FUJI SPRINGS Co., Inc.

Corporate Profile

“Giving shape to 'happiness' through manufacturing”

In 1959, at the beginning of the high economic growth period, Fuji Springs Manufacturing was founded as a small spring manufacturing company with only five employees.

We have been working hard to satisfy our customers and create products to fit the needs of our customers. We believe in constant effort and continuous improvement as being our very spirit of challenge that we have inherited from the beginning of our business to the present day. In order to overcome the geographical disadvantage of having few partner companies around us to explore new business opportunities, we have been working on in-house production of presses and the necessary molds and dies, as well as design and development of plating and assembly machines.

As a result, we have been able to establish relationships with major consumer electronics and heavy electrical appliance manufacturers. In the battery business, we have shifted our focus from cell phones to in-vehicle batteries, and have expanded into the automotive business, including airbag components.

These experiences have led us to our current company, Fuji Spring Co., Ltd. which can provide one-stop services such as technical proposals, prototyping, and mass production from the development stage. We can provide customers with solutions that no other company can offer.

While we will continue to carry on the beliefs that we had at the time of our founding, we are also in an era of dizzying change. There are many things that we must change, such as responding flexibly to the changing needs of society and globalization to support local production for local consumption.

We want to value both "things that must not be changed" and "things that should be changed.”

These thoughts are expressed in our catchphrase, "Giving shape to 'happiness' through manufacturing.

Corporate Philosophy

Corporate Spirit

“Supple and flexible spirit”

Supple and flexible spirit means

- An altruistic spirit
- Rich sense and sensitivity
- Flexible ideas
- Sense of balance
- Gentleness

It indicates a commitment to overcoming difficulties and making the impossible possible.

All employees will "think and work" in accordance with this corporate spirit, continue to provide safety and security to our customers, increase the number of our fans, and continue to develop Fuji Springs for many years to come.

We will uphold this “supple and flexible spirit" as our corporate spirit, and our basic creed is to delight our customers and the society, and to have all our employees devote themselves to their work every day with dreams and pride.

Management philosophy

“Through a virtuous cycle created by the self-actualization of each member, we strive to delight our customers, employees, and society to contribute to the future of the Earth.”

For Fuji Springs, its employees are treasures. Fuji Springs desires to become a company where each employee can look radiant with his/her work. Radiant employees are sure to delight customers and society through products, services, and communication inside and outside the company. They will consequently achieve self-actualization and grow themselves. The grown employees will further create delight, increase our fans, reiterate virtuous and vicious cycles to help Fuji Springs exist for many years to come.

We believe that this self-actualization is the driving force for each employee to face difficulties, the ultimate value nobody can impair, and bliss.

We operate the company with high priority assigned to employee delight, which underlies self-actualization, and endeavor to realize the eternal happiness of employees and contribute to the future of the Earth.

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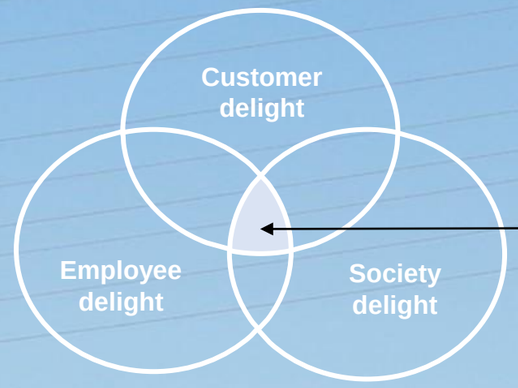


History

STAGE 0

The early days of the company, with many technological innovations

STAGE 1

Searching for the next generation of business

STAGE2

Embarkation on portable battery components

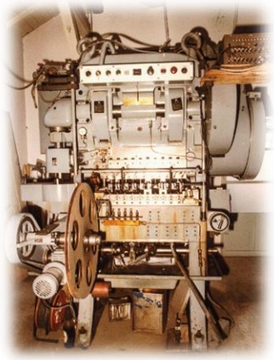
1959.9 Founded as “Fuji Springs Manufacturing” (Tamaki, Wadayama)

1960.2 Established "Fuji Springs Co., Inc.
(3 sales staff and 5 manufacturing staff).
Introduced manual coiling machine.
Expanded sales channels mainly for small precision springs.

