



# Malaysia Automotive Institute Aftermarket Conference 2013

## Automotive Aftermarket: Towards Sustainability Development

*- Benchmarking the Global Automotive Aftermarket from Recyclers' standpoint -*

**NPO-JARA**

Minoru Goko

Director, JARA

Honorary Advisor, PAAIA

Professor, Nihon Automobile College

Advanced Automotive Engineer, IMI, UK



## NPO-Japan Automotive Recyclers Association

[www.npo-jara.org](http://www.npo-jara.org)

**JARA** represents "Earth friendly" automotive recycling companies in Japan to promote effective Reuse and Recycling of ELVs to solve issues for environment and natural resources, working with international associations.

**JARA** dedicates to raise social status of our great industry by sharing information and volunteer activities worldwide.

**JARA** consist of leader auto-recyclers and major auto-part on-line sales network companies, **SPN**, **Ecoline & Big Wave** and **Broad Leaf** in Japan.



- **Recycler** = Dismantler
- **ELV** = End of Life Vehicle
- **3R**=Reduce, **Reuse**, **Recycle**



## JARA member's business is

1. ELV Collector & Disposer
  2. Material recycling business: selling Iron metal, Non ferrous metals such as Aluminum, Cooper, Lead, Rare metals and Plastics etc.
  3. Product recycling business; producing & selling Automotive Recycled Parts.  
**Recycled Parts in Japan** = Good quality used parts with warranty  
Rebuilt parts with warranty
- Automotive Recycled Parts business is more profitable & sustainable than material recycling business.
  - Nearly 300 recyclers related to JARA deal in **5 millions** auto-recycled parts with images through computer on-line network system such as SPN, Ecoline, Big Wave related “BEST Recyclers Alliance” and Broad Leaf.

## What are Recycled Parts in Japan?

- These are used parts (second hand parts).

But,

- Recycled parts are good quality used parts: Cleaned, Inspected & Guaranteed Used parts. The price is less **than 50%** of new genuine parts .
- Recycled parts are Rebuilt parts: Reassembled used parts after changing internal aged parts. The price is **nearly 70%** of new genuine parts.

Rebuilt (Reconditioned, Remanufactured) parts are repaired or modified recycled parts by fixing, abrasion and/or replacing aged sections.

## Automotive Recycling contributes,

report from USA

- Over 14 mill. tons of steel were collected from ELVs and placed back in the industrial production stream. (The American Iron & Steel Institute)
- Automobiles are the most highly recycled product, “Honor student of recycling” on the planet, over 28% more than paper, nearly double of aluminum, and over four times of glass. (Ward’s Motor Vehicle Facts & Figures)
- ELVs reintroduce enough steel into the production stream to build nearly 13 million new vehicles and generates 46,000 jobs.
- 10 millions barrels of oil are preserved each year by using Automotive recycled parts instead of manufacturing new automotive parts.

“Green (recycled) Parts”

## CO<sub>2</sub> reduction rate (amount) of the recycled part comparing to new parts.

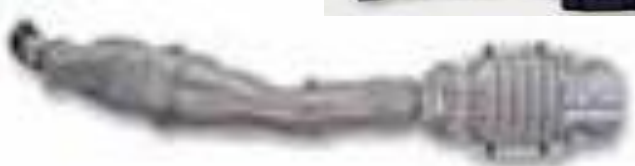
\*Researched by Waseda University in Japan



■ E/G 261kg



■ M/T 179kg



■ Muffler 54kg



■ Radiator 58kg



■ Front door 96kg



# Automotive Recycling Industry in Japan

- 79 million vehicles are running in Japan.
- 7 million registration (mostly new) vehicles a year in Japan.
- 5 million ELVs a year in Japan.
- Average use is nearly 12 years.  
In Japan, 10 year old vehicles are no insurance assessment value.  
It means 0 JPY of damage cover even good conditions.

Therefore, nearly 1 million ELVs  
go to other countries a year as used cars.

