Panasonic IR Day 2012
Automotive Systems Company
Business Strategy

May 23, 2012
Panasonic Corporation
Automotive Systems Company
President Masahisa Shibata

Notes: 1. This is an English translation from the original presentation in Japanese.

Contents
1. Overview of Business Domain
2. Business Policy and Growth Strategy
1. Overview of Business Domain

2. Business Policy and Growth Strategy
FY 2012 Results and FY 2013 Business Plan

Sales

<table>
<thead>
<tr>
<th>FY2012</th>
<th>FY2013 (E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>653.2</td>
<td>720.0</td>
</tr>
<tr>
<td>+7% (VS FY11)</td>
<td>+10% (VS FY12)</td>
</tr>
</tbody>
</table>

Operating profit

<table>
<thead>
<tr>
<th>FY2012</th>
<th>FY2013 (E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.9</td>
<td>18.0</td>
</tr>
<tr>
<td>-78% (VS FY11)</td>
<td>+264% (VS FY12)</td>
</tr>
</tbody>
</table>

- Overall sale increased by 7%. However, sales in PAS products were lower than the previous year.
- Operating profit decreased due to negative impacts such as the earthquake, flooding in Thailand and exchange rates.
- Overall sales is expected to show double-digit growth due mainly to sales improvement in PAS products.
- A significant improvement is expected with sales recovery in PAS products.

PAS Europe
A. Heitmann
President

PAS Asia Pacific
Masahiro Doi
President

PAS China
Minoru Kobayashi
President

PAS America
T. Gebhardt
President

Automotive Systems Company
Masahisa Shibata
President

PAS Global Framework

Broaden development, manufacturing, and sales operations in five regional headquarters across the globe.

Five regional headquarters across the globe.
Automobile Manufacturing Sites and PAS Global Sites

Covers automobile manufacturing sites in cooperation with PAS global sites

Major Clients

Each regional headquarter is responsible for meeting demands from automobile manufacturers

PAS Europe
• Volkswagen
• Daimler
• Audi

PAS China
• Shanghai Automotive Industry Corporation
• Beijing Automobile Works Co.

Automotive Systems Company
• Toyota
• Mazda
• Honda
• Nissan
• Fuji Heavy Industries
• SUZUKI

PAS Asia Pacific
• Maruti Suzuki India
• Tata

PAS America
• GM
• Ford
• Chrysler

Copyright (C) 2012 Panasonic Corporation All Rights Reserved.
**Sales by Region**

Sales by region: Japan 63%, Sales by destination: Overseas 60%.

- **PAS Europe**
  - Europe 9%

- **PAS China**
  - China 5%

- **PAS Asia Pacific**
  - Asia, etc. 5%

- **PAS America**
  - North America 17%

**Aftermarket**

- 60% Overseas
- 40% Japan

**OEM**

- 91%

*FY 2012 results, based on supplied products.*

---

**Flagship Products and Sales by Product**

- **Automotive Multimedia Products**
  - Navigation systems
  - Portable Navigation Device (PND)
  - Car audio
  - Audio with display
  - Deck mechanism
  - Rear-seat entertainment system
- **Electrical components and others**
  - DSRC/ETC onboard unit
  - Angular velocity sensor
  - Steering switch
  - Engine control unit

- **Eco Car Products**
  - Onboard Charger
  - Inverter-integrated compressor
  - Back-up power supply for electric brake
  - Earth leakage circuit breaker
  - Cut-off DC power current EV Relays

**Sales by Product**

- 51% Automotive Multimedia products
- 25% Automotive
- 24% Eco car products

*Based on FY 2012 results.*
1. Overview of Business Domain

2. Business Policy and Growth Strategy

Effective Demand (only in the PAS business domain)

Vehicle production Average annual growth rate (2010-2015)  

