



## 2011 Porter Prize Winners

Komatsu, Construction, Mining and Utility Equipment Division	(Earth-moving equipment)
Mitsubishi Rayon, MMA Business Complex	(Chemical products)
Plan-Do-See, Bridal Services Business Unit	(Wedding services)
Star Mica, Pre-owned Condominium Division	(Real estate)
(Recipients are addressed in no particular order.)	

### Selection Criteria

The essence of strategy is to do things differently from others. Based on this premise, the Porter Prize recognizes those companies and business units that have chosen to compete in a distinctive way in a particular industry by delivering a unique value proposition, based on innovations in products, processes, and ways of management.

#### First-stage Selection Criteria

- (1) Superior sustainable profitability within the industry
- (2) Unique/different value proposition
- (3) Strategic continuity over time
- (4) Innovations that enable the strategy

#### Second-stage Selection Criteria

- (5) Utilization of capital analysis
- (6) Distinctive value chain
- (7) Trade-offs
- (8) Fit across activities

Note: In the analysis of capital utilization, the key focus will be placed on ROIC (Return on Invested Capital) and ROS (Return on Sales). The following report of the winners includes these numbers in comparison with the industry averages. A positive difference from the average indicates the capital utilization of the company/business is better than the industry average. The five-year average is calculated by aggregating the numerators divided by the aggregated denominators. Thus, the derived five-year average is not equal to the simple average of the ratio for each year. The data that is used in calculating the industry average was obtained by carefully selecting truly comparable companies among those classified as being in the same industry.

## **Selection Rationale (Recipients are addressed in no particular order)**

### **Komatsu, Construction, Mining and Utility Equipment Division**

**A strategy modeled on farming is employed throughout the value chain, from supplier management to after-sales services**

#### Industry background

The earth-moving equipment industry is led by Caterpillar and Komatsu. Caterpillar and Komatsu have the broadest product lines, the most extensive services, and global coverage.

The earth-moving equipment market consists of two segments. One is the mining machinery segment and the other is the construction machinery segment.

The global mining machinery segment is served predominantly by Caterpillar and Komatsu. This is because there are several global customers who require an extensive service network in addition to technological know-how.

The construction machinery segment is more fragmented. Its main players are Caterpillar (U.S.), Komatsu (Japan), Hitachi Construction Machinery (Japan), Doosan (South Korea), Volvo Construction Equipment (Sweden), Hyundai (South Korea), Kobelco (Japan), Case New Holland (the Netherlands), and Sumitomo Construction Machinery (Japan). In China, the number of local players is growing, and include companies like SANY.

Product-wise, earth-moving equipment includes seven major products: crawler-based hydraulic excavators, wheel-based hydraulic excavators, bulldozers, wheel loaders, motor graders, dump trucks, and articulated dump trucks.

Komatsu's strategy is described as a "farming" model for the following two reasons. First, Komatsu has created a competitive strategy that prevents the commoditization of its products and generates profits throughout the entire product life cycle. Second, its implementation is supported by activities that involve the nurturing of capabilities and therefore require a patient investment.

Its unique activities include the in-house development and manufacturing of key components that are critical to product performance, the building of dynamic relationships with suppliers, the global standardization of products and components, the installation of the KOMTRAX (Komatsu Machine Tracking System) as a standard product feature, and the development of a dealer network from scratch (in China, among other countries). This unique combination of activities has resulted in technological leadership, low inventories, effective and efficient after-sales service, better control of accounts receivable, better utilization of the machinery, and an improvement in the machinery's resale value.

Komatsu, with consolidated net sales totaling 1,843 billion yen in 2010 (\$22,206 million), is the second-largest manufacturer of earth-moving equipment after Caterpillar (company sales totaled \$42,588 million in 2010).

### **Unique Value Proposition:**

Komatsu's products are almost as expensive as Caterpillar's and more expensive than those of other competitors. However, when the cost of ownership is compared, Komatsu's products are less expensive due to low downtime, low maintenance costs<sup>1</sup>, and the high resale price of used products.

Komatsu targets a broad range of customers. In the mining segment, its customers are large companies that develop natural resources around the world. In the construction segment, its customers are sometimes large construction companies, sometimes tiny companies, and sometimes even individuals, which is the most common case in China. The diversity of the customer portfolio implies a high cost. However, as earth-moving equipment requires maintenance, once Komatsu sells a machine to a customer, it can enjoy a long-term relationship with that customer. And Komatsu has many unique means for enhancing its relationship with customers.

Geographically, Komatsu has the largest market share in China and in Asia. Komatsu categorizes China, Asia, Oceania, Central and South America, the Middle East, Africa, and the former Soviet Union countries as "Strategic Markets," compared with the "Traditional Markets" of Japan, the U.S., and Europe. Sixty-seven percent of Komatsu's sales in 2010 came from Strategic Markets.

Komatsu provides its customers with: 1) environment-friendly products and operation; 2) safety; and 3) new services, supported by operational data made available through its proprietary ICT systems. Komatsu equips its construction machinery with the KOMTRAX (a remote equipment monitoring system) as a standard feature, not an optional one.<sup>2</sup> The KOMTRAX uses a global positioning system (GPS), and can send data to Komatsu's data center through a satellite communication system. Komatsu and customers can learn where a particular machine is located and how many hours it has been working, and can determine when parts should be replaced. Komatsu and its dealers use this data to recommend maintenance services, control inventory, and advice customers on how to use the machine more effectively.

Komatsu provides such benefits to customers so that they will be unable to operate without Komatsu, and so that the customers will want to grow their businesses with Komatsu. One such example is the autonomous haulage system, which Komatsu was the first in the world to commercialize. A mining company in Chile, for example, could not operate without Komatsu.

### **Unique Value Chain:**

**R&D:** Komatsu's product development policy calls for DANTOTSU, which means being the best by far in some important performance features or specs. This makes it difficult for competitors to catch up, as it would take them several years, and at the same time helps to improve profitability significantly. The DANTOTSU product development approach prioritizes among performance features, and identifies places where it does not compete with its competitors, to make room for investment in the critical performance features.

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<sup>1</sup> The lifetime maintenance cost for a construction machine is several times larger than the purchase price of that machine.

<sup>2</sup> Komatsu started to equip its machines with the KOMTRAX as a standard feature in 2001. As of September 2011, 240,000 machines in about 70 countries were equipped with the KOMTRAX. Now, the company is equipping some key components and mining machines with the KOMTRAX.

It puts emphasis on: 1) environmental friendliness, 2) safety, and 3) ICT. As for environmental friendliness, the U.S., the EU, and Japan impose exhaust restrictions on construction machinery. Regarding safety, it is one of the most important factors for customers. With respect to ICT, Komatsu uses ICT to create value, which was explained above in the Value Proposition section.

Manufacturing operations: Komatsu concentrates the development and manufacturing of key components in Japan, while engaging in assembly at production facilities in local markets.

Komatsu assigns a “Mother Plant” for each product. Mother Plants have a product development function, in addition to taking responsibility for the improvement of operations at Child Plants.

Komatsu standardizes its products worldwide. It also standardizes its parts list among plants worldwide. This enables Komatsu to commence production of new products simultaneously at various plants around the world, or move the production of one product to another plant very easily. As a result, Komatsu can quickly move production from Plant A to Plant B to level out production volumes, minimize fluctuations in output, and absorb the impact of exchange rate fluctuations.

