparency of the recruitment process.

Formulate a systematic and unbiased standardized recruitment process to ensure that all links from resume screening, interviews, to employment, follow the principles of fairness and impartiality. Adopt structured interviews and diversified interview panels to reduce the impact of unconscious bias.

Establish an effective feedback mechanism to encourage employees and job seekers to put forward opinions and suggestions on the recruitment process. Timely analysis and handling of feedback to continuously improve and optimize recruitment policies.

**Diversified talent sources:** Release recruitment information through multiple channels, not limited to recruitment websites, industry forums, social media, etc., to attract more job seekers from different backgrounds. At the same time,

establish cooperative relationships with universities, non-profit organizations, etc., carry out school-enterprise cooperation, and actively expand the coverage of campus talents. There are no restrictive requirements such as 985/211 background, age, gender, or region in campus recruitment; for social recruitment, a "Blind Screening" mechanism is adopted to hide non-competence information in resumes. During the recruitment process, strictly verify employees' identity information to ensure that employees reach the legal working age, and explicitly prohibit the use of child labor and forced labor.

### Pay Equity

BEIJING-FANUC builds a "High-Value, High-Performance, High-Return" compensation management system and policies, completely breaking restrictions from non-performance factors, such as age, gender, and job type. Salary payment and adjustment are strictly based on employees' competence and performance contributions. Whether it is management positions or professional positions, such as technology and sales, employees can obtain corresponding returns based on their actual achievements, realizing a direct link between "Promotion and Salary Increase" and value contributions. At the same time, the company is matched with a welfare security system covering employees' entire career cycle and their families, forming double support of "Pay Equity + Welfare Inclusiveness" to ensure the fair pay rights and interests of different groups.

### Protect Employees' Privacy and Legitimate Rights and Interests

BEIJING-FANUC attaches great importance to protecting employees' personal privacy and legitimate rights and interests, has established the "Measures for the Management of the Protection of Employees' Personal Information," regulates the use and management of employees' personal information, and prevents the loss, illegal acquisition, illegal disclosure, and abuse of employees' personal information.

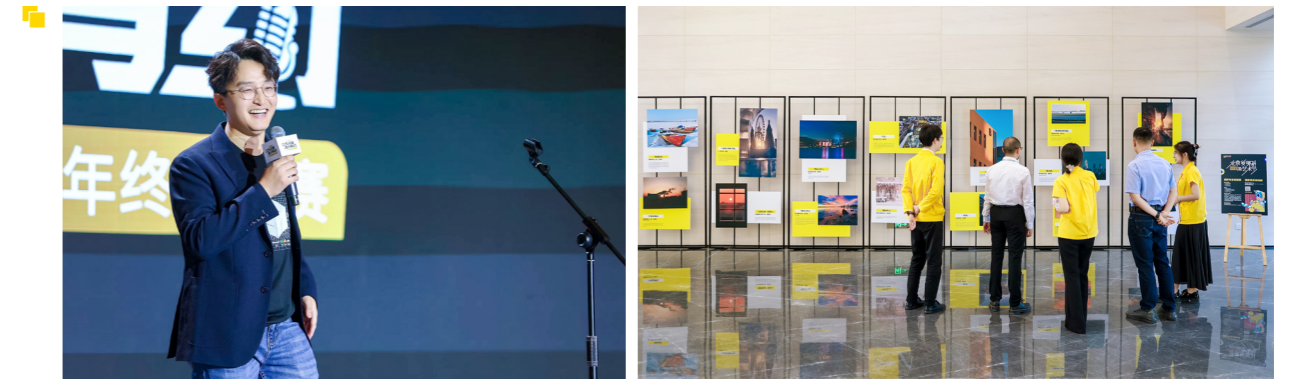
## 5.4.2 Anti-Discrimination Systems

BEIJING-FANUC strictly follows laws and regulations such as the *Labor Contract Law of the People's Republic of China* and specific fundamental conventions of the International Labour Organization (ILO), and formulates normative documents for employee management such as the *International Framework Agreement and the Employee Handbook*, advocating the concept of diversity, equity, and inclusion, and fully protecting employees' rights and interests. It prohibits any form of discrimination based on gender, age, ethnicity, religion, physical condition, etc., from the perspectives of recruitment measures, measures for persons with disabilities, inclusive design of facilities, DEI (Diversity, Equity, Inclusion) training, and complaint and suggestion mechanisms. In 2024, there were no disputes related to discrimination, child labor, or forced labor in the company.

At the same time, BEIJING-FANUC advocates a culture of "Frank Communication and Mutual Trust," building rich and flat communication mechanisms and channels. In addition to online channels and direct upward feedback, employees can also provide direct feedback on needs through democratic meetings, face-to-face with general managers, etc., establishing an "Unbiased Communication Mechanism."

## 5.4.3 DEI Themed Activities and Training

To enable more employees to understand DEI, feel our guarantees and initiatives in the direction of diversity, equity, and inclusion, and encourage employees to actively express themselves and showcase diverse creativity, BEIJING-FANUC continuously encourages concepts such as "Difference is Value" and "Emergence is Better than Authority," and creates a "Diversity Culture Month," planning rich activities such as values talk shows, art festivals, and care for female employees, making the culture of diversity, equity, and inclusion from advocacy to implementation within the company.



BEIJING-FANUC's First Values Talk Show, Where Employees Showcase Cultural Stories in a Relaxed and Humorous Way

BEIJING-FANUC Art Festival "30th Anniversary Poetry and Photography Exhibition"

### Case 1: Values Talk Show

"Culture lies in stories, and values are reflected in actions." To encourage employees' diversified innovative expressions and activate the vigorous vitality of cultural genes, we planned and created a unique "Values Talk Show" cultural innovation practice activity in 2024. By creating an open, inclusive, and equal platform, it encouraged employees to let the real voices of the workplace flow naturally in laughter in a humorous way. BEIJING-FANUC innovatively adopts a small theater immersive form, promoting cultural communication from one-way indoctrination to two-way resonance, stimulating the enthusiasm of all employees to participate, and making core values deeply rooted in the hearts of the people in a relaxed context. In 2024, 4 "Values Talk Show Conferences" were held, involving nearly 40 contestants, covering more than 1,300 online and offline audiences.

### Case 2: BEIJING-FANUC Art Festival

To encourage employees to actively showcase their creativity and talents, and express their views, allowing employees with different interests and backgrounds to have diverse expression windows and talent display stages, we planned and created the BEIJING-FANUC Art Festival. With the concept of "everyone can be an artist for 30 minutes," the activity encourages employees to showcase their creative talents through diverse forms such as poetry, photography, video, and painting. Since the launch of the first Art Festival, a large number of employees have actively participated, contributing rich poetry and photography works. Employees' works are not only displayed in offline art exhibitions but also transformed into physical derivatives.

### Case 3: Themed Empowerment Activities for Female Growth and Diversified Role Design

To care for workplace women and focus on the problems and challenges that female roles may face in the workplace, we organize rich themed empowerment activities around leadership improvement, work-family balance, parent-child relationships, etc., every March. During Women's Day in 2024, through women's leadership knowledge cards, the "Courage to Express for Women" workshop, and workplace evolutionary parent courses, which help female employees release their potential, break the constraints of expression, and enhance workplace influence.

#### Case 4: Inclusive Leadership Empowerment

Focusing on intergenerational integration on Teachers' Day, in-depth dialogues were conducted around core topics such as trust-building and value recognition in the form of round-table discussion, with 49 mentors participating in the learning. Through continuous scenario-based practice, it deepens the implementation of DEI concepts, empowers the organization with inclusive leadership, and fosters an open and inclusive organizational atmosphere.

