NISSAN

Environmental Activities and Green Procurement Program in Nissan

NISSAN GREEN PROGRAM

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Nissan plans locally-based production in India?

On new year's day, Nikkei reported that Nissan decided to build a factory in India and production capacity is up to 200 thousand vehicles per year.

日産、インド進出

年20万台の新工場

部品も一斉に
総投資1000億円

日産自動車はインドに生産基地としての役割を持たせる。（イ
進出する。二〇〇九年稼ンドの自動車生産は3面
働を目指し、年産二十万「きょうのことば」参照）
台規模の工場を建設する。取引先の部品メーカ
も、取引先の部品メーカー11関連記事5面に
ら十社も一斉に現地生
産を始め、グループの総
投資額は二千億円規模に
達する見込み。自動車各
社は市場開拓と輸出をに
らみインド拠点を拡充し
ている。日産が進出に踏
みきることで市場争奪戦
が激化。中国に続きイン

際的に車種を増やし、将
来は年四十万台に生産規
模を拡大する方針だ。
工場建設地は国国西部
や南部の港湾都市二―三
カ所を軸に最終調整中
で、地元政府などと協議
して一月中にも決定す
る。
日産の筆頭株主のルノ
ーはインド自動車大手
マヒンドラ・アンド・マ
ヒンドラと自動車を共
生産する計画。日産も合

弁会社に出資する方針だ
が、インド市場の成長力
や生産基地としての有望
性をにらみ、日産専用の
工場を建設する。
日産は現地調達率を早
期に引き上げてコスト競
争力を高めるため部品各
社に進出を要請。カルソ
ニックカンセイが最大五
十億円を投じ、〇九年に
もカーエアコン部品など
の工場を建設する方針を
固めた。日産を主販引先

Corporate Policy

Sincere Eco-Innovator

For the Earth and Future generations

Sincere

Aggressively address environmental issues to reduce real-world environmental impact

Eco-Innovator

Contribute to the development of a sustainable mobile society by providing innovative products for the customer

Vision

- **Reducing environmental impact to stay within the Earth's natural ability to absorb these impacts**

Three Major Issues of Environment Management

Reducing CO_2

Reducing Other Emissions

(Protecting the Air, Water and Soil)

Recycling Resources

(Promotion of 3R* activities)

* Reduce, Reuse and Recycle

Ultimate Goals for Three Major Issues and 2010 Targets

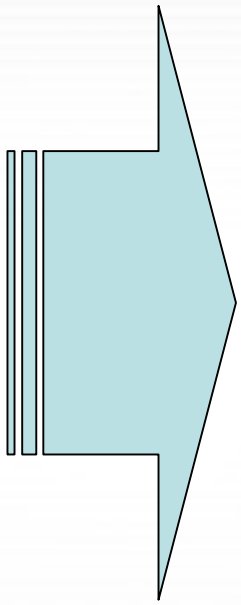
Three Major Issues	Ultimate Goals	Field	NGP2010 Targets
CO_2	Minimizing CO2 emissions	Prodt.	Meet and exceed fuel economy regulations worldwide
		Manuf.	7% reduction from all Nissan plants (Global per-unit CO2 emission, compared with FY2005)
Emissions	Atmospheric Air Level	Prodt.	Early compliance of future regulations worldwide
		Manuf.	Reduce VOC*1 emissions Global : Exceed regulations in each country Japan: 10% reduction (per unit, compared with FY2005)
Recycling	Recovery Rate 100% (Zero Waste)	Prodt.	ELV*2 recovery rate Global: Promote activities to achieve 95% Japan: Achieve 95% (5 years ahead of future regulation)
		Manuf.	Plant resource recovery rate Global: "Best Level" in each country Japan: Achieve 100%

* 1 Volatile Organic Compounds, *2 End of Life Vehicle

Diversification of Social Requirement for Environmental Issues

Conventional environmental issues

- Exhaust emissions
  - -- Ambient air quality
- CO_2 emission (Fuel consumption)
  - -- Global warming



Increasing environmental issues including ELV

- Hazardous chemical materials
  - -- Toxic heavy metals
  - -- Flame retardants
- Recycling
  - -- Improvement of Recyclability Rate
- Volatile organic compounds
  - -- Vehicle Cabin Air Quality

Broad requirement for CSR + rising concern over environmental issues

--- Diversification of potential risk factors for business

Partnership with Suppliers Relating CSR and Environmental Activity in Renault-Nissan

The Renault-Nissan Purchasing Way

This guide explains the values and processes promoted by Renault and Nissan to optimize supplier performance.

