

## Environmental Policy of Private Company

November 10, 2008  
NEC Corp.  
Env. Mng. Division  
Ryosuke UGO

## Structure of the Lecture !

- ◇ Nov. 10
  - Part 1 Information input for Environmental management activities – NEC’s activities
  - Part 2 Discussion on the environmental activities of “private company”
    - Short preparation for the next lecture
- ◇ Dec. 1
  - Part 1 Environmental (CSR) Reporting
  - Part 2 Debating on the sustainability of private companies

## The Points of my Lecture !

1. What is “the private company” ?  
The answer is ???
2. What is “the Environmental Problems” ?  
The answer is ???
3. What is “the Management System” ?  
The answer is ???
4. What is  
“the sustainability” of the private company ?

## NEC’s Environmental Strategy “Ecology through IT”

~ NEC’s Environmental Vision 2010 ~

Nov. 10, 2008  
NEC Corp. CSR Unit  
Env. Mng. Division  
UGO, Ryosuke

## Input information contents

1. **Company Profile**
2. **NEC's Environment Vision**
3. **Environmental activities**
  - (1) Eco-Products development
  - (2) 3R activities
  - (3) Eco-Solutions & Services
  - (4) Continuous reduction of environmental loading
4. **Positive information disclosure**
5. **NEC's environmental policy**
6. **Report theme (1)**

## Company Profile

**Company Name:** NEC Corporation  
**Address:** 7-1, Shiba 5-chome, Minato-ku, Tokyo, Japan  
**Established:** July 17, 1899  
**Chairman of the Board:** Hajime Sasaki  
**President:** Kaoru Yano  
**Capital:** ¥ 337.8 billion - As of Mar. 31, 2006 -  
**Consolidated Net Sales:** ¥4,824.9 billion  
 - Fiscal year ended Mar. 31, 2006 -  
**Operations of NEC Group:** IT Solutions Business  
 Network Solutions Business  
 Electron Devices Business  
**Employees:** NEC Corporation  
 23,528 - As of Mar. 31, 2006 -  
 NEC Corporation and Consolidated Subsidiaries  
 154,180 - As of Mar. 31, 2006 -  
**Consolidated Subsidiaries:** 356 ( 142 Domestic, 214 Overseas )  
 - As of Mar. 31, 2006 -



