Product/development strategies (Development and production company)

We enthusiastically manufacture products that will be selected, in concerted efforts of development, manufacturing, and purchasing divisions.

Hajime Odagiri
Representative Director & Senior Corporate Executive Officer,
General Division Manager, Development & Production Division

Message from the General Division Manager, Development & Production Division

The manufacturing environment has changed dramatically over the past few years. In such an environment, the role of ISEKI Group is becoming increasingly important. As society undergoes rapid changes and uncertainties about the future increase, the development and production company will manufacture products that will be selected, in concerted efforts of development, manufacturing, and purchasing divisions in accordance with medium- to long-term business and product strategies.

In the development departments, for the Japanese market, we will further strengthen our line-up of smart agricultural machinery that contributes to ultra-laborsaving and high-profit agriculture, as well as low-priced products for small-scale farmers, and products that meet the needs of the field crops and vegetable farming markets. In overseas markets, we will aim to strengthen our competitiveness and expand our brand through the development of products suitable for respective needs of the North American, European, and Asian regions.

In the manufacturing departments, we are promoting the establishment of optimal production systems in Japan and overseas to maximize utilization of management resources, including concentration of operations of production technology and outsourcing management to Head Office and launching expansion of production capacity in ISEKI INDONESIA.

In the purchasing departments, we have engaged in dialogue with our suppliers to build a fair and equitable relationships of trust, and practiced CSR procurement that takes into consideration the environment, society, and human rights.

The Development & Production Division focuses on two important themes in research, development, and production to realize a sustainable society. One is research and development of electrification products to address climate change, and the other is the enhancement of smart agricultural machinery utilizing cutting-edge technologies to realize smart agriculture. With the aim of further growth of our global development, we will work to develop and revitalize internal human resources, as well as actively work on frontrunner research and development to expand open innovation with Japanese and overseas companies, universities, and research institutions, deepen core technologies, and incorporate new technologies into new products in areas where future growth is expected.

Key points of the Mid-term Management Plan strategies

- Focus on regions, products, and growth markets, which are our strength
  - Response to large-scale farming
  - Response to brand expansion
  - Safety and environmental responses
  - Frontrunner development

ISEKI Group's initiatives in research and development

- Technological capabilities to create innovation
- Intellectual property strategies
- Development of specialized human resources in research and development and at production sites
- Joint research and development with research institutions and universities
- Brand power of combine harvester "JAPAN" and rice transplanter "Sanae"
- Dream Agricultural Research Institute (latest technologies)

Research and development policy

We conduct research and development in line with the four spirits as the engineer, upholding the mission of "contributing to society through agricultural machinery."

Spirits as the engineer

- Market ideas
- Exert all technical potential
- Always being one step ahead of the competitors
- Be totally dedicated to product philosophy

Research and development

Focus on regions, products, and growth markets, which are our strength

Product and development strategy under the Mid-term Management Plan (product development theme)

Social changes and issues

- Increase in size of farm business
- Diversification to field crops and vegetables
- Leasing of agricultural machinery
- Acceleration of smart agriculture
- Needs for low-priced products
- Creation of a decarbonized society
- Stable food production and supply
- Expansion of demand for landscaping
- Improved productivity
- Expansion of agriculture in the ASEAN and East Asian regions
- Lifestyle change

Domestic strategy <Response to large-scale farming>

- Strengthening of large to medium size, low price, smart agricultural machinery and products for field crops and vegetable farming
- Response to changes in agricultural style (contractor leasing)

Overseas strategy <Response to brand expansion>

- Strengthening of products for European and North American markets, which are our strength
- Strengthening of products for ASEAN
- Penetration of brand in China and East Asia

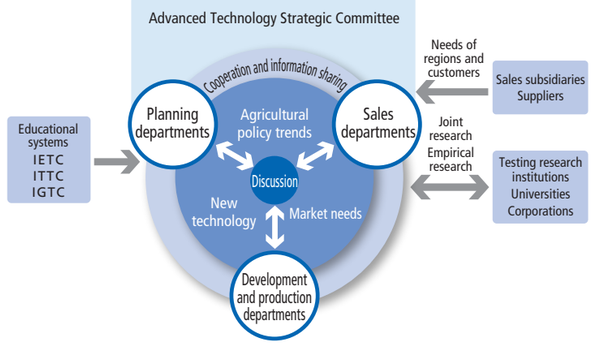
Common strategy <Safety and environmental responses/Frontrunner development>

- Promotion of environmentally-friendly design
- Measures to prevent farming accidents
- Electrification and hydrogen use
- Automation, robotics, use of agricultural ICT data, etc.
- Enhancement of emission regulations-compliant engines produced in-house

Research and development system

We have built a research and development system that displays collective power through collaboration among the planning, development, production, and sales departments, and determine the direction for the product strategy and research and development based on the market needs and market trends, and engage in speedy research and development. The Development & Production Division has strengthened the system related to the latest technologies and increased the number of personnel in the Green Innovation Promotion Section, to address environmental issues including decarbonization and smart agriculture. We are making up for any lacking technologies and human resources through human resources development and internal collaboration. We are also committed to educating engineers to promote research and development of electrification and agricultural machinery using hydrogen, automation, and robotics at IETC, a specialized educational institution for design technologies.