Values Trust Respect Transparency

The Renault-Nissan Purchasing Way

Alliance objectives can only be achieved through long-term supplier relationships that are focused on performance, growth and profit, and are beneficial to both companies.

Renault and Nissan have the expertise, tools and processes to optimize the supply chain jointly with suppliers.

This guide explains the "Renault-Nissan Purchasing Way" - the values and processes promoted by the purchasing departments of Renault and Nissan to optimize supplier performance. Renault and Nissan strongly believe that this commitment to work with, and support our suppliers is unique in today's market.

Collaborating with our suppliers as business partners is essential, in order for us to develop and produce attractive products and services for our customers. We are convinced you will support us in making our objectives a reality.

Odile DESFORGES
SVP Purchasing - RENAULT
Chairman & Managing Director
RENAULT-NISSAN Purchasing Organization

Hiroto SAIKAWA
EVP Purchasing
NISSAN MOTOR CO., LTD.

The Renault-Nissan Purchasing Way

Requirement for CSR including environmental issues

Suppliers should be compliant with all relevant social, health, safety, environment and ethical legislation.

In particular, Renault and Nissan forbid the use of child and/or forced labor, and will not work with suppliers that do.

Social Requirement and Regulative Trend for Chemical substances

- EU End of Life Vehicle (ELV) Directive（1） -

Aims

- **Reducing waste**
  - **Promote usage of recycled materials.**
  - **Promote design and production to facilitate reuse, recycle, and recovery**

- **Limiting/reducing the use of hazardous substances causing pollution during the process of vehicle disposal**

- **Preventing illegal derelict vehicles**

Social Requirement and Regulative Trend for Chemical substances

- EU End of Life Vehicle (ELV) Directive（2） -

Requirements

- **Heavy metals (Pb, Hg, Cd and Cr^{+6}) are prohibited with some partial exceptions**
- **Reusing and recycling rate for manufacturers are regulated**
  On and after 2006 : 80%　On and after 2015 : 85%
- **Brominated Flame retardants (penta-, Octa- and deca-BDE) are prohibited**

Korea, Taiwan and China examine the application of regulations or voluntary actions like that of ELV directive (already regulated in Japan in 2005).

Social Requirement and Regulative Trend for Chemical substances

- Registration, Evaluation, Authorization of Chemicals (REACH) -

Aims

- **Reducing the potential risks of broad chemical species.**

  Business is required to manage the usage of such chemical substances by business as well as declare the hazard information and usage of object substances to authority

Requirement

- **Pre-registration**

  Reporting basic property of the designated substances such as CMR* substances and substances used in large quantity.

  ***CMR ; Carcinogens, Mutagens or Reprotoxins (substances toxic to reproduction)**

- **Registration**

  Assess&report the risk caused by using the substance towards humans/environment in less quantity than above.

- **Notification**

  Report how the substance assigned by regulation is used and in which amount, etc.

Green Procurement Program in Nissan

Aims

- **Provision of environmentally friendly products**

  Providing products that are less environmental burden to customer in collaboration with suppliers.

- **Avoidance of business risks related to environmental issues**

  Reducing hazardous material in the products lowering business risks.

- **Establishing environmental management system**

  In order to ensure transparency and accountability, Developing environmental management system in collaboration with suppliers.

Green Procurement Program in Nissan

Requirements for parts and material suppliers

1. **Notification of the responsible person for environmental issue**

   Strengthening collaboration for environmental activities

2. **Acquisition of ISO14001certification**

   Building environmental management system

Briefing session for green procurement

3. **Reporting chemical hazardous substances in delivered goods**

   Compliance of Nissan's standard for chemical substances usage

Requirements for Suppliers

1. Notification of the responsible person regarding environmental issue

Suppliers need to assign someone to be in charge of environmental issues and notify Nissan of the contact person.