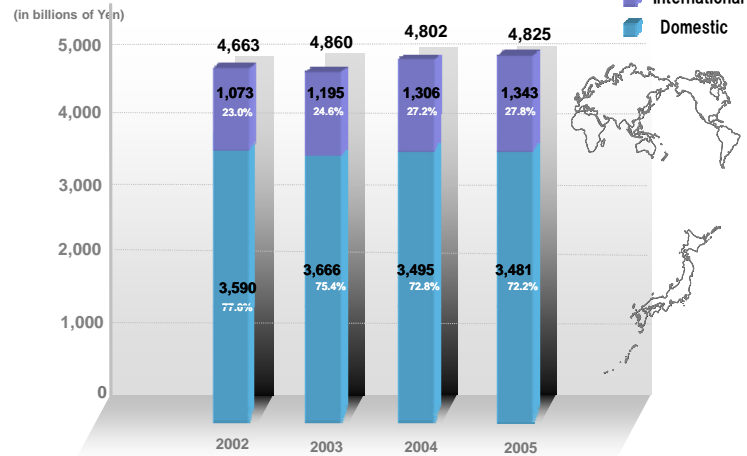
Hajime Sasaki



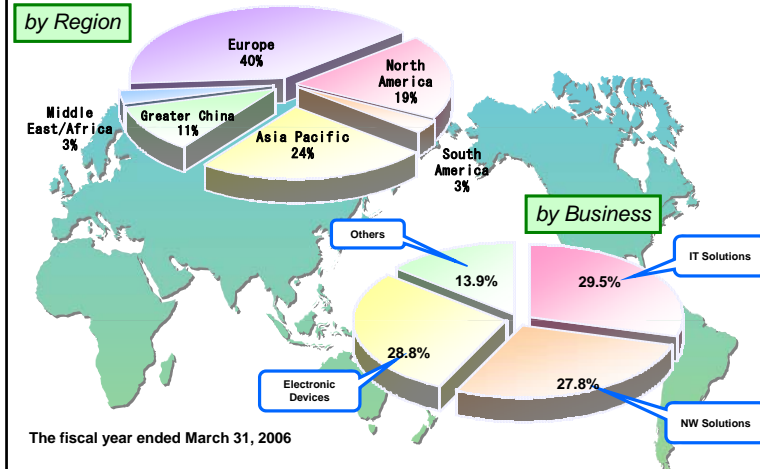
Kaoru Yano

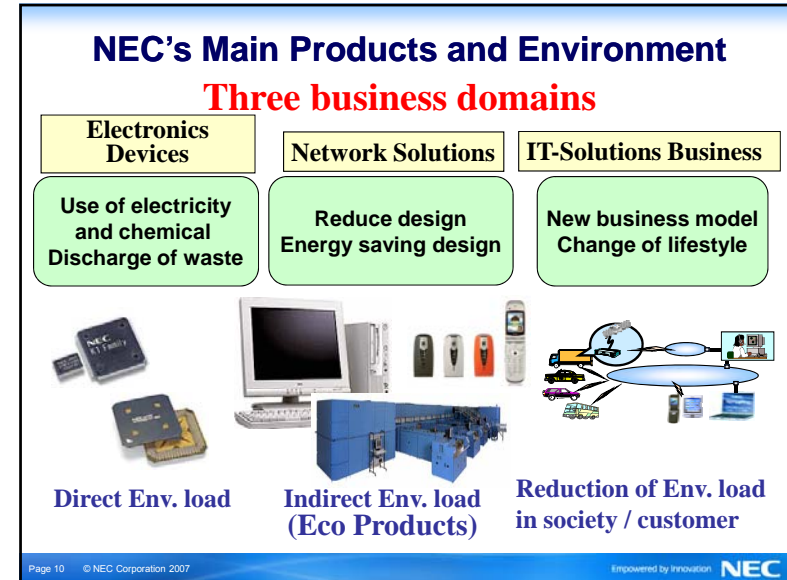
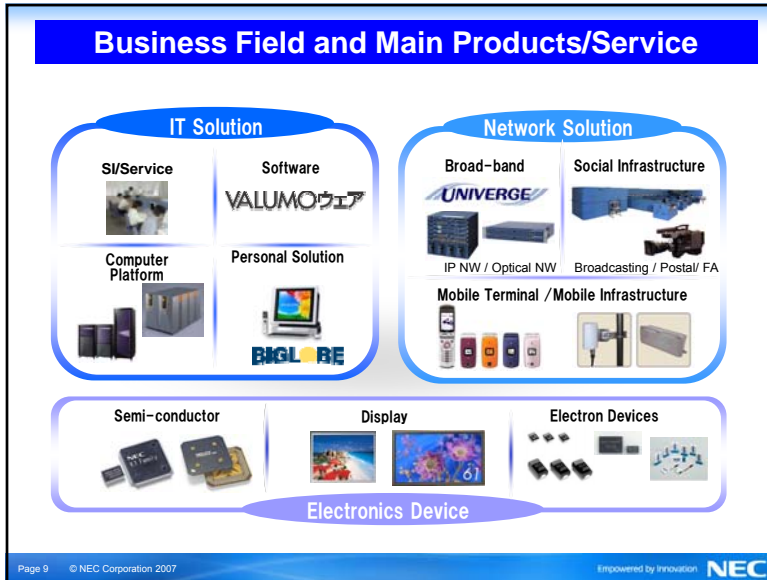
## Net Sales

(NEC Corporation and Consolidated Subsidiaries)