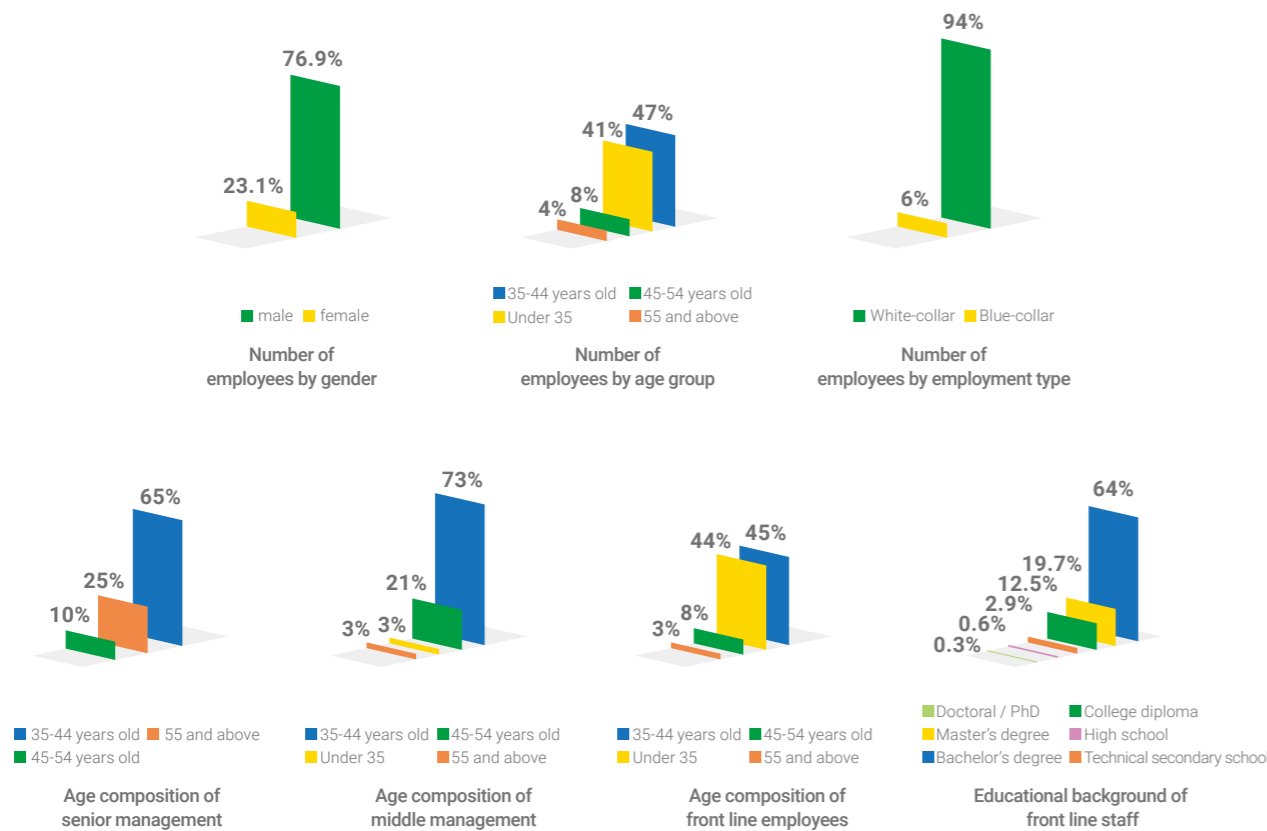
#### 5.4.4 Key Achievements

As of December 31, 2024:

**In terms of personnel composition:** The total number of employees is 715, including 165 females and 550 males; covering 10 ethnic groups, 30 provinces, and 2 nationalities; 2 employees with disabilities.

**In management:** Female managers account for 18.5%, including 5 females among 20 senior executives, 5 females among 34 middle managers, 155 females among 661 front-line employees.

**In the educational composition of grassroots employees:** 64% have bachelor's degrees, 12.5% have college degrees, and 0.3% have doctoral degrees.



Employee Composition by Age, Gender, and Education

#### 5.5 Occupational Health and Safety

BEIJING-FANUC continuously improves the occupational health and safety system, building a full-cycle safety protection closed loop of "Diagnosis-Prevention-Intervention-Improvement." Through regular safety education and training and emergency drills, we strengthen employees' safety awareness and emergency capabilities, guard employees' lives and health, ensure our safety production goal of "Zero Accidents," and foster an all-employee safety culture atmosphere.

##### 5.5.1 Management System

BEIJING-FANUC strictly complies with the requirements of laws and regulations such as the *Work Safety Law of the People's Republic of China*, the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases*, the *Measures for the Grading of Enterprise Work Safety Standardization Construction*, and the laws and regulations of each operation location, and has established various systems and management rules related to employees' occupational health and safety. BEIJING-FANUC has established 25 systems, including the *Work Safety Responsibility System*, the *Park Fire Safety Management System*, and the *Safety Operating Procedures Management System*, covering the entire process of risk identification, operation control, and emergency disposal. At the same time, we have established and operated the EOE system. In 2024, 2 internal audits were completed, identifying 1 general non-conformity item with a rectification completion rate of 100%; conducting compliance evaluations in combination with the implementation of the system, complying with the requirements of more than 10 laws and regulations, such as the *Work Safety Law of the People's Republic of China* and the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases*, with no environmental or occupational health and safety accidents.

BEIJING-FANUC has obtained ISO45001 Occupational Health and Safety Management System certification, passed external audits in 2024, with no major non-conformity items.

To improve the emergency response system for safety accidents, we have formulated 25 emergency plans for fire, electric shock, chemical leakage, mechanical injury, etc., clarifying response processes, division of responsibilities, and material reserves. In 2024, 5 plans were updated; strengthen safety inspections, entrust a third party to inspect fire-fighting facilities monthly. In 2024, more than 50 expired fire extinguishers were replaced, with a fire-fighting facility integrity rate of 100%.

##### 5.5.2 Management Structure

To strengthen work safety management, BEIJING-FANUC has established a three-level control system, building a full-chain organizational structure of "Decision - Making - Execution - Implementation."

###### Decision-Making Level

In 2017, BEIJING-FANUC established the Safety Management Committee as the highest-level group for the company's work safety, with relevant senior executives and department heads serving as members. The committee is responsible for reviewing and issuing the company's work safety-related policies, making decisions on major safety issues, and holding special meetings every quarter to review safety risk matters.

###### Execution Level

Establish a Safety Management Office responsible for promoting the company's safe operation and system implementation, and supervising the implementation effect.

###### Implementation Level

Establish multiple thematic special groups, including production safety, fire protection, environmental protection and

food safety, occupational health and safety, fund safety, and information security. Each department sets up a safety liaison officer, covering all business units of BEIJING-FANUC, forming a global control network.



BEIJING-FANUC Safety Management Organizational Structure Diagram

### 5.5.3 Safety Training

BEIJING-FANUC conducts work safety training for all employees, aiming to cultivate an all-employee safety culture. The safety training system covers all employees, including but not limited to new employees, incumbent employees, and managers.



Safety Training Scene

Among them, company-level training includes pre-job safety training for new employees and annual safety training for all employees, requiring employees to learn work safety management regulations and sign the *Work Safety Responsibility Letter* with a signing rate of 100%. At the same time, special occupational health and safety training is conducted irregularly for employees in production lines, and members of the Safety Committee and safety management personnel are regularly organized to participate in annual training and certification to improve their professional skills and knowledge.

The content of training for all employees includes:

Work safety education and training for all employees.

Detailed safety operating procedures training, with special explanations on equipment use, hazard identification, and preventive measures for different positions.

Emergency rescue and self-rescue skills training, including response methods for emergencies such as fire, electric shock, and sudden illness.

Training on common occupational disease prevention knowledge, such as prevention of cervical spondylosis and lumbar spondylosis for office employees.

Psychological health counseling to help employees cope with work pressure, anxiety, and other psychological problems.

Occupational health and safety laws and regulations, and enterprise safety management systems.

Correct use of labor protection equipment, detailing the protection principles and scope of application of various labor protection equipment.

To realize the transformation of training from theory to practice and its application in work, we have established various training methods, such as regular retraining, practical skills training, and case analysis, to ensure that employees truly understand and apply them.

**Regular Retraining:** Conduct online pre-job training for new employees; conduct special training in a timely manner for employees who change positions or use new equipment and materials.

**Practical Skills Training:** Demonstrate the correct wearing and use of labor protection equipment, such as adjusting the adjustment buckle of safety helmets, conducting tightness tests of dust masks, and wearing and fixing safety belts; organize employees to conduct practical operation exercises to ensure proficiency.

**Case Analysis:** Select accident cases that occurred in the industry or the enterprise itself for in-depth analysis, allowing employees to deeply understand the importance of safety protection.

**Multi-Scenario Emergency Drills:** Conduct multi-scenario emergency drills irregularly on work safety publicity nodes such as Fire Prevention Day and daily to improve employees' emergency disposal capabilities. On Fire Prevention Day in November 2024, an all-employee evacuation drill was carried out, simulating a "Workshop Fire" scenario to achieve rapid and safe evacuation of all employees; 8 emergency drills were conducted throughout the year, covering scenarios such as mechanical injury and gas leakage, with a participation rate of 100%.

