1.5 Million-Car Project

Fukuoka/Japan

Fukuoka - Location

Fukuoka - Features

- “The Gateway to/from Asia”
- Population
  - 5 million / Fukuoka prefecture
  - 15 million / Kyushu
- Climate
  - Mild with a moderate amount of rainfall
  - Average annual temperature: 18 C

Fukuoka - Features

- GDP of Fukuoka: € 156 billion
- GDP of Kyushu: € 432 billion
- Major industries
  - Transportation equipment
  - Electrical equipment and components
  - Iron and Steel
  - Machinery
  - Chemical

1.5 Million-Car Project - Overview

1.5 Million-Car Project

~ Toward the realization of a world-leading automobile production & development base ~

- Concentration of automakers: Toyota, Nissan, Daihatsu
- Annual production capacity: Over 1.5 million
- Engine factories: Toyota, Daihatsu
- Hybrid vehicle component factory
- HR development in the auto industry
- Next-generation automobile R&D base
  - Promoting the development of senior-friendly automobiles
- Design development base
  - R&D of vehicle, production control technologies
  - R&D of embedded software for automobile, ICs

1.5 Million-Car Project - Overview

1.5 Million-Car Project

~ Toward the realization of a world-leading automobile production & development base ~

Target 1: Produce 1.5 million automobiles annually

Target 2: Procure 70% of parts within the region

Target 3: Become a hub of highly qualified human resources

Target 4: Become a center of R&D and demonstration activities for next-generation automobiles

1.5 Million-Car Project - Overview

- Foster high-functional parts industry
  - Foster high-functional parts companies
  - Promote transactions with local companies
  - Promote investment of enterprises
  - Enhance business alignment
- Cultivate advanced HR in auto industry
  - Formulate a guideline on advanced HR development
  - Enhance HR development programs
- Promote R&D / demonstration activities
  - Promote a senior-friendly car development
  - Promote ITS demonstration
  - Promote next-generation car demonstration
- Enhance related measures
  - Conduct the project across Kyushu
  - Improve infrastructure

1.5 Million-Car Project - Production volume

Production volume of four-wheel vehicles

	2004	2005	2006	2007	2008	2009	**2010**
Nissan Motor Kyushu Plant	510,000	420,000	350,000	400,000	360,000	310,000	**410,000**
Nissan Shatai Kyushu	-	-	-	-	-	5,000	**60,000**
Toyota Motor Kyushu	250,000	310,000	410,000	440,000	290,000	340,000	**270,000**
Daihatsu Kyushu	40,000	170,000	250,000	290,000	310,000	340,000	**340,000**
Total	800,000	910,000	1,010,000	1,130,000	960,000	990,000	**1,080,000**

1.5 Million-Car Project - Engine plants, suppliers

- Engine, CVT, Transaxle plants

Company	Factory (start operation)	Production item
Toyota Motor Kyushu	Kanda No.2 plant (Apr. 2008)	Engine
Toyota Motor Kyushu	Kokura plant (Aug. 2008)	Transaxles for hybrid car
Daihatsu Kyushu	Kurume plant (Aug. 2008)	Engine
Akashi Kikai Industry	Kyushu plant (Oct. 2009)	CVT

- Concentration of automobile-related companies

850 automobile-related companies in Fukuoka/Kyushu

FY	2002	2003	2004	2005	2006	2007	2008	2009	Total
Number of companies newly entered	2	6	10	11	20	21	20	2	92

1.5 Million-Car Project - R&D

- R&D of vehicle, production control technologies
  - Toyota Technical Development - Fukuoka R&D Center
  - Toyota Production Engineering - HQ and Fukuoka Technical Center
  - NCS - Kyushu Office

TPEC Fukuoka

- R&D of embedded software & ICs
  - CATS - Embedded Software Laboratory
  - Denso Techno - Fukuoka Technical Center
  - Aisin comCruise – Fukuoka Technical Center, Kitakyushu Laboratory
  - ECS - Kitakyushu Lab
  - New Japan Radio - Kitakyushu Design Center

1.5 Million-Car Project - Human resource

- Foster manufacturing engineers of SMEs

  Conduct training programs to develop skilled engineers and technicians in basic manufacturing techniques.

  * Molding, Plating, Rubber manufacturing, Plastic, 3D design, Module

- Foster highly-skilled human resources

  Universities in Fukuoka conduct specialized course for automotive science, digital engineering, automotive system engineering and car electronics.

- Foster younger people, high school students

  Provide technical high school students practical educations to learn basic skills and principles, while implementing internship programs in companies located in Fukuoka.

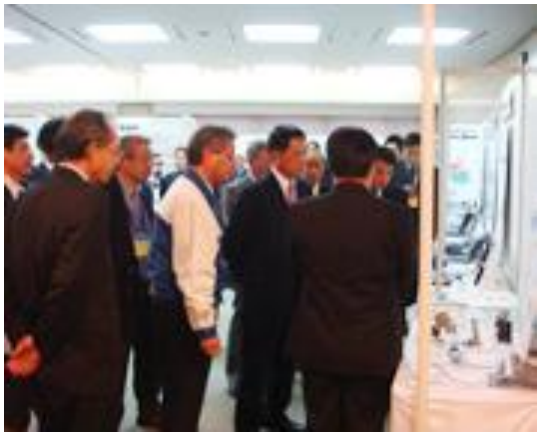
Internship program at Nissan

1.5 Million-Car Project - New manufacturing technology

- New manufacturing technology development
  - Complex servo press processing method for head restraint
  - Heat-resisting material for power train using magnesium alloy castings
  - Rapid isothermal forging technology of aluminum alloy for mass-production
  - Slide parts for power train using low-temperature thermal spraying technology
  - High-precision micro fabrication technology for deep hole nozzle using tool wear sensing method
  - High lubricity automotive wiper
  - Noncontact, on-machine and automatic compensation type grinding system

1.5 Million-Car Project - Business networking

- Promote transactions with local companies
  - Appointment of entry support advisors
  - Business matchmaking to expand trade in auto parts
  - New technology and processing method exhibition
  - Strengthen regional networks



1.5 Million-Car Project - Senior friendly car

Senior-friendly car development project

- Automobile is necessary for elderly people as means of daily transportation, in particular in countryside without public transport.
- At the same time, automobile is a key device for social participation and fulfilling life throughout our lifetimes.