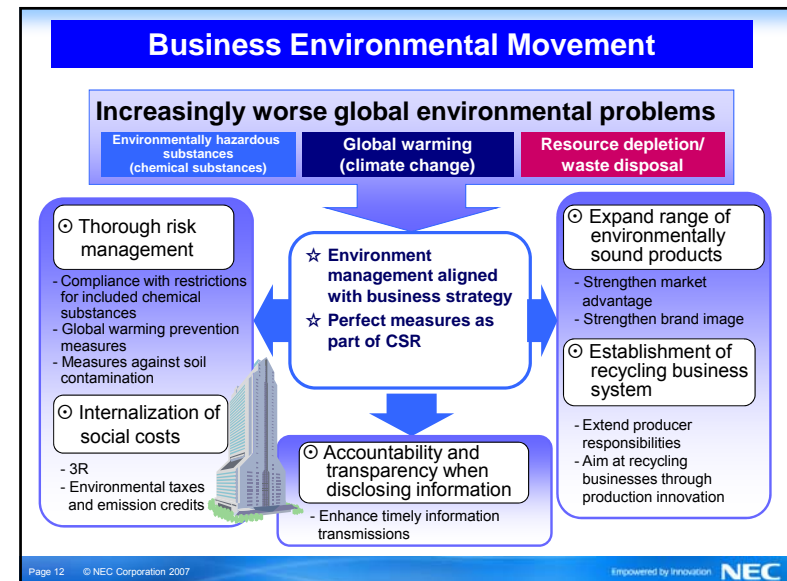


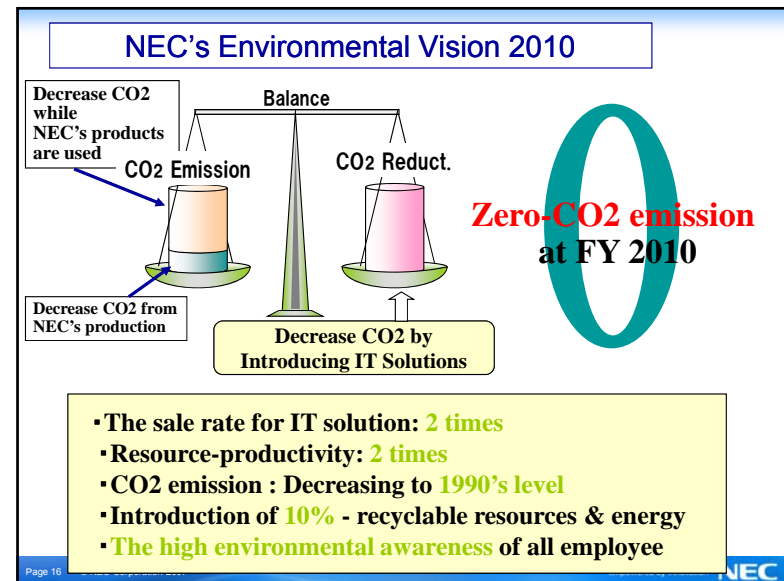
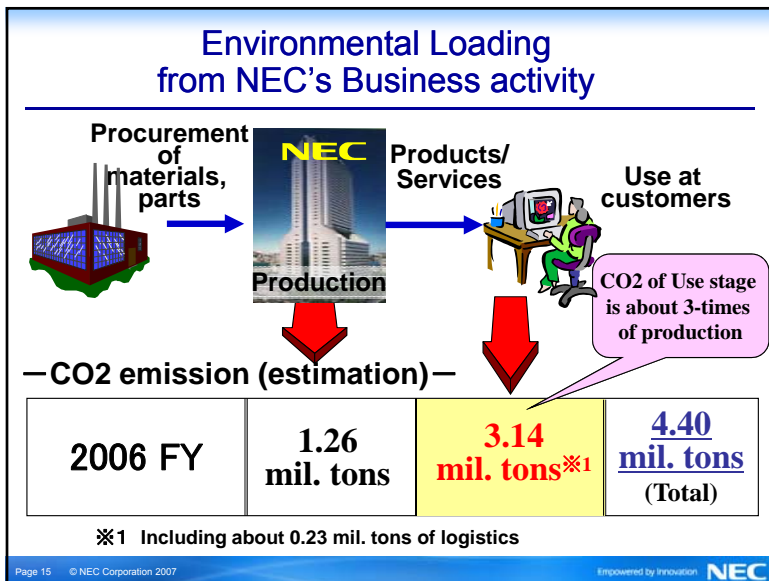
