

Making Dreams Come True



“Glocalization”

The Green Factory Concept

Research and Development



“Glocalization”

GLOBAL FOCUS

LOCAL KNOWLEDGE

EFFECTIVE OPERATIONS



Honda's commitment to making dreams come true transcends geographical boundaries. Accordingly, we are working to reinforce our grasp of local needs in markets around the world and to respond with appropriate products by expanding the scale of our global operations, while focusing on localized product development and manufacturing.

WORLDWIDE PRODUCTION NETWORK

Honda divides its global business into five regional operations: Japan; North America; Latin America; Europe, the Middle East and Africa; and Asia and Oceania. Our worldwide organization, which has grown rapidly over the years, currently comprises 109 overseas manufacturing facilities in 29 countries. In fiscal 2002, we commenced operations at several new facilities, including a new motorcycle plant for Honda Motorcycle & Scooter India (Private) Limited (HMSI); a second automobile plant for Honda of the U.K. Manufacturing Ltd. (HUM); a new automobile plant in the United States, Honda Manufacturing of Alabama, LLC (HMA); and a new motorcycle production and sales joint venture in China. In early 2003, we plan to commence operations at new automobile plants in Malaysia and Indonesia.

To strengthen our worldwide production network, we are currently implementing a strategy that we have dubbed the Global Supply Network, through which we are taking steps to link facilities in different regions, creating a mutually beneficial system that facilitates global procurement and production and ensures a swifter and more accurate responsiveness to customer needs. In line with this concept, a facility in one market might, for example, manufacture automobiles or motorcycles specifically for export to another region. As an example of this strategy, and to maximize the increased production capacity resulting from the start-up of its second automobile plant, in autumn 2001 the U.K.'s HUM facility in Swindon began exports of the Civic 3-door to North America and Japan. In April 2002, the company also began exporting the CR-V to North America. We are also promoting a highly flexible and efficient manufacturing network for smaller production facilities in Asia designed to encourage greater sharing of complementary components and products within these markets.

A CUSTOMER-ORIENTED APPROACH

Of course, our objective is not simply to establish manufacturing facilities worldwide. We are also working closely with local sales and R&D bases to improve our grasp of customer needs in different regions, thus ensuring a faster, more effective response with the most appropriate products and services.

Examples of the success of these efforts include the Accord, for which we have created several designs tailored specifically to the needs of different markets around the world; the Fit and Mobilio subcompact cars and the Step Wagon and Stream minivans in Japan, both of which are high growth market categories; and the Acura MDX and Pilot, both developed exclusively for the North American market, where SUVs are particularly popular. In response to increasing demand for diesel-powered automobiles in European markets, we launched the Civic mounted with a 1.7-liter diesel engine from Isuzu Motors Limited. We are currently developing a new 2.0-liter diesel engine for the upcoming new Accord. In Asia, we have developed and introduced products suited to the particular road and driving conditions of the region, including the City compact sedan and the Cub motorcycle, with plans to expand the focus of these efforts to the small car category in the near future.



The Green Factory Concept

FLEXIBILITY

COST EFFECTIVENESS

ENVIRONMENTAL CONCERN



The Green Factory concept is designed to facilitate the efficient use of resources and to eliminate industrial waste at Honda plants worldwide. As part of this initiative, we are further revising production processes and creating an advanced manufacturing system that is both flexible and environmentally sound, thereby enabling us to supply products that redefine concepts of vehicle quality.

THE NEW MANUFACTURING SYSTEM

Over the past few years, we have made fundamental changes to production processes at manufacturing facilities worldwide—beginning with our principal Japanese automobile manufacturing facilities in Suzuka and Saitama and major plants in the United States, Canada and the United Kingdom—as part of an overall drive to raise quality, efficiency, flexibility and environmental soundness. To this end, we sought to make the most of our accumulated expertise and experience by actively canvassing ideas from our production-line associates. One such idea led to the use of industrial robots for welding, a move that has increased speed, body precision and durability, while simultaneously reducing energy consumption. Another associate suggestion resulted in the adoption of waterborne paints, improving the work environment for line associates, shortening process times and improving vehicle finishes. Associate input also led to a reorganization of the assembly process into functional process zones and the use of subassembly lines to manufacture modular parts. This change has contributed substantially to improvements in product quality and production efficiency.

The renovation of production processes has had a far-reaching positive effect. Changes implemented on the Suzuka Factory's No. 1 line, for example, halved specific investment for the introduction of new models, as well as halved initial investment for line installation when the line was revamped in May 2000. The modifications to production processes on the line since that date have slashed lead times by an average of 30%; increased flexibility, enabling the line to accommodate a maximum of eight models; and reduced carbon dioxide (CO₂) emissions by approximately 20%. As a result of enhanced efficiency, we will reduce the number of production lines at our Suzuka Factory to two, from the current three, while maintaining the same capacity, by the end of fiscal 2003.