Procurement: Komatsu’s policies toward suppliers are based on the “win-win” and the “same boat” approaches. Komatsu shares production plans with suppliers and allows them to participate in its internal human resource development programs. Japanese suppliers are organized into the Midori Kai, and they are encouraged to get to know each other well. At the same time, Komatsu has its suppliers compete with each other. For example, it awards orders to the company that has submitted the best proposal, and then sticks with that supplier until the next model change.

Supply chain management: Komatsu checks the sales figures of dealers worldwide on a real-time basis. This data is combined with other data related to production and inventories at plants, distributors and dealers to keep total inventory low. Accessing these figures in real time for all operations worldwide is possible for Komatsu because it has installed the KOMTRAX system in its construction machinery as a standard feature. Komatsu has already succeeded in reducing distributor inventory to zero in Japan, China, North America, India, Thailand, Indonesia, and Brazil.

Marketing and sales: Komatsu makes it a priority to provide various services to support customers throughout the lifecycle of its products. Such services include the supply of replacement parts and re-manufactured components, retail finance, equipment rental, and the sale of used equipment. By offering customers a wide range of services to choose from when they purchase new equipment, Komatsu achieves differentiation from its competitors and thus avoids pricing competition.

In China, Komatsu has developed its own sales network by recruiting local entrepreneurs. Although it takes time to develop a network of local dealers from scratch, these dealers tend to have better access to local information and business opportunities.

After-sales service: Komatsu positions the after-sales service (provided by dealers) as a system through which to keep new products selling.

Komatsu dealers provide customers with advice on how to improve the utilization of machines based on an analysis of the data obtained from the Komatsu machines through the KOMTRAX. Dealers also contact customers, recommending parts replacement and maintenance services based on the usage data obtained from each machine through the KOMTRAX.

Komatsu has been working to train service personnel in emerging countries, where sales are growing rapidly. Komatsu maintains support centers at its distributors around the world. At these overseas support centers, Japanese expatriates provide training and support to the service personnel at local distributors. In China, Komatsu develops service engineers through Shandoong Jiaotong University, with which the company has a partnership. In the Philippines, Komatsu has opened an educational center for service engineers (mainly for mining equipments). From this educational center Komatsu dispatches service representatives to various parts of the world. For the mining segment, Komatsu provides service 24 hours a day, 365 days a year.

**Human resources management:** In seven out of eleven countries outside of Japan, the top management positions at its manufacturing entities are staffed with local personnel, who have been working for Komatsu for more than ten or twenty years, and who share the core corporate values, known as “The KOMATSU Way.” Komatsu considers leaders’ actions, such as visits to the factory floor, crucial to the achievement of strong manufacturing capabilities, and has learned that changing employees’ mindsets and behavior takes time.

**General management:** Komatsu employs Standard Variable Margin (SVM) as a way to control costs. This approach uses variable costs as a means of comparing the productivity of various plants.

### **Fit among Activities**

At Komatsu, activities are selected and coordinated around: 1) customer relationship management that aims to enhance the customer relationship to the point where Komatsu becomes indispensable to the customers’ operations; 2) product development activities that aim to develop DANTOTSU products and services; 3) flexible manufacturing; and 4) the visualization of information. These activities are supported by the sharing of The KOMATSU Way and activities that encourage teamwork. (Please refer to Komatsu’s activity system map, which appears at the end of this report.)

### **Innovation that Enabled Strategy**

- The DANTOTSU policy
- Made the KOMTRAX a standard feature for all its construction machinery.
- Extensive use of ICT, such as the KOMTRAX, throughout its value chain.
- The information obtained by the KOMTRAX is used not only to improve Komatsu’s operations but also to improve the operations of its customers and business partners. Komatsu had this idea earlier and developed an access system specifically for customers.
- Product innovation 1: the hybrid hydraulic excavator launched in 2008 (the first in the world).
- Product innovation 2: the autonomous haulage system launched in 2008 (the first in the world).

### **Consistency of Strategy Over Time**

The core components of Komatsu’s strategy are the promotion of a “win-win” relationship with its business partners; a commitment to technological innovation and quality; and global expansion. These core components are supported by visualization efforts and an investment in people. Among these, “the commitment to technological innovation and quality,” “global expansion,” and “investment in people” have been stated in Komatsu’s corporate philosophy since its foundation in 1921.

These have served as a foundation for global business development in the 1990s, when Komatsu began investing in China and other Asian countries, while undertaking M&As in the U.S. and Europe. In the latter half of the 1990s, Komatsu standardized its ICT system at the global level. It also streamlined its

product mix. It developed a base for highly profitable operations by reducing the complexities of operation that result from global expansion. Finally, it connected its value chain and its business partners' value chain to create value by utilizing the KOMTRAX, which was first introduced in 2001.

### Trade-offs

- Does not accept conformity with products of merely acceptable quality. Aims to produce only DANTOTSU products, featuring exceptional quality.
- Does not increase its product mix in response to customer requests. Komatsu restructured its product mix in 2001, and halved the number of product development projects. Komatsu decided to focus on the areas in which it has a competitive advantage.
- Does not have multiple brands for use in the introduction of low-end models or regional models.
- Uses a standardized parts list worldwide, which allows it to conduct global operations efficiently.
- Does not rely on head-hunting. It cultivates human resources internally.
- Does not pursue market share. Does not discount just to increase sales. Does not push inventory to dealers to increase sales.
- Does not diversify into other business areas where Komatsu is unable to differentiate itself with original technology.

### Profitability

Both return on invested capital and return on sales exceed the industry average.

Note: The financial performance figures provided by Komatsu are the consolidated, corporate-level results, not the figures for individual business segments. The Construction, Mining and Utility Equipment business segment accounts for 87.7% of total sales (2010), and has higher profitability than the other business segment. A comparison with the industry average was made with the company-level figures, which are less profitable than the figures at the business-segment level.

#### Komatsu, Construction, Mining and Utility Equipment Division

Return on invested capital (ROIC) (Unit = percentage point)

Difference from industry average over 5 year period	Difference from industry average, by year				
	2006	2007	2008	2009	2010
7.8%P	6.7%P	13.4%P	2.2%P	7.8%P	9.9%P

