

**The 3<sup>rd</sup> Workshop of Japan-UK Joint Research Project**  
**“Roadmap to Low-Carbon World”**

**Market Transformation by  
Energy Efficiency Indicator**

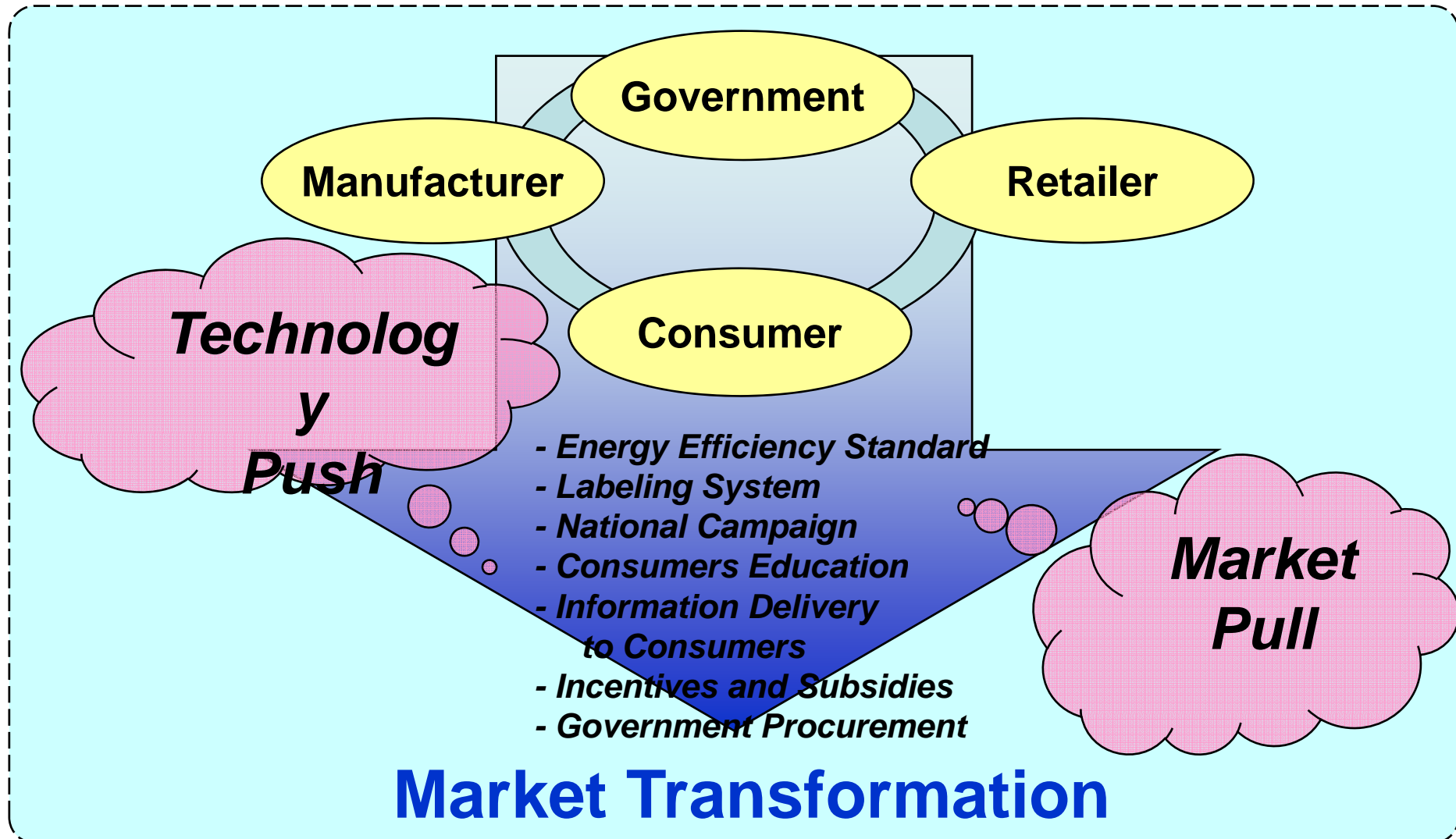
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# Concept of Market Transformation

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Technology push and market pull are key drivers to transform the market of individual economy



# APP/BATF/Project 3: Market Transformation

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## ***Policy Analysis***

1. National campaigns being run by individual governments and international joint initiatives
2. Methods to provide information to consumers e.g. labeling
3. Educations and supports to consumers
  - Raising consumer awareness via retailers
  - Encouraging consumers to select environmentally conscious products
4. Political incentives to shape leading markets

## ***Objectives***

1. Analyze policies and programs being implemented by each country and issue the “Good Practices Handbook”.
2. Link good practices to consider possible initiatives such as model projects in designated regions.