⇨ Automobile from a senior driver's standpoint is required!

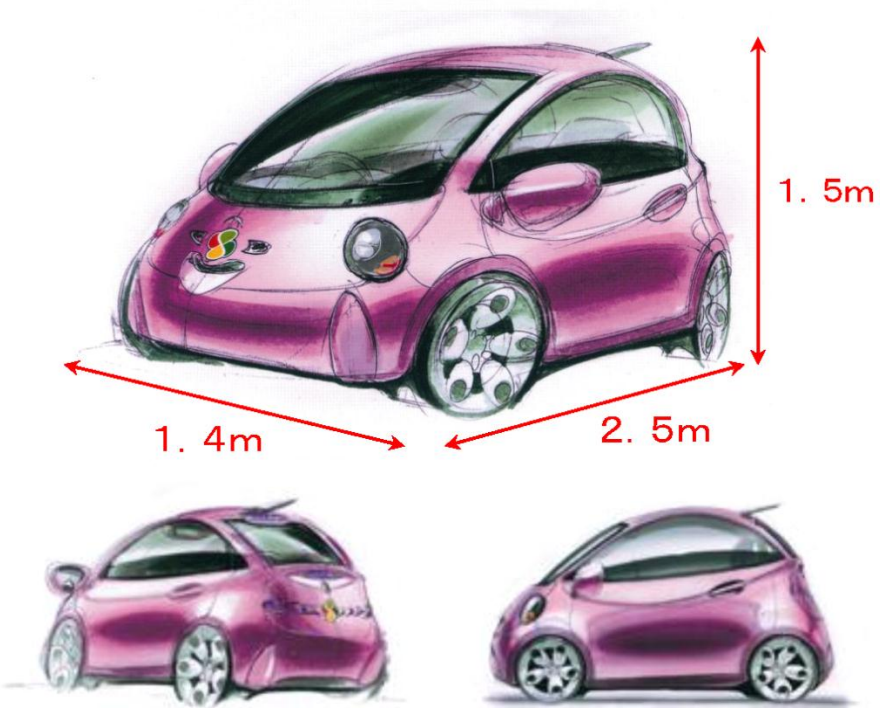
Governors' association

- Analysis of current situation of senior drivers
- Survey analysis of dissatisfactions and requests of senior drivers with existing cars
- Propose a new concept of senior-friendly cars to automakers etc.

1.5 Million-Car Project - Senior friendly car

< Spec of senior-friendly car >

Dimension	Length: 2.3 - 2.8 m Width: 1.3 - 1.4 m Height: 1.5 - 1.6 m
Capacity	2 persons
Max. speed	less than 60 km/h
Range	approx. 60 km
Weight	less than 700 kg
Power source	Electricity
Max. power	10 kW - 20 kW

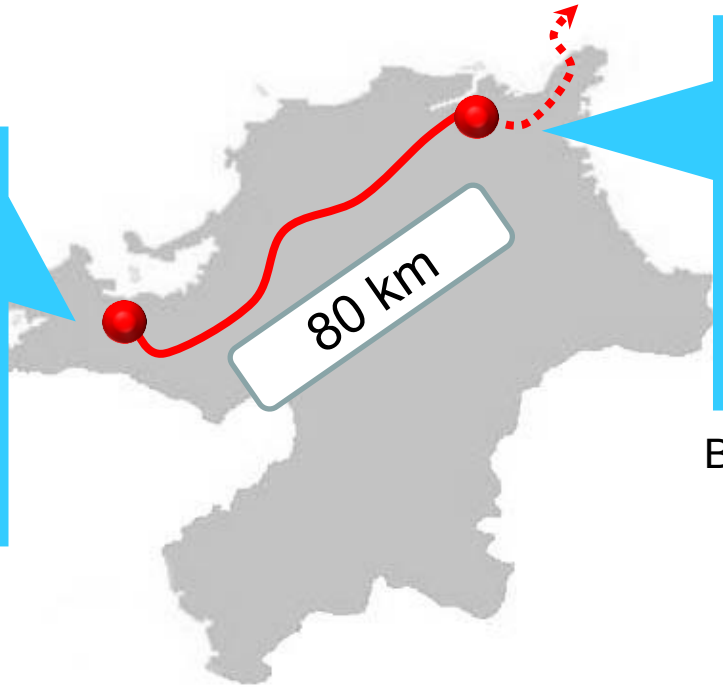


Body design example

Hydrogen highway

- Hydrogen vehicles have freedom of operation

Based on water electrolysis using solar power



Based on by-product hydrogen supplied through pipeline

1.5 Million-Car Project - Hydrogen highway

1.5 Million-Car Project - Hydrogen highway

FCEV installation initiative

- Development of hydrogen stations
- Incentives for FCEV purchase, use and parking
- Setting goals for the number of FCEV


See you in Fukuoka!