Inter quartile range (IQR) = 6.7% P

Return on invested capital = Operating income / Average invested capital

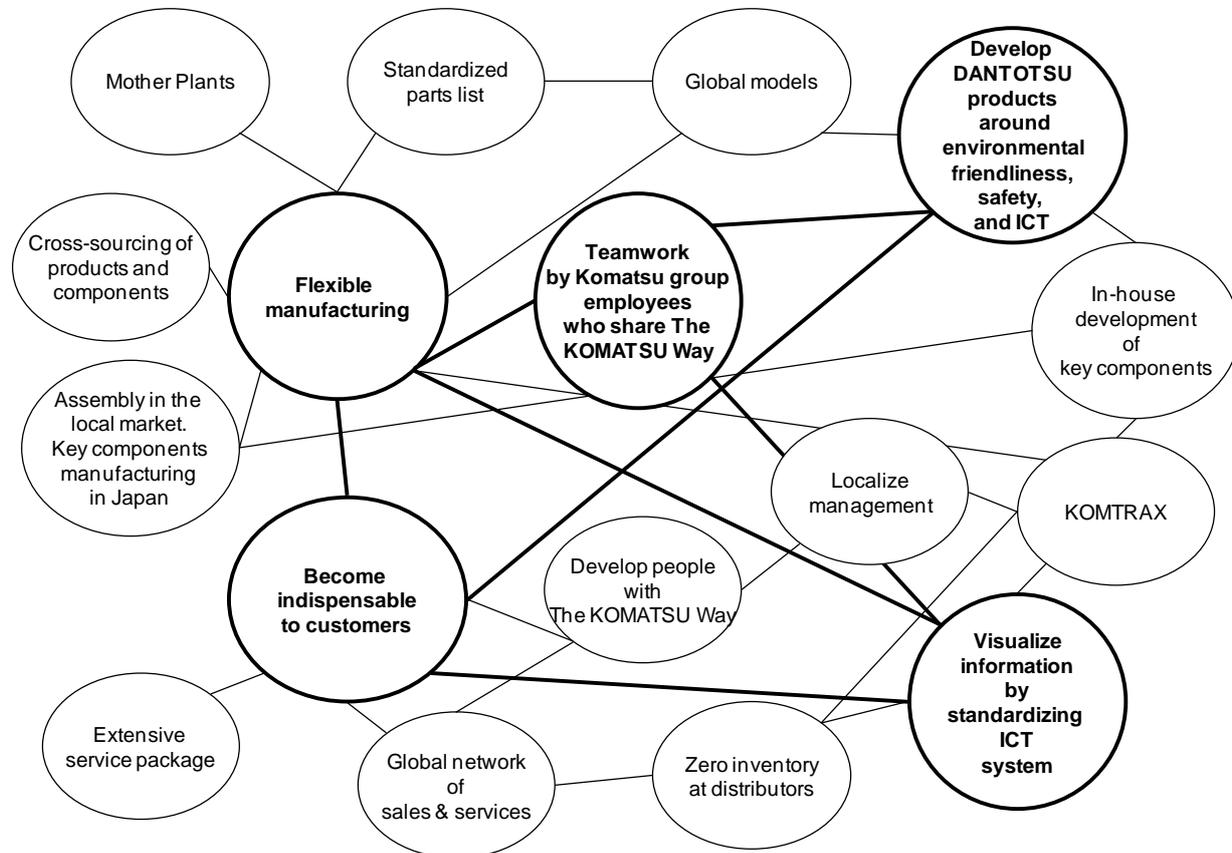
Return on sales (ROS) (Unit = percentage point)

Difference from industry average over 5 year period	Difference from industry average, by year				
	2006	2007	2008	2009	2010
5.9%P	4.3%P	5.3%P	2.4%P	8.5%P	8.6%P

IQR = 7.2% P

Return on sales = Operating income / Net sales

**Activity System Map of Komatsu, Construction, Mining and Utility Equipment Division**



## **Selection Rationale (Recipients are addressed in no particular order)**

### **Mitsubishi Rayon, MMA Business Complex**

#### **Global leader in methyl methacrylate (MMA), with both economies of scale and scope and technological leadership**

##### Industry background

MMA (methyl methacrylate) is highly transparent, flexible, and weather-resistant. It has many applications, and sales of this product are expected to grow around 5% annually. It is categorized as a semi-commodity, and MMA monomers accounts for 3% of Japan's domestic production of petrochemicals.

Industry players generally focus on either the upstream products (monomers) or the downstream products (polymers and processed products) of the product value chain. Companies that focus on the downstream products tend to specialize in particular product areas.

The size of the global market for MMA monomers in 2010 was about 3 million tons, with Asia accounting for 56% of production, followed by the U.S. with 23%, and Europe with 21%. In the high growth Asian market, ten companies have MMA monomer plants, in the U.S., three, and in Europe, three. Only Mitsubishi Rayon and a German company have monomer plants in the U.S., Europe, and Asia.

Mitsubishi Rayon's MMA Business Complex (hereafter, Mitsubishi Rayon) has developed a vertically integrated product value chain — a start-to-finish MMA production system that ranges from the production of MMA monomers to polymers and processed products.

It has the largest production capacity for MMA monomers in the world, and supplies MMA monomers to its customers from the nearest overseas production site. It has developed resilience against raw material price fluctuations thanks to the use of three different kinds of proprietary manufacturing process technologies. It can also minimize the impact of fluctuations in demand by flexible planning of a broad asset portfolio. It can thus provide customers with a stable product supply and the convenience of "one-stop shopping," thanks to its broad product line.

In the downstream products (MMA polymers and processed products), Mitsubishi Rayon differentiates itself through technological leadership. Many of these products are ones that only Mitsubishi Rayon can offer.

By setting a target ratio for in-house use of monomers, Mitsubishi Rayon has internally embedded in its strategy the dynamics required for business growth.

### **Unique Value Proposition**

Mitsubishi Rayon's MMA product line is the broadest in the industry. It produces MMA monomers, polymers, and processed products. 1) Monomers include: MMA, methacrylic acid and methacrylic esters, which are used in paints, adhesives, and plastic modifiers. 2) Polymers include: a) methacrylic molding materials, b) plastic modifiers, and c) methacrylic sheets — e.g., the sheets used as light guide panels for LCD backlight units, light emission and diffusion panels for LED light sources, scratch-resistant surface-hardening panels for small LCD screens for mobile phones, d) methacrylic film — when laminated on the surface of other materials, it improves external appearance, ultraviolet light resistance, and the durability required for outdoor use (applications include the surface of traffic lights, automotive interiors, construction materials), and e) methacrylic coating materials — e.g., UV curable super-hard coatings for automobiles and the coating material used for optical disks. 3) Processed products include plastic optical fibers and rod lens arrays. Plastic optical fibers are lighter and more flexible than glass fibers. They are not affected by electromagnetic noise, and are used for the in-car wiring of cars (mainly in Europe). Rod lenses are cylindrical-shaped lenses that are used as reading devices for facsimiles, scanners, and multifunction copiers. They are replacing rod lenses made of glass.

Some of the aforementioned products where Mitsubishi Rayon has clear leadership include plastic optical fibers, rod lens arrays, extra-thin methacrylic sheets (0.5-1.2 millimeters thick), and methacrylic sheets for aquarium tanks (extra-thick).

There is a synergistic effect among MMA products. The company can transfer production know-how across products. Also, in R&D, there are economies of scope. Knowledge in monomers helps in the development of new materials downstream.

Mitsubishi Rayon's customers are in such industries as automobiles, coatings and adhesives, construction materials, information technology, and household appliances.

Mitsubishi Rayon's mission is to support the growth of its customers. It has the largest production capacity for MMA monomers and the broadest product line in the industry. It has production sites in Europe, the U.S., and Asia, and is thus able to supply customers with whatever, whenever, and from wherever they want.

Mitsubishi Rayon's value proposition to its customers is: 1) the convenience of one-stop shopping. This is helpful for customers who are working to centralize procurement. The company can also provide information regarding demand forecasts for various products. 2) Global supply. Customers are integrating and relocating production to reduce costs. It is often less expensive to supply from the bases located closer to the customer's production sites. 3) Supply of unique products that other players can't offer. 4) Having broad technological knowledge in-house allows Mitsubishi Rayon to propose technological solutions to customers.

### **Unique Value Chain**

Mitsubishi Rayon has two autonomous value chains. One value chain is comprised of Mitsubishi Rayon's traditional operations, and the other is Lucite.<sup>3</sup> Mitsubishi Rayon calls the former the "MMA

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<sup>3</sup> Mitsubishi Rayon announced its intention to acquire Lucite, a leading MMA specialist headquartered in the U.K., in November 2008, and finished the acquisition process in May 2009.

block” and the latter, the “Lucite block.” Both are vertically integrated, with operations ranging from monomer production to polymers. Both blocks have several divisions<sup>4</sup>, and these units are interdependent on each other, as one unit’s output is another unit’s input. Traditionally Mitsubishi Rayon sets a target ratio for the in-house use of the monomers it produces (a maximum 50% of total production).