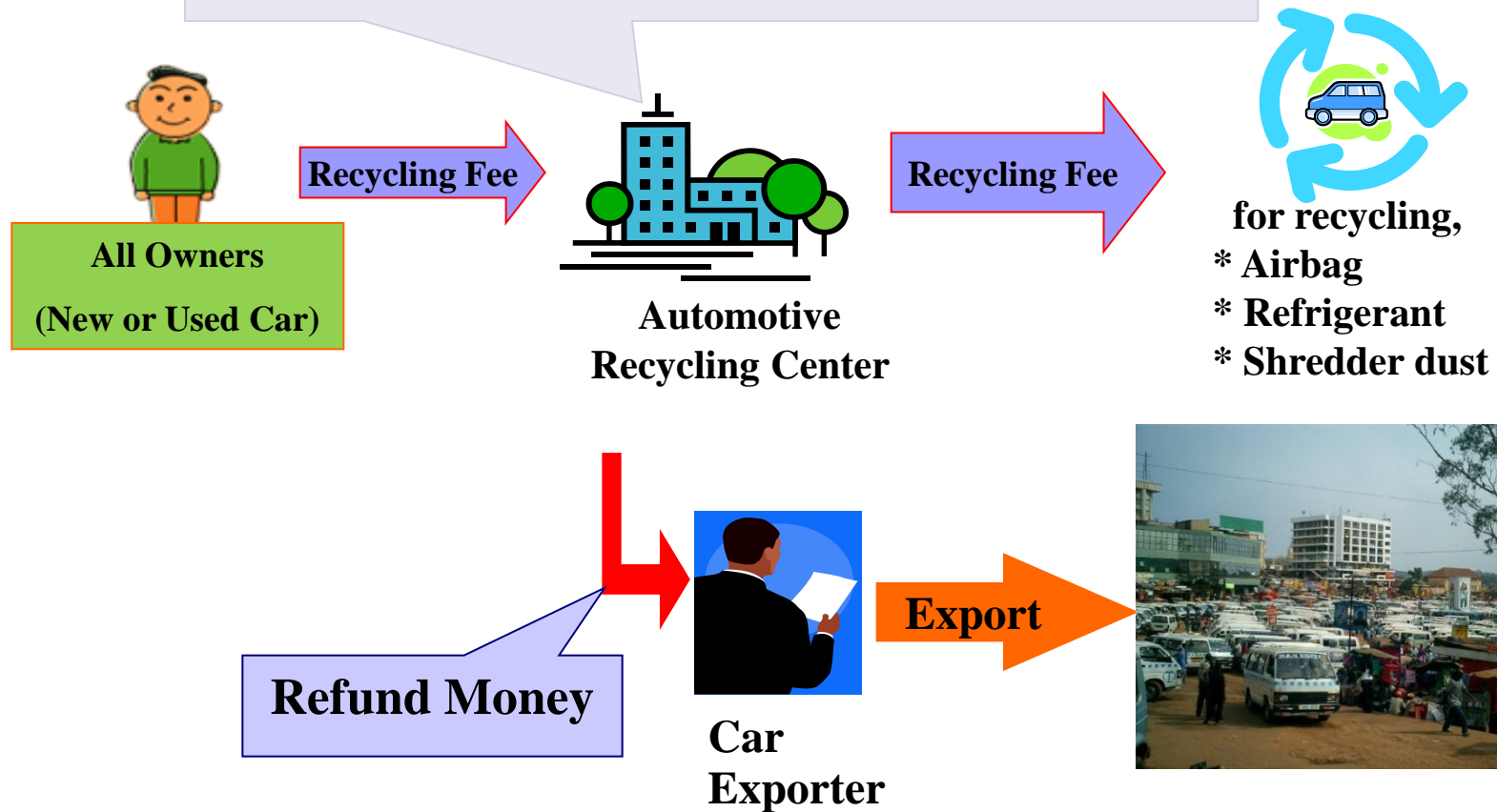
These countries are mostly  
No Automotive Recycling system.





