

Value Chain

TS TECH's Value Chain

The TS TECH Group achieves value creation through manufacturing that yields high-quality products and services. We aim to maximize corporate value by leveraging mutual cooperation and synergies among the functions of each value chain. In this effort, we make optimum use of all the management resources we have developed over our more than 60 years in business with the support of our stakeholders.

Value Chain



*1 The principles TS TECH has established to ensure fair and just transactions and to construct and maintain win-win relationships with our suppliers globally
*2 Quality, Cost, and Delivery

Research and Development

The TS TECH Group aims to keep improving corporate value by developing advanced technologies focused on its strengths: safety, the environment, and the creation of attractive products. To do this, we are engaging proactively in research and development aimed at developing new value in the domain of next-generation vehicle interior spaces. What is more, we are also stepping up development of innovative and environmental technologies and transforming these into commercial products at an early stage, with an eye to achieving our material issues and 2030 targets.

The creation of this new value cannot be realized by limiting our horizons to the same technologies we have used in the past. As "A company dedicated to realizing people's potential," which is one of our core principles, we intend to develop a next generation of engineers and unleash new innovations based on the diversity of ideas brought forth by younger engineers in order to generate groundbreaking technologies never seen before.

Eiji Toba

Representative Director, Senior Managing Officer, Corporate Development and Engineering Division Executive General Manager



Basic Policies on Value Creation

- ▶ Creating and delivering appealing products and technologies
- ▶ Enhancing our system and software development capabilities beyond the framework normally required for a parts manufacturer
- ▶ Developing environmentally friendly products and manufacturing technologies that help build a sustainable world
- ▶ Ensuring reliable quality assurance from the outset of development

SWOT Analysis

Strengths

- Wide range of development and technological capabilities for phases from product planning through development and performance evaluation
- Group-wide development system based on projects managed by Large Project Leaders (LPLs)^{*1}
- Creating new value through active collaboration with other industries

Opportunities

- The EV market, where advanced technology is being proactively adopted
- Providing the new value required for next-generation vehicle interiors
- Growing need for environmentally friendly products

Weaknesses

- Speed of global development aimed at sales expansion
- Speed of mass production realization of innovative technologies

Threats

- Intensifying competition in technological development and changes in product development styles driven by the entry of companies from other industries into the automotive industry
- Tighter regulations in various areas to promote carbon neutrality

Key initiatives for fiscal 2024

Commercializing our cabin products and technologies, and developing environmental technologies

In fiscal 2024, our efforts to offer technical proposals to customers bore fruit, as we exceeded our target for the number of TS TECH products adopted for future models. These products include our extended slide rail, a technology which enables seating arrangements to be changed easily to suit user preferences. They also included sound and vibration functions which create a more powerful sense of immersion for entertainment systems, and energy-saving air conditioning systems to support a more comfortable journey while minimizing power consumption. All of these innovations generate new value for the vehicle interior space as a whole.

The Group is also stepping up its efforts to develop material substitution technologies in order to reduce its environmental footprint. These efforts include research into creating structures which enable all functions required in seats to be fulfilled using sustainable materials^{*2} based on their characteristics, which differ from those of traditional materials. Such materials include biomass urethane created by combining plant materials, steel created through electric furnace steelmaking using molten scrap steel, and recycled resins.

*1 A development system that assigns LPLs to coordinate all departments, including overseas bases, and provides total management from planning to mass production
*2 Raw materials that are derived from continuously available resources and have a low environmental impact throughout their life cycle

Key initiatives going forward

Securing cabin coordination capacity

In the next-generation automotive market, where autonomous driving technology and the shift to electric vehicles (EVs) continue to advance, we aim to evolve into a company capable of proposing the entire vehicle interior space as an attractive product in order to create the necessary functions and technologies for these new demands. To achieve this, we are stepping up our research and development with the aim of establishing basic research into the "human element," our vision of the passenger in the next-generation vehicle, and human-centered seat control technologies for vehicle interior spaces. In addition, we will seek to develop unprecedented new functions by collaborating with other industries. Leveraging all of our technological expertise, in fiscal 2025 we are working on offering package proposals for each vehicle model of automakers and realizing products that meet attractive customer needs. We are also engaging in projects to generate new value by proactively adopting the free-thinking concepts coming forth from our younger engineers, as we develop products for the next-generation vehicles the world will see in the years beyond 2030.