2. Acquisition of ISO14001certification

Suppliers are strongly requested to acquire ISO14001 for the following two reasons.

- **To develop the environmental management system internally**
- **To enhance the credibility by obtaining the third party certification**

Requirements for Suppliers

3. Reporting chemical hazardous substances in delivered goods

Nissan requests suppliers to inform the use of banned or restricted materials listed in Nissan Engineering Standard NES 0301.

- **To obtain accountability by complying Nissan's standard.**
- **To enhance the use of less hazardous alternatives.**

Standard for Usage Restriction of Environmentally-Impacting Substances in Nisan

NISSAN ENGINEERING STANDARD(NES) M 0301
- Substance Use Restrictions -

Nissan decided its own standard for chemical substance usage taking into account regulations and social requirements globally.
Supplier is requested strictly to comply this standard by Nissan

In NES M 0301, Prohibited, Limited in use or Attention Needed Substances are declared.

- **Prohibited or Limited in Substance:**
  208 Substances are listed based on regulation or Nissan's policy for Environmentally-Impacting Substance.
  Example : Asbestos, Mercury, Lead, Cadmium and Brominated Flame retardants
- **Attention Needed Substances:**
  58 Substances are clarified as Attention Needed Substance which is not currently restricted but the regulation trend and social trends regarding these substances should be cared.
  Example: Polyvinyl chloride(PVC) and Paradichlorobenzene

Survey for chemical hazardous substances in delivered goods (1)

Nissan conducts the survey for chemical substances in delivered parts applied for new model to be launched prior to start of production (SOP) of the model as well as just after the SOP as a part of Green Procurement Activity.

Aims

- **To comply with NES M 0301**

- **To grasp the total amount of environmentally impacting substances in a new model vehicle**

Survey for chemical hazardous substances in delivered goods (2)

EXAMPLE

(1) Scope of the research

■ Parts to be adopted to the new model (Model name: 418)　□ Parts which specifications were changed (Model name:)

□ Specified parts (Model name:)　□ Other parts (Model name:)

(2) Substances to be researched

(2)-1. Prohibited substances → Prohibited substances defined in NES M0301 (2005-1).
⟨1⟩ Mercury, ⟨2⟩ Cadmium, ⟨3⟩ Asbestos

(2)-2. Substances to be reduced → Limited use substances defined in NES M0301 (2005-1),
and ones that Nissan judged as reporting was necessary among the substances to be carefully watched in the future:
⟨4⟩ Lead, ⟨5⟩ Hexavalent chromium, ⟨6⟩ PBDE, ⟨7⟩ PVC, ⟨8⟩ 2,4,6-tri-tert-butyl phenol

(3) Reporting of research results

(3)-1. Usage of prohibited substances specified in NES M0301 (Revised in Dec., 2001), except 5 substances specified in ⟨1⟩ through ⟨5⟩ above.

■ No part contains the prohibited substances. □ Some parts contain the prohibited substances. → Refer to the "Table of Environment-impacting Substances for Reporting" (Attachment 5) for details.

(3)-2. Usage and the amount of substances of ⟨1⟩ through ⟨7⟩, which are required individual reporting　*:Available

Part number	Number of p per vehicle	Prohibited Substances ⟨1⟩	⟨2⟩	⟨3⟩	Substances to be reduced ⟨4⟩	⟨5⟩	⟨6⟩	⟨7⟩	⟨8⟩
1234567890	1	レ	レ	レ	レ	レ	レ	レ	レ
2345678901	2	レ	レ	レ	*レ	レ	レ	レ	レ

Availability of Information system of Chemical Substances

Several information or database systems are available throughout the world.