1968.3 Head office and factory relocated (Hirano, Wadayama)

1975 Began business with a major home electronics manufacturer. Manufacture of dynamo wire springs for bicycle lights, constant load springs for electric fans, cord winding springs for vacuum cleaners, etc.

1976 Production of torsion springs began.
Started development of quartz crystal units.
Invested 200 million yen to build a plant dedicated to presses. Introduced 2 transfer press machines.
Started taking orders for deep drawing.
Production of antenna caps, etc.



1981 Started development of Center Shaftless Blade for hand mixers. Started business with a major heavy electrical machinery manufacturer. Began production of automotive electrical components.

1982 Started development of nickel-cadmium battery seal with safety valve.

1983 Introduced machine tools such as wire EDMs and machining centers to strengthen in-house production of molds and dies.

1988 Maseba Plant completed (Maseba, Wadayama).
Became the production base for Center Shaftless Blades.
(total production: 1 million units)
Development of steel rectangular sealing elements began.

1990 Began full-scale mass production of nickel-cadmium battery seals.

1995.4 Akira Fujii became President & Representative Director & CEO.
Trial production of lithium-ion battery components for cellular phones began.

1996.3 Purchased Nomura Plant (Nomura, Wadayama).
Mass production of lithium-ion battery components for cellular phones began.

1997 Started trial production of nickel metal hydride cylindrical battery components for automotive use.

1999 Era of full-scale mass production of lithium-ion battery components for cell phones. (22 million units shipped per month at its peak).

STAGE 3

Entry into the automotive battery parts business

Take the next step when business is good

2001 Started mass production of nickel metal hydride cylindrical battery components for automotive use / 200 employees

2003.9 Began full-scale mass production of nickel metal hydride cylindrical battery components for automotive use

2004.9 Began full-scale mass production of airbag inflator components.
In-house trial production of automotive rectangular battery components began.

2005.4 Built Plant 2 in Wadayama Industrial Park (Tsutsue).
Full-scale mass production of seatbelt emergency winding device parts began.
The number of employees reached 300.

2006 Joint development of automotive rectangular battery parts with a major automobile manufacturer began. Built Building B at Plant 2 in April, which started operation as a dedicated plant for hybrid business.

2009 Adopted for a subsidy from the Ministry of Economy, Trade and Industry for a project to promote the low-carbon employment-creating industries.
Began production of automotive rectangular lithium-ion battery components.

2011 Began full-scale mass production of automotive rectangular lithium-ion battery components. Built Building E at Plant 2 in April and Building F at Plant 3 (Santo) in May. The number of employees increased to 500.

2014.11 Built Building G at Plant 3 in November.
Established Fuji FNS Korea as a joint venture in Asan, Korea.

2016 Began mass production of second-generation automotive rectangular lithium-ion battery components. Merged with Technoforest Co., Ltd. and started operation as Osaka Toyonaka Plant.

2017 Established Satellite Office Nagoya.
Merged with FUJI EXCEED Co., Ltd.

2019 Purchased a site for a new plant in Kameyama, Mie Prefecture.
Established FUJIHATSU TECH (Suzhou) Co., Ltd. in China in February.
Sixtieth anniversary celebration of the company's founding in September.

2020 Mie Kameyama Plant began operations.

2022 Established FUJIHATSU TECH America, Inc.

2023 Established FUJIHATSU & TOYOTSU Battery Components, North Carolina LLC. as well as FUJIHATSU TECH India Private Limited.