**R&D:** Mitsubishi Rayon’s core technologies are polymerization technology, precision forming technology, and optical design technology.

Although “technology push” is a popular approach in R&D in the chemical industry, Mitsubishi Rayon’s technological development has been stimulated by input from sales, which helps researchers to understand customers’ needs, especially with regard to cost reductions and other specific functions.

**Procurement:** By integrating procurement with Lucite, Mitsubishi Rayon has lowered its procurement and logistics costs significantly. According to the company, total cumulative cost reductions since the completion of Lucite’s acquisition in May 2009 have reached \$76 million. Further cost reductions of \$67 million are expected.

**Manufacturing:** Mitsubishi Rayon has plants in Japan, Thailand, South Korea, China, Indonesia, the U.S., the U.K., and Singapore. It has the largest manufacturing capacity in Asia.

**Sales and marketing:** Particularly in coating materials, plastics modifiers, and optical products, Mitsubishi Rayon conducts solution sales, supported by its R&D capabilities and extensive market information.

Mitsubishi Rayon has a designated technical service department for each business division, and sales and technical service representatives visit customers in pairs. Although this is a practice broadly conducted in the industry, Mitsubishi Rayon pioneered this practice in the later 1970s, and this practice is now deeply rooted in the organization. The pair input the market-related information they have collected into a database, to which researchers, technical service staff, sales staff, and the management have access. The technical service staff at the company’s overseas operations input information into the headquarters’ database too. The technology planning department at the headquarters monitors these activities, and ensures that the information will not get lost within the organization.

**Company infrastructure:** Mitsubishi Rayon manages its business through the use of Management Responsibility Units (MRUs). Each MRU has its own financial statements (P/L, B/S, and CF/S), which are evaluated in terms of the four key performance indicators (KPIs): EVA (economic value added), Value Added, ROCE (return on capital employed), and VAW (value added over wage).

At the same time, Mitsubishi Rayon works to maximize profit as an MMA Business Complex. It moves production from the less productive factories to the more productive factories, and increases the production of more profitable products. This makes Mitsubishi Rayon more resilient against external changes.

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Lucite, which started out as ICI, was later integrated with DuPont’s methacrylic business in 1993 and became Lucite. Mitsubishi Rayon and Lucite serve as suppliers for each other.

<sup>4</sup> For example, MMA block has Chemicals division, Specialty Resins and Plastics division, and Specialty Chemicals division.

Since 1999, it has been pursuing “US — Unique and Specialty” as the strategic theme guiding its competitive strategy and R&D activities. In addition, since 2002, it has been conducting company-wide activities to achieve cost reductions in such areas as manufacturing, logistics, inventory control, and working capital. In the MMA block, such activities are called “JK” activities, and in the Lucite block, these activities are called “Manufacturing Excellence” activities.

Human resources management: Although each MRU is measured using several key performance indicators (KPIs), as explained in the Company infrastructure section above, employees are evaluated on their capabilities and division-level performance.

At Mitsubishi Rayon, web meetings and teleconferences are frequently held among operations across national borders, to solve problems. The company seeks to develop people who can work in an international context, employing a variety of educational programs offered to employees at different career levels. One such program is the Global Leadership Program. For this program, managers are selected from all of Mitsubishi Rayon’s group companies worldwide (including Lucite). These individuals undergo a five-month training program, which is conducted in English and involves periodic meetings. At the end of the program, participants are required to make a presentation in English to the executive management team, which includes the proposal of overall management strategies or specific business strategies.

### **Fit among Activities**

At Mitsubishi Rayon, activities are selected and coordinated around the key strategic choices, namely, differentiated high-value-added products, a broad MMA product line, growth through a balance of up-stream and down-stream products, the global expansion of manufacturing and sales activities, and cost reductions. (Please refer to Mitsubishi Rayon’s activity system map, which appears at the end of this report.)

### **Innovation that Enabled Strategy**

- Conceptualized the various divisions in the MMA Business Complex as individual links in a “chain” and encouraged the creation of synergies among them, while monitoring and managing their individual profitability.
- Process innovation 1: Developed its revolutionary continuous sheet production method in 1971. Although the majority of competitors adopted the extruding machine method (glass-casting method), Mitsubishi Rayon decided to entirely discontinue use of the extruding machine method and instead focused on the continuous sheet production method. Down through history, this technology helped the company to become cost competitive in ICT-related products such as LCD light-guide sheets and methacrylic sheets for mobile phones. It further developed this technology, and now is the only company that can produce extra-thin and extra-large methacrylic sheets. For this achievement, the Mitsubishi Rayon was awarded the Okochi Award in 1978.
- Process innovation 2: Developed a continuous bulk polymerization process in 1977 (a world’s first). This process enabled a lower cost and improved purity. This technology also contributed to Mitsubishi Rayon’s competitive advantage in optical products.
- Process innovation 3: In 1982, Mitsubishi Rayon became the world’s first company to successfully commercialize MMA monomer synthesis for industrial applications, using its new C4 direct oxidation process for synthesis. This innovation freed methacrylic production from a reliance on hydrocyanic acid and simultaneously lowered the production cost. For this achievement, the

Mitsubishi Rayon was awarded the 1982 technical development prize by the Chemical Society of Japan, as well as the Okochi Special Award in 1983.

- Product innovation 1: In 1984, Mitsubishi Rayon succeeded in commercializing plastic optical fiber (a world's first) by improving the light transmittance ratio, and thereby increasing the transmission distance. This innovation incorporates the continuous bulk polymerization process mentioned above in "process innovation 2" and precision composite spinning technology. Mitsubishi Rayon now has a 70% share in the global market for plastic optical fiber. For this innovation, it was awarded the technical development prize by the Chemical Society of Japan in 1985.
- Product innovation 2: Developed a plastic rod lens and commercialized it in 1989 (a world's first). Mitsubishi Rayon is the only supplier of plastic rod lenses, which currently account for a 30% share of the global market—the rest are glass rod lenses. Rod lenses are used for the reading devices of facsimiles and multifunction printers. Furthermore, it improved chromatic aberration, responding to the evolution of printers from black-and-white to color. It was awarded the Optics Design Award by the Optical Society of Japan in 2010.

### **Consistency of Strategy Over Time**

Mitsubishi Rayon launched its MMA business in 1943. The current strategy, however, originated when the company conceptualized its MMA monomer operations as a "business chain" consisting of departments that are interdependent on each other, and organized the departments into divisions in order to realize synergies among them.

Global expansion began in the 1990s with the deployment of manufacturing facilities in Asia. In 1999, Mitsubishi Rayon established itself as the MMA leader in Asia. With the acquisition of Lucite in 2009, Mitsubishi Rayon established itself as the global leader in this field.

Another core component of Mitsubishi Rayon's strategy is its proprietary technology. Through technological leadership, the company has succeeded in reducing costs, improving product performance, and commercializing new materials. This has been consistent throughout its history, and is the key component of its differentiation strategy.

### **Trade-offs**

- Does not do business where Mitsubishi Rayon can't have "Unique and Specialty." In the latter half of the 1990s and the beginning of the 2000s, it gradually discontinued using the extraction machine method for MMA sheet production to focus on its own innovation, which was a continuous sheet production method. In 1995, it exited from a joint venture with Mitsubishi Petrochemical in methacrylic acid esters after realizing that it would not be able to achieve technological leadership through differentiation.
- Does not spread its business operations geographically if that means losing the benefits afforded by concentrating operations in one region. Although Mitsubishi Rayon is unique for having business operations in the U.S., Europe and Asia, each business unit must be strong in order to remain competitive. In 2002, it exited from a joint venture in plastics modifiers in the U.S. in order to focus on Asia.
- Does not rule out the option of working with others. Although Mitsubishi Rayon's technological leadership is supported by its own R&D activities, where economies of scale work, it works with others. To produce MMA monomers, it formed a joint venture with the Siam Cement Group in

Thailand (production began in 1999) and with Honam Petrochemical — a subsidiary of Lotte — in South Korea (production began in 2006).