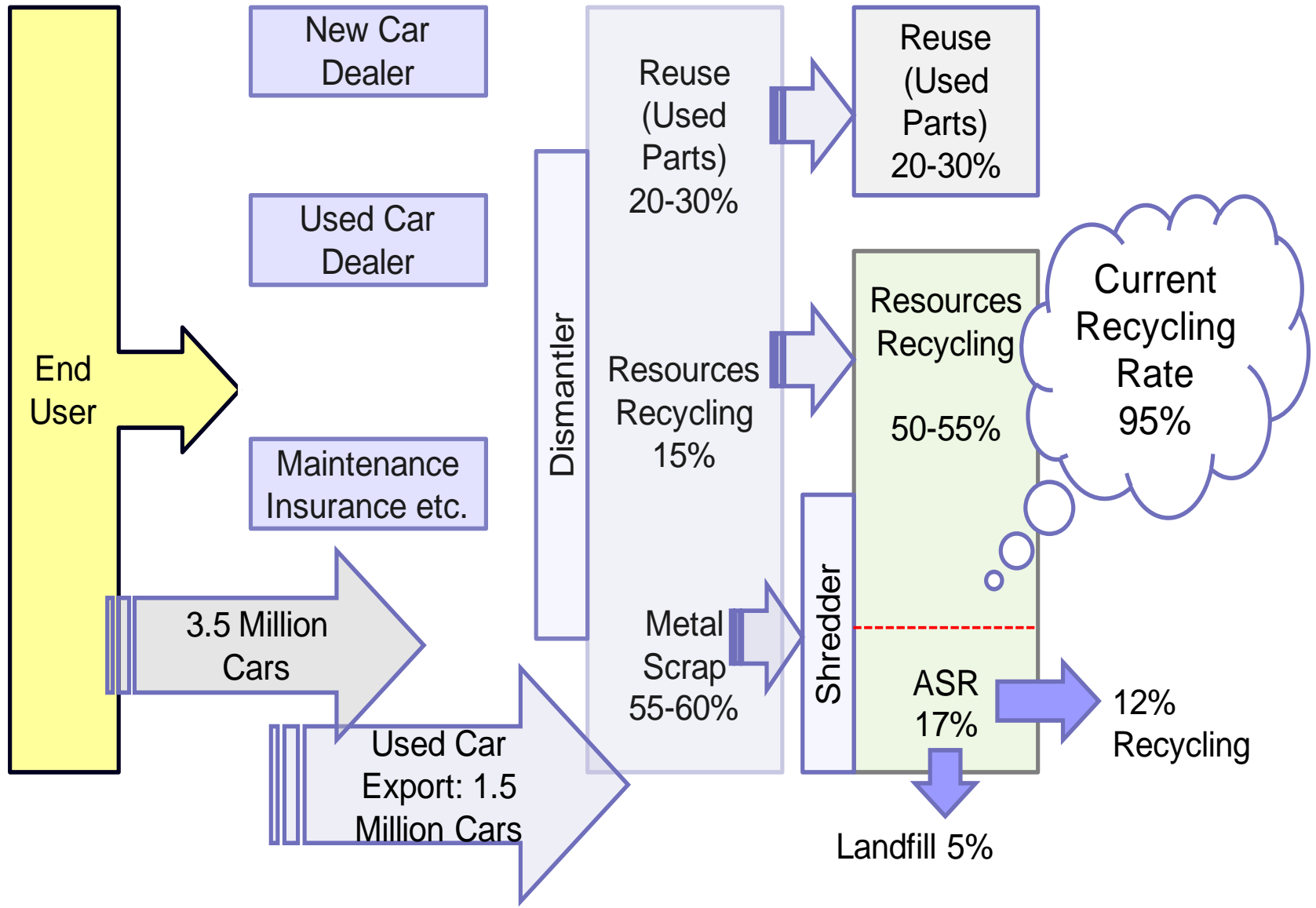
Over 1 million ELVs are exported every year.

On average, \$108 (\$64-ASR, \$23-Airbag, \$21-Freon).  
Ex, Toyota Collora-\$77 (\7,710). \*\$1=\100



Nearly 1mill. ELVs

# Flow of ELVs in Japan



ELVs are from Customers, Car dealer, Car Auctions, etc.  
Each JARA company accepts 5,000 ~ 30,000 ELVs a year.  
Check condition, collect data & register into computer system.  
Then, drain of fuel, oils and refrigerant to individual tanks.