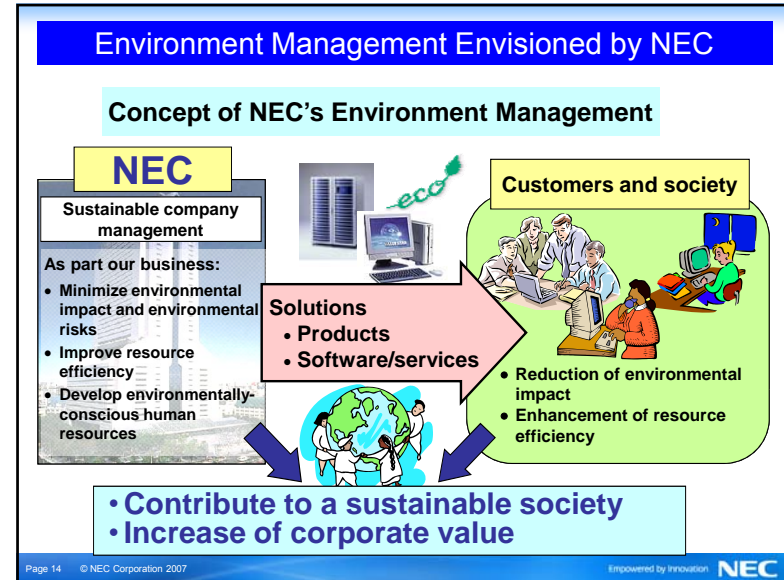
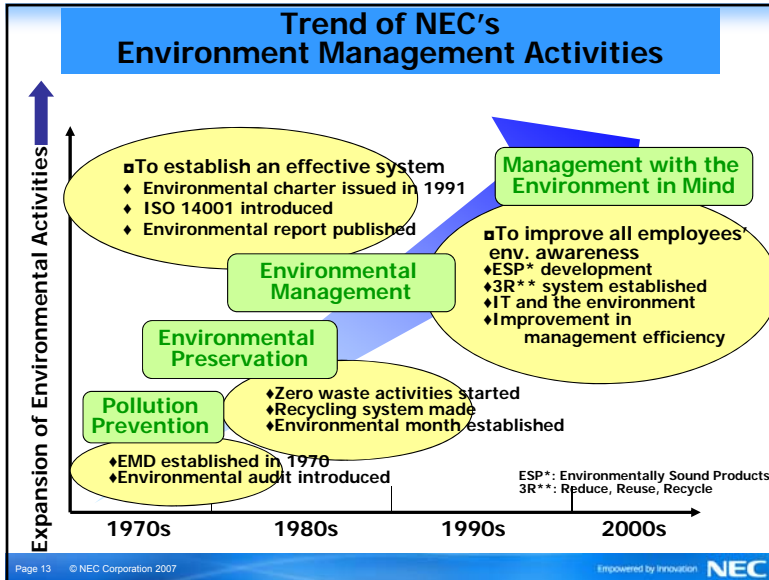
## International Sales

