The Yazaki Group boasts development, production and sales bases in Japan and overseas. Overseas, Yazaki supplies automotive parts to automakers in various countries, while in Japan the Group supplies a broad range of products to automakers and other manufacturers.

**Yazaki Group Businesses and Roles**

*To contribute to the enrichment of society and be considerate of the environment*

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**Flow of Operations in Japan**

**Customers in Japan**
- Automakers
- General construction companies
- Electric utility companies
- Gas companies

**Flow of Operations Overseas**

**Overseas Customers**
- Automakers

**Production in Japan**
- Yazaki Parts Co., Ltd. (Wiring harnesses, components, electronic equipment)
- Yazaki Electric Wire Co., Ltd. (Electrical wire and cables)
- Yazaki Meter Co., Ltd. (Measurement instruments, gas equipment)
- Yazaki Resources Co., Ltd. (Environmental systems, solar-powered equipment)

**Overseas Production**
- 80 Yazaki Group companies overseas

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4 companies and their subsidiaries for a total of 71 companies

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*YAZAKI* Social & Environmental Report 2007
Overview of the Yazaki Group’s three areas of business and initiatives taken in each area to fulfill corporate responsibilities, contribute to the betterment of society, and be an environmentally friendly company.

### Automotive Sector

**Wiring harnesses, meters, and components**

- **Supplying everything that is connected to the central nervous system of the car**
  - Supplying the quality and functions demanded throughout the world

  - Meeting the high quality requirements specified by automakers
  - Ensuring thorough quality management of connectors and electronic components

- **Meters**
  - A specialized manufacturer of equipment to promote safe and environmentally sound driving practices
  - Helping prevent traffic accidents and supplying environmentally considerate products

  - Manufacture of digital tachographs that contribute to safe driving practices
  - Manufacture of drive recorders that record images when an accident occurs
  - Manufacture of digital tachographs that contribute to fuel efficiency improvements
  - Manufacture of vehicle-mounted ETC units that help improve fuel efficiency and ease traffic congestion

### Environmental Systems Sector

**Electric wires (electricity transmission, control cables, communication wires, optical fibers, etc.)**

- **From industrial to residential applications**
  - Creating the future by offering a wide variety of products

  - Acquisition of ISO 9001 certification by all divisions, including production, sales and development divisions
  - Compliance with all relevant laws and regulations, including the Consumer Product Safety Law (establishment of a crisis management system)
  - Elimination of lead from the insulation materials for all types of electric wires and cables—industry first
  - Repair and reuse of electric wire spools
  - Recycling and reuse of copper resources
  - Development of technologies and provision of equipment that help reduce CO2 emissions (use of energy from solar power, waste heat, wood biomass, and other sources)
  - Wide-area waste transportation and processing

**Environmental and Energy Systems (gas equipment, environmental systems, and household equipment)**

- **Using energy more efficiently**
  - Promoting the use of solar heat and wood biomass energy

  - Designing easy-to-recycle wiring harnesses
  - Reduction of wiring harness weight by reducing wire diameter
  - Manufacturing and distribution of digital tachographs that contribute to fuel efficiency improvements

### New Business Fields

**Nursing care and health management**

- **Developing nursing care businesses and health management systems with close local ties**
  - Contributing to local communities and enhancing health management

  - Establishment of a small-scale multi-function residential nursing care facility, Kami Fusen Yazaki Care Center
  - Sales of the health-management terminal, “Healthful”

- **Combining vegetable scraps and soybean-derived food waste to produce fertilizer**
- **Recycling waste paper into buffering material**
- **Converting waste glass into a medium for growing plants**
- **Recycling toner cartridges of laser printers**
Yazaki Group Businesses and Roles

Automotive Sector

Yazaki develops and produces wiring harnesses for automakers all over the world and most Yazaki employees are engaged in the production of wiring harnesses. Yazaki also develops and produces automotive electrical system parts and electronic parts according to automakers’ needs.

Wiring harnesses and other parts to overseas automakers. Since wiring harnesses are essential to both the vehicle’s basic performance and its safety performance, they must satisfy the high quality requirement levels specified by individual automakers. Therefore, Yazaki works with automakers to establish strict internal standards and ensure the highest level of quality.

In order to continue to supply wiring harnesses, Yazaki must not only adhere to its quality standards but overcome even more difficult hurdles.

One of these issues is wire diameter reduction. As vehicle functions become more and more sophisticated, the number of wires contained in wiring harnesses keeps increasing. However, since there is a limit to the space the wiring harnesses can occupy, increases in the number of wires makes it necessary to reduce the wire diameter. Reducing the diameter also helps reduce the vehicle weight and, ultimately, vehicle cost. Currently, the thinnest wire has a cross-sectional area of 0.13mm².