In terms of training methods, a combination of various forms is adopted, such as centralized lectures by safety experts, professional trainers, or enterprise safety management personnel, online learning, on-site demonstrations, group discussions, and interactive exchanges. Safety knowledge competitions are organized irregularly to encourage employees to put forward questions and suggestions, popularize safety protection knowledge, and jointly improve safety awareness and protection capabilities.



Safety Knowledge Competition

### 5.5.4 Risk Prevention and Control

BEIJING-FANUC has established a work safety and occupational health risk management and prevention and control process. Through risk identification, prevention, monitoring, screening, and handling, we continuously optimize the risk list and prevention and control plan, comprehensively ensuring employees' occupational health and the safety of the working environment. In terms of risk prevention and control and management, multiple measures are adopted, such as improving management processes, empowering with advanced technology, managing production equipment safety, controlling high-risk operations, and ensuring high-quality work safety materials to ensure that work safety management is in place, implemented, and effective.

### Intelligent Manufacturing Technology Empowers Work Safety Management

Relying on our own advantages in intelligent manufacturing technology, promote the automation upgrade of production workshops through intelligent technology, reducing personnel operation risks from the source:

**Intelligent Monitoring System:** The workshop is equipped with infrared monitoring and abnormal alarm devices to monitor the operation status of equipment in real time; at the same time, the system carries out online monitoring of safety risks and major hazard sources, such as fires by applying information technology means to identify potential safety hazards in advance and assist in the standardized management of safe operations.

**Automation Upgrade of Production Workshops:** Deploy CNC intelligent control systems, industrial robots, and automated conveyor lines; adopt automation to replace manual operations in high-risk operation links such as heavy object handling and mechanical machining, reducing direct contact between personnel and risk scenarios.

**Virtual Testing Technology:** Adopt digital twin technology for product testing, reducing the frequency of manual participation in physical testing and lowering safety risks in the testing process.

### Control of High-Risk Operations

Implement the "Work Permit Approval System" for high-altitude operations, confined space operations, hot work, etc. Conduct a risk assessment before operations and arrange special personnel to monitor during operations. In 2024, more than 300 work permits were reviewed, 15 potential risk hazards were identified and rectified, with a certificate-holding rate of 100%.

### Equipment Safety Management

Formulate the *Safety Operating Procedures* for each position, with a posting rate of 100% for operating procedures of key positions (mechanical operation, electrical maintenance). In 2024, 28 special inspections on equipment safety were carried out, 12 pieces of old equipment were upgraded for safety, with a rectification completion rate of 100%.

### Configuration of Labor Protection Equipment

Formulate the *Standards for the Configuration of Labor Protection Equipment* according to job risk scenarios (object falling, mechanical operation, dust contact, etc.), clarifying the issuance cycle and usage specifications of more than 20 types of labor protection equipment, such as safety helmets, dust masks, and cut-resistant gloves. In 2024, more than 1,200 pieces of labor protection equipment were issued to high-risk positions, such as production and after-sales, an electronic issuance account was established, and compliance with wearing was inspected monthly. AED (Automated External Defibrillator) and emergency medicine kits were equipped in the workplace, and employees were organized to receive training and certification on usage methods.

### Supplier Control and Audit

Sign the *Safety Responsibility Letter* with more than 300 cooperative suppliers every year, clarifying the safety responsibilities of both parties. In 2024, conduct safety qualification audits on suppliers, focusing on verifying qualifications such as fire acceptance and special equipment certification, and reject applications from 2 non-compliant suppliers.

### Cargo Transportation Safety Management

BEIJING-FANUC has basically realized the full-process information management of cargo transportation, realizing real-time alarms for work safety risks, establishing safety emergency plans, and realizing timely coordination between

safety accident handling and relevant departments.

### 5.5.5 Occupational Health Management

BEIJING-FANUC strictly abides by the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases*, strengthens the protection of employees' occupational health, systematically sorts out occupational health management system documents, provides pre-employment, on-the-job, and post-employment physical examinations for employees involved in occupational disease hazards, improves occupational health monitoring files, and provides employees with health testing and support, including training and publicity on common occupational disease prevention knowledge, and provides resources for some employees in need of intervention, comprehensively protecting employees' occupational health and safety. No occupational disease cases were found during the reporting period.

#### Disease Prevention

In 2024, 8 themed lectures on "Cervical Spondylosis Prevention," "Emergency First Aid," and "Occupational Disease Protection" were held, covering more than 500 person-times, and more than 200 health manuals were distributed; the *EAP Work and Life Monthly Newsletter* was released monthly, covering common mental health topics such as "stress management" and "workplace relationships," with a total reading volume of more than 5,000 times.

#### Mental Health Counseling and Support

Provide mental health counseling for employees to help them cope with work pressure, anxiety, and other psychological problems. Provide psychological counseling for employees in high-pressure positions relying on the EAP system; open a 24-hour EAP psychological counseling hotline.



# 06

## SUSTAINABLE GOVERNANCE

BEIJING-FANUC has always strived to be "A respectable company," advocating the corporate values of "Precise, Professional, Responsible, and Sustainable." BEIJING-FANUC regards law-abiding compliance and sustainable development as an important part of our business strategy. Adhering to business ethics and aiming to maintain a transparent and sound business ecosystem, we create an operational atmosphere of "Abiding by Laws, Integrity, and Impartiality." Attaching great importance to product quality responsibility, we build a solid quality defense line throughout the entire process from product R&D and design to after-sales service; establish rigorous systems in compliance, procurement, cyber security, and other aspects; strengthen information security management to protect the cyber security and privacy of the company, customers, and employees; focus on intellectual property protection to safeguard our competitive advantages and brand reputation through sound intellectual property management, and maintain a healthy industry competition order; actively promote green procurement to drive the sustainable development of the supply chain.

### 6.1 Product Quality Responsibility

Product quality responsibility is the lifeblood of BEIJING-FANUC. We have always regarded product quality and reliability as core competitiveness, adhering to the quality policy of "providing high-quality CNC products and intelligent manufacturing full-value chain overall solutions for customers," focusing on customers, and efficiently organizing the realization process of products and services. By establishing a full-chain control system, we build a solid quality defense line throughout the entire process from R&D and design to after-sales service, strengthen reliability technology R&D, improve safety assurance functions, continuously enhance product competitiveness, make continuous efforts for the excellent quality of products, and continuously improve customer satisfaction and market share.

#### 6.1.1 Product Quality Responsibility Management System

To standardize company behaviors, ensure product quality meets customer needs, and improve our credibility and product competitiveness, BEIJING-FANUC has established a systematic and documented quality management system covering the entire process, and promotes quality improvement actions in all links of the product life cycle.

##### Governance Structure

To effectively implement quality management, BEIJING-FANUC has formulated a quality management organizational structure and defined the responsibilities, authorities, and mutual relationships of all levels and positions. The company's quality management organization is led by the General Manager as the top management, with representatives of department managers participating in management, responsible for determining product quality policies, strategies, and objectives. The Quality Management Office, as a full-time management institution for product quality management, is responsible for the construction and operation of the company's quality system, carrying out product quality and safety management work, implementing product quality and safety responsibilities, and preventing the company's product quality and safety risks. In the implementation process, an inter-departmental coordination and cooperation mechanism is established to ensure that product quality and safety control runs through the entire business process.

##### Quality Management System and Standard

Based on our product quality system requirements and management improvement needs, BEIJING-FANUC has established a sound product quality management system and obtained ISO9001 Quality Management System Certification.

Combined with the standards of *GB/T 19001-2016/ISO 9001:2015 Quality Management System Requirements*, we compile the *BEIJING-FANUC Electromechanical Co., Ltd. Quality Manual* and procedure documents,



The Company has Obtained ISO9001 Quality Management System Certification

which serve as regulatory documents for our quality management system and guidelines for various quality activities, clarifying our quality policy and objectives, and providing an overall description of establishing a process-based quality management system. The Quality Management Committee Office updates the system every year to ensure it is consistent with actual management needs.