<table>
<thead>
<tr>
<th>Year</th>
<th>Eco car related products</th>
<th>Driving support system (Electrical components and others)</th>
<th>Automotive multimedia products</th>
<th>Display products</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2011</td>
<td>3.9</td>
<td>1.1</td>
<td>2.4</td>
<td>0.4</td>
</tr>
<tr>
<td>FY2012</td>
<td>4.4</td>
<td>1.3</td>
<td>2.5</td>
<td>0.6</td>
</tr>
<tr>
<td>FY2013</td>
<td>4.7</td>
<td>1.4</td>
<td>2.5</td>
<td>0.7</td>
</tr>
<tr>
<td>FY2014</td>
<td>5.0</td>
<td>1.5</td>
<td>2.5</td>
<td>0.9</td>
</tr>
<tr>
<td>FY2015</td>
<td>5.5</td>
<td>1.6</td>
<td>2.5</td>
<td>1.0</td>
</tr>
<tr>
<td>FY2016</td>
<td>5.9</td>
<td>1.8</td>
<td>2.5</td>
<td>1.2</td>
</tr>
</tbody>
</table>

*Estimated by PAS

Effective demand  

Average annual growth rate

Vehicle production  

Average annual growth rate

+5%  

+29%  

+8%  

+1%  

+25%  

+9%
Contribute to the creation of a new car society through electronics

1. Continuous investment for growth
   - Global multimedia business
   - Cockpit business
   - New business (EV-related business)
   - Electrical component business

2. Constant reform of business structure

3. Drive the Panasonic Group’s automotive electronics business

Two core businesses lead the automotive electronics business among all Panasonic domain companies

Global Multimedia Business
Global Multimedia Business

Change and evolution in the automotive multimedia market

Car navigation
Saves map data on HDD, etc.
High-quality/high-definition/vehicle information display

PND
(Portable Navigation Device)
Simplified functions
Compact, lightweight, portable

Car Audio
Music media reproduction such as radio and CD

Cockpit system
Easy-to-use HMI implemented system

Display audio

Evolution

Functional Integration

Low-priced audio for emerging markets

Functional Optimization

Saves map data on HDD, etc.
High-quality/high-definition/vehicle information display

PND
(Portable Navigation Device)
Simplified functions
Compact, lightweight, portable

Car Audio
Music media reproduction such as radio and CD

Display audio

Functional Integration

Low-priced audio for emerging markets

Global Multimedia Business

Initials in the automotive multimedia

Audio
Pursuit of car interior sound quality
Large-screen information display and HMI

Display

Connectivity
Smartphone connectivity
Use of apps

Navigation
Support by customer and region
in-house development
Software collaboration in-house development

50 mil. units

Forecast for overall demand for display audio

Industry’s first MirrorLink

* All regional companies

4 mil. units

Display audio

Navigation

SNS
Game
News
Weather Information
Navigation

FY2010 FY2013 FY2016 FY2019
Global Multimedia Business

Initiatives in the automotive multimedia

**Audio**
- Pursuit of car interior sound quality
  - Display audio
  - Connectors
  - Navigation

**Anticipation of aggregate demand for display audio**
- Display Audio
- Connectivity
- Navigation

Industry's first MirrorLink

* All of the regional companies

Pursuit of car interior sound quality: Collaboration with ELS and Fender

Collaboration with US company Fender, the world's leading instrument maker and developer of legendary guitars

- Collaboration with Grammy Award winning music producer Elliot Scheiner

Bringing the sound studio environment into your vehicle

Pics provided by American Honda Motor Co., Ltd.

Fitted in the US Honda (Acura) TL, TSX, ZDX, MDX, RDX

Pictures provided by Volkswagen of America

Fitted in the US Volkswagen Jetta, Beetle, and Passat

Winner of the 2011 Car Radio of the Year

Copyright (C) 2012 Panasonic Corporation All Rights Reserved.
Global Multimedia Business