### Profitability

Both return on invested capital and return on sales exceed the industry average.

#### Mitsubishi Rayon, MMA Business Unit

Return on invested capital (ROIC) (Unit = percentage point)

Difference from industry average over 5 year period	Difference from industry average, by year				
	2006	2007	2008	2009	2010
7.8%P	19.3%P	9.1%P	-1.2%P	0.2%	9.2%P

Inter quartile range (IQR) = 5.5%P

Return on invested capital = Operating income / Average invested capital

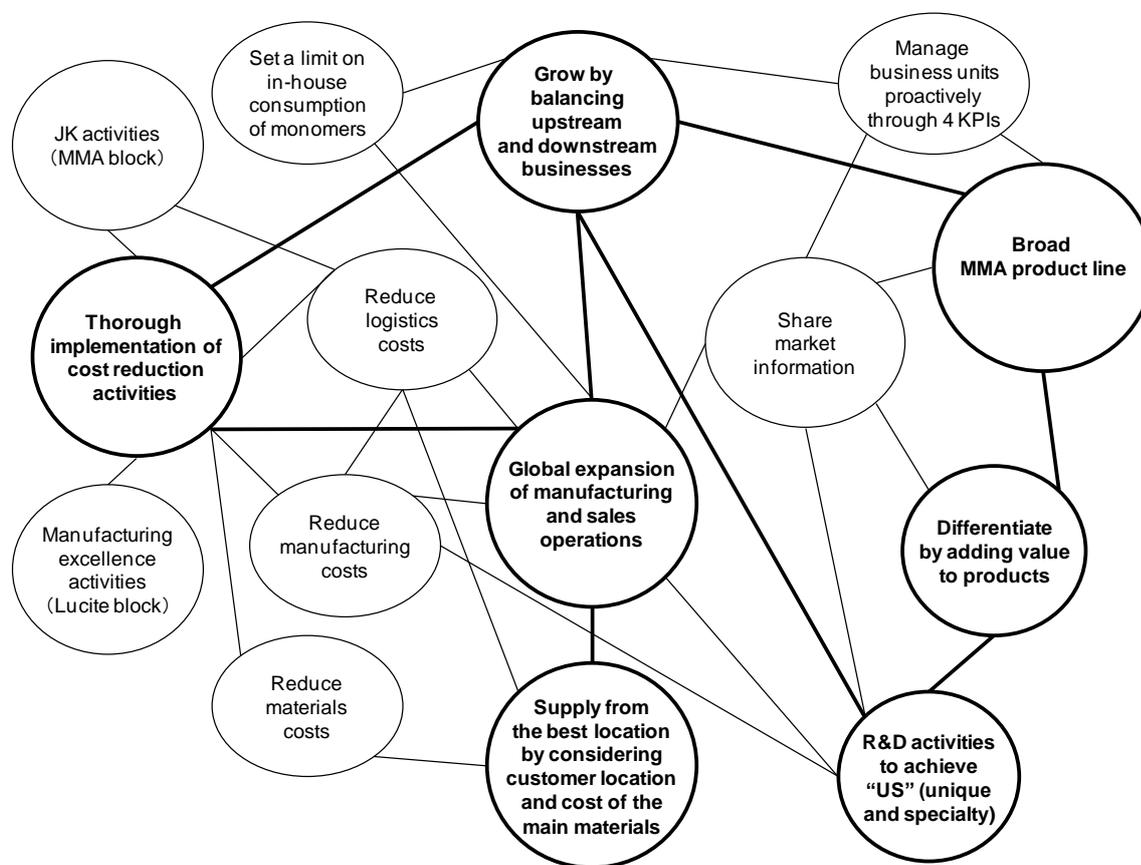
Return on sales (ROS) (Unit = percentage point)

Difference from industry average over 5 year period	Difference from industry average, by year				
	2006	2007	2008	2009	2010
7.4%P	15.7%P	7.7%P	-0.6%P	2.3%P	9.7%P

IQR = 3.4%P

Return on sales = Operating income / Net sales

### Activity System Map of Mitsubishi Rayon, MMA Business Unit



## **Selection Rationale (Recipients are addressed in no particular order)**

### **Plan-Do-See, Bridal Services Business Unit**

#### **A place to revisit — The bridal services business as a repeat business**

##### Industry background

Hotels and restaurants offer wedding services. The third category is specialized wedding service providers who have their own facilities. This category changed its operating style— instead of using a large wedding hall, it offers a “House Wedding,” which consists of a wedding ceremony followed by a reception conducted in a large “guest house-style” building. It has a chapel, a restaurant, and a garden.

In the industry, barriers to entry were low and differentiation was not easy to achieve. However, the facilities had to be rebuilt every five or ten years in order to keep attracting customers. They also had to spend considerable amounts on advertising to keep attracting new customers. It is reported that House Wedding providers spend 5% to 15% of sales on advertising.<sup>5</sup> At the same time, factors for inhibiting competition are at work too. Since the majority of customers do not arrange their own wedding receptions more than once, they have no way of comparing the quality of service, and they tend to be satisfied with the service they get. Also, even if a wedding services provider improves its service quality, it is difficult for customers to tell the difference.

According to Zexy.net, the website of Zexy magazine (the dominant wedding information provider), the distribution of facilities was as follows: hotels (31.2%), specialized facilities (28.3%), guest house weddings (21.8%), and restaurants (8.6%).

The Plan-Do-See Wedding Services Business Unit (hereafter, Plan-Do-See) provides wedding planning and production services at seven facilities: three hotels (two in Fukuoka and one in Kobe), and four restaurants (three in Nagoya and one in Kyoto). The actual operation of these restaurants and hotels are handled by the company’s other business units.

Plan-Do-See defines wedding services as a repeat business, and therefore puts a priority on satisfying all its customers, who include the people who are attending the wedding reception as guests. It provides a higher quality of food and drinks, as these details directly influence the guests’ level of customer satisfaction, offers customized menus, and has developed both a unique organization and a system of human resource management that enable seamless operation. Wedding facilities are always adjacent to hotels and/or restaurants, and this factor is also what helps the company to sustain a long-term relationship with customers.

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<sup>5</sup> *Shukan Diamond*, 2010/12/04.

### **Unique Value Proposition**

Plan-Do-See's value propositions to its customers are; 1) a high-quality, customized menu, 2) seamless service, and 3) a place that customers may revisit. Its aim is the establishment of a life-time relationship with its customers. None of the three different models (restaurant weddings, hotel weddings, and weddings at specialized facilities) can provide all of these three value propositions.

1) High-quality, customized menu: Customers can customize a menu for their own wedding. To discuss the menu, a chef meets with the customers, which is rare in the industry. Also, Plan-Do-See will accept a request for changes in the number of guests up to two days before the wedding, while the industry standard is 10-14 days before the wedding.

2) Seamless service: The same wedding planner takes care of the customer from the initial visit to the wedding day, while the industry standard is to have a division of labor among the sales staff, the wedding planner, and the operator. All Plan-Do-See's employees, including individuals who work in administrative positions within the company, interact with wedding customers by helping out at bridal fairs. Sometimes people are moved from the kitchen to become wedding planners. Such first-hand experience in interacting with customers and flexible job assignments facilitate discussion among the different functions, and help make operations seamless.

