

Special Feature 1: Business Model Characteristics

01 Ever-Evolving DANTOTSU Initiatives

Enhancement and Acceleration of Initiatives Pertaining to Three DANTOTSUs

Realization of DANTOTSU Value

DANTOTSU has been a keyword in Komatsu's business strategies throughout the 2000s.

In Japanese, this word expresses a level of excellence that is a cut above that of rivals, and this word rings with the same degree of strength found in Komatsu's mainstay construction equipment.

At Komatsu, we are accelerating initiatives pertaining to DANTOTSU Product, DANTOTSU Service, and DANTOTSU Solution while enhancing and evolving these initiatives to realize DANTOTSU Value (a positive cycle of resolving ESG issues and improving earnings through the creation of value for customers).

DANTOTSU Product Pursuit of New Heights of Quality and Value

Komatsu refers to products with features in safety, environmental friendliness, ICT, and productivity to which no competitors can catch up with in the next several years as DANTOTSU products.

By taking the technological advantage of in-house development and production of key components and through seamless coordination between development, production, and suppliers in product development, we have been able to introduce the world to numerous industry-leading products. Today, we are developing automation, autonomous, electric, and remote-control technologies to create next-generation DANTOTSU products that contribute to the realization of the safe, highly productive, smart and clean workplaces of the future.

Case Examples

Hybrid Hydraulic Excavators

(2008)

Komatsu launched the first hybrid hydraulic excavator for market sale in 2008. By equipping these excavators with proprietary developed systems, we have succeeded in achieving reductions in CO₂ emissions and fuel consumption of more than 20%. In 2016, we began expanding our lineup of 30-ton class models to complement the existing 20-ton class models. To date, an aggregate of approximately 5,000 Komatsu hybrid hydraulic excavators have been sold in 40 countries worldwide.



Environment

ICT-Intensive Models

(2013)

The world was introduced to Komatsu's first ICT-intensive model, an ICT-intensive bulldozer, in 2013. This was the first piece of equipment in the world to feature automated blade control for processes ranging from rough dozing to finish grading. Meanwhile, our first ICT-intensive hydraulic excavator was launched in 2014. The bucket teeth of this excavator are automatically maneuvered along the target surface to enable the operator to continue excavating without worrying about overcutting.



ICT

Electric Mini Excavators

(2020)

Rentals of electric mini excavators were commenced in April 2020. These excavators feature excavating capacity equivalent to that of engine-powered excavators coupled with zero emissions and greatly reduced noise pollution. Anticipated to be used for indoor and nighttime construction, we will work to popularize and expand use of these excavators, which are friendly both toward the environment and people.



Environment

Human Detection & Collision Mitigation System

(2019)

Our proprietary KomVision Human Detection & Collision Mitigation System was introduced into the Japanese market in December 2019 as a standard feature on hydraulic excavators, an industry first. When the system detects a person while driving or turning, it will stop the equipment to contribute to reduced accidents from collisions with people.



Safety

DANTOTSU Service

Visualization of Operating Status and Reduction of Lifecycle Costs

Komatsu develops a value chain business in which it pursues reduction of lifecycle costs by means of the visualization of machine operations and multifaceted customer support that begin when new equipment is delivered and continue through to machine maintenance, parts supply, overhauls, and finally trade-ins of used equipment.