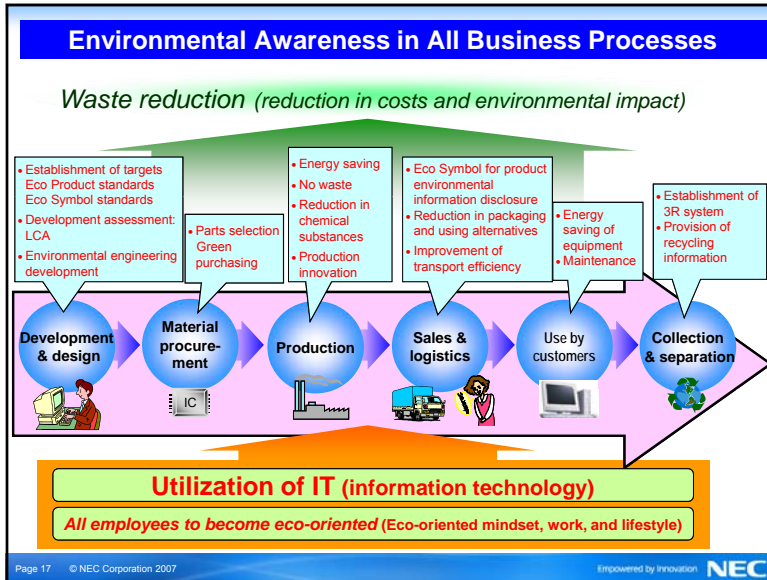




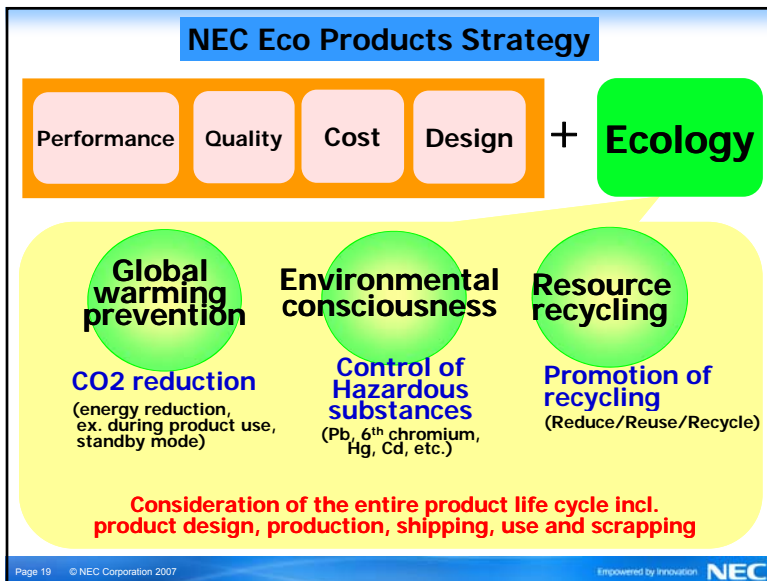
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  4. Positive information disclosure
  5. NEC's environmental policy
  6. Let's think about (1)
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- ## Eco-Symbol System
- ~ Started in December 1998 ~
- Promote the eco-product development
  - Disclose eco information on products
- Requirement for the Eco Symbol -
- ◆ Meet NEC standards for Eco-Product : 24 items
  - ◆ Have environmentally sound advanced features
  - ◆ Disclose environmental information on products
- NEC Eco Symbol Mark
- Eco-Product Standards (Extract)**
- ◆ Determine the CO2 amount throughout a product's life cycle and make efforts to prevent global warming
  - ◆ Use recycled paper for 70% or more of packaging cardboard and use recycled paper for manuals
  - ◆ Ban the use of ozone-depleting substances for parts and materials
  - ◆ Promote green procurement in selecting parts
  - ◆ Design and produce products at sites certified by ISO14001
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## NEC Eco Products Range

