MAZDA PRODUCT DEVELOPMENT - FROM MILLENNIUM PLAN TO TODAY

- Introduced new “Zoom Zoom” models as well as environment/safety technologies.
- Introduced clean DE engines (EU cars/ JPN commercial cars with DPF)
- Introduced Tribute HEV to North America
- Introduced world’s first “RX-8 Hydrogen RE”
- SU-LEV ratio: 90% or above
- Introduced “MPV” with Mazda Pre-Crash safety
- Eco-products Excellent Prize (MPV 2.3L DISI Turbo)
Economic growth and environmental issues

- Reduce hazardous substances
- CO₂ reduction
- Prevention of water pollution/vibration/noise
- Prevention of air pollution
- Resource recycling
- Energy conservation
- Use new energy
- Hazardous substances reduction
- Emission reduction
- VOC reduction
- Pollutants reduction
Multi-solutions are required in the automobile industry.

The diagram illustrates the issues of the automobile industry from 1970 to 2030, focusing on three main areas: Anti-Fossil Fuel, CO₂ Reduction, and Clean Emission. The timeline highlights the present (2000) and future efforts towards these goals.

Multi-solutions include:
- High Efficiency & Clean Gasoline/Diesel ENG
- Hybrid Technology
- Bio Mass Energy
- Hydrogen Energy

These solutions are aimed at reducing fossil fuel dependence, lowering CO₂ emissions, and improving overall environmental impact.
The number of worldwide fatalities in road traffic accidents has been increasing year by year. We have to reduce accidents as well as human damage in accidents.
The automotive industry has been developing anti-collision vehicles through various technologies.
Mazda is working towards a sustainable future that brings continued happiness and excitement to people in a global society, by developing vehicles that never fail to excite, visually capture the customer’s heart, and provide a fun driving experience that keeps bringing them back to Mazda.
Vision
Pursue the powertrain technology that never fail to excite, visually capture the customer’s heart, and provide a fun driving experience that keeps bringing them back to Mazda.

Policy
Mid/Long Term
✓ Combine strong dynamic performance and product appeals to repeat customers.

For the future
✓ Pursue the hydrogen combustion technology, evolving the combustion technology.
✓ Introduce practical technology in evolution process.
MAZDA POWERTRAIN

Gasoline Engines

New Gasoline Engines (I4)
- Dynamic performance: Improve 15-25%
- Fuel economy: Improve 20%

Flex Fuel Engines
- E85

Smart Idling Stop
- Fuel economy: Improve 10% (in JPN)
- DISI + Combustion re-start system

DISI 2.0L
DISI-Turbo 2.3L

2000  2010  2020
MAZDA POWERTRAIN

Diesel Engines

New Clean DE engines

- Fuel economy: Improve 10%
- Emission: EU “Euro6”
  US “Tier2 BIN5”
  JPN “H12 standard”

2000 2010 2020
New Automatic Transmissions

- Driving performance: Realize “direct feel” comparable to MT
- Fuel performance: Comparable to MT
MAZDA POWERTRAIN

Rotary Engine

New Hydrogen Rotary Engine

New Rotary Engine

Dramatically improve dynamic/fuel performances.

RENESIS

2000 2010 2020
Future Technology

New Hydrogen Rotary Engine
- Dynamic performance: currently comparable to V6 3.0L gasoline engines
- Cruising distance: 400km

High-efficient hybrid system
- Fuel economy: Improve 100%

Premacy hydrogen RE hybrid
- Dynamic performance: Improve 40%
- Cruising distance: 200km
- Original hybrid system

RX-8 hydrogen RE

2000 2010 2030
MAZDA DESIGN

Vision
Pursue Mazda design that never fails to excite, visually captures the customer’s heart, and provides a fun driving experience that keeps bringing them back to Mazda.

Policy
- Establish family taste, which visually captures the customer’s heart.
- Propose new design cues.
- Innovate proportion.
Vision
Pursue the platform technology that never fails to excite, visually captures the customer’s heart, and provides a fun driving experience that keeps bringing them back to Mazda.

Policy
✓ Support attractive styling
✓ Provide the driving-pleasure and safety
✓ Support fair driving skill and realize anti-collision technology.
✓ Realize CO2 reduction as well as driving performance enhancement through weight reduction.
MAZDA VEHICLE TECHNOLOGY

Design & Platforms

New Design & Platforms
- Distinctive design (New proportion)
- Excellent dynamic performance
- Safety & lightweight

NEW Demio / Mazda2
- Distinctive design & Excellent dynamic performance
- CO2 reduction
- About 100kg lighter than the previous models

2000  2010  2020
MAZDA VEHICLE TECHNOLOGY

Safety

HMI / Dynamic Safety
- HMI supports correct risk awareness & judgment
- Dynamic performance to drive easily and avoid risk

ITS Prevention of traffic jams and accidents
- Demonstration in Hiroshima
- Driving support system linked with infrastructure

Mazda pre-crash safety

2000  2010  2020
MAZDA VEHICLE TECHNOLOGY

Material & Manufacturing technology

Original Water Based Paint System
- VOC reduction

Bio-Plastic/ Bio-Seat Fabric
- Carbon-neutral materials made of plants

Bumper-to-Bumper Recycling

Three Layer Wet Paint System

2000  2010  2020
Mazda is working towards a sustainable future that brings continued happiness and excitement to people in a global society, by developing vehicles that never fail to excite, visually capture the customer’s heart, and provide a fun driving experience that keeps bringing them back to Mazda.
The projections and future strategies shown in this presentation are based on various uncertainties including without limitation the conditions of the world economy in the future, the trend of the automotive industry and the risk of exchange-rate fluctuations. So, please be aware that Mazda's actual performance may differ substantially from the projections.

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