Case Examples

ICT-Powered Lifecycle Support

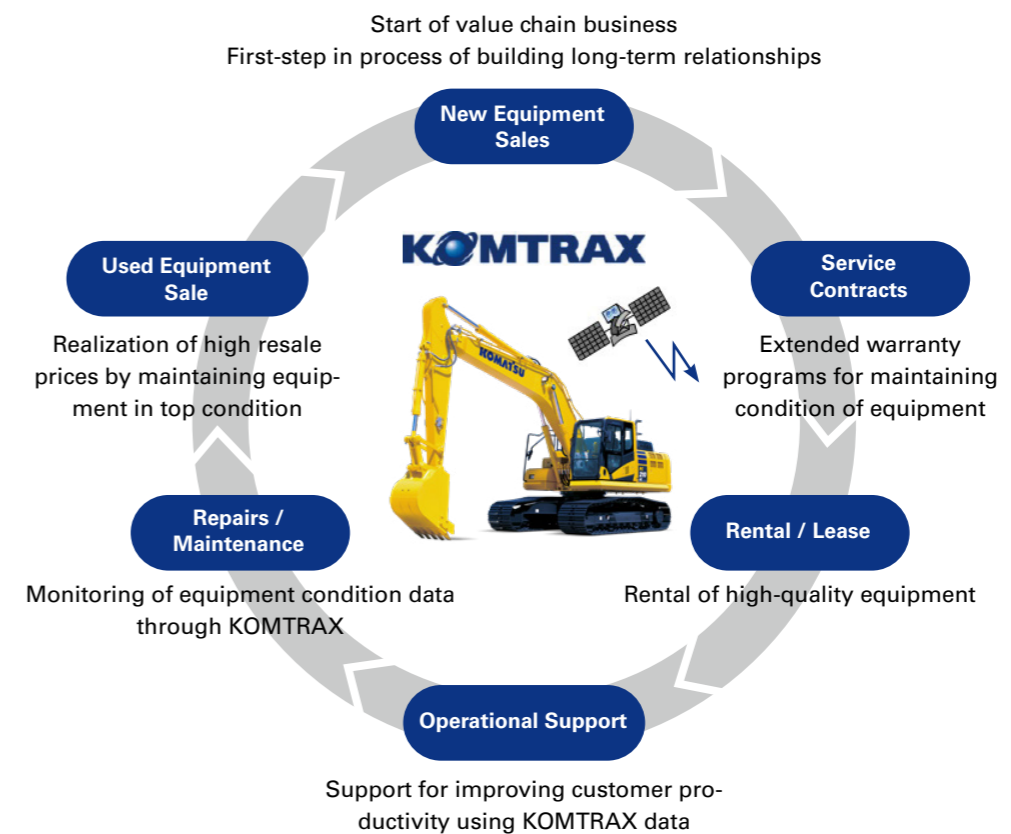
Business Model Encompassing Everything from New Equipment Sales to Trade-Ins of Used Equipment

Komatsu installs the KOMTRAX (Komatsu Machine Tracking System) remote management system on its products as a standard feature. This system tracks information on equipment condition and operating status along with other metrics. By using this information to propose measures for supporting fuel-efficient operation and reducing maintenance costs, we are able to help customers increase the operating ratios and lower the maintenance costs of their equipment.

In addition, we are enhancing the extended warranty programs we offer on a global basis. Through these programs, we aim to raise the rate of equipment for which we continue to provide services and offer ongoing support to customers by encouraging them to use genuine parts to keep their equipment in top condition and offering trade-ins that realize high resale prices when they no longer need a piece of equipment.

Moreover, we are planning the launch of a next-generation KOMTRAX system. This system will make greater contributions to improvements in customer productivity by enabling them to acquire the data they desire via smartphone applications.

Comprehensive Lifecycle Support Leveraging Komatsu Group's Collective Strength to Enhance Customer Relationships



Komatsu's Business Model

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▶ DANTOTSU Product

▶ DANTOTSU Service

▶ DANTOTSU Solution

DANTOTSU Solution

Workplace Solutions Provided Using ICT

Komatsu utilizes cutting-edge ICT to facilitate the visualization of construction by compiling data on all people, equipment, and materials at workplaces. We thereby aim to help improve the safety of customer workplaces, shorten construction periods, minimize costs, and otherwise optimize construction. This is the DANTOTSU Solution Komatsu aspires to deliver.

By promoting digital transformations in construction, we aim to create the safe, highly productive, smart and clean workplaces of the future together with customers.

Case Examples

World-First Autonomous Haulage System Launched in 2008
Safe, Efficient, and Coordinated Operation Achieved through Fleet Management System

In FY2019, we worked toward our goal of deploying 41 units of our latest model of super-large dump trucks, which can be retrofitted with the Autonomous Haulage System (AHS) to be operated autonomously, in the Pilbara region of Western Australia. At Northern Brazil's Carajás iron ore mine, which is one of the largest in the world, in addition to taking steps to deploy 37 of the super-large dump trucks and introduce AHS, we opened Komatsu's first "AHS Training Center" in the vicinity of the Carajás mine and promoted activities to provide training over a wide area of northern Brazil in relation to AHS operations and maintenance. Since its commercial launch in 2008, a total of 221 AHS-equipped vehicles have been deployed in Australia, North America, and South America (as of March 31, 2020).