Research and development system



Expand research and development investment in priority strategic fields

Establish development themes that match sales strategies	We focus on product development incorporating new technologies such as automatic control and robot technologies as development themes for food security, field crops, and environmental responses. (Examples of development themes) Japan —— Smart agricultural machinery Data use Overseas — Electrification products for Europe Products to promote mechanization of agriculture in India and Asia
Forward-looking development	We aim to create successful products by setting forward-looking research themes, partnering with Japanese and overseas corporations, universities, and public institutions, and utilizing open innovation. Using technologies cultivated through electrification products and research, we will launch electrification products for professional use in the European landscaping market in response to environmental issues.
Investments in research and development	We are improving development productivity by allocating research and development man-hours to priority strategic fields. To that end, we are developing internal specialized human resources and expanding career recruitment. In addition, we will optimize the upstream development process for improved productivity and optimal placement of personnel.

Product/development strategies (Development and production company)

Structural reforms through establishment of an optimal production system

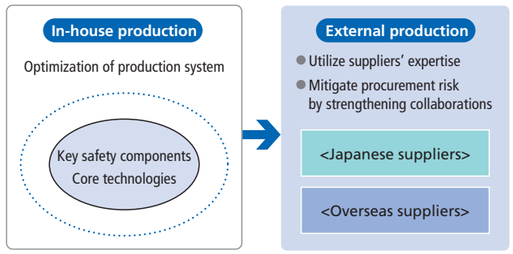
Domestic production system in Japan

Through structural reforms, we will aim for the further enhancement of quality and profitability.

At our Japanese manufacturing bases, we made capital investments aimed at QCD* improvement and worked to optimize the efficiency of the system from development to manufacturing. We have concentrated production technology functions to Head Office organization, and worked to reduce procurement risks by reviewing the in-house/external production categories and strengthening collaborations with Japanese and overseas supply chains.

*QCD (quality, cost and delivery)

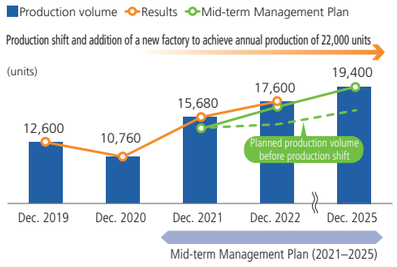
Optimization by reviewing the in-house/external production categories



Global production system

PT. ISEKI INDONESIA is a production base for strategic machinery for North America, Europe, and the ASEAN region, and produces tractors that meet the high quality, low price needs by capitalizing on the expertise it has acquired locally over many years. Production has increased steadily since 2014 when production was started. We are working to make capital investments and establish systems for lowering costs and increasing production through the optimization of suppliers for further expansion of business.