#### **Internal Audit Mechanism**

BEIJING-FANUC formulates a quality management review plan and conducts a quality management review regularly every year. Through internal quality system audits, product audits, process audits, and special audits of key processes, we implement strict management on the key links of quality management throughout the product life cycle to ensure the comprehensive and effective operation of the quality system and verify the compliance and effectiveness of the system. At the same time, we identify quality risks through internal audits, establish continuous improvement management procedures, and optimize management processes and implementation results.

### **6.1.2 Product Reliability Management**

Attaching great importance to product quality responsibility, BEIJING-FANUC integrates product reliability management throughout the entire product life cycle, including design, production, use, and maintenance. Through integrating resources, applying reliability technologies and management, and other multiple measures, we continuously and effectively guarantee the high machining performance, high reliability, and high usability of products.

#### **High-Reliability Design, Testing, and Evaluation**

In the product R&D process, BEIJING-FANUC incorporates verification and confirmation links, including design reviews and reliability evaluations, to ensure products have high reliability from the source. Each R&D department sets up specialized reliability development positions to promote the standardization of reliability development methods. In the testing and evaluation, to ensure products operate stably for a long time in harsh industrial environments, we have built a professional reliability evaluation system to verify product performance through multi-dimensional testing: constructing professional evaluation facilities, relying on specialized reliability evaluation sites, equipped with anechoic chambers, Electromagnetic Compatibility (EMS) test rooms, vibration test rooms, damp-heat test rooms, precision measurement rooms, and other dedicated test spaces to simulate various working conditions of products in practical applications; conducting multi-scenario test verification, carrying out various types of evaluations such as accelerated life tests and environmental adaptability tests, fully considering data fluctuations under different conditions, ensuring products can maintain stable performance in complex environments, and minimizing the downtime risk of customers' production sites.

#### **Digital Empowerment of Quality Management**

Relying on our own product technologies in the fields of the IoT and digital intelligence, BEIJING-FANUC empowers quality management throughout the entire life cycle. By connecting the data chain throughout the entire life cycle, we realize the digitization, visualization, and intelligence of quality management, improve the efficiency and accuracy of product quality management, and accelerate the rapid identification and response to product quality risks. Through evaluating and accurately assessing CNC, key components of machine tools, etc., we optimize spare parts inventory and maintenance plans, reducing equipment downtime by 40% and extending the component replacement cycle by 50%.

#### **Full-Life Cycle Service Commitment**

For old equipment with stable mechanical precision of customers' machine tools, BEIJING-FANUC quickly initiates a "Replace Old with Old" response when components fail. For components that have been discontinued by component manufacturers, we produced substitutes with matching performance by redesigning drawings, equipped with advanced BGA chip-level professional maintenance equipment, professional personnel with solid component-level maintenance technology, and refined maintenance methods such as chip re-soldering and component replacement to restore com-

ponent performance and fulfill the full-life cycle service commitment.

### **6.1.3 Product Inspection and Non-Conforming Product Management**

BEIJING-FANUC identifies and controls non-conforming products and services to prevent unintended use and delivery. At the same time, we take appropriate measures according to the form of non-conforming products and their impact on products and services. For non-conforming products, we adopt corrections, isolation, returns, or suspensions, promptly inform customers, and take other measures to ensure the supply of products and services. For quality problems that have occurred, based on the quality control list, we conduct item-by-item implementation and hierarchical inspections on project management, production and manufacturing, product testing, and other links.

For product R&D and design defects, BEIJING-FANUC has established a detailed FANUC product defect classification and defect management system, classifies defects according to severity and frequency, establishes corresponding evaluation standards, and formulates handling strategies and processes for different classifications. BEIJING-FANUC centrally controls the entire process from cause investigation to improvement measures to ensure no defect problems are missed and properly solved. At the same time, we also built a defect management knowledge base to display past defect cases and share experience and lessons, providing a learning carrier for young engineers and helping improve quality awareness and technical capabilities.

To achieve the high-speed and efficient handling of product defects, we have also established an online process for product defect handling to realize online traceability. We have made the standardized management and feedback process of defective products, forming a closed-loop operation of identification, judgment, isolation, review, handling, feedback, and improvement.

### **6.1.4 Building Quality Culture**

BEIJING-FANUC is committed to building a quality culture led by the Quality Management Office and actively participated in by core departments and all employees. We have established a company-level and department-level quality training system, conduct quality training through a combination of online and offline methods, develop quality management courses, and regularly supplement and adjusts internal quality system auditors according to the needs of quality management system work, and invite qualified third parties to train and assess internal auditors; conduct training and assessment on our quality manual for new employees.

## **6.2 Compliance Governance**

BEIJING-FANUC has established a three-level compliance governance system of "Top-Level Architecture-Risk Control-Full Employee Implementation." Through top-down system design and full-process supervision, we integrate compliance requirements into all links of enterprise operations, adhere to business ethics, and maintain a transparent and sound business ecosystem.

### **6.2.1 Compliance Governance System**

With a clearly defined organizational structure and standardized processes, BEIJING-FANUC has established a closed-loop compliance management system featuring "Pre-event prevention, In-event control, and Post-event rectification", which safeguards the steady operation and business expansion of the enterprise.

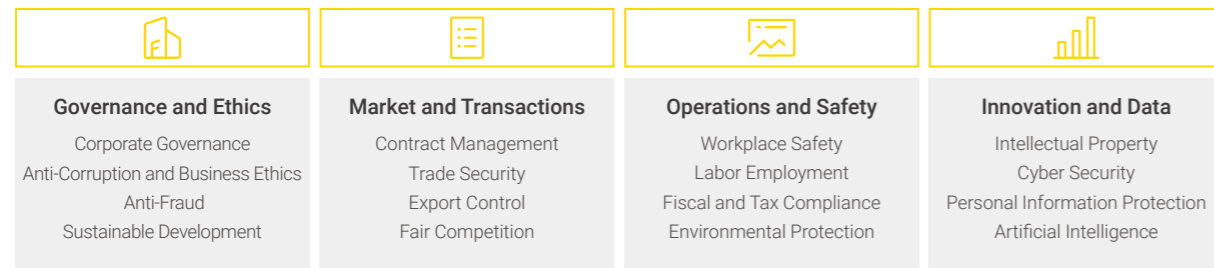
#### **Governance Structure**

Referring to advanced industry governance logic to build a governance structure, BEIJING-FANUC integrates the three lines of defense for risk management into the established three-level control architecture of "Board of Directors-Compliance Committee-Executive Departments".

**Board of Directors:** As the highest decision-making body, it reviews compliance strategies, annual compliance objectives, and major compliance matters to ensure compliance management is aligned with our strategy.

**Compliance Committee:** Composed of senior management teams, representatives of compliance and business departments, it is responsible for formulating compliance management systems, conducting risk assessments, supervising rectification and implementation, and holding special meetings every quarter to review the progress of compliance work.

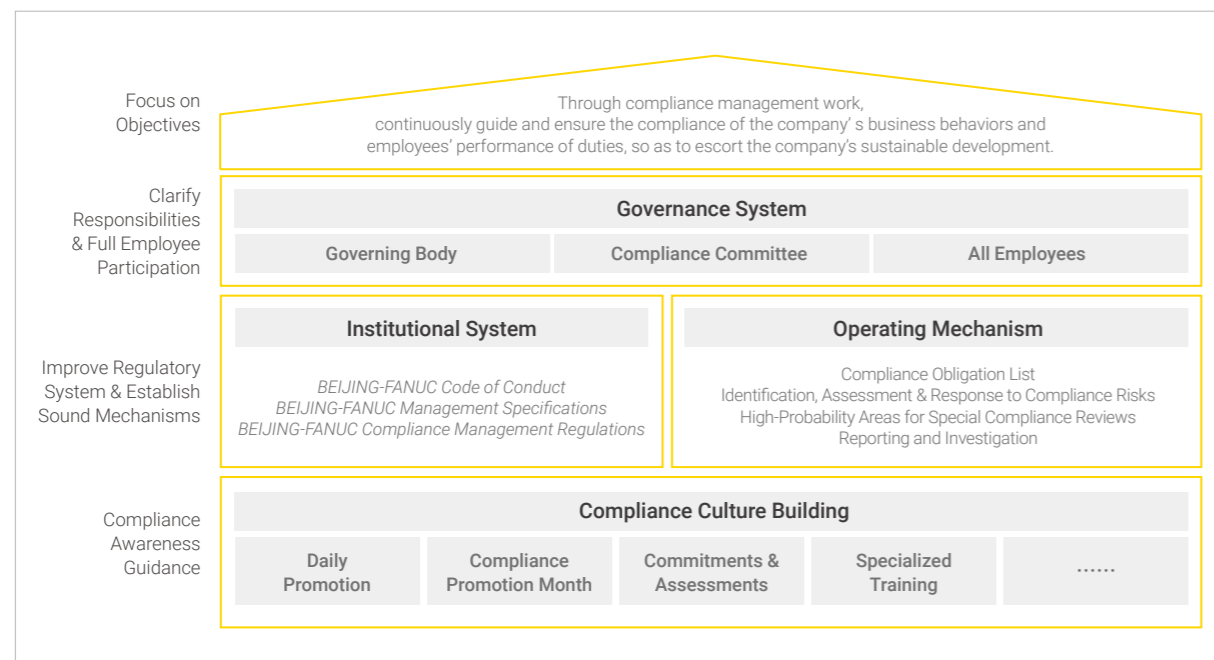
**Executive Departments:** The Compliance Committee takes the lead in daily operations, the Headquarters Audit Department is responsible for auditing and supervision, and each business department sets up compliance liaison officers, forming a "Horizontal to the Edge, Vertical to the End" compliance management network.