Yazaki is also currently designing easy to remove and disassemble wiring harnesses so that copper components can be easily removed during the dismantling of end-of-life vehicles.

Shortening the production lead-time is also an important issue.
Yazaki supplies taximeters to taxi companies. Yazaki developed digital tachographs capable of recording driving history, so that the information can be used to help taxi and truck drivers improve their driving. Yazaki also develops vehicle-mounted ETC units and drive recorders.

**A Specialized Manufacturer of Equipment to Promote Safe and Environmentally Sound Driving Practices**

**Helping Prevent Traffic Accidents and Supplying Environmentally Considerate Products**

**Contributing to Traffic Safety and Eco-drive Initiatives for Many Years**

In the General Transportation Systems Division, Yazaki is contributing to the enrichment of society by providing products that are designed to ensure safety, environmental friendliness, and efficiency, for use in taxis, trucks, buses, etc.

For example, Yazaki drew upon its expertise in manufacturing automobile meters to produce taximeters that are easier to read, lighter in weight, and easier to install. Yazaki’s LT25P taximeter with an integrated printer has been internally certified as an environmentally friendly product.

The multi-function digital tachograph helps improve fuel efficiency and also promotes safe driving by providing voice guidance to the driver. The driving history is recorded on an electronic card instead of on paper, allowing for easier downstream management.

Other Yazaki devices, which incorporate the latest technologies, are also contributing to safe and environmentally sound driving practices. Examples of these devices include the vehicle-mounted ETC unit, which helps improve fuel efficiency and ease traffic congestion by eliminating the need to stop at toll-collection booths, and the drive recorder that records images when an accident occurs.

**Developing Connectors and Electronic Components as Well**

To ensure the reliability of the entire electrical system of a car, wiring harnesses as well as the connectors which connect wires to the various electronic devices, must be vibration and shock resistant. Therefore, Yazaki is also developing and manufacturing leading-edge electronic parts such as connectors and hybrid ICs.

In this way, in the Automotive Sector, Yazaki works in cooperation with automakers to develop a wide range of high-quality products, centered on wiring harnesses, that ensure the reliability of automobile electrical systems, and as such help to enhance vehicle safety and environmental performance.

Normally, wiring harness specifications are not finalized until the end of the vehicle design process. Therefore, Yazaki is striving to shorten the lead-time by reassessing its manufacturing processes.
Supplying the Quality and Functions Demanded throughout the World

Electrical wires (electricity transmission/control cables, communication wires, optical fibers, etc.)

From Industrial to Residential Applications creating the Future by Offering a Wide Variety of Products

Pursuing Quality Because of Yazaki’s Important Role in Supporting Electric Power Transmission and Communication

The Electric Wire Division produces cables for electric utility, railway, communications, and housing construction companies. In houses and buildings, the division handles everything from the electrical wires entering the eaves to electrical outlets.

Strict quality and safety standards have been established for these cables, which support electrical power supply and communications in a wide range of applications. In 2003, the Electric Wire Division acquired ISO 9001 certification for the entire division, including its Sales Department. The fact that the Sales Department also acquired certification increased Yazaki’s opportunities to propose the development of new products that satisfy heightening quality needs, and to provide technology-related consultations.

To continue maintaining high quality, Yazaki considers it important to educate its employees and offer training seminars to its suppliers. Yazaki conducts seminars on various subjects for the employees of 63 sales distributors throughout Japan every year. At these seminars, the participants are taken on a tour of some of Yazaki’s production sites to help them deepen their understanding of Yazaki’s commitment to quality. Additionally, as part of efforts to educate Yazaki employees, the Wire College was opened to help employees from production and development divisions improve their technical skills. Furthermore, in the Sales Department, Yazaki conducts training regarding products so that sales personnel obtain at least a certain level of technical knowledge.

Complete Elimination of Lead from Vinyl-cladding Materials

Conventionally, lead has been essential as a stabilizer for the polyvinyl chloride used as the insulation material for electric wires. However, the automobile industry is strengthening its regulation of products containing lead. Therefore, the Fuji Factory, which is responsible for the manufacture of the insulation material, successfully eliminated lead in 1998 from the polyvinyl chloride used in wiring harnesses. Subsequently, in order to provide more environmentally friendly products, the Yazaki Group has eliminated lead from the insulation materials for all types of electric wires and cables.