3) A place to revisit: Plan-Do-See considers the wedding business as a repeat business, rather than a series of one-time transactions. Guests who have attended a wedding reception frequently choose Plan-Do-See for their own wedding receptions. Customers of the hotel or the restaurant will often become customers of the wedding business. Couples who have used the wedding services will often return to stay at the hotel or enjoy dinner at the restaurant. At the hotel and restaurant, customers can enjoy an experience similar to their wedding reception because these facilities are operated by the same company. Consequently, Plan-Do-See relies less on advertisements to obtain new customers than its competitors.

Plan-Do-See's target customers are couples in their twenties and thirties, especially those who live in large cities, who want high-quality service, and who want to show hospitality to their family members and guests.

Plan-Do-See's average sales per wedding were 3,651,000 yen in 2010, which was 12% higher than the industry average of 3,257,000 yen.<sup>6</sup>

### **Unique Value Chain**

Procurement: Plan-Do-See carefully chooses facilities that blend in with the region's history and culture. It aims to contribute to the attractiveness of the region so that customers will want to revisit. For example, the restaurant in Kyoto was the residence of a famous Japanese-style painter; one of the restaurants in Nagoya has a 400-year-old history and was used by the Owari Tokugawa family; and the hotel in Kobe is located in a historic area where foreigners originally settled and is one of the oldest in Japan.

Plan-Do-See sources from multiple suppliers such services as flower arrangements, photography services, hair and make-up services, and gifts for guests. Each facility selects its own suppliers, except for flower arrangement services. It does not ask for a security deposit from suppliers. (If a wedding

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<sup>6</sup> *Zexy Kekkon Trend Chosa 2010.*

facility operator asks for a security deposit, this would make it difficult to change suppliers when service quality fails to meet expectations.) Plan-Do-See lets suppliers compete with each other; at the same time, it provides educational programs in order to share the concepts behind its weddings. Plan-Do-See does not enter this part of the value chain except for bridal gown and dress rentals.

The company limits the customers' choices in order to assure service quality. Plan-Do-See allows customers to bring in their own dresses and other items only when they are irreplaceable. In such cases, it does not ask customers to pay an additional fee (a corkage fee).

Plan-Do-See directly procures food and drinks. It carefully selects the location from which the food items are procured, as well as the means of processing, and the site for food processing, in order to assure high levels of freshness and hygiene. For certain kinds of fish, which is often used for wedding dinners, it hires a fishery operator, who cuts up the fish the same day it is caught. Plan-Do-See receives the fish the next day. For wine, it searches for wineries and buys directly from them, rather than from wine importing companies. This way, it saves on the middleman's margin and buys more expensive wines.

Operation: Wedding planners, who work as case managers for couples, are in charge of acquiring customers, then undertaking service registration, consulting, contracting, delivery, and follow up.

Plan-Do-See has an arrangement with a service company, whose employees are responsible for serving the food at all Plan-Do-See's facilities. Plan-Do-See has a long-term working relationship with this company, and together they have developed seamless operations.

On the wedding day, details are carefully planned so that each couple may feel that they have received special treatment and that their wedding was unique – a one-of-a-kind wedding. For example, although Garden Oriental Kyoto has four reception rooms, even if four brides were to have their wedding receptions at the same time, they would never meet each other.

Marketing & sales: Plan-Do-See decides when to introduce a campaign discount based on the data collected in the management system.

Wedding planners at each facility decide the schedule, the medium, and the contents for advertising. Many competitors centralize this function at the headquarters. Plan-Do-See spends 4% to 5% of sales on advertising, which is the lower end of the industry average.

Wedding planners carefully explain the details of the wedding reception they can offer, enabling customers to imagine what the event would be like and helping them to make choices.

Customer feedback from couples will be sent to the headquarters. This feedback is passed on to each facility. Wedding planners follow up with customers and collect questionnaires, often achieving very close to a 100% rate of collection. For guests, when the couple agrees, Plan-Do-See asks for their feedback on a tiny card left on the dining table. These cards are collected and analyzed at each facility immediately after the event.

Wedding planners are evaluated based on their contract conclusion rate, the number of couples they handle, customer satisfaction, and complaints, as well as their capabilities in planning bridal fairs and advertisements for wedding magazines.

After-sales service: Plan-Do-See issues membership cards and provides points that are shared with its hotels and restaurants. It sends invitation cards for anniversary dinners, etc.

Human resources management: Plan-Do-See entrusts to its employees full responsibility for a project regardless of their years of experience on the job. At the same time, employees work in a team beyond functions.

For seamless operation and employee development, Plan-Do-See moves people among different functions, rotating them between the kitchen, restaurant, and planning. It also has employees from the other business unit (which includes the restaurant, banquet operations, lodging, accounting, and general affairs) to serve potential customers at the bridal fairs.

“I am one of the customers” is the mind-set that Plan-Do-See is asking its employees to share. In order to develop its employees’ capabilities to judge what is good and what is not from the customer’s perspective and to come up with proposals for services and amenities that go beyond what the customers are requesting, the company encourages its employees to experience luxury hotels, restaurants and entertainment facilities, and pays half of their expenses. It also plans overseas trips for its employees, and the company also pays some portion of their expenses. According to the Great Place to Work Institute Japan, Plan-Do-See ranked fourth for educational expense per employee.

Plan-Do-See does not recruit people for the position of wedding planner. It chooses people who like to be organizers and individuals with a strong sense of responsibility.

According to the Great Place to Work Institute Japan, it was ranked 5<sup>th</sup> in employee satisfaction in 2011.

Company infrastructure: The founder and CEO has a vision to provide service with style and *Omotenashi* (hospitality in the Japanese way) through its hotels and restaurants. He aims to apply them in overseas markets to let the world know about Japanese *Omotenashi* and make more people happy.

The company intends not to go public to avoid growth pressure. It wants to spend time developing people and carefully choosing facilities.

### **Fit among Activities**

At Plan-Do-See, activities are selected and coordinated around the key strategic choices, namely, custom-made services designed for each couple, a unique concept and design for each facility, service development that does not rely on suppliers, the building of long-term relationships with customers which start before the wedding day and continue after it. (Please refer to Plan-Do-See’s activity system map, which appears at the end of this report.)

### **Innovation that Enabled Strategy**

- Views the wedding business as a repeat business.
- Gets customer feedback from guests, not only from the bride and groom.
- Developed a management system that covers customer relationship management, sales management, and planner evaluations.
- Uses a plate-warmer set under each dinner plate.
- Makes sure that all staff members engaged in the wedding services eat the new full-course menu, which includes drinks, four times a year.

### **Consistency of Strategy Over Time**

Since its foundation in 1993, Plan-Do-See has viewed wedding services as a repeat business, emphasizing the satisfaction of the guests as well as the marrying couple. This key concept has remain unchanged, although the operational format has changed from wedding services offered at rental halls at the time of its founding to a “house-wedding” format adopted later on.