Key Areas of Compliance Management

### Full-Process Compliance Control System

To strengthen compliance management, BEIJING-FANUC has established a Full-Process Compliance Control System. With the goal of ensuring the compliance of our business behaviors and employees' performance of duties, we realize the full-process control and implementation of compliance management through multiple measures such as defining the organizational system and regulatory system, establishing operational mechanisms, and building a compliance culture, so as to escort sustainable development.



Compliance Management System

### 6.2.2 Promotion of Compliance Guidelines

BEIJING-FANUC has established a three-dimensional moral management system centered on business conduct guidelines and supported by compliance committee supervision. The system has zero tolerance for corruption and other behaviors, and through system and cultural promotion, transforms compliance requirements into employees' consciousness, creating a fair and transparent business environment.

BEIJING-FANUC has issued the "BEIJING-FANUC Code of Conduct," which focuses on law-abiding, integrity, and impartiality:

**Law-abiding:** Must comply with national and local laws, regulations, and company policy requirements when carrying out all activities.

**Integrity:** Must be upright, act transparently, correctly handle interest relationships, and not engage in favoritism or self-interest when carrying out all activities.

**Impartiality:** Must treat all people and things equally when carrying out all activities, and the handling process should be fair, reasonable, and legitimate.

To ensure all employees understand and earnestly practice the code, BEIJING-FANUC conducts hierarchical and classified promotion and training on the code of conduct:

**Full-staff popularization:** New employees must complete 8 hours of compliance training and pass the assessment upon entry; incumbent employees participate in 4 hours of compliance training every year, covering typical case analysis and new regulations interpretation. In 2024, the cumulative training covered more than 5,000 person-times with a 100% pass rate.

**Key reinforcement:** Conduct "Compliance Special Training Camps" for key positions such as procurement, sales, and senior management to improve practical capabilities through scenario simulation and case discussions. In 2024, 6 special training sessions were held, covering more than 300 person-times.

**Management demonstration:** Implement the *Compliance Commitment Letter for Management Cadres*, with more than 300 managers at all levels signing the commitment letter, promising to "take the lead in complying with compliance requirements and supervise subordinates' compliance behaviors," and the commitment letter is posted on the internal platform for employee supervision.

### 6.2.3 Anti-Corruption and Anti-Fraud

#### Multi-Channel Reporting and Protection Mechanisms

Through a full-chain mechanism of "Prevention-Reporting-Investigation-Punishment," BEIJING-FANUC creates a clean and upright business environment and protects the legitimate rights and interests of the company and stakeholders. It includes "online + offline" diversified reporting channels such as reporting email, 24-hour reporting hotline, and an anonymous reporting entrance on the internal platform. Strictly implement the whistleblower protection system: report information is encrypted and managed by special personnel of the Compliance Committee, and the whistleblower's information is concealed during the investigation process.

#### Punishment and Deterrence Mechanisms

**Establish a "Classified Punishment Standard for Irregularities":** Give warnings and performance deductions to those with minor violations; terminate labor contracts and recover losses for those with serious violations; transfer those

suspected of violating criminal laws to judicial organs.

**Supplier "blacklist" management:** Permanently terminate cooperation with suppliers involved in commercial bribery and notify industry associations. In 2024, 2 non-compliant suppliers were included in the blacklist, forming industry deterrence.

**Case warning education:** Release *Compliance Warning Cases* every quarter, analyze internal and industry corruption cases, organize all employees to study, and strengthen the ideological line of "daring not to corrupt, being unable to corrupt, and not wanting to corrupt."

## ■ 6.3 Responsible Procurement

Guided by our strategy, BEIJING-FANUC's procurement management is committed to building a forward-looking and resilient supply chain. Adhering to the transparent procurement principle of "Fairness, Impartiality, Openness," we take the "Optimal Total Cost" throughout the life cycle, covering quality, delivery, service, and risk as the goal. At the same time, we deeply integrate sustainable concepts into supply chain management and work with supply chain partners to cultivate a healthy, transparent, and sustainable new supply chain ecosystem through sound supplier evaluation, green procurement, and honest cooperation.

### ■ 6.3.1 Full-Life Cycle Supplier Management

Attaching great importance to the sustainable development of the supply chain, BEIJING-FANUC, with the Procurement Center as the core, collaborates with various departments to continuously build a rigorous and compliant value-adding procurement management system, implementing full-life cycle management of suppliers from access to withdrawal. Through strict certification, assessment, and risk control, we continuously optimize the supplier resource pool, improve our efficiency and quality, and ensure supply chain stability.

#### Full-Process Control

**Access phase:** Strictly audit supplier qualifications (established for more than 3 years, registered capital meets standards, and environmental compliance). In 2024, 15 new suppliers were added, all passing environmental and compliance reviews.

**Assessment and rating:** Conduct ratings from technical, quality, service, price, and delivery performance dimensions.

**Annual review:** Conduct performance reviews of more than 300 cooperative suppliers every year, evaluate from compliance, rationality, and service quality dimensions, and conduct high-level interviews with suppliers with an annual cooperation amount of more than 1 million yuan.

**Withdrawal mechanism:** Remove suppliers with a score below 60 points or those with serious violations from the qualified supplier database. In 2024, a total of 8 non-compliant suppliers were withdrawn.

#### Transparent Procurement

Sign the *Partner Integrity Commitment Letter* with all suppliers, clearly prohibiting 12 types of behaviors such as commercial bribery and interest transfer, and agreeing on cooperation termination and compensation clauses after violations.

Implement the *Public Commitment Letter on Integrity and Self-Discipline for Procurement Personnel* for procurement personnel, prohibiting accepting gifts and banquets from suppliers. In 2024, 4 compliance training sessions were organized for procurement personnel, covering more than 80 person-times.

### ■ 6.3.2 Green Procurement Collaboration in the Supply Chain

Gradually improve procurement efficiency by setting strict supplier access standards and reasonable bidding and negotiation strategies. At the same time, BEIJING-FANUC implements "Low-Carbon Environmental Protection" throughout the entire procurement process, and promotes the overall transformation of the supply chain towards resource conservation and environmental friendliness through supplier environmental requirements and green screening standards.

#### Adhere to Environmental Compliance Requirements

In procurement execution, BEIJING-FANUC strictly follows environmental compliance requirements. For key material suppliers such as cables and connectors, they are required to sign the Supplier Environmental Commitment Letter, promising to comply with domestic and foreign environmental standards such as the *List of Key Controlled New Pollutants*, *RoHS Directive*, and *REACH Regulation*, prohibiting the use of Persistent Organic Pollutants (POPs), and providing test reports as evidence.

#### Advocate Green Priority Procurement

In procurement execution, when suppliers meet the requirements in terms of service and price, priority is given to suppliers certified by the ISO14001 Environmental Management System with excellent environmental performance. For energy-consuming materials in production procurement (such as motors and cables), priority is given to purchasing first-class energy efficiency products, and the proportion of green procurement volume increased to 25% throughout the year. In the procurement of product packaging materials, we insist on promoting the recycling of packaging materials, requiring suppliers to use degradable or recyclable packaging, and reducing the use of disposable packaging materials by 30% in 2024.