Initiatives in the automotive multimedia

Display

- Large-screen information display and HMI

Cockpit system

Connectivity

- Smartphone connectivity
  - Use of apps

Navigation

- Support by customer and region

Anticipation of aggregate demand for display audio

Industry's first MirrorLink

Connectivity Display Audio

All of the regional companies

Display Audio

- Display audio

50 mil. units

FY2010 FY2013 FY2016 FY2019

Anticipation of aggregate demand for display audio

* All of the regional companies

Connectivity

- Display Audio

SNS

- Game

News

Weather

- Information

Navigation

Audio

- Pursuit of car interior sound quality

In-house development

Software collaboration

Entertainment

Navigation

- Large-screen information display and HMI (human-machine interface) cockpit

"Achieving both safe driving and car multimedia operations" that are optimized for people and communities

Driving support

Camera system

Eco-friendly driving information

Audio

Traffic information

Smartphone connectivity

Internet

Navigation

Phone Entertainment

Driving information

Large and detailed screen

Emergency information

Large-screen information display and HMI (human-machine interface) cockpit

Systemizing cockpit with large displays for optimal and intuitive use

Copyright (C) 2012 Panasonic Corporation All Rights Reserved.
Global Multimedia Business

Large-screen information display and HMI (human-machine interface) cockpit

“Achieving both safe driving and car multimedia operations” that are optimized for people and communities

- Driving support
- Camera system
- Eco-conscious driving information
- Audio
- Traffic information
- Smartphone connectivity
- Internet
- Phone
- Entertainment

Systemizing cockpit with large displays for optimal and intuitive use

Copyright (C) 2012 Panasonic Corporation All Rights Reserved.
Global Multimedia Business

Large-screen information display and HMI (Human-machine interface) cockpit

“Achieving both safe driving and car multimedia operations” that are optimized for people and communities

Driving support  Camera system  Eco-conscious driving information  Audio  Traffic information  Smartphone connectivity  Internet

Navigation  Rear/side camera  Smartphone connectivity

Displays images on large screens at front and rear passenger seats

Global Multimedia Business

Large-screen information display: Rear entertainment system

Year 2003  2006  2010  2012 -
7-inch screen  8-inch screen  9-inch screen  16-inch wide screen

Many automobile manufactures adopt Panasonic system

Awarded JD Power’s “Best in Class”

Copyright (C) 2012 Panasonic Corporation All Rights Reserved.
Global Multimedia Business

Initiatives in the automotive multimedia

- Display Audio
  - Pursuit of car interior sound quality
  - Large-screen information display and HMI

- Connectivity
  - Smartphone connectivity
  - Use of apps

- Navigation
  - Support by customer and region

Forecast for overall demand for display audio

Industry’s first MirrorLink

4 million units

FY2010 FY2013 FY2016 FY2019

50 mil. units

* All regional companies

Forecast for overall demand for display audio

Global Multimedia Business

Smartphone connectivity, app use: MirrorLink / iPhone app connectivity

World’s first MirrorLink enabled display audio

Installed in Toyota iQ for the European market

Also compatible with iPhone apps

Forward planning and proposal of prototypes with smartphone and app makers

- Android
- iPhone
- *CCC-approved apps
- *iPhone app partners
- + new OS, new specifications, new functions

4 million units

FY2010 FY2011 FY2016 FY2019
Global Multimedia Business

Initiatives in the automotive multimedia

- Audio: Pursuit of car interior sound quality
- Display: Large-screen information display and HMI
- Connectivity: Smartphone connectivity, Use of apps
- Navigation: Support by customer and region

Anticipation of aggregate demand for display audio

Industry’s first MirrorLink

Display audio

50 mil. units
FY2010
FY2013
FY2016
FY2019

Connectivity

- SNS
- Game
- News
- Weather
- Information

Navigation

Audio

Pursuit of car interior sound quality

Display

Large-screen information display and HMI

Connectivity

Smartphone connectivity, Use of apps

Navigation

Support by customer and region

50 mil. units
FY2010
FY2013
FY2016
FY2019

Global OEM car navigation systems: Software collaboration
Car navigation systems for aftermarket: In-house development

<table>
<thead>
<tr>
<th>OEM navigation systems</th>
<th>Software collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design to match car type</td>
<td>Strengthen PND lineup using assets developed by Sanyo</td>
</tr>
<tr>
<td>Custom design from external configuration through to location of operating keys</td>
<td>Full lineup: 5 – 7 inch, 1-seg/full-seg enabled</td>
</tr>
</tbody>
</table>

Development of new markets (Active navigation systems)

- <Focus on seniors and female customers>
- <Strengthen bicycle navigation functions>
Display audio : Sales target

[yen: billions]

- Already fixed business
- Estimated orders

*14 clients

Display audio market share

Automotive multimedia
Sales

Display audio

Existing Car navigation systems
Car audio, etc.