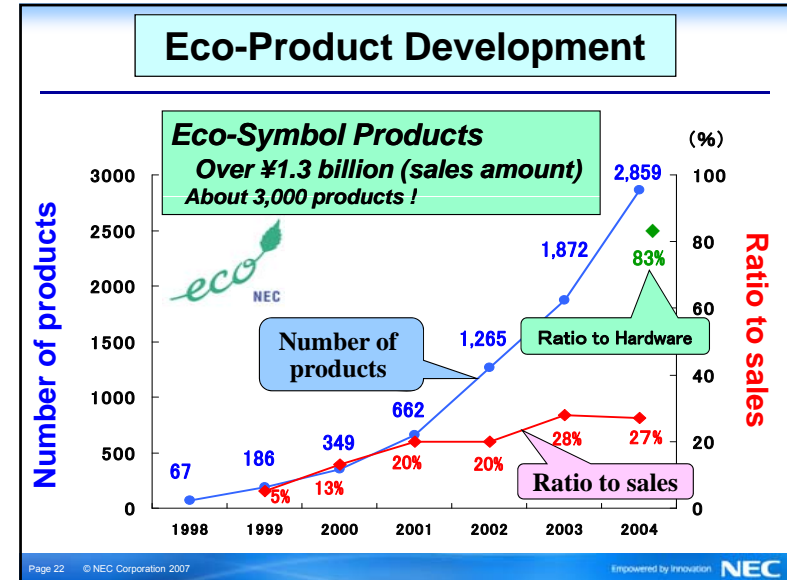
**3990 products models in 55 product categories**  
(as of the end of March 2006)

**Effective use of Resources**  
(Conservation of resources)

**Environmentally Sound**  
(Reduction of toxic substances)

**Preventing Global Warming**  
(promoting energy conservation)

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## Market-Leading Environmental Products and Branding as an Environmentally Sound Company

### ★ Eco Symbol product: PCs

Global warming prevention

- Satisfy the international energy-saving standards (International Energy Star Program)
- Conform to the Energy Conservation Law

Adopts lead-free solder to mount motherboard parts.      Recycled plastic (front panel)

**Mate box-less model**

Resource recycling

- Facilitate parts removal
- Adopt **recycled plastic**
- List materials on the product, accessories and packaging plastics.

Environmental awareness

- Adopt **lead-free solder**
- Adopt **halogen-free/ phosphorus-free flame retardant** using plastic (NuCycle)
- **Chromium-free steel plates**

### ★ Mobile phones adopting bioplastic

Adopt kenaf fiber-reinforced bioplastic for the case "FOMA® N701IECO" (launched on March 10, '06)

NECは、携帯電話からつくったプラスチックで、ケースをつくりました。

地球にやさしい

- This product is sold by NTT Docomo, Inc. for Japanese market only available on March 10, 2006.  
- "FOMA" is a trademark or registered trademark of NTT Docomo, Inc. in Japan and other countries.  
- "NTT Docomo" & "FOMA" service is only available to subscribers in Japan.

Advertisements for branding as an environmentally sound company

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## Kenaf Fiber-Reinforced Bioplastic for Mobile Phones

Mar.06 on sale

### FOMA N701IECO

- The world's first Bioplastic strengthened Kenaf fiber is used
- A part of Earth-Conscious efforts

High biomass constituent ratio approximately 90% in Plastics, the highest level in bioplastics used for electronic devices.

Plant derived plastic consisting of **poly lactic acid (PLA)**, the fiber of **Kenaf** and other biomass-based additives