Business development

(1) Environment

Lithium-ion battery parts for motive power

Nickel-metal hydride battery parts for motive power

Battery module parts

Automotive and environmental components. *1

(2) Safety

Airbag inflator parts

Seat belt pretensioner parts

(3) Basic performance

Engine starter parts

Clutch parts

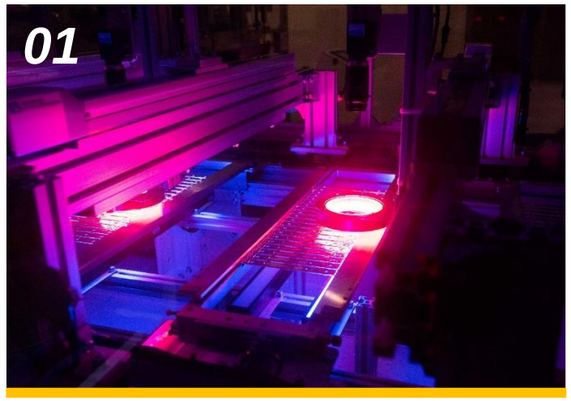
Inverter parts

Automotive and safety related components. *2

Automotive related parts and other general machined parts

*3 (part)

Our Business



02 Technology

We have achieved stable high quality and low cost through our in-house tooling manufacturing technology as well as proposal and design technology to realize it. We participate from the initial development stage to understand the truly necessary functions and propose the most suitable processing methods and shapes to realize them, thereby contributing to the maximization of value for our customers.。

04 Maintenance Activity

Our maintenance activities are proactively developed under the slogan, "Build quality within the process." We work together without being restricted by the boundaries of divisions and departments, sharing information and technologies to invigorate our activities.

01 One-Stop Service

We provide one-stop services for all phases from product development and design to mass production. To ensure smooth and stable start-up of mass production, we have established a system to manage the process from the preparatory stage to mass production.

03 Production Equipment

In addition to press machines, we have introduced tooling processing machines, prototype machines, hydrocarbon washing machines, and a large automatic plating line for plating processing. In addition to existing and custom-made equipment, we are also equipped with in-house original devices such as valve opening pressure measuring instrument to meet a wide range of customer needs.

One-Stop Service

One-stop service for all phases from product development and design to mass production.

Customer	Plan	Product design	Specification decision	Trial production	Mass production
Fuji Springs	Suggestion	Method development	Tooling design	Trial production	Mass production

To ensure smooth and stable start-up of mass production, we have established a system to manage the process from the preparatory stage to mass production.

Phase1 Inquiries and order

- Review and estimate preparation
- Business plan development
- Receipt of orders for trial and mass production.
- Determination of start-up ranks
- Input information
  - Mass production starting schedule
  - Assumed flow
  - Required facilities
  - Planned number of mass production, etc.

Phase2 Process design

- Formation of cross-organizational team
- Mass production feasibility study group
- Process FMEA
- Start-up schedule
- Design and fabrication of molds and dies
- Evaluation of prototypes
- Process review
- Parts inspection method (tentative)
- Mass production tooling, equipment design and evaluation
- Validation and evaluation

Phase3 Process preparation

- Mass production tooling, equipment fabrication
- OT trial and issue identification
- OT/OP trial and issue identification
- Process control preparation
- Parts inspection method
- MSA
- Process capability study
- Packing specification
- Primary R&R
- Validation and evaluation

Phase4 Preparation for production

- Operator training
- Packaging evaluation
- Mass production appearance limit
- Delivered specifications
- Secondary R&R
- Procedures for transition to mass production

Quality Policy

We are committed to customer satisfaction management through the manufacture of products that customers can use with confidence.

ISO9001	**Certified in 2007**
ISO14001	**Certified in 2005**
IATF16949	**Certified in 2018**

■Environmental regulatory compliance
REACH Regulation, RoHS Directive, ELV Directive

■Supply chain management
Quality audit follow-up and regular meetings with major suppliers

■Traceability
Quick and reliable lot tracing by individual identification number

■Material development
Stable quality achieved with material manufacturers from the development stage

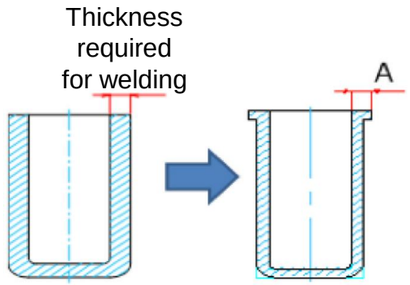
Technological Capacity

Proposal

Contribute to customers to maximize value through VA/VE proposals

[Example] Reducing material costs for rectangular lithium-ion battery cases

Rectangular lithium-ion battery cases require a certain thickness in part A in the figure as the sealing welding part. When this case is made by drawing, the thickness of the plate is generally almost the same from the bottom of the case to the opening where the welding takes place. However, this thickness is excessive for the pressure-resistant function required of the body part, and in fact, from the viewpoint of material cost reduction and weight saving, it can be said to be wasted thickness. Therefore, we devised a drawing process and succeeded in reducing the thickness of the body to that required for pressure resistance, while maintaining the thickness required for welding in the A section.