Carefully remove necessary parts, inspect parts condition and input the data to computer on-line sales network .



Afterwards, clean-up removed parts and storage.

The parts become guaranteed parts (=Automotive Recycled Part).

Computer on-line sales network such as "Super Line of SPN", Ecoline, Big Wave & Broad Leaf manage **5 mill.** recycled parts business with images.





After disassembled necessary parts, the rest such as body, chassis, electric wires & etc are dismantled by KOBELCO-MDM within **nearly 20 minutes.**

(Pictures from Takahashi Shoukai Co. Ltd.,)

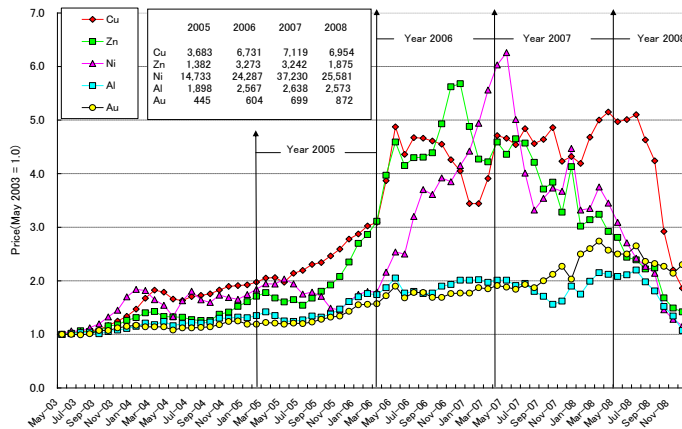


Afterwards, the bodies become cubes by high pressure press and sale to the metal buyer. Electric wires are also separated to pellet of cooper and plastics.

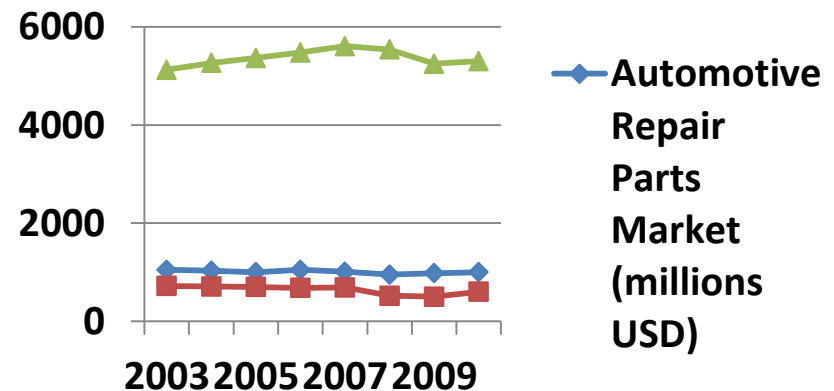


## Automotive recycling business in Japan after the “Riemann Shock (Economic crisis)”

- Material business was damaged by decrease of international scrap price.
- However, recycled parts business is slightly increase. = People want to repair the car with the recycled parts (= Price is **50% less** of new parts price)
- Tax reduction policy of new car purchases (=Eco-vehicle) brought good car sales (=produced many ELVs).



**Trend of International Metal Market Price**



**Graphic of Economic Trend in Japan**




## JARA members concentrate Auto-recycled parts business.

- Most progressive JARA recyclers, 80% of gross sales are from the recycled parts business, fully utilized computer on-line sales network for B to B business.
- It brings “good profit ” and contributes “Standardization of recycled parts quality” & “Transparency of business”. = Increasing confidence from public and social status of Auto-recyclers.
- They are also selling new (Non OEM) Parts through the on-line sales network and/or their own shops.

However,

- Usage rate of the auto-recycled parts is **only 5%** in all automotive repair parts market in Japan. In USA, usage rate is **more than 30%!**



Popular computer on-line sales network in Japan,  
“**Super Line**” of SPN is also used in Korea.  
Automotive recycling is **international business**  
with computer on-line sales network around the world.

- Auto-recycled parts computer network for public (B to C) in Japan.

**[www.recojapan.com](http://www.recojapan.com)** (Japan)

Over 50,000 customers are registered as Recojapan members.