Acquisition of Mine Operator Training Company
Contributions to Safe and Productive Mine Operations

In July 2019, the Company acquired Immersive Corporation Pty Ltd, a mine operator training company. Immersive develops, manufactures, and sells mining equipment simulators for training machine operators for surface and underground mines. Immersive also offers educational programs using simulators and provides training solutions by proposing improvements. The inclusion of Immersive's solutions into our lineup has made us even better poised to contribute to the improvement of safety and productivity and the optimization of operations at customer mines.



02 Global Component Recycling
Reman and Rebuild Operations

Reuse and Recycling Business Made Possible by In-House Development and Production of Key Components

Komatsu Group develops global remanufacturing ("Reman") operations in which it restores the engine and transmission components collected during regular replacements to the same status as if they were new so that these products can once again be sold on the market. Restoring these products entails a process with various steps including disassembly, washing, parts replacement, reassembly, painting, and shipping inspections. The restoration of components through Reman operations has the following benefits for customers.

- Guaranteed quality and performance on a level with new products
- Lower prices than new products
- Shorter equipment downtimes through supply of appropriately stocked Reman components
- Resource conservation and waste reduction through component reuse and recycling

Reman operations are a strength of Komatsu made possible by in-house development and production of key components.

Rebuild operations involve replacing perishable parts inside components with new parts whereas Reman operations involve recycling and reusing perishable parts to contribute to greater resource conservation and waste reduction amounts.

Case Examples

Two Global Bases

To provide customers worldwide with Reman components, Komatsu has established two global bases, one in Indonesia and one in Chile. The base in Indonesia handles engine, transmission, and hydraulic cylinders for large-sized construction equipment while the base in Chile is responsible for components for electric dump trucks. Components that have been collected from around the world and restored are then stocked at the global bases to be shipped to locations across the globe as necessitated by demand. In addition, Komatsu has 13 regional Reman and rebuild bases around the world.



Sharing of Reman Techniques through Network to Facilitate Quality Improvements and Development

Our Reman bases are linked through a network that allows for information on the necessary Reman techniques to be shared on a global basis. In addition, the restoration history of Reman components is managed via IC tags and 2D-barcode to track information on component durability and allow for important information for developing components with optimal lifespans to be fed back into the development process.



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03 Flexible Global Production and Procurement Systems

That Are Resilient to Demand and Foreign Exchange Fluctuations and Responsive to Wide-Ranging Market Changes through Global Cross-Sourcing

Characteristic 1: Global Cross-Sourcing

Komatsu has positioned assembly factories in the major markets it supplies and produces the same models at multiple factories. This system enables the Company to practice cross-sourcing while manufacturing products in the optimal locations with consideration for demand and foreign exchange fluctuations as well as the need to evenly distribute production load. Komatsu also has global cross-sourcing systems in place for part procurement. In this manner, we have made it possible to maintain supply chains no matter how markets may change.

Mid-Sized Hydraulic Excavator Cross-Sourcing

Produced in nine countries

Japan, United States, United Kingdom, Brazil, China, Thailand, Indonesia, Russia, India



Benefits

1. Responsiveness to foreign exchange fluctuations
2. Responsiveness to production fluctuations
3. Reduced costs
4. Effective utilization of production capacity
5. Minimized investment

Necessary Conditions

1. Base equipment standardization
2. Production management system standardization
3. Production and design bill of materials standardization
4. Manufacturing process and quality requirement standardization

Characteristic 2: Balanced Development of Global Operations

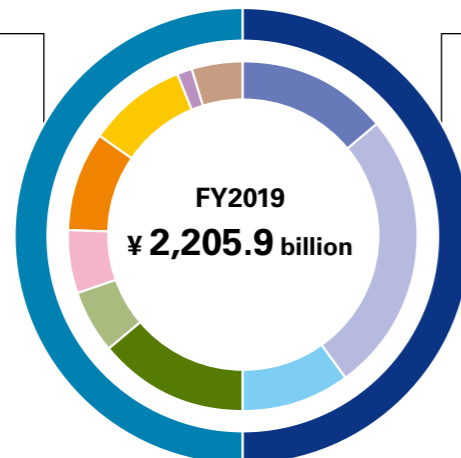
Komatsu establishes worldwide sales and services systems and utilizes the strength of its flexible production and procurement systems to develop its global operations while maintaining close ties with customers and local communities.