Received repeated orders of display audio
Market share No.1

50%

27% 42% 45% 50%

New Business

Copyright (C) 2012 Panasonic Corporation All Rights Reserved.
New Business (EV-related Business)

Business opportunities expand, benefiting from vehicle electrification

Gasoline car → EV (Electric Vehicle)

- Engine
- ECU
- Steering
- Car navigation/Car AV
- Belt compressor
- Keyless entry
- Gas station
- Camera
- Gasoline

- Motor
- ECU
- Cockpit
- Inverter-integrated electric compressor
- Keyless entry
- Wireless charging system
- Earth leakage circuit breaker
- Cable
- Plug-in station
- Battery

New Business (EV-related Business)

Home environmental technology “saving energy, storing energy and creating energy”

- Air conditioner
- LED light
- Creating energy
- Solar cell
- EcoCute
- Saving energy
- Storing energy
- TV
- IH Cooking Heater
- Rechargeable battery ‘EVOLTA’
- Lithium-ion battery module
- Storing battery
- Fuel cell
New Business (EV-related Business)

Apply home environmental technology “saving energy, storing energy and creating energy” to vehicle environmental technology.

Home Electronics
- Air conditioner
- EcoCute
- IH Cooking heater
- Saving energy
- Creating energy
- Storing energy
- Fuel cell
- Solar cell

Car Electronics
- Power Mgmt. System
  - Charger
  - Wireless charging system
  - Battery system
  - Car battery pack
  - Fuel efficiency
  - Electrification
- EV
- HEV

Battery systems
- Thermal Mgmt. system
- Heat pump
- Combination heating

New Business (EV-related Business)

Apply technologies for evaluation and testing cultivated in the electrical component business to new businesses.

Core electrical component technologies
- Real time control
- Dead time control
- Safe design methods
- Engine control technology

Electrical component reliability
- Broad temperature assurance
- Water resistant design
- Vibration resistance

Engine ECU
- Knock sensor
- Long-term assurance (11 – 15 years)

High current / AC technology
- 3-phase 200V, 50A/100A, ~15kW
- Safety: Detection of power leakage, overcurrent, overheating, and voltage abnormalities
- Reliability/durability: Establish component evaluation technology/ reliability of overcurrent joint connection

Application and extension to EV-related business
- Power Mgmt. systems
- Thermal Mgmt. systems
- Battery systems
- HEV
- EV
New Business (EV-related Business)

Proposal of devices and systems for full spectrum of eco cars

<table>
<thead>
<tr>
<th>Eco car type</th>
<th>Idle-stop systems</th>
<th>Hybrid</th>
<th>Plug-in hybrid</th>
<th>EV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Current business</td>
<td>Current business</td>
<td>(Non-contact power supply)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Inverter)</td>
<td>(Inverter)</td>
<td>(Inverter)</td>
</tr>
<tr>
<td>TECS</td>
<td></td>
<td>High voltage junction box</td>
<td>Electrically driven compressor</td>
<td>(Heat pump system)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DC–DC converter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Power Mgmt. systems

Thermal Mgmt. systems

Battery systems

New Business (EV-related Business)

Developing home electronics technologies for in-car use: Non-contact charger
[Example of technology development]
**Toward 1 Trillion Yen Business in FY2019**

**Contributing to the creation of a new society through electronics**

<table>
<thead>
<tr>
<th>Year</th>
<th>Value (yen: billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2012</td>
<td>653.2</td>
</tr>
<tr>
<td>FY2013 (plan)</td>
<td>720.0</td>
</tr>
<tr>
<td>FY2016</td>
<td>900.0</td>
</tr>
<tr>
<td>FY2019</td>
<td>Over 1 trillion yen</td>
</tr>
</tbody>
</table>