- There is the **largest** recycled parts network in the world.

**[www.Car-Part.com](http://www.Car-Part.com)** (USA)


It stores data for over 140 million recycled parts from 3,400 auto recyclers & is accessed over 400,000 times per month from all over the world.

Car-Parts.com recycled parts prices are a benchmark in North America as the company has changed the recycling industry from a conventional labor-intensive industry to an IT-intensive industry, contributing to standardize and improve the recycling industry.



Automotive Recyclers are moving from Waste disposer → Automotive material & production recycler → Global IT companies.

- Leader recyclers & Computer network companies in Japan extend their business to other countries with their entity power & advanced technologies such as “Kobelco-Multi Dismantling Machine” & on-line sales network.
- In general, the waste-disposal industry does not require advanced skill, but effective ELV recycling, auto-recycling industry needs latest knowledge and advanced technologies. Especially, operation (**management**) technology is as a conclusive factor for success.
- Common education program and certification standards, like “**BEST Recyclers Alliance**” are needed for automotive recycling industry.



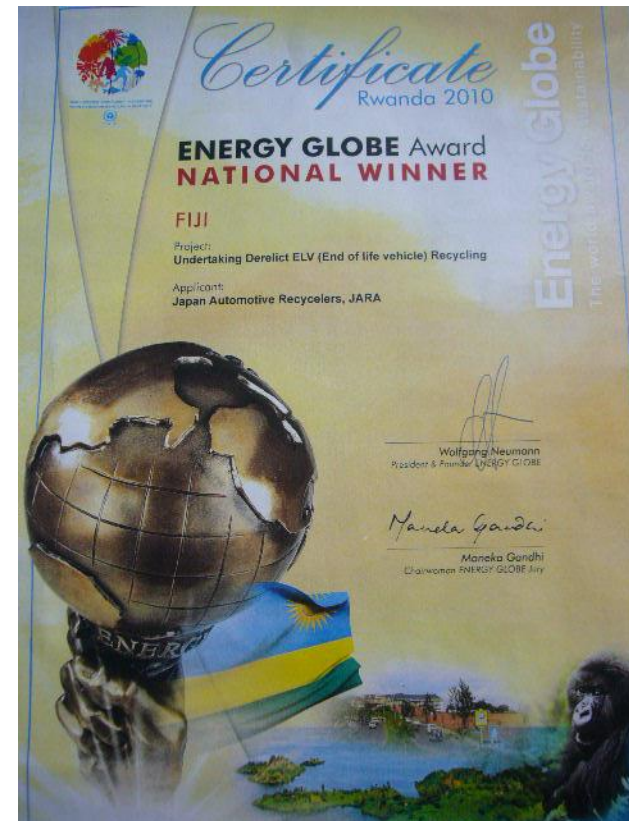
## Conclusion, As automobiles are international products.

- Circulation society is necessity for effective use of natural resource in any countries.
- ELV is the best industrial resources, “**Honor student of recycling**”  
Resource strategy for future.
- Any countries need Recycling industry. Because,  
**Manufactures** = Artery industry  
**Recyclers** = Vein industry
- Need **Circulation system** of automotive industry, working together with  
Car manufacturer, Government, Consumer, Recycler, Shredder and Iron  
maker.

# Topics

JARA achieved **ENERGY GLOBE Award** on  
“**Undertaking the Derelict ELV Recycling in Fiji**”

The Derelict ELVs destroy nature, land and ocean of beautiful resort islands.



JARA contributes **E**ducation for **S**ustainable **D**evelopment,  
ESD through the Automotive Recycling study book (in English).

- 1 Automobile and Environment
- 2 Automobile and Natural Resources
- 3 Process of Automotive Recycling
- 4 Automotive Recycling & Distribution Network
- 5 Automotive Recycling & Technology

Reference, List of Auto-Recycling Words  
& Auto-recycling equipment DVD.





This year, Automotive recyclers IRT meeting will be held in Phoenix, Arizona, USA on November 10-12, 2013 in conjunction with the ARA Annual Convention, assembling leader auto-recyclers from all over the world.



**Welcome all of you!**

**Thank you!**