We participate from the initial development stage to understand the truly necessary functions and propose the most suitable processing method and shape to realize them, thereby contributing to maximize value for our customers.

Robust design

High quality and low cost

[Example] Safety valve for lithium-ion battery

Lithium-ion batteries are equipped with a function called a safety valve to prevent explosion due to some abnormality. If the internal pressure of a battery rises above a set value due to a short circuit or other problem, the safety valve opens and releases the pressure to avoid the risk of abnormal heating, or even an explosion or fire. On the other hand, the safety valve must remain sealed and not be activated by pressure fluctuations caused by normal charging and discharging. In order to realize these functions in mass-produced products, direct countermeasures against various error factors that disrupt the functions would result in high costs, including management costs. Therefore, with the concept of robust design, we pursue safety valve design that is least affected by error factors, as well as tooling and process design for press forming of such shapes. As a result, we have achieved both stable high quality and low cost.

In-house manufactured tooling

Maximizing the benefits of in-house production of molds and dies, which are the essential to press work

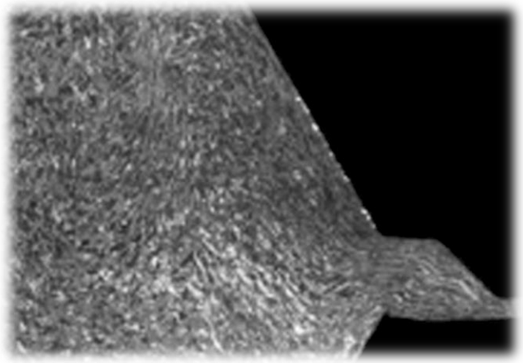
The advantages of in-house production include the accumulation of know-how, quick delivery, and cost reduction. We also see sharing information by working as a team as an important advantage. This information refers to the level of importance and urgency of each project, as well as its purpose and intent. Sharing this information among all processes and working with the same awareness is linked to expanding the scope of our responsibility.

Evaluation technology

Process validation for true quality assurance

[Example] Metal flow analysis

The lids of lithium-ion batteries are required to have various advanced functions and for this reason, complex shapes are formed by cold forging. If we judge the quality of the formed surface shape only by its dimensions and appearance, we cannot guarantee quality in stable mass production and under severe market usage conditions. Therefore, we observe and analyze the metal flow of the formed cross section to evaluate and judge whether the forming is smooth and stress-free. If the forming is under strain, wrinkles will be generated inside, which will develop into cracks in the future, and the product will not be able to fulfill its function. In this way, we evaluate the adequacy of the process and assure quality.



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Press forming analysis

Start-up time reduced by CAE analysis

[Example] Tooling design for rectangular lithium-ion battery case

A rectangular case is formed by drawing a single flat plate through several processes. This process results in a complex interplay of stress and strain in the material. The key point of tooling design is to control them well. By proceeding with design on CAE based on know-how accumulated over many years, we are able to reduce trial and error and significantly shorten the start-up period.