Sales (Honda Group)

The business we do with Honda Motor Co., Ltd. and the Honda Group (its network of associated companies), our main customers, is an important foundation. We aim to raise our market share of automobile seats sold to the Honda Group to 70% or more by 2030, to ensure the further growth of our business.

The automobile industry is undergoing a major transformation due to the shift to EVs and the advance of autonomous driving technology. Amid these changes, the Group will leverage its global network of 44 companies in 13 countries worldwide and move rapidly to propose new products which look ahead to the diversifying needs of each region. By doing this, we will remain “A company sincerely appreciated by all” in the eyes of our customers (including the Honda Group) and our end users, while further boosting our marketing share.

Satoru Munemura

Managing Officer, Corporate Sales and Purchasing Division Executive General Manager



Basic Policies on Value Creation

- ▶ Offering appealing products that exceed customer expectations at competitive prices
- ▶ Proposing the new value required for next-generation mobility and vehicle interiors by leveraging cooperation between each segment and functional division
- ▶ Accurately identifying changes in the market, the environment, and customer needs, and swiftly proposing new measures to resolve issues

SWOT Analysis

Strengths

- Our specialized knowledge as a supplier for vehicle interior spaces
- Our follow-up system and ability to make proposals, leveraging our global information-gathering system

Weaknesses

- Insufficiently rapid growth in the new parts-related businesses that are needed for further corporate growth
- The features of our products and parts make us especially vulnerable to the effects of rising prices

Opportunities

- Creating proposals that deliver the new value required for next-generation vehicle interior spaces through the application of our seat technologies
- Entering businesses creating new parts suited to the changing environment of the automobile industry

Threats

- Pressure on profits caused by rising infrastructure costs
- Increasingly demanding and diverse needs among our customers, who are facing sudden changes in their business environment

Key initiatives for fiscal 2024

Looking ahead to anticipate the needs of customers in line with a changing business environment

With the business environment surrounding the automobile industry going through tumultuous changes, our customers are pushing forward with the development of new shared platforms that allow them to make more effective use of their management resources. In line with these trends, they are demanding from their suppliers not only shorter development times and cost reductions but also the versatility that will enable seats to be installed in all kinds of models, from sedans to SUVs. TS TECH must meet these demands if it is to grow its market share further. We have established a development framework that positions us to generate unprecedented value which exceeds customer expectations by working in close cooperation with them starting with the upstream development stages and by addressing customer needs in each division and in the supply chain in early stages. Applying this framework to the development of next-generation models enables us to deliver both the specifications and cost levels required by our customers, ensuring we acquire a steady stream of new commercial rights.

Key initiatives going forward

Sales activities that anticipate a changing world

In the next-generation automobile market, which is seeing a shift toward EVs and autonomous driving technology, we will further boost our cost-competitiveness and propose new value not bound by the limits of the past. This is the key to continuing to acquire new commercial rights. By accurately identifying market trends and customer needs, and analyzing the Group from various perspectives to ascertain which resources we lack and improving these areas, we will further improve our cost-competitiveness. Moreover, with interest in sustainability growing stronger each year among both our customers and the broader society, contributing to sustainability through our business operations will be essential if the Group is to remain “A company sincerely appreciated by all” in the years to come. As we reduce our environmental footprint by employing sustainable and recycled materials, we will propose products that go beyond customer expectations.

Sales (New Businesses)

The Group has achieved steady growth over the years as a strategic partner of the Honda Group, our main customer.

However, to minimize the risk that profits could fall due to changes in the external business environment and to secure further business growth, we will need to expand our commercial rights to include new customers beyond Honda, and to expand our acquisition of commercial rights in the “new businesses” domain.

To achieve our target of ensuring that new business sales account for 30% of our consolidated revenue by 2030, we will constantly anticipate future trends in the automobile industry, and engage in strategic sales activities by carefully discerning customer needs. We aim to expand new businesses by having the New Business Management Division take a leadership role in making proposals for “attractive products sincerely appreciated by all” to customers all over the world.