### **Trade-offs**

- No platform stage for the bride and groom. Plan-Do-See considers the wedding reception to be a place where the bride and groom offer hospitality to their guests.
- No corkage fee from customers, no security deposit from suppliers. No dominant supply contract with one supplier.
- Does not accept wedding parties beyond a certain number of guests. By setting this rule, Plan-Do-See does not have to keep extra chairs and tables, and can thereby keep non-business property at a minimum.
- Does not own facilities. Plan-Do-See specializes as an operation service provider.
- Does not accept reservations for the entire restaurant in order to keep it open as a place for others to revisit.
- Does not rely on media exposure to attract customers, as it does not want to turn off self-confident customers who tend to avoid fads. Hence, it does not use such tactics as buying menus from famous chefs, having movie stars use its services, making a planner famous through publicity, or having the company founder serve as spokesperson for the company.
- Does not provide services to outside facilities to ensure that it can offer customers a place to come back to.
- Does not produce “theme” weddings that would offer a non-routine experience, such as “a princess in a white mansion” concept. The experience PDS creates should last beyond the wedding day, and should be part of the past and future of the couple.
- Does not respond to requests for discounts from customers if such a discount would make it difficult to meet the quality standard for food, drinks, and gifts.
- Does not copy the same designs from facility to facility.
- Does not go public in order to be able to put customers ahead of shareholders.
- Does not propose wedding services as a package with a choice of modular components. PDS develops a customized wedding plan, based on consultations. This process requires more time for selling the service, but leads to higher customer satisfaction and employee satisfaction.
- Does not have a position for a chef, but it does have a position for a kitchen manager. The head of the kitchen is not someone who lords over the staff but who manages the kitchen team. The kitchen manager leaves the kitchen to develop plans with customers and wedding planners.

### Profitability

Both return on invested capital and return on sales exceed the industry average by a wide margin.

#### Plan • Do • See, Wedding Services Business Unit

Return on invested capital (ROIC) (Unit = percentage point)

Difference from industry average over 5 year period	Difference from industry average, by year				
	2006	2007	2008	2009	2010
32.1%P	71.7%P	51.3%P	22.5%P	35.5%P	16.5%P

Inter quartile range (IQR) = 18.6%P

Return on invested capital = Operating income / Average invested capital

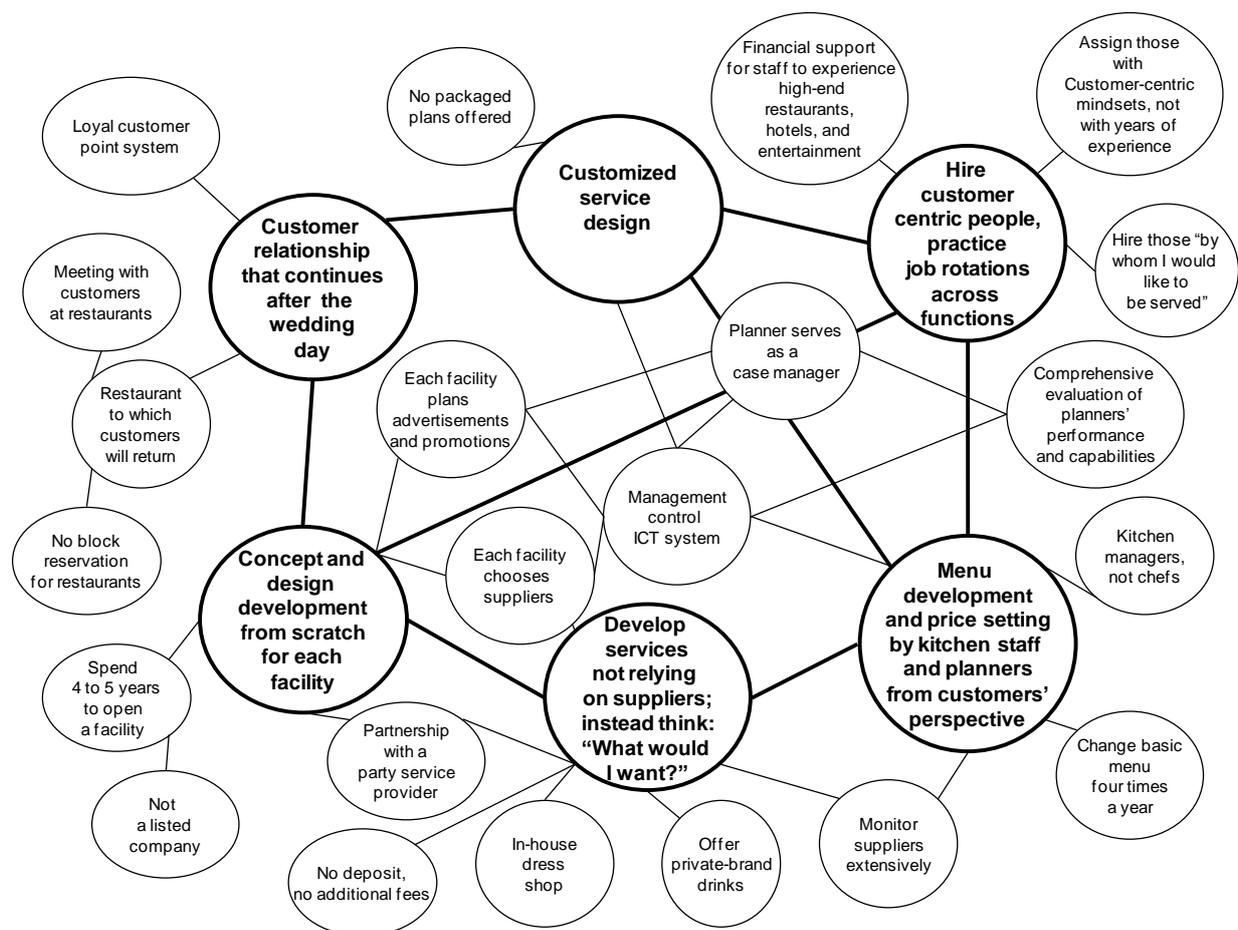
Return on sales (ROS) (Unit = percentage point)

Difference from industry average over 5 year period	Difference from industry average, by year				
	2006	2007	2008	2009	2010
13.0%P	16.3%P	16.3%P	11.4%P	13.8%P	11.5%P

IQR = 6.9%P

Return on sales = Operating income / Net sales

### Activity System Map of Plan-Do-See, Wedding Services Business Unit



## **Selection Rationale (Recipients are addressed in no particular order)**

### **Star Mica, Pre-owned Condominium Division**

#### **Created a market for pre-owned, family-type apartment units**

##### Industry background

There are four strategic groups in the real estate investment industry for used apartments. One group focuses on vacant family-size units (typically larger than 50 square meters), which it renovates and sells. Since this does not require a large capital investment, small and medium-sized providers of remodeling services are the main players. To minimize the risk of a decline in prices, they aim to sell as quickly as possible, and hold onto a unit for three months on average. The second group focuses on apartment buildings and office buildings. They purchase a building, improve rental fees and occupancy rates, and then sell that building to an investment fund. As participation in this segment requires large amounts of capital, large real estate investors such as Real Estate Investment Trusts (REITs) are here. Players can make huge profits in just a single deal, but when real estate prices are declining it is not easy to make a profit. The third group focuses on one-room apartments (units typically smaller than 30 square meters). They buy apartment units under lease and sell. Most of the sellers and buyers are investors. They hold onto a unit for three months on average. The fourth group is a new category created by Star Mica.

Star Mica focuses on family-size apartments (rather than apartment buildings) under lease contract, specifically units which are in the middle price range (between 20 million yen and 30 million yen) and at least 10 years old. Star Mica buys an apartment unit, and holds that unit until the tenant moves out. It then renovates the apartment and sells it to customers who will live there, rather than to individuals seeking an apartment merely for investment purposes. This is a new type of strategic positioning that did not exist prior to Star Mica's entry into the market.