Main assembly line at PT. ISEKI INDONESIA

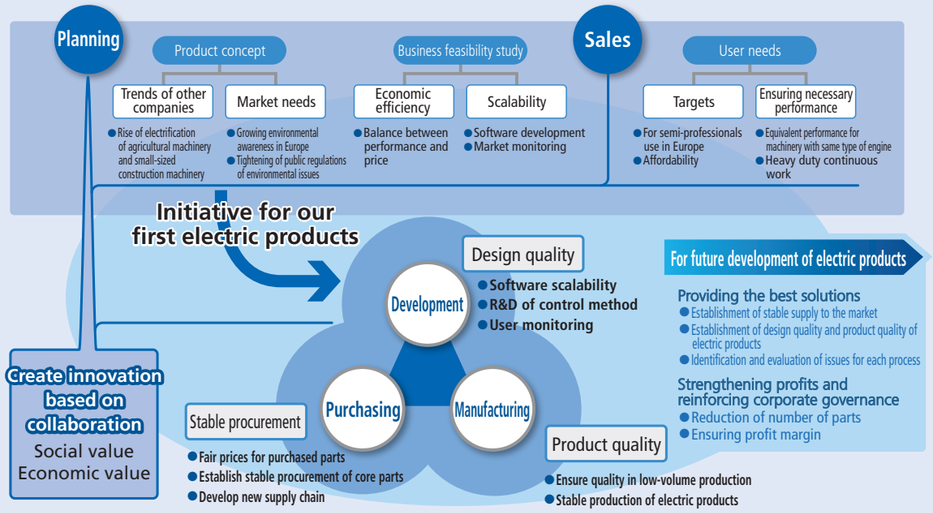
Production	Transform to a company with a lean and streamlined business structure by formulating and promoting optimization of production
Reconstruction of optimal production system	In order to optimize the placement of Group's personnel and improve productivity through the effective utilization of facilities throughout factories, we will reorganize component and unit production bases and product assembly and shipping bases to further promote our structural reform. We will work to reduce fixed costs through external production of low value-added components and processes while continuing in-house production of core technologies that have high added value and require the transmission of skills.
Establishment of systems for increasing production at PT. ISEKI INDONESIA	Since PT. ISEKI INDONESIA first started manufacturing tractors as a production base of low-priced tractors for the overseas markets in 2014, its production volumes have increased continuously as a result of expansion in the overseas business and an enhanced lineup of models. In addition, as part of the reconstruction of optimal production system, production of riding lawn mowers, which had been produced at ISEKI-Matsuyama MFG. Co., Ltd. (in Ehime Prefecture), has been shifted to PT. ISEKI INDONESIA, and production started in July 2022. We added a new factory building as an initiative to continue increasing production volumes by further expanding the overseas business and shifting more of our production, and full-scale operation began in June 2023. This addition has increased annual production volume from 18,000 units to 22,000 units. We will use this initiative at PT. ISEKI INDONESIA as a first step in accelerating our establishment of an optimal production system on a global basis and improving profitability. Production volume at PT. ISEKI INDONESIA and Mid-term Management Plan 
Improvement of product quality and productivity	Robotics and the introduction of facilities utilizing IT technologies can achieve productivity improvement and improved and stable quality, as well as improve the working environment and safety of workers. We can address personnel shortages at manufacturing departments by reducing manpower and increasing processing speed, and solve issues of securing human resources by reducing workload, as well as focus on higher value-added operations. We will horizontally deploy systems whose effectiveness has been confirmed at other manufacturing bases. Transmission of know-how of skilled workers has been an issue, and we will work to transmit skills and develop multi-skilled workers by enhancing education and training programs that utilize video materials in nurturing leaders of production sites and skill acquisition in Japan and overseas. **Case study** ISEKI-Matsuyama MFG. Co., Ltd. : reduction in manpower in the cylinder head processing line by using general-purpose robots ISEKI-Niigata MFG. Co., Ltd. : prevention of assembly error by introducing projection picking systems ● Please refer to p. 53 for more information on the projection picking systems.

Strengthening supply chain management

Purchasing	Strengthen purchasing power and engagement
Strengthen purchasing power and optimize procurement	We have strengthened our initiatives for optimal procurement based on central purchasing by integrating the Purchasing Department of Head Office and procurement departments of manufacturing subsidiaries. In order to address the recent sharp rise in raw material prices and difficulties in procurement, we will specially manage parts that require time for procurement and work to prevent delays in procurement of parts by placing orders in advance and securing safety stock. Furthermore, we are promoting purchasing and procurement in Japan to mitigate geopolitical risks. In addition, we will develop new suppliers to avoid dependence on specific suppliers, propose stable production plans, and strengthen communication with suppliers. In this way, we will prevent problems before they occur. By implementing these optimal procurement measures, we aim to avoid production loss and line stoppage risks and achieve stable production.
Engagement and CSR procurement	In order to build a fair and equitable relationship of trust with suppliers, we hold semiannual business report meetings, engagement through IR information meetings for vendors, as well as superior company tours and workshops. In addition to engaging in dialogue, we comply with the Act against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors, and are working to review and establish business terms and conditions with suppliers. We will practice CSR procurement that takes into consideration the environment, society, and human rights, with the understanding and cooperation of suppliers for decarbonization through our CSR questionnaires. ● Please refer to p. 65 for more information on our supply chain management and CSR procurement.

TOPICS — New value creation: development of electric riding lawn mowers

Electrification of products is one of our priority measures. We began limited sales of electric riding lawn mowers to the highly environmentally conscious European market in 2022. Through collaboration between development, manufacturing, and purchasing, we have established a series of processes, including accumulation of technologies and identification of European market needs, sales, production, distribution, and post-sales services. We will work on mass production based on future market evaluation.



Voices of person in charge of manufacturing ••• Naoto Matsunaga Production Engineering Control Department

In producing our first electric products, I had to take a training course for handling low-voltage electricity to handle large capacity batteries and other electric parts, where I learned about the dangers of electricity and safe operations.

As incorrect wiring during assembly would result in damage to the controllers, motors, etc., I was especially required to perform accurate work. Motor's resin cover is easily scratched when in contact with frame, so extreme care was required in handling the cover, and I prepared the repair paint from paint samples in advance. There were many electrical control checks, and I had a hard time performing tasks and inspections which I had not performed for conventional tractors, including inspection of a product while connecting it to a computer to check its condition.

I will apply know-how and work procedures gained through this production to the production of electrification products in the future.