Masaki Nagayama

Operating Officer, New Business Management Division Executive General Manager



Basic Policies on Value Creation

- ▶ Obtaining commercial rights orders by proposing “attractive products sincerely appreciated by all” that anticipate customer needs
- ▶ Proposing products based on existing commercial rights (expanding adoption to derivative models)
- ▶ Pursuing strategic technical sales development focusing on target commercial rights to increase the likelihood of securing orders
- ▶ Strengthening the competitiveness of our European sites to promote commercial rights expansion

SWOT Analysis

Strengths

- Sales activities in cooperation with business partners
- Making product proposals before model development, and promoting collaboration activities with customers
- Global supply capabilities based on sites in 13 countries worldwide

Opportunities

- Expanding opportunities to propose new vehicle interiors toward next-generation mobility
- Developing new, appealing products in collaboration with business partners

Weaknesses

- Keeping pace with the global acceleration of shorter development cycles
- Independence of overseas bases
- Information-gathering network on needs of new customers

Threats

- Rapidly changing customer needs
- Decline in profitability due to stiffer competition and entry of competitors from other industries
- Delays in securing orders, due to revisions to customer development plans in the wake of changes in the market environment

Key initiatives for fiscal 2024

Further expansion of new businesses closely aligned with customer needs

To acquire new commercial rights, we are presenting the functions and technologies required for next-generation vehicle interiors to various automakers. Our proactive technical sales activities, tailored to meet the specific needs of each new customer, are beginning to bear fruit. We are starting to see results that will lead to the acquisition of new commercial rights, including inquiries from companies interested in participating in advanced development projects.

We have also engaged in activities which are expanding our commercial rights among our existing customers, such as the orders we have received for the rear seats for the new SPACIA models recently launched by Suzuki Motor Corporation. This success was thanks to our proposing new value which boosts convenience and comfort across various usage methods, and compact storage mechanisms which make use of our own seating arrangement technologies. We are also making other efforts to further expand our business and strengthen our cost-competitiveness, including embarking on the establishment of a new plant in India to pursue new commercial rights from Maruti Suzuki, which boasts the top market share in the Indian market.

Key initiatives going forward

Strategic expansion of new businesses in Europe

With sites in Germany and Poland, the TS TECH Group is focusing on further expanding its transactions with European automakers, such as the Volkswagen Group.

Our new vehicle seat production company in Poland began full-scale operations in April 2024, including the start of production of third-row seats designed for European automakers' new EV models. By cooperating with our various European sites to provide automakers located in Germany, the Czech Republic, Slovakia, and other countries with a supply of cost-competitive products tailored for the characteristics of each location, and actively implementing sales expansion in the region, we are establishing relationships with new customers as well as expanding commercial rights with existing customers. By increasing production capacity with an eye to the growing orders we anticipate, as well as optimizing our production system, including the supply chain, we aim to ensure that these developments lead into the acquisition of a steady stream of new commercial rights and the further establishment of our European business operations.

Purchasing

With the business environment facing the Group experiencing rapid change in recent years, boosting corporate value further will require us to increase our cost-competitiveness by thinking outside traditional constraints and fundamentally reestablishing our supply chain. We will also need to bolster our initiatives relating to sustainability across the whole of our supply chain in response to the requests of our stakeholders if we are to remain “A company sincerely appreciated by all” and whose presence is valued. By working not only as an individual company but also together with all our business partners, based on the three axes of “generating maximum added value,” “preventive maintenance aimed at ensuring a stable supply,” and “CO₂ emissions reductions,” we intend to deliver a robust and sustainable supply chain at the global level.