## ■ 6.4 Cyber Security

BEIJING-FANUC attaches great importance to cyber security in operations, regarding it as an important foundation for maintaining the trust of customers and partners. Based on the core standards in the field of information security—"Confidentiality, Integrity, and Availability (CIA)"—BEIJING-FANUC has built a defense-in-depth system covering the entire process of data "Collection, Transmission, Storage, Use, and Destruction." Through integrating technical means and management systems, it is committed to implementing effective protection in all links of data to provide solid guarantees for cyber security.

### ■ 6.4.1 Cyber Security Technology and Management System

BEIJING-FANUC regards cyber security as the foundation of digital transformation, and through "Technology + System" dual guarantees, prevents data leakage, tampering, or loss, and maintains the credibility of industrial chain data and business stability.

#### Management System

BEIJING-FANUC has issued systems such as the Information Security Management Specifications, Safety Management Regulations, and Generative AI Usage Safety Management Specifications, clarifying the systems, processes, organizational structure, and standards for our information security management. We classify information security by business information level and impact level, divide security accident levels into 5 levels based on the above two, determine common accident levels and handling methods, and formulate the *Information Security Accident Investigation and Handling Process*, clarifying the response mechanism for emergencies such as data leakage and system intrusion, ensuring emergency handling is initiated within 2 hours.

Accident Level	Handling Method
Level 1	Terminate the labor contract; pursue legal liability for extremely serious cases
Level 2	Demotion, salary reduction, or combined demotion and salary reduction
Level 3	Circular criticism
Level 4	Written inspection
Level 5	Warning

Information Security Accident Levels and Corresponding Handling Methods

### Information Security Governance Structure

BEIJING-FANUC has established an information security governance structure with the Information Security Committee as the highest decision-making body. The Chief Information Security Officer leads strategy formulation and daily management. The IT and business departments are responsible for technical implementation and execution, respectively. All information insiders bear direct custody and confidentiality responsibilities, and the Human Resources Department promotes the implementation of confidentiality agreements in various departments. At the same time, a special network security team is set up to conduct regular vulnerability scanning and penetration testing. In 2024, a total of 23 security vulnerabilities were discovered and fixed.



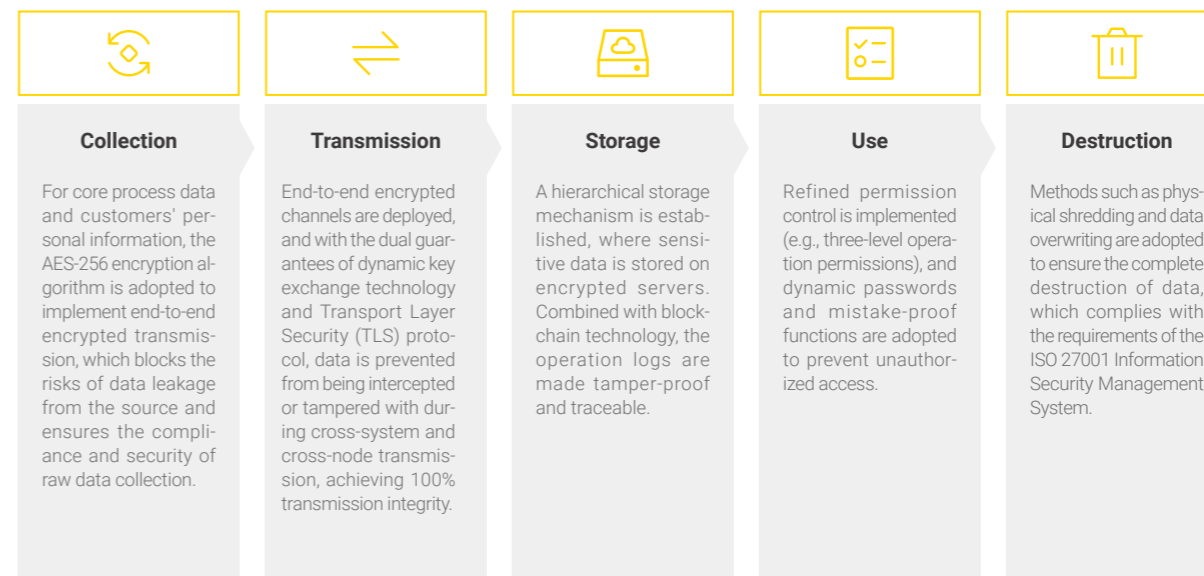
Information Security Governance Structure Diagram

BEIJING-FANUC has obtained ISO 27001 Information Security Management System Certification and Information Security Level Protection 2.0 Level 3 Certification.



ISO 27001 Information Security Management Certification and Information Security Level Protection 2.0 Level 3 Certification

### 6.4.2 Full-Life Cycle Protection System



Full-Life Cycle Information Security Protection System

### 6.4.3 Internal and External Collaborative Model

Overall, BEIJING-FANUC aims to strongly support the informatization needs of the Headquarters Daoxiang Lake Campus, Shangdi Campus, Shanghai and Shenzhen Branches, and various offices, providing high-performance computing power support for core business systems such as SAP, ERP, MES (Manufacturing Execution System), and WMS (Warehouse Management System), as well as office collaboration and cyber security operation platforms; externally serving manufacturing enterprise customers, providing cloud capabilities such as application hosting, data storage, and disaster recovery services for factory digital projects through standardized interfaces and customized solutions. In 2024, we served more than 50 customers without any cyber security incidents.

### 6.4.4 Professional and Reliable Security Design

In the architectural design of our cyber security, BEIJING-FANUC proactively introduces data backup, Endpoint Detection and Response (EDR), network zero trust, and virtual desktop systems, realizing full-life cycle management of core data and effectively narrowing the security risk surface. At the same time, referring to the ISO 27001 Information Security Management System and the national Information Security Level Protection 2.0, Level 3 standards, a defense-in-depth system covering all businesses has been established. Through the deployment of firewalls, Intrusion Detection Systems (IDS), and 7x24-hour special personnel on duty, dual physical and network protection is formed.

In addition, BEIJING-FANUC extends the security concept to supply chain management, formulates strict supply chain security specifications, implements pre-launch security testing and regular penetration testing for all information applications, shortens the high-risk vulnerability repair cycle to 7 days, and realizes full-process traceability from design to scrapping.

### 6.4.5 Cyber Security Training

To enhance all employees' awareness of the importance of information security and promote employees to strictly abide by relevant information security policies and systems, BEIJING-FANUC regularly organizes cyber security publicity and training activities. The training covers modules such as system explanation and publicity content learning, and

synchronous online training and assessments are carried out to effectively enable each employee to understand and participate in our cyber security protection work.

### Case: Data Center of BEIJING-FANUC Headquarters Daoxiang Lake Campus

Located in Building A of the Headquarters Daoxiang Lake Campus in Haidian District, Beijing, the data center strictly follows the national Class B computer room construction standards and was officially put into use in 2023. With a total construction area of 260 square meters, the data center adopts a modular design, planning 4 independent modules, and a single module can carry a maximum of 100 server devices, with flexible expansion capabilities. The computer room has obtained the authoritative certification of CQC (China Quality Certification Center) Class B information computer room certification.



Data Center of BEIJING-FANUC Headquarters Daoxiang Lake Campus

Passed CQC (China Quality Certification Centre) ClassB Information Computer Room Certification

**Physical Environment Guarantee:** Equipped with a constant temperature and humidity air conditioning system (temperature 22±2°C, humidity 40%-70%), a gas fire extinguishing device, and a redundant UPS power supply (supporting 60 minutes of emergency power supply), ensuring the uninterrupted and stable operation of core assets such as servers and network equipment throughout the year.

**Space Layout Optimization:** Adopt a hot and cold channel isolation design, combined with an intelligent dynamic environment monitoring system (real-time monitoring of temperature, humidity, power, and fire status), realizing visualization and refinement of operation and maintenance management.

**Reliability Guarantee:** By building a "Same-City Active-Standby" architecture, with the data center of the Headquarters Daoxiang Lake Campus as the core node, supplemented by dual-circuit power supply and diesel generator emergency guarantee, ensuring a system availability of up to 99.99%, providing a solid backing for stable business operation.

**Green and Efficient Operation:** In the overall operation of the data center of the Headquarters Daoxiang Lake Campus, green low-carbon is the core principle.

**Green Power Supply:** The data center innovatively adopts rooftop distributed photovoltaic power generation, realizing the nearby and uninterrupted supply of clean energy through "Photovoltaic + Energy Storage" and "Photovoltaic + Power Grid" multi-mode complementarity, effectively reducing operating costs and carbon emissions.