Recycling Copper Resources and Reusing Wooden Electric Wire Spools

For many years, Yazaki has been purchasing end-of-life electrical wire from offices and factories to be reused or recycled. In FY2006, 96% of the recovered electrical wire was recycled back into copper resources. Every year, Yazaki also repairs and reuses approximately 90% of the wooden electrical wire spools used for shipping electrical wire.

Through these measures, the Electric Wire Division is striving to recycle resources as much as possible.
Yazaki’s Energy Equipment Division is engaged in the following three types of businesses: gas equipment, environmental systems, and household equipment. Gas equipment, such as LPG meters and gas leak detectors, is supplied to individual homes via gas companies. For small and medium-size commercial applications, Yazaki supplies clean energy systems such as CFC-free air conditioners that can use gas, kerosene, and waste heat, as well as natural and renewable energy sources like solar heat and wood biomass that do not depend on fossil fuels. Yazaki also supplies household equipment such as solar-powered heating systems to individual homes via sales companies.

Environmental and Energy Systems (gas equipment, environmental systems, and household equipment)

Using Energy More Efficiently
Promoting the Use of Solar Heat and Wood Biomass Energy

Within the Energy Equipment Division, there are three business divisions, each of which manufactures its own products.

The Gas Equipment Division manufactures gas meters, gas supply equipment, and gas/fire/CO alarms. The Environmental Systems Division manufactures absorption chiller-heaters for both commercial use and for cogeneration systems. The Household Equipment Division manufactures solar-powered heating systems.

Ensuring Accurate Measurement of LPG and Its Safe Use

Since gas meters must be nationally certified and have expiration dates, demand can fluctuate with the seasons or around the time when batches of gas meters expire. The highest demand level can be as much as three times the lowest demand level. Consequently, our production line must be able to flexibly cope with production volume fluctuations. Therefore, based on the concept of delivering gas meters to customers as though they were perishable goods, Yazaki reassessed its quality control and production method in May 2002 to establish a new production system. Utilizing this new system, Yazaki can now ship gas meters as “perishable goods” to customers based on confirmed orders, the day after they pass certification, while at the same time maintaining high quality.

Capturing Solar Heat and Producing Energy from Wood Pellets

The Energy Equipment Division, whose goal is to help build a society that is free of dependence on fossil fuels, is engaged in business activities to develop products that utilize natural energy and other forms of renewable energy. In the area of utilizing natural energy, Yazaki plans to promote its solar-powered water heating system, “Yuwaita,” in urban areas where the market is largest. It is also planning to actively market its double-effect absorption chiller-heater in both the Japanese and overseas markets.

In the area of utilizing other forms of renewable energy, Yazaki is currently developing an absorption chiller-heater that uses wood pellets as the fuel. Production of wood pellets is scheduled to begin in Yusuhara-cho, Kochi Prefecture in 2008.

Effective April 21, 2007, in response to the revision of the Consumer Product Safety Law in December 2006, the Gas Equipment Division revised its crisis management manual, created as part of its crisis management system to comply with the Accident Information Reporting and Publishing System. The new manual is used to explain the requirements of the revised law to Yazaki sales personnel throughout Japan and production/R&D personnel at factories.

Environmental and Energy Systems

Using Energy More Efficiently
Promoting the Use of Solar Heat and Wood Biomass Energy

Using solar heat to make hot water

Solar-powered water heating system

YUWAITA

Using Energy More Efficiently
Promoting the Use of Solar Heat and Wood Biomass Energy

Using solar heat to make hot water

Solar-powered water heating system

YUWAITA
The nursing care business is being conducted nationwide in Japan, although centered in Kochi and Oita prefectures. The healthcare business has begun sales of “Healthful” health-management terminals in cooperation with the Yazaki Health Insurance Association.

The Yazaki Health Insurance Association also uses “Healthful” terminals to enhance health management by employees. “Healthful” terminal

As automotive markets expand globally, demands on the automobile industry to globalize the manufacture of parts are increasing. Against this backdrop, Yazaki has been actively shifting production overseas in response to calls from automobile manufacturers. At the same time, in order to strengthen business foundations in Japan, Yazaki has also been diversifying its business operations, such as the search for new businesses by Minami Shikoku Parts Co., Ltd., a Yazaki subsidiary, since 1997.

One such new business launched in April 2000 by Minami Shikoku is the nursing care business. The business started with home-visit nursing service and now operates four nursing and retirement homes for senior people in Kochi Prefecture. Seven other Yazaki subsidiaries in Japan are also engaged in nursing care businesses. Yazaki also started a home-visit nursing service business operated from Y-CITY in Susono City, Shizuoka Prefecture (see page 45 for details) in June 2004. In July 2006, Yazaki opened the Kami Fusen Yazaki Care Center as a full-scale local welfare facility. The Center is Shizuoka Prefecture’s first small-scale, multifunction residential nursing care facility that combines inpatient, outpatient, and nursing care services. It also serves as a group home for people suffering from dementia.