- **Global Automotive Declarable Substance List / GADSL**

  Designed to ensure integrated, responsible and sustainable product development and use by automobile manufacturers and their supply chain

  Covering the declaration of certain substances that are regulated, projected to be regulated or have potential to be regulated

- **International Material Data System / IMDS**

  System covering all concerned materials used for car manufacture

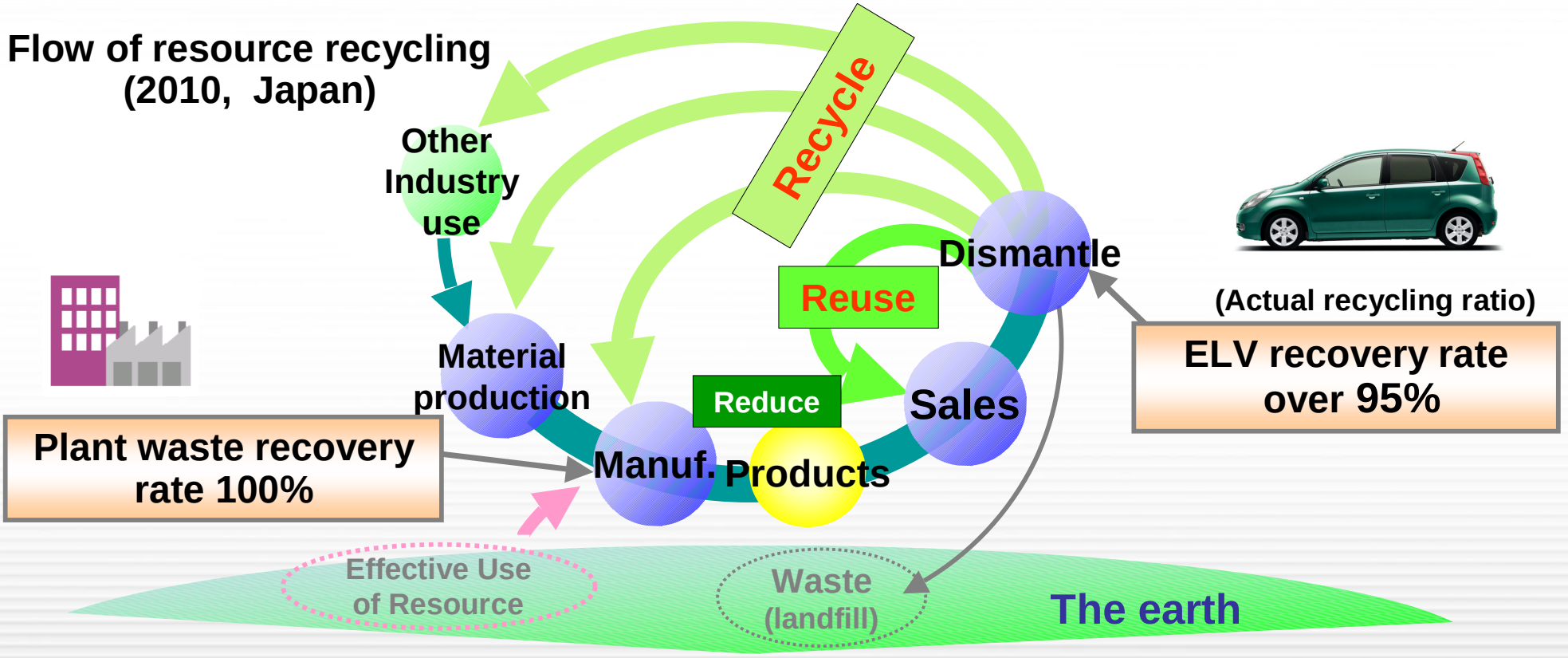
  Meeting the obligations placed on car manufacturers, and thus on their suppliers, by national and international standards, laws and regulations.