Before improvement

After improvement

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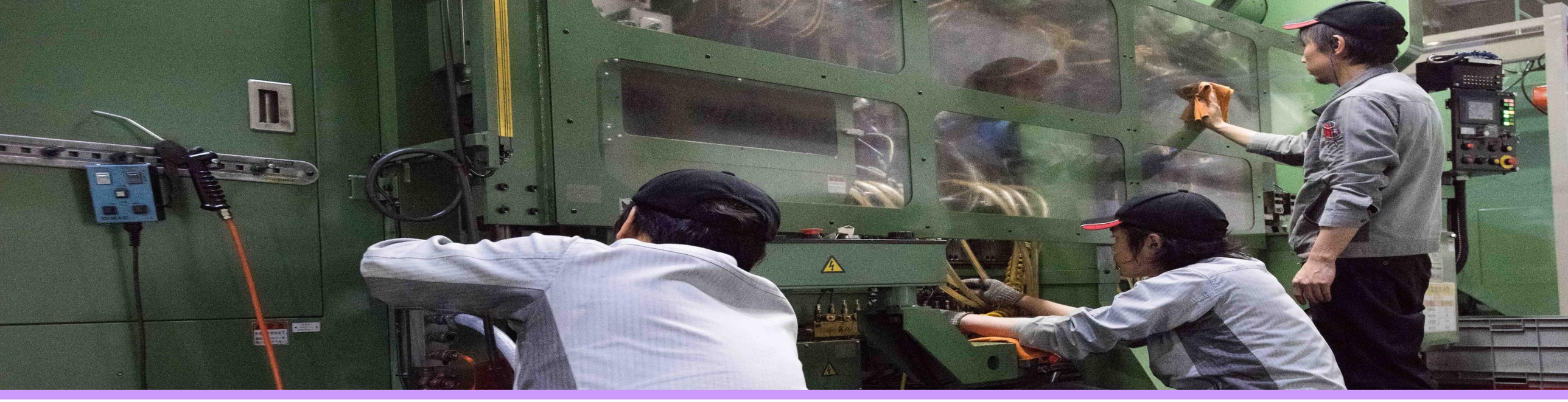


Maintenance Activity

Maintain the best condition

In order to build quality in a process, it is necessary to keep tooling and equipment in good condition at all times. Preventive maintenance is essential for this purpose. To avoid overlooking even the smallest signs of trouble, we have established various inspection standards and monitor conditions. We then make sure that the tooling and equipment are always performing at their best.

Be prepared for any eventuality

No matter how much effort is put into the aforementioned "preventive maintenance," there are cases of breakdowns that can be restored in a short period of time or unexpected failures that lead to production interruptions. In such "what-if" scenarios, it is necessary to be prepared to recover as quickly as possible. Specifically, this includes preparation of standard documents such as troubleshooting and manuals, and management of spare parts.

Slogan

"Turning factories into showrooms."

"The world's most beautiful handling of molds and dies."

Promotion of 7S activities

We have been working on 7S activities by adding "Safety" and "Sense" to the general 5S (Sorting, Setting-in-Order, Shining, Standardizing, Sustaining the Discipline). “Safety” is the first priority in everything we do. Only when safety is ensured can good work be done. We have also added "Sense” to encourage employees to exercise their creativity to make their workplace more exciting and enjoyable through innovative ideas.

Training

Maintenance activities also have a great deal to do with improving the skills of employees. Employees' skills are improved by not only operating tooling and equipment in daily production activities, but also by learning about their structures and theories and acquiring higher-level maintenance methods. Various study sessions are held for this purpose, and the results of the improvement are also reflected in personnel evaluations.

VISION～To the Next Stage～

Disciplined organizational culture

Create oneself
Healthy and efficient thinking through correct reporting and communication

Create together
Co-creating value with customers, society, and employees

2030
Strategic diversification management
Create adeptly
Expansion of new business (experience)

2025
Strategic diversification management
Create adeptly
Expansion of new business (experience) (Global expansion)

2020
High value-added management
Produce proficiently
Thorough commitment to customer value
Manufacture skillfully
Make it overwhelmingly inexpensive

Now

A company where one can achieve self-actualization

One naturally returns the next generation what one has acquired through the support from the former generation.

As a good senior...

