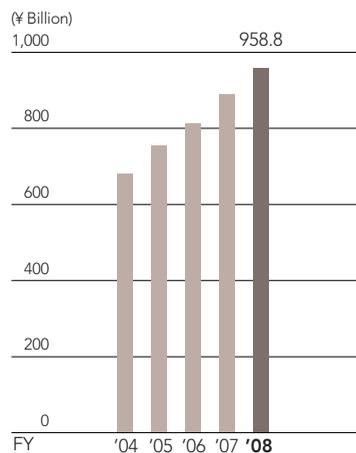




R&D and Intellectual Property

Toyota R&D is dedicated to the development of attractive, affordable, high-quality products for customers worldwide, and the intellectual property that R&D generates is a vital management resource that Toyota utilizes and protects to maximize its corporate value.

R&D Expenses



Note: Fiscal years ended March 31

R&D Facilities



Head Office Technical Center (Toyota City, Aichi Prefecture, Japan)



Toyota Motor Engineering & Manufacturing North America, Inc. (Ann Arbor, Michigan, U.S.A.)



Toyota Motor Europe R&D/Manufacturing (Brussels, Belgium; Derby, U.K.)



Toyota Motor Asia Pacific Engineering and Manufacturing Co., Ltd. (Samutprakan, Thailand)

R&D Guiding Principle

- Providing clean and safe products and to enhance the quality of life of people everywhere in all our activities.
- Pursuing advanced technological development in a wide range of fields, we pledge to provide attractive products and services that respond to the needs of customers worldwide.

» R&D Activities

The overriding goal of Toyota's product and technology development is to minimize the negative aspects of driving, such as the burden it places on the environment and traffic accidents, and maximize the positive aspects, such as driving pleasure, comfort, and convenience. By achieving these sometimes conflicting goals to a high degree, we want to open the door to the automobile society of the future.

To assure efficient progress in R&D activities, we coordinate and integrate all phases, from basic research to forward-looking technology and product development. With respect to basic research issues such as energy, the environment, information technology, telecommunications, and materials, projects are regularly reviewed and evaluated in consultation with outside experts to ensure efficient R&D cost control. And with respect to forward-looking and leading-edge technology and product development, we establish cost-performance benchmarks on a project-by-project basis to ensure efficient development investment.

Basic Research	Development theme discovery Research on basic vehicle-related technology
Forward-Looking and Leading-Edge Technology Development	Technological breakthroughs related to components and systems Development of leading-edge components and systems ahead of competitors
Product Development	Primary responsibility for new model development Development of all-new models and existing-model upgrades

» R&D Expenditures

In fiscal 2008, R&D expenditures totaled ¥958.8 billion, up 7.6% from the previous fiscal year, representing 3.6% of consolidated net revenues. Investment in R&D has been at a high level in recent years because we have been aggressively engaged in forward-looking and leading-edge technology development. Moving forward amid intensifying technological competition on a global scale, we will continue to maintain a high level of R&D investment to maintain our competitive advantage in technology and products.

» R&D Organization

In Japan, R&D efforts are led by Toyota Central Research & Development Laboratories, Inc., which works closely with a range of Toyota Group companies that includes Daihatsu Motor Co., Ltd., Hino Motors, Ltd., Toyota Auto Body Co., Ltd., and Kanto Auto Works, Ltd.

Overseas, technical centers in North America, Europe, Asia, and Oceania, as well as a range of design and motorsports R&D centers around the world, give us strong global R&D capabilities that enable us to build cars that better meet the needs of customers in each region.

Note: See page 64 for details.

Intellectual Property Guiding Principle

- Through appropriate acquisition and utilization of intellectual property, our goal is to secure greater corporate flexibility and to maximize corporate value.

» Intellectual Property Activities

Toyota's competitiveness springs from the forward-looking R&D stance that drives its product and technology strengths. Underlying each new product to emerge from R&D, there are always intellectual properties such as inventions and expertise that we value as important management resources.

» Intellectual Property Systems

R&D and intellectual property activities are organizationally linked to enable us to focus on selected development themes and build a strong patent portfolio. We have also established an Intellectual Property Committee made up of management, R&D, and intellectual property to secure and

utilize important intellectual property that contributes to management, or that deliberate response policies to management risks related to intellectual property.

» Intellectual Property Strategies

Toyota carefully analyzes the patent situation in each area of research to formulate more effective R&D strategies. We identify R&D projects in which Toyota should acquire patents, and file relevant applications as necessary to help build a strong global patent portfolio.

In addition, we want to contribute to sustainable mobility by promoting the spread of technologies with environmental and safety benefits, and as such, we take an open stance to patent licensing, and grant licenses when appropriate terms are met. A good example of this policy can be seen in the area of hybrid technology, one of our core technologies related to environmental energy, where we have licensed hybrid-related patents to other companies.



R&D Organization

As of March 31, 2008



Japan			
Company name	Activities	Location	Establishment
1 Head Office Technical Center	Planning and design of products, prototypes manufacture, and vehicle evaluation	Toyota City, Aichi Prefecture	1954
2 Toyota Central Research & Development Laboratories, Inc.	Fundamental technical research for the Toyota Group	Aichi County, Aichi Prefecture	1960
3 Higashi-Fuji Technical Center	Research and development of new vehicle technology and new engine technology	Mishuku, Susono City, Shizuoka Prefecture	1966
4 Shibetsu Proving Ground	Testing and evaluation of automobiles under high speed and cold conditions	Onnebetsu, Shibetsu City, Hokkaido	1984
U.S.A.			
Company name	Activities	Location	Establishment
5 Toyota Motor Engineering & Manufacturing North America, Inc.*	Vehicle development & evaluation, certification, collection of technical information	Ann Arbor, Plymouth (Michigan), Torrance, Gardena (California), Wittmann (Arizona), Washington, D.C.	1977
6 Caltly Design Research, Inc.	Exterior / Interior / Color design	Newport Beach (California)	1973
Europe			
Company name	Activities	Location	Establishment
7 Toyota Motor Europe R&D/Manufacturing	Vehicle development & evaluation, certification, collection of technical information	Brussels (Belgium), Derby (U.K.)	1987
8 Toyota Europe Design Development	Exterior / Interior / Color design	Nice (France)	2000
9 Toyota Motorsport GmbH	Development of Formula One race cars, participation in F1 races	Cologne (Germany)	1993
Asia Pacific			
Company name	Activities	Location	Establishment
10 Toyota Motor Asia Pacific Engineering and Manufacturing Co., Ltd.	Vehicle development, software development, evaluation, collection of technical information	Samutprakan Province (Thailand)	2003**
11 Toyota Technical Center Asia Pacific Australia Pty., Ltd.	Vehicle development, software development, evaluation, collection of technical information	Melbourne (Australia)	2003

* Toyota Motor Engineering & Manufacturing North America, Inc., is a consolidated R&D and manufacturing company in North America.

** The year shown is as at the establishment of Toyota Technical Center Asia Pacific Thailand Co., Ltd., which integrated with Toyota Motor Asia Pacific Co., Ltd., to establish Toyota Motor Asia Pacific Engineering and Manufacturing Co., Ltd., in April 2007.