**Energy Efficiency Management:** Rely on AI and intelligent algorithms to conduct 7×24-hour real-time monitoring and dynamic adjustment of energy consumption, accurately matching cooling demand. The average PUE is stable between 1.2 and 1.26, which is better than the national green standard of 1.3.

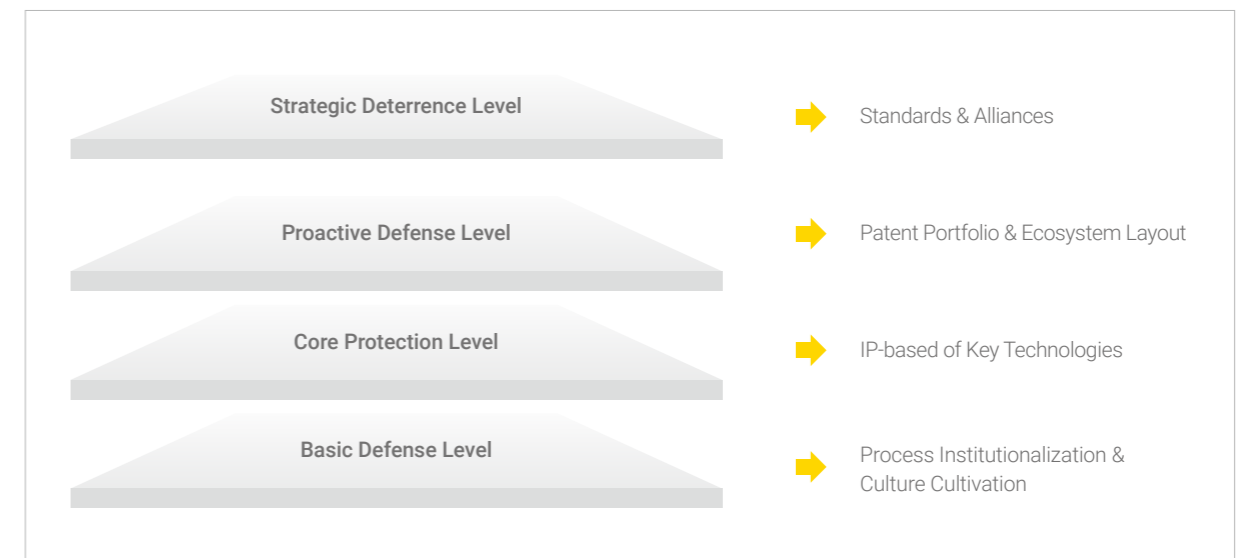
**Technological Innovation:** Proactively adopt micro-module packaging and cold channel design, breaking through the limitations of traditional architecture, significantly reducing cooling demand, and saving 20%-30% of cooling energy consumption.

## 6.5 Intellectual Property

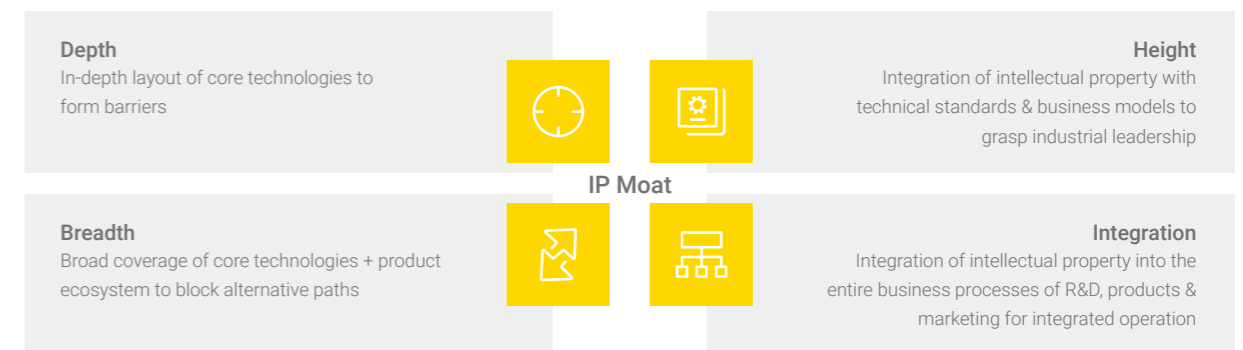
BEIJING-FANUC has built a rigorous intellectual property management system. Relying on continuous accumulation in core technical fields such as CNC and servo, we have formed a professional and systematic intellectual property work mechanism, providing comprehensive intellectual property layout and risk control support for product R&D, and ensuring customers carry out business in a safe and compliant environment.

### 6.5.1 Patent System

BEIJING-FANUC has established an efficient intellectual property governance system with clear powers and responsibilities. The system takes a dedicated Intellectual Property Management Committee as the leading core, responsible for formulating strategies and supervising implementation; and takes a set of standardized full-process management systems as the implementation foundation, systematically covering the four key processes of intellectual property layout planning, innovation mining, application and maintenance, and application and protection.



BEIJING-FANUC Intellectual Property Governance System



BEIJING-FANUC Intellectual Property Protection System Construction

### Patent Layout for Core Technologies

BEIJING-FANUC has built a patent cluster around core technologies such as CNC and Servo Motors. From 2022 to 2024, we filed a total of 32 patents, including 26 invention patents, covering key technologies such as Intelligent Dynamic Adaptation, Intelligent Digital Twin Virtual Commissioning, Edge Intelligence Products, Machine Model Solutions, and Process Macros. In the meantime, BEIJING-FANUC has established a patent risk screening mechanism. We conduct patent searches prior to the R&D of new products to avoid infringement risks. In 2024, BEIJING-FANUC completed patent risk assessments for 14 R&D projects.

### Patent Commercialization and Application

BEIJING-FANUC has integrated patented technologies into our products and solutions. For example, the patented technology of the Intelligent Tool Monitoring Method, as the basic function of adaptive machining, has been applied in CNC adaptive machining, helping CNC machining clients using different machine models improve efficiency by approximately 5% to 20%. Up to now, 30% of the patented technologies have been implemented (data derived from authorized invention patents excluding those related to intelligent production lines), helping clients save energy, reduce consumption, improve quality, and increase efficiency.



Examples of Invention Patent Certificates of BEIJING-FANUC

### 6.5.2 Collaborative Innovation Protection

In the field of innovation protection, BEIJING-FANUC implements a forward-looking intellectual property strategy. Through a regular patent mining mechanism, we promptly identify and consolidate innovative achievements. Beyond a single protection model, BEIJING-FANUC has systematically built a three-dimensional intellectual property portfolio covering patents, software copyrights, and trademarks based on our business blueprint, providing comprehensive legal protection for core technologies, brands, and software assets.

### Definition of Intellectual Property Rights in Joint R&D

When conducting joint R&D with customers and universities, BEIJING-FANUC signs confidentiality agreements and intellectual property ownership definition agreements, clarifying the following principles to ensure clear rights and interests and controllable risks for all parties: the ownership of intellectual property before and after cooperation remains unchanged; the achievements generated during cooperation are negotiated and defined based on contribution; the rights for future extended development and commercialization benefits are separately agreed upon according to the actual development content. For example, when cooperating with Zhongtai Mould to develop intelligent programming software, we assisted it in applying for patents for mechanical structure innovations.

Meanwhile, BEIJING-FANUC provides intellectual property compliance consulting for cooperative customers and partners. In 2024, we offered infringement avoidance suggestions to more than 20 customers, with no patent disputes occurring.

### Process Technology Confidentiality

BEIJING-FANUC establishes an encrypted process database to dynamically encrypt core machining technology data, which is only accessible to authorized personnel. For high-innovation projects, we sign the *High-Confidentiality Agreement* with participants, prohibiting the disclosure of technical details during R&D. From 2024 to 2025, we ensured the technical security of 10 key R&D projects.

# APPENDICES

## Appendix 1 To Stakeholders

Dear customer partners, employees, suppliers, government and industry associations, communities, and all partners concerned about BEIJING-FANUC:

With more than 30 years of trials and hardships, BEIJING-FANUC has taken root in the fertile soil of the manufacturing industry. From initially being dedicated to the promotion and popularization of CNC technology to now working with all parties to build a sustainable industrial ecosystem, every growth leap and every innovative breakthrough of BEIJING-FANUC is deeply inscribed with your trust and companionship.