Satoru Munemura

Managing Officer, Corporate Sales and Purchasing Division Executive General Manager



Basic Policies on Value Creation

- ▶ Building a competitive supply chain aligned with the Four Principles of TS Procurement*¹
- ▶ Improving QCD*² capabilities by enhancing supply chain management
- ▶ Ensuring the supply chain facilitates the realization of ESG management

*1 The principles TS TECH has established to ensure fair and just transactions and to construct and maintain win-win relationships with our suppliers globally

*2 Quality, Cost, and Delivery

SWOT Analysis

Strengths

- Our strong partnerships with our business partners, developed through multifaceted cooperation
- Our global supply chain, which enables us to leverage our competitiveness by working together with our business partners and Group companies

Opportunities

- Starting new supply chains that make use of new sales channels and insights gleaned from our expansion of new businesses
- Expanding business with emerging local suppliers

Weaknesses

- Our supply chain has not yet broken free from traditional frameworks
- The need to establish a supply chain that can adapt to the growing application of sustainable materials

Threats

- Supply risks for components and raw materials due to climate change, infectious diseases, conflicts, etc.
- Impact of procurement costs due to rising costs for energy and labor, etc.

Key initiatives for fiscal 2024

Reestablishing a supply chain that can respond to changes in the environment

As the world transitions to next-generation vehicles, including the shift toward EVs and the development of autonomous driving and other technologies, our automaker customers are seeing changes in their profit structures. This means meeting their demands is more challenging than ever. Moreover, with procurement costs being dramatically impacted by the rising costs of energy and labor as well as other factors, the Group will need to reestablish a supply chain that is capable of responding flexibly to changes in the external environment if we are to continue to respond to customer needs and exhibit sustainable growth going forward.

In fiscal 2024, we undertook a thorough reexamination of our traditional procurement structures and business practices and carried out initiatives to boost the Group's profitability and competitiveness by slimming down overly complicated procurement routes and expanding the adoption of new manufacturers as suppliers. We have also worked hard to further stabilize our procurement structures by bolstering our risk management from the perspective of preventive maintenance, including ensuring more rapid initial responses at times of emergency. These efforts will further shore up the stability of our production supply system.

Key initiatives going forward

Building a sustainable supply chain

The Group has formulated the TS TECH Supplier Sustainability Guidelines in order to share our approach to sustainability with all our business partners worldwide and make progress together in unity.

In the environmental domain in particular, we are working to reduce CO₂ emissions across the entire supply chain by progressively introducing energy-saving policies and sustainable energy together with our business partners, with the aim of helping to build a carbon-neutral world. By taking up these initiatives, working with all our business partners to reduce various risks, and building a sustainable supply chain that adheres to legal and social standards, we seek to remain “A company sincerely appreciated by all” and whose presence is valued.

Manufacturing

The automobile industry faces a period of tumultuous change; if we are to deliver sustainable growth in these circumstances, we will need to strengthen our corporate structure by further developing our manufacturing, the activity that lies at the heart of the Group. To ensure that the growth strategies we have developed for achieving our 2030 Vision can be truly effective, we are working to establish a high-efficiency production system that makes the most of our competitive edge over rival firms.

We plan to move toward a more sustainable style of manufacturing by establishing a high-efficiency global production system that will outperform our competitors. This effort will be guided by the principles of “integration of specifications and craftsmanship.” These efforts will center on the three policy pillars that we have implemented thus far for cost reduction: “production line automation,” “establishing sustainable production lines,” and “creating a more efficient production supply chain.”

Yasushi Suzaki

Director, Managing Officer, Corporate Manufacturing Division Executive General Manager



Basic Policies on Value Creation

- ▶ Improving our manufacturing for higher efficiency and sustainability
- ▶ Providing innovative production technology to Group companies and strengthening control functions
- ▶ Building highly efficient production lines using automation and more advanced equipment and molds

SWOT Analysis

Strengths

- Technological development and increased efficiency achieved through in-house production of molds and equipment
- Achieving high standardization of each QCD capability within the Group
- Employing a flexible production system that supports multi-product production

Opportunities

- The growing need for new production technologies that can handle carbon-neutrality requirements
- Increased demand for high-value-added products suitable for CASE and next-generation vehicles

Weaknesses

- Measures for reducing the environmental footprint of the production domain are still at the halfway point
- Many quality inspection processes still rely on human intervention
- Collaboration effectiveness between sites in different countries