ENVIRONMENTALLY SOUND FACILITIES

We are also taking decisive action aimed at eradicating industrial waste from our production facilities. In July 2000—well ahead of the original schedule—we succeeded in completely eliminating the output of industrial waste requiring disposal as landfill from all our domestic manufacturing facilities. We have also set stringent voluntary emission targets and are stepping up efforts to achieve steady reductions in air and water pollutants and ensure effective management.

Thanks to New Manufacturing System processes and a multifunctional, integrated and synchronized production line, the Hosoe Plant—a new outboard engine facility at the Hamamatsu Factory in Japan—boasts 40% fewer CO₂ emissions than the previous outboard engine facility and zero wastewater discharge.

In production and development, we are taking measures to improve the efficiency of overall energy and resource use, including the installation of high-efficiency cogeneration systems. In fiscal 2002, we achieved a 15% reduction in energy consumption per unit of production at our domestic factories, compared with the fiscal 1991 level. By fiscal 2011, we intend to increase this percentage to 30%.

We are also expanding implementation of the Green Factory concept at manufacturing facilities overseas.



Research and Development

ENVIRONMENTAL PERFORMANCE

ADVANCED SAFETY

NEW TECHNOLOGIES



Honda's R&D activities comprise long-term, forward-looking research aimed at developing basic and advanced technologies, and the development of products featuring these technologies that respond to the specific needs of customers in various parts of the world. In all aspects of our R&D activities, we maintain a firm commitment to innovation and leadership.

CLEANER VEHICLES

Honda has always placed a high priority on cultivating superior technologies that reduce the environmental impact of its products. Our efforts focus on such objectives as improving emissions performance, enhancing fuel economy and developing alternative-energy vehicles. To date, we have succeeded in applying a number of advanced environmental technologies to a broad range of commercial products.

Our breakthrough CVCC engine technology, incorporating a cleaner combustion process that reduces exhaust emissions, was featured in the popular Civic series in 1972. We have continued to conduct research with the goal of further reducing the carbon monoxide (CO), hydrocarbon (HC) and nitrogen oxide (NOx) emissions from exhaust gas. In 1995, we introduced the first Low Emission Vehicle (LEV) gasoline engine. At present, we are pursuing our fiscal 2006 targets to lower HC and NOx emissions by 75% from the fiscal 1996 level (Japanese market).

Efforts to develop clean, fuel-efficient engine technologies have yielded such major achievements as the Variable Valve Timing and Lift Electronic Control System (VTEC) engine technology, which increases engine output while reducing fuel consumption, and the Honda Integrated Motor Assist (IMA) system, a unique gasoline-electric hybrid system that greatly improves fuel economy. In December 2001, we commenced sales of the Civic Hybrid, featuring an advanced Honda IMA system that offers even greater efficiency than its predecessor. Current efforts target a 25% improvement in average fuel efficiency in Honda automobiles sold in Japan from the fiscal 1996 level by fiscal 2006.

We continue to promote R&D directed at the commercialization of vehicles powered by electricity, natural gas and other next-generation fuel alternatives. In September 2001, we announced the FCX-V4, a new fuel cell-powered vehicle featuring improved speed, acceleration and cruising distance, as well as new collision-safety measures, all of which enable it

to deliver a performance closer to mass-produced vehicles than has previously been possible.

INDUSTRY-LEADING SAFETY STANDARDS

Honda remains committed to developing technologies that set the standards for safety in today's motorized society. Our efforts encompass active safety technologies developed to prevent accidents from occurring, and passive safety technologies that minimize injuries to drivers, passengers and pedestrians in the event of an accident. Achievements to date include our renowned antilock brake system (ABS) that provides greater stability in critical braking conditions, Vehicle Stability Assist (VSA) system and omnidirectional collision safety body, all of which have been successfully commercialized. At our indoor car-to-car crash test facility in Japan, we conduct real-world crash tests, thereby accelerating the development of technologies that meet our own increasingly high safety standards.

THE POWER OF DREAMS

Our commitment to anticipating and responding to the future needs of our customers is driving us to expand R&D efforts into new fields. In line with the commitment of our R&D team worldwide to promoting coexistence with society by providing products that offer new value, in 1986 we launched a humanoid robotics project. This project culminated in the year 2000 with the unveiling of ASIMO, our third prototype and the world's most advanced bipedal humanoid robot. We continue to conduct research with the goal of developing ASIMO into a robot that can be of great benefit to humans and to society as a whole.