Behind this strategy is the low level of liquidity for apartment units under lease contract. As a result, there is a thirty percent price gap between vacant apartment units and those under lease. Japanese law protects tenants, and the landlord cannot force tenants to move out. Although it may sound easy to imitate this strategy once this price gap is noticed, it is not. There have been many attempts to imitate Star Mica, but nobody has ever succeeded.

Two factors contribute to this inimitability. First, there is a trade-off between Star Mica's strategic positioning and that of incumbents. Star Mica does not rely on upward price trends in the real estate market. Neither does it go after big deals (ones on a scale of hundreds of millions of yen per deal). On the contrary, the scale of investment per deal for Star Mica is much smaller, and it can profit in the case of both upward and downward trends in prices. Also, its approach to market risk is different from the approaches used by others in the industry. Incumbents aim to shorten the holding period, while Star Mica aims to hold onto a large number of apartment units with relatively stable prices.

Second, Star Mica's strategic positioning requires a unique set of activities. In order to implement Star Mica's strategic positioning, the following capabilities are necessary: a pricing model and a database which enables reliable pricing, extensive experience in finance (this approach requires a financing

scheme that is different from the simple financing of operating capital or equipment—it requires financing for a portfolio of assets), and a large enough scale of operations (the number of apartment units has to be large enough to form a diversified portfolio to reduce the risk of price fluctuations and it should also be big enough to cover the overhead costs incurred in the execution of various operations for real estate transactions and property management).

### **Unique Value Proposition**

Star Mica's investments are focused on family-type apartments under lease contract. Also, it focuses on apartments that are in the middle price range (between 20 million yen to 30 million yen) and more than 10 years old. This is because the decline in price bottoms out after 10 years. By carrying a large enough inventory (more than 1,000 units), Star Mica diversifies the risk of price fluctuations for a single unit. As of November 2010, Star Mica had 1,000 units, which were worth 21 billion yen and were located in the greater metropolitan Tokyo area. These units, on average, were 17 years old and measured 69.9 square meters. Star Mica was offering owners a buying price of 21 million yen per unit on average.

Star Mica's target customers are the owners of family-size apartments who are interested in selling.

The value Star Mica provides for the target customer is: 1) liquidity for the real estate asset under lease contract. Before Star Mica entered the market, many owners just had to give up the idea of selling, or else had to wait as long as it took to find a buyer. 2) Pricing based on greater market efficiency. Sellers could sell at a higher price, and buyers could buy at a lower price compared with the prices in effect before Star Mica entered the market. As a matter of fact, the price gap for apartments under lease has narrowed.

### **Unique Value Chain**

Procurement: Star Mica collects selling information from real estate agents. Informed by the owners of their intent to sell their property, agents make inquiries to Star Mica, the biggest buyer who can quickly offer a buying price. This way, Star Mica can buy apartment units with a minimum number of staff. In return, it pays 3% of the purchase price as a commission to real estate agents.

Star Mica has developed its own system for assessing apartments so that it can offer a buying price within two hours after an inquiry has been made. The market price, the specifics regarding the apartment, fees, and expenses for renovation are used to make this calculation. Star Mica applies its own original pricing model, instead of relying on the experience or the hunches of seasoned real estate agents.

Star Mica keeps enough cash on hand so that it can buy apartments as soon as the terms and conditions have been agreed upon. It has also developed an ICT system to support the execution of complex transactions, as well as associated operations and property management.

Property management: Star Mica outsources property management functions, such as rent collections and insurance payments.

Renovation: It does not customize renovations, nor does it use expensive materials for the purpose of increasing property value. Rather, it standardizes the design to obtain volume discounts on materials and to quickly sell to new owners. Star Mica outsources renovation services.

**Sales & marketing:** Star Mica sells through real estate agencies. Star Mica pays 3% of the sales price as commission to the agents, which is the industry standard.

**R&D:** Star Mica's R&D activities are focused on two areas: 1) Improving the pricing model, and 2) creating new financing schemes.

**Finance:** Star Mica finances the capital necessary for acquiring apartments from the capital market (it is listed) and by borrowing bank loans with terms of three to five years. This is contrary to the standard practice in the industry. Most resellers of used apartments can get loans for only three to six months.

**Company infrastructure:** Star Mica has developed an ICT system to support the execution of complex transactions and related property management operations. Through this system, its employees share information regarding the entire life cycle of a property (i.e. property assessment, purchase negotiations, rent, tenants' schedules for moving out, and sales).

Star Mica can obtain financing, arrange rental contracts, and prepare or dissolve mortgage contracts on apartments with just a limited number of employees. Star Mica had only 65 employees, including executives, as of October 2011.

Star Mica keeps fixed costs (such as its own office rental fees and labor costs) below the profit on rental income in order to ensure a positive cash flow. This policy will limit the speed of growth because Star Mica cannot add people. Still, this policy significantly lowers the risk of bankruptcy.

### **Fit among Activities**

At Star Mica, activities are selected and coordinated around the key strategic choices, namely: 1) a focus on family-type apartment units under lease; 2) concluding transactions on a large number of apartment units and holding those units; 3) the establishment of a solid financial foundation that will support long-term holding periods; 4) low fixed costs; and 5) precise pricing. (Please refer to Star Mica's activity system map, which appears at the end of this report.)

### **Innovation that Enabled Strategy**

- Created a new strategic positioning, which is called the "Star Mica model" in the industry.
- Applied an extensive knowledge of finance to the real estate business.
- Conceptualized its business as a market maker.
- Star Mica views apartments not as real estate properties but as commodities.
- Star Mica views inventory as a profit-generating opportunity that creates a positive cash flow. Also, it sees vacancies as a business opportunity, not a risk. This thinking goes against what is considered common sense in the industry.
- Financing schemes. Created a real estate fund for real estate transactions in order to finance initial investments. Created a non-recourse loan that has a mortgage allowing for the replacement of the real estate property offered as collateral.
- Developed an assessment system for apartments.
- Developed an ICT system to support the execution of complex transactions, as well as related property management operations.

### Consistency of Strategy Over Time

Star Mica was founded in 2001, and it focuses specifically on investment in family-type apartment units under lease. Although there have been improvements in activities such as financing, its core components of the strategy have remained unchanged.

### Trade-offs

- Does not buy one-room apartments.
- Does not buy high-end, family-size apartments. The high-end market is smaller, and high-end customers are less likely to accept standardized renovations.
- Does not conduct activities other than market-making activities in-house. Activities other than market-making activities include property management, renovation, and sales.
- Does not increase fixed costs beyond the amount of profit received from rental income.
- Does not pursue aggressive growth.

### Profitability

Return on invested capital exceeds the industry average, which indicates that Star Mica efficiently creates value added on invested capital. The difference between the return on sales and the industry average is negative. This reflects Star Mica's unique competitive strategy.

#### Star Mica, Pre-Owned Condominium Division

Return on invested capital (ROIC) (Unit = percentage point)

Difference from industry average over 5 year period	Difference from industry average, by year				
	2006	2007	2008	2009	2010
7.5%P	8.6%P	7.3%P	7.4%P	7.2%P	7.2%P

Inter quartile range (IQR) = 1.0%P

Return on invested capital = Operating income / Average invested capital

Return on sales (ROS) (Unit = percentage point)

Difference from industry average over 5 year period	Difference from industry average, by year				
	2006	2007	2008	2009	2010
-32.1%P	-29.7%P	-32.5%P	-32.9%P	-32.8%P	-29.8%P

IQR = 16.4%P

Return on sales = Operating income / Net sales

**Activity System Map of Star Mica, Pre-owned Condominium Division**