Threats

- Rise of emerging local suppliers
- Rising costs for raw materials, labor, energy, and the like
- Intensifying competition to attract human resources due to shrinking and aging production workforces in many countries

Key initiatives for fiscal 2024

Developing high-efficiency, sustainable manufacturing

To ensure that we can deliver a stable supply of high-quality products to global markets at ever-more competitive prices, we are boosting the efficiency of every aspect of our systems by using advanced technology (including digitalization and IoT). We are also working to strengthen our assurance of defect-free processes using a quality determination system based on AI analysis. In further developing our production systems, we are not only promoting more automation but also strengthening our development of in-house equipment designed to reduce workloads. This equipment is designed by employees with a good understanding of the front line of production. In these efforts, we prioritize providing a good working environment for every one of the employees supporting our manufacturing.

In addition, as measures for reducing our environmental footprint, we engage in horizontal deployment of energy conservation diagnoses by facility experts from Japan to other sites around the world. We have worked hard to reduce CO₂ emissions and lower energy costs in the production domain from various perspectives, including developing equipment that uses regenerative energy* and devising *karakuri* systems which can automate work without using electricity.

* A process in which surplus energy produced by devices is converted into electricity and reused

Key initiatives going forward

A sustainable production structure

We will work to establish high-efficiency production and manufacturing technology that can outperform our competitors, by strengthening global mother plant functions, in order to develop a corporate structure centered on the manufacturing domain. To respond to the changes occurring in raw material/product mixes due to the shift toward EVs and the development of autonomous driving technology, we have recently established the new Production Technology Building at our Saitama Plant, where we will perform preliminary verification of new functions, construction methods, materials, productivity, and other areas. Meanwhile, we are stepping up our efforts to strengthen our verification systems and global communications regarding manufacturing and automation technologies. We are also working on restructuring our key production base in the Saitama district to establish a highly efficient production system. This involves revising the overall layout of the factories based on the flow of materials, as well as streamlining logistics costs and fixed expenses through the consolidation of production capabilities within the district, ultimately strengthening our profitability.

Quality

The automobile industry has seen a series of quality-related problems in recent years, a situation which is threatening trust in the industry as a whole. Since the products delivered by our Group are components of the highest importance for protecting human life, we cannot raise the corporate value of the Group unless our customers trust the quality of these products.

We are enhancing quality awareness across the entire supply chain by thoroughly implementing quality education, sharing improvement examples, and conducting awareness-raising activities that include our business partners. We are also strengthening our frontline areas by conducting verification meetings for process management and implementing improvement activities in collaboration with each production site. Quality is the lifeline on which our company depends. We aim to remain “A company sincerely appreciated by all” by working together across the Group to deliver top-level stability in the quality of our products.

Yoshiaki Kida

Operating Officer, Corporate Quality Assurance Division Executive General Manager



Basic Policies on Value Creation

- ▶ Providing safety and security to customers
- ▶ Delivering a stable supply of products with the same high level of quality worldwide
- ▶ Ensuring high-level stability in the quality of the products we develop and manufacture

SWOT Analysis

Strengths

- Quality control and assurance system based on international standards
- Development and horizontal deployment of quality-related measures through integrated management systems for quality data

Opportunities

- Optimizing the contents of inspections in line with the automation of production lines
- Increasingly sophisticated demands for quality assurance accompanying a trend toward multifunctionality in products
- Improve quality data precision and streamlining quality data management by using digital technology, and establishing processes which do not depend on human intervention

Weaknesses

- The need to develop quality assurance initiatives and secure human resources to deal with new customers
- Training of expert human resources for quality assurance is incomplete

Threats

- Greater scope of impact when quality defects occur as a result of part standardization
- Concerns that quality levels could decline due to intensifying competition to attract expert human resources
- Advanced software quality verification capabilities are needed to make high-value-added products to be installed in next-generation vehicles

Key initiatives for fiscal 2024

Strengthening quality management

In fiscal 2024, we worked to boost quality levels across the Group as a whole and stabilize quality at high levels, by assigning the Corporate Quality Assurance Division a leadership role in monitoring the quality assurance processes and verifying the operation of the quality improvement cycle across the various production sites, thereby strengthening quality management. We are also working to establish a system that allows us to prevent quality issues before they arise, by setting out the key management points for quality assurance and deploying these horizontally within the Group, and meticulously monitoring whether our various sites are successfully conducting quality assurance based on the correct processes. By utilizing digital technology and AI to extract latent quality issues from the quality data gathered through cooperation across our various sites, we are enabling rapid improvements and strengthening our quality management.