In this way, the Yazaki Group’s nursing care businesses were created to fulfill social responsibilities to local communities and residents. Yazaki will continue its efforts to work with local residents in developing beneficial social environments based on its corporate policy of striving to be “a corporation in step with the world” and “a corporation needed by society.”

Another business that developed from the nursing care business is sale of the “Healthful” health-management terminal. The nursing care business is premised on the provision of services to people in need of nursing care, but it is also important to prevent illness in healthy seniors and middle-aged people who would potentially require care in the future. It is from this perspective that the Yazaki Group searched for new services that will help prevent illness and launched the “Healthful” health-management terminal in 2004.

The “Healthful” health-management terminal is compact but allows for easy measurement of blood pressure, heart rate, electrocardiograms, and finger plethysmographs. The measurement data is transmitted via the Internet to a support center for examination by a clinical examination technician, and information concerning the patient’s condition and advice are returned within 48 hours. If it is determined that the person has a medical condition, he/she is advised to obtain a diagnosis at a healthcare facility.
Many of Yazaki’s environment-related and recycling businesses were conceived by Yazaki Group companies in response to local needs. Yazaki is focusing primarily on four of these businesses.

### Environment-related and Recycling Businesses

#### Advancing Recycling Businesses that Embody the Spirit of “Mottainai”

Effectively Utilizing Resources and Helping Revitalize Local Economies

The late Sadami Yazaki, founder of the Yazaki Group and its first president, believed that “waste generated is not waste at all but instead a valuable resource.” This spirit of “Mottainai” (defined as “a sense of regret over something being wasted due to undervaluing its worth”) has been handed down to become Yazaki Group’s corporate philosophy.

In line with this spirit, Yazaki began copper recycling in 1957, and then launched a gas meter recovery and recycling business in 1973. Since then, Yazaki has established four new businesses—toner cartridge reuse, paper recycling, glass recycling and food waste recycling businesses.

### Food Waste Recycling

#### Turning Soybean-derived Food Waste and Vegetable Scraps into Fertilizer

The former Tochio City (currently part of Nagaoka City), Niigata Prefecture is famous for abura-age, a deep-fried bean curd puff, production of which generates as much as four tons of soybean-derived food waste a day, most of which used to be incinerated. In December 2006, Niigata Parts Co., Ltd., a Yazaki subsidiary, implemented a food waste recycling business that produces an organic fertilizer by combining soybean-derived food waste generated by local food-processing companies with vegetable scraps generated by supermarkets. This organic fertilizer is utilized by local farmers and helps recycle food waste on a local basis.

#### Paper Recycling Business

**Buffering Material for Packaging**

Gifu Parts Co., Ltd., another Yazaki subsidiary, mixes recovered waste paper with polypropylene and cornstarch, and applies a special treatment to the mixture to manufacture paper pellets for use as a buffering material, as well as sheets and boards. The paper pellets, called “Wonder Eco,” have excellent shock absorbency and heat insulation properties, and can be disposed of as burnable trash. Because of these excellent environmental performance characteristics, the paper pellets are certified as being compliant with the Law on Promoting Green Purchasing. They are used in packaging materials, as well as in the inner soles of slippers and shoes, and have been processed into postal packaging. Gifu Parts is planning to further expand the applications of these paper pellets.

#### Glass Recycling Business

**Converting Glass into a Medium for Growing Plants**

Super Sol R, manufactured by Sol Technica Co., Ltd and introduced by the Yazaki Group in July 2005, is a lightweight, construction material made solely from glass bottles and other discarded glass. It is lightweight and durable, has good draining properties, and emits less CO₂ than other lightweight, construction material. Based on the results of LCA (see page 42 for details), numerous public institutions have certified Super Sol R as an environmentally friendly product. In 2006, a material combining Super Sol R with other elements was commercialized for use in the hydroculture of plants.

### Toner Cartridge Reuse Business

#### Capitalizing on Expertise as a Parts Manufacturer

In 2001, Fujinomiya Parts Co., Ltd. launched a business to reuse laser printer toner cartridges. It recovers toner cartridges from customers, dismantles and cleans them and replaces necessary parts. The cartridges are then refilled and delivered to customers. Since this service not only results in effective utilization of resources, but also reduces product cost, it has been receiving extremely positive feedback from customers.