FY2019 Construction, Mining and Utility Equipment Business Sales (to Outside Customers) by Region

Strategic Markets

50%

Latin America	¥309.2 billion
CIS	¥127.4 billion
China	¥127.0 billion
Asia	¥205.7 billion
Oceania	¥203.3 billion
Middle East	¥30.6 billion
Africa	¥98.2 billion



Traditional Markets

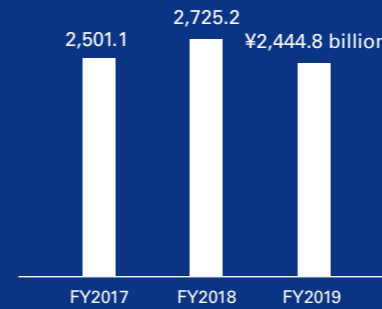
50%

Japan	¥310.8 billion
North America	¥573.5 billion
Europe	¥219.7 billion

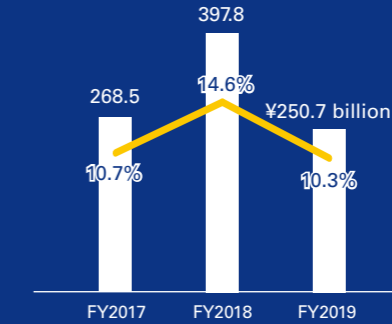
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Business Segments

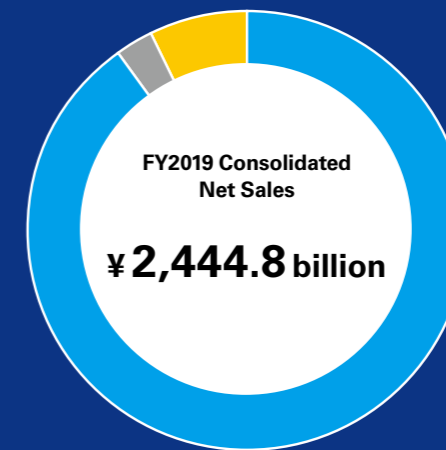
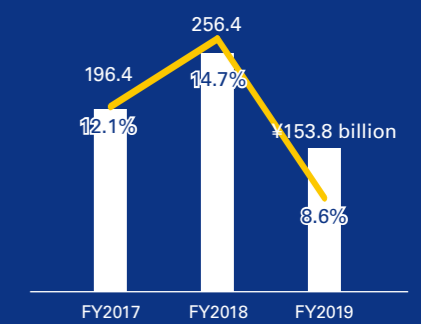
Consolidated Net Sales



Operating Income / Operating Income Ratio



Net Income Attributable to Komatsu Ltd. / Return on Equity



Construction, Mining, and Utility Equipment Business

¥2,205.9 billion

Komatsu supplies a wide range of products, services, and solutions including construction and mining equipment for use in construction and mining workplaces around the world as well as forklift trucks, forest machines, recycling equipment, and tunneling machines. We have established a position as the international leader in the construction and mining equipment field by delivering unrivaled quality and technological innovation together with this full lineup.



Dump truck

Retail Finance

¥62.9 billion

Komatsu conducts a retail finance business aimed at helping reduce customers' funding burdens and otherwise assisting in the purchase of its products. Our strengths in this field include the prevention of overdue debt through effective utilization of KOMTRAX (location information, operating status information, engine locks, etc.) technologies, swift credit screening, and competitive financing conditions. These strengths have enabled us to build long-term relationships with customers.

Industrial Machinery and Others

¥175.9 billion

The industrial machinery and others business stands alongside the construction, mining, and utility equipment business as a core business of Komatsu. Offerings in this business include the large presses used to mold automobile hoods and side panels as well as sheet-metal machines, machine tools, and light sources for semiconductor lithography systems (excimer lasers). In this business, we also contribute to the business activities of various customers through production of specialty equipment for Japan's Ministry of Defense.



Large press