Key initiatives going forward

Enhancing quality assurance through awareness-raising and improving quality consciousness

Our aim is to upgrade the quality framework of the entire Group by ensuring the Corporate Quality Assurance Division works in cooperation with Group sites across the world. This will be done to boost the level of quality awareness at each site by continuously implementing standardized global quality assurance education and horizontally deploying improvement activities and their outcomes across the sites. We also intend to establish a robust quality framework across the entire supply chain by promoting quality improvement activities that include our business partners.

It is well documented that declining awareness of quality lies at the root of all quality issues. To address this, we will work together as a group to further boost quality awareness levels and ensure meticulous management. We are stepping up our efforts to build a quality management and quality assurance structure trusted by customers all over the world, and to ensure high-level stability in the quality of our products. In doing so, we will remain “A company sincerely appreciated by all” and whose presence is valued.

Examples of Value Chain-Related Initiatives

Further expansion of a new business, based on real understanding of the customer's needs—Suzuki SPACIA—

Introduced in November 2023, Suzuki Motor Corporation's new SPACIA and SPACIA Custom models feature rear seats made by TS TECH. As part of our efforts to secure this new commercial right, we placed particular emphasis on engaging with the Chief Engineer, who is responsible for model development on the customer's side. Our ability to directly propose a number of technologies based on our proprietary market research and advanced development efforts to the Chief Engineer was a key factor in securing the order.

What the customer had initially requested from us was improved convenience from seating. By eliminating the slight angling of the back of the seat (the storage compartment floor) which had previously been observed when the seat was folded down and which had been an issue in the previous models, we were able to realize a bigger cargo space. We also helped to deliver even greater convenience for users by developing the multi-use flap, created alongside Suzuki's development staff. This flap can be used not only as a leg rest but also as a “cargo stopper” when raised upright; the addition of this new function means that the rear seats are no longer merely places for sitting, but also function as “places where you can feel confident about stowing your cargo.” Thanks



to a structure which does not compromise comfort levels, these seats provide comfort as well as convenience—fulfilling the core values of our manufacturing.

Working with our customer on this project to push forward development has enabled us to develop seats that truly resonate with growing numbers of end users. We have also been approached by the customer about their next business, representing a major step forward in our efforts to achieve new business expansion.



The flap used as a leg rest



The seat used to store cargo

A large-scale project that started from the overall concept of “structural evolution”—Honda N-BOX—

Rear seats manufactured by TS TECH have been adopted for the new N-BOX model launched by Honda Motor Co., Ltd. in October 2023. The development of these seats was a major project spanning five years, driven by the key concept of “structural evolution,” after Honda informed its suppliers that it was “aiming for a higher level of production efficiency than before.”

We considered various improvement methods from a number of angles—specifications, manufacturing, cost, and the like—with the aim of delivering the higher production efficiency level that had been requested; one option was that of simplifying specifications. By cleverly adapting the seat design in ways that did not compromise the sense of quality,

we were able to reduce the number of places where outer upholstery layers needed to be stitched, reducing the number of processes involved in mass production.

The production line at the Group's Suzuka Plant, which handles production of these seats, underwent development that went beyond what had been done before. Multiple new functions were introduced into the production line for N-BOX seats, including the introduction of automated equipment for fastening of parts and external finishing (previously introduced separately for different models) and the re-examination of production processes. These efforts boosted the automation rate and delivered high-efficiency production for seat assembly processes, which traditionally have been considered difficult to automate.

As a result of these various improvement methods, this project successfully reduced the number of worker-hours required for assembly by 30% compared with previous models. Now, by horizontally deploying this know-how across our production sites in and outside Japan, we will ensure the establishment of high-efficiency production structures across the entire Group.



Automated equipment