Lower use of petroleum and amount of CO2 emissions

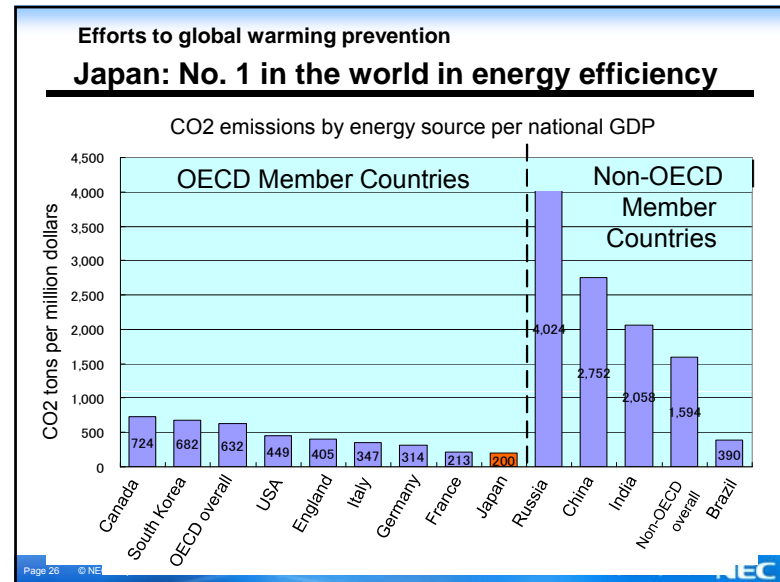
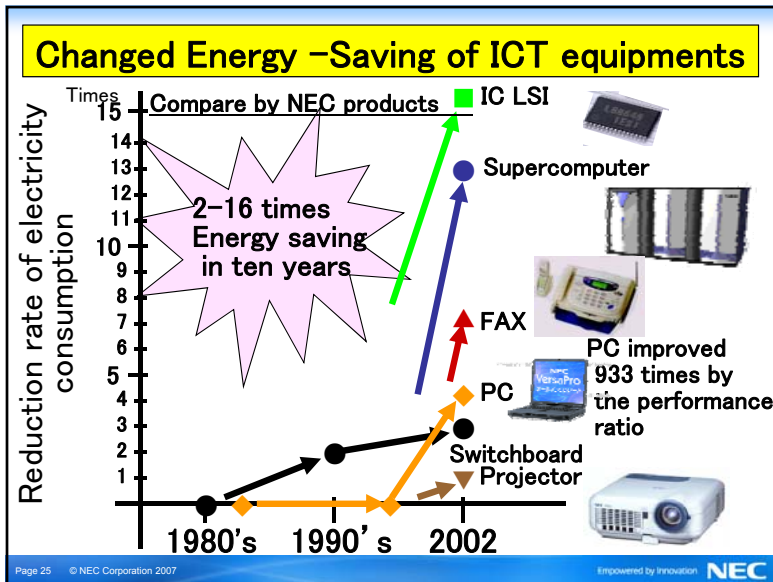
Broken down by microorganisms in the soil