Recycling Resources

Improvement of resource recovery rate

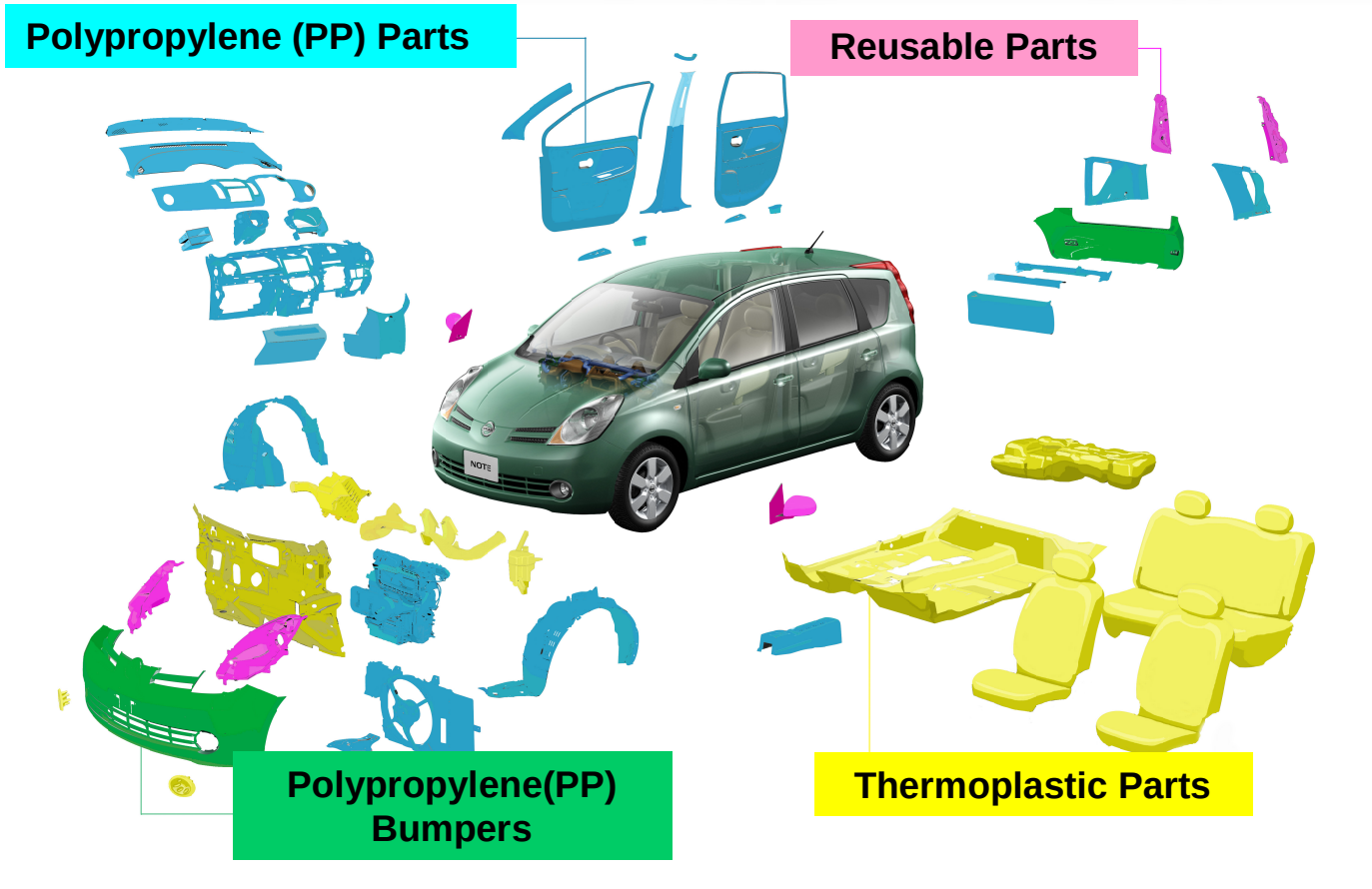
- End of Life Vehicle : Recovery rate over 95% by FY2010 (Japan, 5 years ahead of regulation)
- Manufacturing Plant : Waste recovery rate 100% by FY2010 (Japan)

Flow of resource recycling (2010, Japan)



Lifecycle Environment-Conscious Design

- **Introduction of “Design for recycling” into all new vehicles launched after FY2005 to attain recovery rate 95% by FY2010 (Japan)**



Design for Environment to Improve Recoverability (1)