**Electrical components, EV-related (including others)**

**Global multimedia**
Disclaimer Regarding Forward-Looking Statements

This presentation includes forward-looking statements (within the meaning of Section 27A of the U.S. Securities Act of 1933 and Section 21E of the U.S. Securities Exchange Act of 1934) about Panasonic and its Group companies (the Panasonic Group). To the extent that statements in this presentation do not relate to historical or current facts, they constitute forward-looking statements. These forward-looking statements are based on the current assumptions and beliefs of the Panasonic Group in light of the information currently available to it, and involve known and unknown risks, uncertainties and other factors. Such risks, uncertainties and other factors may cause the Panasonic Group's actual results, performance, achievements or financial position to be materially different from any future results, performance, achievements or financial position expressed or implied by these forward-looking statements. Panasonic undertakes no obligation to publicly update any forward-looking statements after the date of this presentation. Investors are advised to consult any further disclosures by Panasonic in its subsequent filings with the U.S. Securities and Exchange Commission pursuant to the U.S. Securities Exchange Act of 1934 and its other filings.

The risks, uncertainties and other factors referred to above include, but are not limited to, economic conditions, particularly consumer spending and corporate capital expenditures in the United States, Europe, Japan, China, and other Asian countries; volatility in demand for electronic equipment and components from business and industrial customers, as well as consumers in many product and geographical markets; currency rate fluctuations, notably between the yen, the U.S. dollar, the euro, the Chinese yuan, Asian currencies and other currencies in which the Panasonic Group operates businesses, or in which assets and liabilities of the Panasonic Group are denominated; the possibility of the Panasonic Group incurring additional costs of raising funds, because of changes in the fund raising environment; the ability of the Panasonic Group to respond to rapid technological changes and changing consumer preferences with timely and cost-effective introductions of new products in markets that are highly competitive in terms of both price and technology; the possibility of not achieving expected results on the alliances or mergers and acquisitions including the business reorganization after the acquisition of all shares of Panasonic Electric Works Co., Ltd. and SANYO Electric Co., Ltd.; the ability of the Panasonic Group to achieve its business objectives through joint ventures and other collaborative agreements with other companies; the ability of the Panasonic Group to maintain competitive strength in many product and geographical areas; the possibility of incurring expenses resulting from any deficits in products or services of the Panasonic Group; the possibility that the Panasonic Group may face intellectual property infringement claims by third parties; current and potential, direct and indirect restrictions imposed by other countries over trade, manufacturing, labor and operations; fluctuations in market prices of securities and other assets in which the Panasonic Group has holdings or changes in valuation of long-lived assets, including property, plant and equipment and goodwill, deferred tax assets and uncertain tax positions; future changes or revisions to accounting policies or accounting rules; natural disasters including earthquakes, prevalence of infectious diseases throughout the world and other events that may negatively impact business activities of the Panasonic Group; as well as direct or indirect adverse effects of the Great East Japan Earthquake on the Panasonic Group in terms of, among others, component procurement, manufacturing, distribution, economic conditions in Japan including consumer spending and sales activities overseas, and direct or indirect adverse effects of the flooding in Thailand on the Panasonic Group in terms of, among others, component procurement and manufacturing. The factors listed above are not all-inclusive and further information is contained in Panasonic's latest annual reports, Form 20-F, and any other reports and documents which are on file with the U.S. Securities and Exchange Commission.

In order to be consistent with generally accepted financial reporting practices in Japan, operating profit (loss) is presented in accordance with generally accepted accounting principles in Japan. The company believes that this is useful to investors in comparing the company’s financial results with those of other Japanese companies. Under United States generally accepted accounting principles, expenses associated with the implementation of early retirement programs at certain domestic and overseas companies, and impairment losses on long-lived assets are usually included as part of operating profit (loss) in the statement of income.