# Life Cycle Story of a Notebook PC

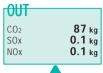
# Assessing products' relationship with the environment. What is the relationship in the case of a familiar notebook PC?

This example employs a notebook PC to illustrate our concrete efforts to consider the environment throughout the product life cycle.

The IN/OUT numeric environmental burden values introduced here are all described on the EcoLeaf environmental label received by Fujitsu.

Example: Model FMV-7140MG5 notebook PC, launched spring 2004





## **Development/Design Stages**

### **Employing eco-friendly materials to** save resources

#### Recycled plastic materials

Materials containing waste plastic employed since

#### Materials derived from plants

Plastic that uses corn as its raw material adopted for some parts.



## Making positive use of parts and technologies that do not generate harmful substances

#### Halogen-free case

Resin that does not generate dioxin during combustion employed for the product body.

#### Lead-free solder

Lead-free solder technology applied in part of the mounting circuit base.



## Making use of design support tools to conduct manufacturing with a lower environmental burden from the development stage onward

#### VPS/Eco Design

(Virtual Product Simulator/Eco Design)

3D simulator that evaluates products' environmental burden in real time applied.



## **Procurement Stage**

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## Preferentially promoting green procurement of parts and materials with a reduced environmental

Green procurement ratio of 99.6% achieved by the Fujitsu Group (March 2003).



## **Manufacturing Stage**

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### Working continuously to reduce the environmental burden in the areas of manufacturing and costs simultaneously.



Shimane Fuiitsu

#### Green Process activities

Original index employed to evaluate the manufacturing process and reduce both costs and the environmental burden





#### **Energy-saving measures**

Reduction of 347 Mwh achieved by implementing energy-saving measures (fiscal 2003/Shimane Fujitsu).

Chemical substance content reduction

#### Zero-emission activities

Zero emission achieved in manufacturing (fiscal 2003/Shimane Fujitsu).





## Distribution/Sales Stage

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Pursuing environmental burden reduction efforts in the distribution stage, from a shift to railway transportation to adoption of new packaging

#### Modal shift promotion

System combining truck and railway transportation promoted.





Wide-area delivery center enhancement Nationwide transportation routes optimized.

## Integration of delivery database

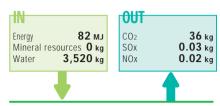
Efficiency in allocating number of shipments improved.

#### Adoption of packaging boxes using soybean ink

Use of volatile organic compounds (VOCs) restrained.



EcoLeaf environmental labels are granted to products whose life cycle environmental burden has been calculated. Fujitsu is the only company to acquire the label for PCs.



## **Usage Stage**

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## Disclosing environmental information for customer use at the time of product purchasing

Conformity with the Law on Promoting **Green Purchasing** 

Certification as a Fujitsu Green Product Satisfied original standards established by Fujitsu.



Achievement of target standards for energy consumption efficiency



#### Conformity with 3R PC Eco-labels

Satisfied standards established by the Japan Electronics and Information Technology Industries Association.

Compliance with the International Energy Star Program

Acquisition of EcoLeaf environmental label





## Collection/Reuse/ **Recycling Stages**

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## Promoting recycling and reuse to contribute to creation of a cyclical society



Fujitsu Recycling Center

#### Recycling of magnesium alloys

Magnesium alloy cases we collect reused in new products.



#### Semi-closed recycling of waste plastic

ABS resin we collect reused in new PCs.



## Promotion of parts reuse

HDDs, CPUs and memory reused after data erasure.



#### Use of dismantling manuals Manual produced for each product.

#### Sales of refurbished PCs

PCs inspected, cleaned and reused following lease expiration.