# Recent International Discussions

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## ■ IEA (*International Energy Agency*)

- Indicator Workshop (25-26 Oct. 2007, Paris)  
⇒ Recommendations to G8 on energy efficiency

## ■ ISO (*International Organization for Standardization*)

- TC207/SC5 TG Meeting (5 Dec. 2007, Gothenburg)  
⇒ Proposal for eco-efficiency standard

## ■ APP (*Asia Pacific Partnership on Clean Development and Climate*)

- BATF Meeting (15-16 Nov. 2007, Washington)
- Project 3 Workshop (31 Jan. 2008, Tokyo)  
⇒ Policies analysis for "Good practices handbook"

# Market Pull by Indicators

To inform consumers on the importance of considering eco-efficiency of products in purchasing --- **Pulling the market**

"Factor" is an indicator enabling overall assessment of the "value of a product" and the "environmental impact of the product".

There are so many issues to be addressed for our future, such as prevention of global warming, prevention of the depletion of the ozone layer, and energy saving. "Eco-efficiency" and "Factor" are indicators that help promote such efforts.



## What is Eco-efficiency?

$$\text{Eco-efficiency} = \frac{\text{Value of a product}}{\text{Environmental impact of a product}}$$

↑ Enhancing the quality

↓ Reducing the impacts

The smaller the "environmental impact" and the higher the "value" of the product, the greater is the eco-efficiency. The higher the value, the greater the eco-efficiency is.

## What is the Factor?







$$\text{Factor} = \frac{\text{Eco-efficiency of a product subject to assessment}}{\text{Eco-efficiency of the benchmark product}}$$

The benchmark product is usually a previous model of the product subject to assessment. The product subject to assessment is usually a new product. So, the value of the factor indicates to what extent the eco-efficiency of the product has increased or, in other words, the greater equilibrium achieved between the value and environmental impact of the product.

The greater the factor, the greater the overall benefit of the product.

# Technology push by Indicators

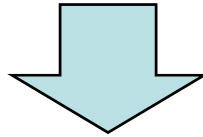
Consumers are increasingly demanding information on the products that they are using --- **Pushing the technology**

Environmental Activities			
Basic Policy			
Green Products			
Clean factories			
Products Recycling			
Data Files			
Communication			
Sustainability Report			
			
Factor X			
The following is Factor X calculation data of our 29 products.			
Product[Model No.]	Evaluated product	Reference product	Detail data
 TV [TH-36D10]	comparison of Based:made in'93 Evaluated:made in'00	Factor GHG 3.3 Resource 3.1	Detail (Update: Oct 17, 2006); Detail info[PDF:31KB] specification [PDF:66KB]
 TV [TH-36D60]	comparison of Based:made in'93 Evaluated:made in'04	Factor GHG 4.8 Resource 4.6	Detail (Update: Oct 17, 2006); Detail info[PDF:31KB] specification [PDF:68KB]
 Washing machine [NA-F80SP1]	comparison of Based:made in'91 Evaluated:made in'01	Factor GHG 2.2 Resource 1.5	Detail Detail info[PDF:44KB]
 Washing machine [NA-FS800]	comparison of Based:made in'91 Evaluated:made in'05	Factor GHG 2.4 Resource 1.4	Detail Detail info[PDF:45KB]
 Drum-type washing machine [NA-VX911]	comparison of Based:made in'97 Evaluated:made	Factor GHG 1.2 Resource 1.4	Detail Detail info[PDF:37KB] specification

# Recent Trends on Eco-Efficiency in Japan

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Several industries understand that eco-efficiency can be a powerful product indicator to communicate with consumers



- 8 electronics companies in Japan have agreed to develop the “Guideline for Common Factor-X” by eco-efficiency evaluation to provide meaningful indicators to the markets, creating new relationships between manufacturers and consumers.
  - Product strategy must be responding to market needs such as higher quality and environmental friendliness.
  - For standardization, it is desirable to be simple, easy to understand and clearly transparent.
  - As the environmental impact, GHG emission or energy consumption is most familiar, scientifically established and important to all the consumers.

# Rationales to Develop Good Indicators

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- World–wide indicators must respect and reflect individual economy's policy, current status, history, custom, etc.

If not, the indicators cannot give practical results and environmental problems would not be solved eventually.

- It is difficult to make absolute evaluation on energy consumption of each industry and product.

Improvement of efficiency is easier to understand and more acceptable for each market.

- Indicators on energy efficiency should be effective in both of technology push and market pull.
  - Manufacturers can measure the position of products with the indicator, so that they would develop better ones.
  - Consumers can know the progress of products by the indicator, so that they would buy better ones.