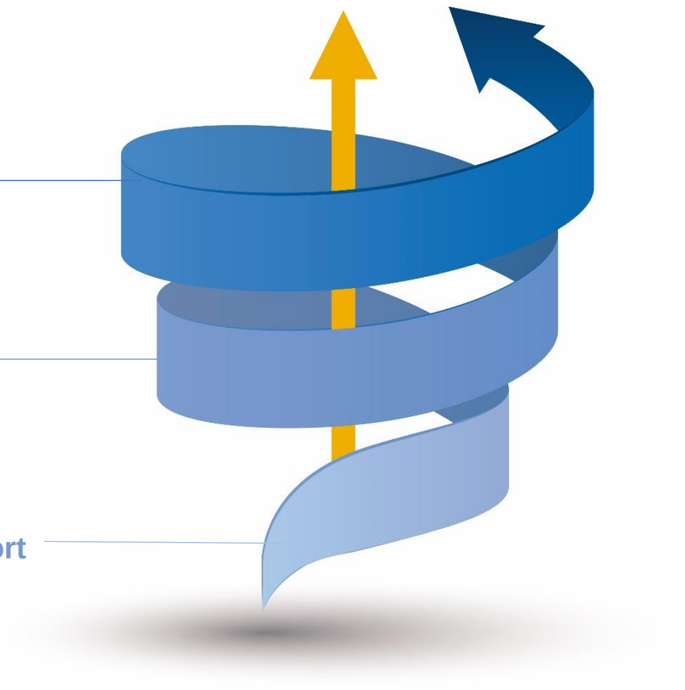
One's growth, which is the result of one's effort, is naturally recognized.

Sense of accomplishment
Value of existence

One's challenge naturally receives firm support.

Return

To have motivation and support



Diversification strategy to achieve our vision

As our business performance expanded, the size and shape of our organization rapidly changed, and in 2010 we renewed our management philosophy and published "Management Philosophy Handbook." Even if we have unrivaled technology and equipment, it is our people who will master them and pave the way to the future. Based on our management philosophy of "Through a virtuous cycle created by the self-actualization of each member, we strive to delight our customers, employees, and society to contribute to the future of the Earth," we will continue to push forward with a focus on management that places "employees" at its core.

Since the time of our founder, the "spirit of challenge" has consistently flowed through our company. We got ahead of the competition in the automotive battery business because we embarked on the new field when our cellular phone battery business was at its peak.

In January 2019, we announced our "Long-Term Vision 2030" at the first meeting of the year for all employees. With the mission of “Giving shape to happiness through manufacturing“ in mind, this long-term vision was drafted by the members who would be the next generation of management executives, aiming to build the FUJI brand trusted around the world with its comprehensive manufacturing capabilities.

In order to achieve this vision, it is essential to develop a strategy to evolve our high value-added management, which has been nurtured through a history of reforms, into strategic diversification management. Grounded in our disciplined organizational culture, we will maintain our high value-added management through the expansion and development of existing businesses, while aiming for the next stage through strategic business plans, such as the development of new businesses with an eye to overseas expansion, and furthermore, the development of "manufacturing-related businesses" that sell “experiences" other than "products.” Such a vision cannot be achieved simply by imposing it on employees from the company.

Fostering a corporate culture to achieve our vision

First of all, it is necessary to foster a work environment where individual employees can positively tackle their daily work with a system in place that motivates and supports them to “try their best. Then, when the company sees and evaluates their efforts properly, it will lead to a sense of individual achievement as well as a sense of the value of their existence. Self-actualization gained through the company’s support is returned to junior members, thereby forming the spiral of growth over generations. The accumulation of the spiral of self-actualization will help Fuji Springs to grow into an indispensable company, and at the same time, it will enhance the status of being a member of Fuji Springs.

By establishing a corporate culture that encourages continuous self-actualization, we will become a company in which all employees can be proud of their work. We will make company-wide efforts to achieve this goal as an indispensable task for the achievement of our vision.

“Next step should be taken when business is strong.”

As our predecessors have demonstrated, the future lies ahead of us if we continue to challenge ourselves with an eye to the future. We must not be complacent about good performance but must continue to take on new challenges, always looking for new areas of business. The establishment of Satellite Office Nagoya and FUJIHATSU TECH (Suzhou) Co., Ltd. in Jiangsu, China, were the developments with an eye toward our next move. We also completed our construction of a new plant in Kameyama, Mie Prefecture in 2020. This was to be close to our customers, to respond quickly, and to ensure a stable supply of locally produced, locally consumed products.

We are confident that Fuji Spring’s progress toward becoming a 100-year company will be more solid than ever as all employees work together to become a forward-looking and challenging corporate entity.

Giving shape to "happiness" through manufacturing

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