1997・1998

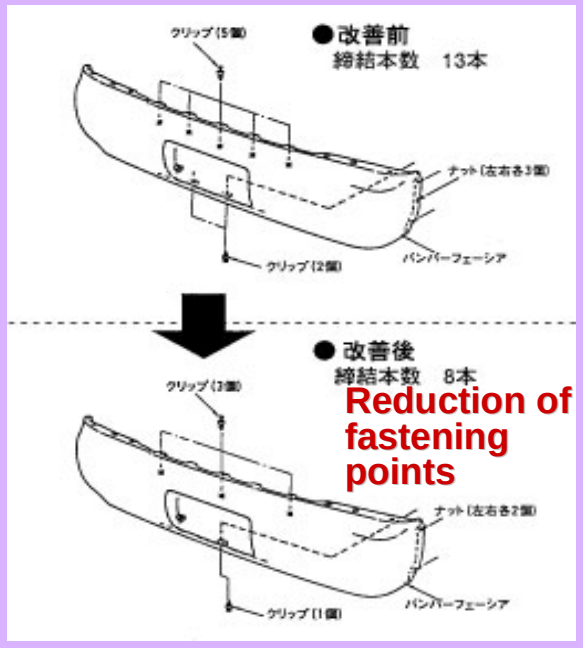
Start adopting design for recycling to new models

After 2005

All New Model launchied in Japanese market achieved Recoverability 95%

’97 model (C35)

Easy dismantling structure



Reduction of fastening points

’98 model (B15)

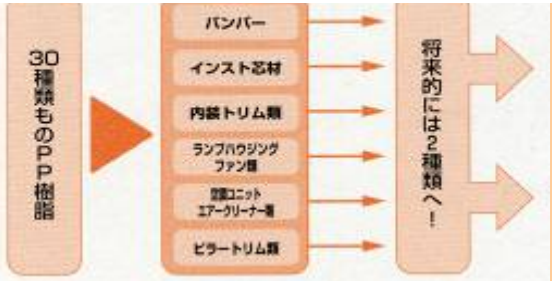
Easy recycling plastics

- Idea for easy material recycling
- Idea for easy discriminating materials

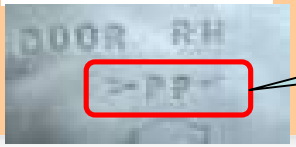
Single material (All polypropylene)

Instrumental panel

Utilization of polypropylene (No.1～No.6)



Parts marking



Design for Environment to Improve Recoverability (2)

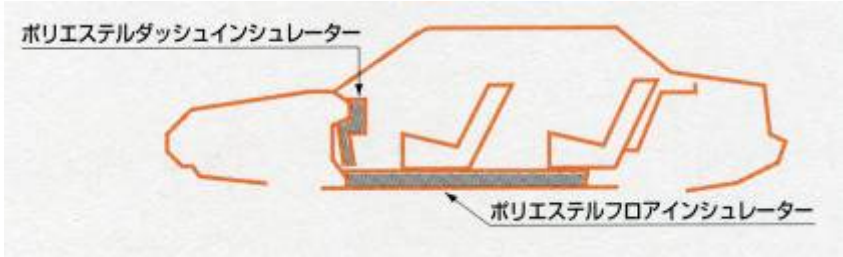
Example for adoption of easy for recycling plastics

Expansion of Thermo plastics adoption

More utilization of Thermo plastics such as PP, PE

Shift to PET fiber materials

Apply PET fiber for sound-absorbing material, making it possible to separate, melt and recycle.



Creating material families

For more effective recycling, develop material families based on as assessment for each family of where the material should be used and which parts can be combined and recycled together .

	ポリプロピレン（PP）ファミリー	アクリロニトリルブタジエンスチレン（ABS）ファミリー	ナイロン（PA）ファミリー	ポリエステル（PET）繊維ファミリー
回収する部品	バンパー インストトリム エアクリーナー　等	ラジエーターグリル ホイールカバー　等	ロッカーカバー キャニスター インテークマニフォールド　等	ダッシュインシュレーター フロアカーペット　等
処理	部品混合・再生加工			
リサイクル材を使う部品	バンパー ファンシュラウド ランプハウジング ヒーターケース　等	ホイールカバー トリム芯材　等	キャニスター ロッカーカバー　等	ダッシュインシュレーター フロアカーペット トランクトリム

Remained Tasks

Following tasks should be challenged among supply chain

●Global deployment of Green Procurement Activity

Expanding the surveyed suppliers

Japan → **World Wide**

USA, Europe and South East Asia

●Grasping and reducing environmentally-impacting substances in life cycle stage

For Supplier

Product → **Manufacturing Process**

Starting with Life Cycle Analysis of CO_2 emission

Thank You for Your Attention