BEIJING-FANUC has always firmly believed that the sustainable development of the manufacturing industry is never a "Solo Journey for Speed" of a single enterprise, but a "Joint Journey for Distance" of all stakeholders moving in the same direction. It is the demand of customer partners for high-quality development and green transformation and upgrading that has anchored the direction of our technological innovation and product iteration; it is the employees' adherence to customers, practice of mission, and recognition of cultural values that have laid a solid foundation for our steady development; it is the mutual assistance and resource sharing of suppliers and partners that have helped us continuously expand the coverage of the sustainable ecosystem; it is the expectation of all sectors of society for industrial upgrading and green development that constantly reminds us to keep in mind corporate social responsibility and bravely shoulder the mission of industry development.

Here, we would like to extend our highest sincere gratitude to every partner!

Looking forward to the future, BEIJING-FANUC will always adhere to the mission of "Becoming a value-adding partner in the green and sustainable transformation of China's and even the world's manufacturing industry, and building a sustainable and prosperous industrial ecosystem", and continue to empower partners with technological innovation and lead the industry with ecological co-construction. We look forward to working with all stakeholders, taking technology as a bridge and collaboration as a boat, deepening cooperation, sharing opportunities, and overcoming challenges on the road of green manufacturing and intelligent upgrading, to jointly build a more resilient and dynamic sustainable industrial ecosystem, and work together to inject a steady stream of power into the high-quality and sustainable development of China's manufacturing industry, moving towards a new future of industrial prosperity!

## Appendix 2 GRI Indicators Comparison Table

This appendix screens the core indicators disclosed in this report in accordance with the GRI Sustainability Reporting Standards (2021 Edition) (GRI Standards), clarifies the corresponding chapters of each indicator in the report, and ensures the standardization and traceability of information disclosure.

Indicator No.	Indicator Name	GRI Indicator Category	Corresponding Report Chapters	Indicator Content Description
1	Energy Use	Environment (E)	Chapter 4 Green Operations - 4.1 Energy Management	Discloses the construction of the energy management system, ISO 50001 Energy Management System, application of renewable energy, deployment of intelligent energy management platform, energy efficiency improvement technological transformation, etc.
2	Greenhouse Gas Emissions	Environment (E)	Chapter 2 Innovation in Intelligent Manufacturing - 2.2.1 Low-Carbon Transition; Chapter 4 Green Operations - 4.3 Response to Climate Change	Discloses organizational-level greenhouse gas emission data of Scope 1, Scope 2 and Scope 3, carbon targets, carbon reduction practices, carbon management system planning, etc.
3	Waste Management	Environment (E)	Chapter 4 Green Operations - 4.4 Circular Economy	Discloses waste classification management mechanism, equipment remanufacturing services, reduction and recycling of packaging materials, resourceful treatment of kitchen waste, recycling of production scraps, etc.
4	Green Product Design and Innovation	Environment (E)	Chapter 2 Innovation in Intelligent Manufacturing - 2.2 Energy and Carbon Transition	Discloses green product R&D, integration of product energy-saving technologies, output of green solutions, etc.
5	Environmental Impact of Product Life Cycle	Environment (E)	Chapter 2 Innovation in Intelligent Manufacturing - 2.2 Energy and Carbon Transition	Discloses green product design, whole-life-cycle carbon inventory management, equipment lifelong maintenance services, component-level maintenance and "replace old with old" model, green process substitution, etc.
6	Environmental Compliance	Environment (E)	Chapter 6 Sustainable Governance - 6.2 Compliance Governance; 6.3 Responsible Procurement	Discloses the construction of environmental compliance systems, ISO14001 Environmental Management System certification, supplier environmental access standards, investigation and rectification of environmental violation risks, etc.
7	Employment and Employee Composition	Social (S)	Chapter 5 Employee-Centric - 5.4 Diversity, Equity and Inclusion	Discloses total number of employees, gender and age composition, ethnic and regional distribution, fairness of recruitment, etc.

Indicator No.	Indicator Name	GRI Indicator Category	Corresponding Report Chapters	Indicator Content Description
8	Employee Training and Development	Social (S)	Chapter 5 Employee-Centric - 5.2 Employee Development; Chapter 3 Responsible Ecosystem - 3.2 Talent Ecosystem	Discloses new employee training, skill improvement of on-the-job employees, joint training of industry talents, etc.
9	Occupational Health and Safety	Social (S)	Chapter 5 Employee-Centric - 5.5 Occupational Health and Safety	Discloses the occupational health protection system, safety risk inspection mechanism, emergency drills, ISO 45001 Occupational Health and Safety Management System certification, etc.
10	Diversity and Equal Opportunity	Social (S)	Chapter 5 Employee-Centric - 5.4 Diversity, Equity and Inclusion	Discloses the proportion of female managers, office facilities for employee care, DEI special training, female care activities, etc.
11	Customer Health and Safety (Product/Service Safety)	Social (S)	Chapter 2 Innovation in Intelligent Manufacturing - 2.1.3 Occupational Health; 2.3.1 Information Security; Chapter 6 Sustainable Governance - 6.1 Product Quality Responsibility	Discloses the product quality responsibility management system, ISO9001 Quality Management System, product reliability management, product empowerment for customers, customer occupational health management, and product-end protection of customer information security
12	Customer Privacy (Cyber Security)	Social (S)	Chapter 2 Innovation in Intelligent Manufacturing - 2.3.1 Information Security; Chapter 6 Sustainable Governance - 6.4 Cyber Security	Discloses cyber security technologies, systems and management, ISO27001 Information Security Management System certification, etc.
13	Social Welfare Investment and Practices	Social (S)	Chapter 3 Responsible Ecosystem - 3.3 Social Ecosystem	Discloses educational public welfare, disaster support, community activities, etc.
14	Organizational Governance Structure	Governance (G)	Chapter 1 Company Overview - 1.3 Sustainable Development Management Structure; Chapter 6 Sustainable Governance - 6.2 Compliance Governance	Discloses the ESG governance structure, division of responsibilities at all levels, decision-making and reporting mechanisms, etc.
15	Ethical Behavior and Anti-Corruption	Governance (G)	Chapter 6 Sustainable Governance - 6.2 Compliance Governance	Discloses business ethics guidelines, anti-corruption systems, hierarchical disposal of violations, etc.
16	Intellectual Property Management	Governance (G)	Chapter 2 Innovation in Intelligent Manufacturing - 2.3.2 Intellectual Property; Chapter 6 Sustainable Governance - 6.5 Intellectual Property	Discloses the intellectual property protection system for empowering customers at the product end, patent layout of the company's core technologies, patent risk inspection mechanism, definition of rights and interests in joint R&D, customer intellectual property protection, etc.
17	Supply Chain Ethical Governance	Governance (G)	Chapter 6 Sustainable Governance - 6.3 Responsible Procurement	Discloses supplier ethical evaluation, signing of integrity and honest cooperation agreements, supply chain compliance supervision, supplier empowerment, etc.

## Appendix 3 Feedback

Dear readers:

Thank you very much for reading this report. This is BEIJING-FANUC's first publicly released sustainability report. To continuously improve BEIJING-FANUC's sustainable development work, we sincerely invite you to make an objective evaluation of this report and hope to receive your valuable opinions and suggestions. We will listen humbly and make continuous improvements. You can provide feedback on your ideas to us in two ways: answering the questions below or scanning the QR code to fill out the questionnaire.

### Multiple-Choice Questions (Please tick ✓ in the corresponding position)

- Does this report comprehensively and accurately reflect BEIJING-FANUC's significant impacts on the economy, society and environment?  
 Conforms  Basically conforms  Average  Basically does not conform  Does not conform
- Does this report respond to and disclose the issues concerned by stakeholders?  
 Conforms  Basically conforms  Average  Basically does not conform  Does not conform
- Are the information, indicators and data disclosed in this report clear, accurate and complete?  
 Conforms  Basically conforms  Average  Basically does not conform  Does not conform
- Does this report have high readability?  
 Conforms  Basically conforms  Average  Basically does not conform  Does not conform

### Open-Ended Questions

- What aspects of this report are you most satisfied with?
- What information do you think is not reflected in this report that you need to know?
- What suggestions do you have for our future release of sustainability reports?



Scan the QR code to submit feedback



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We hold the belief that responsible decisions allow business and nature to thrive together.  
Each recycled page is our promise to the Earth's future.