Mechanical strength improved by adding kenaf fiber

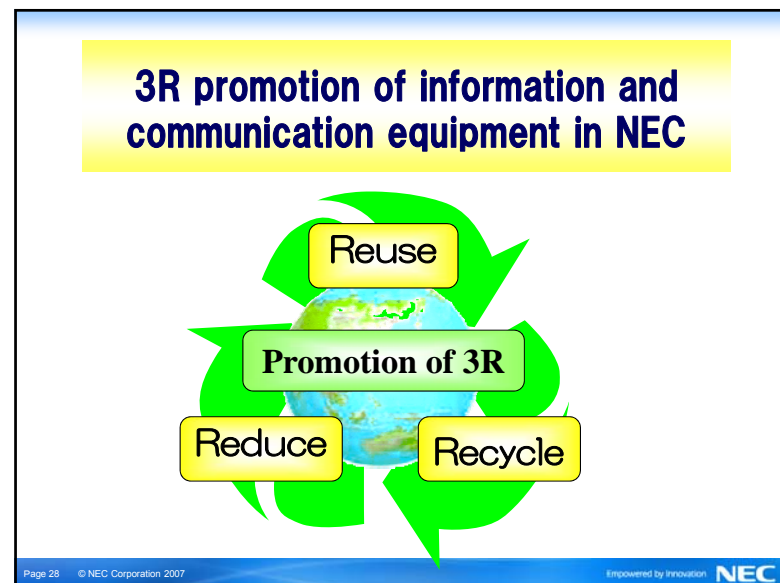
地球にやさしい

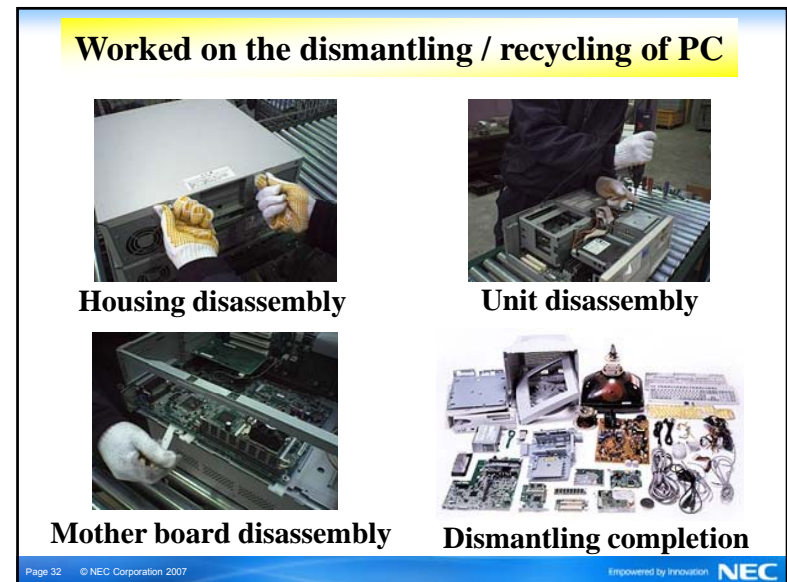
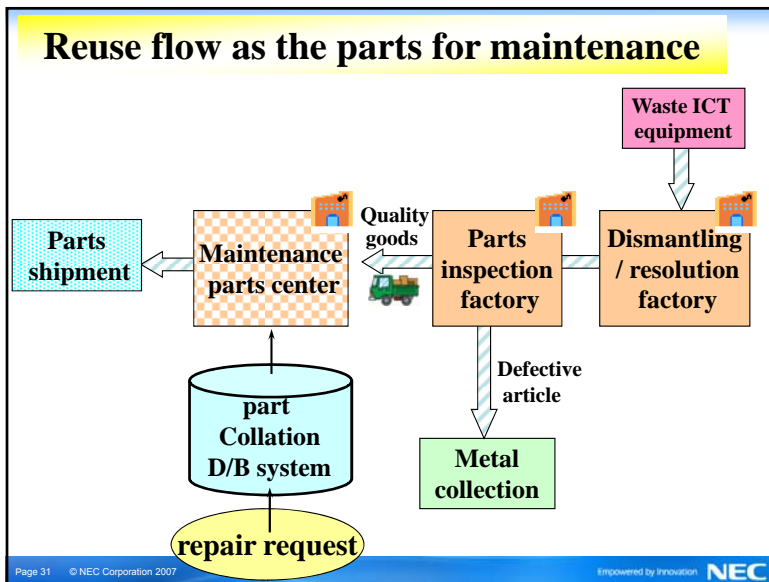
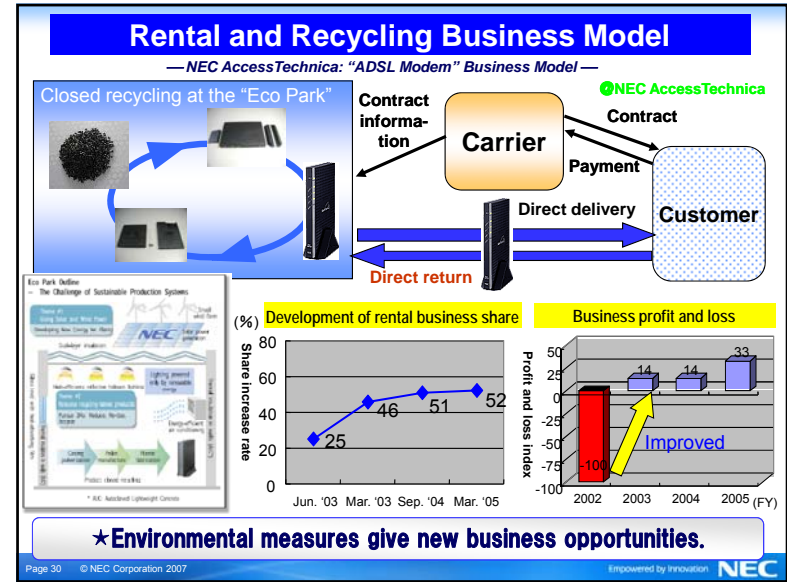
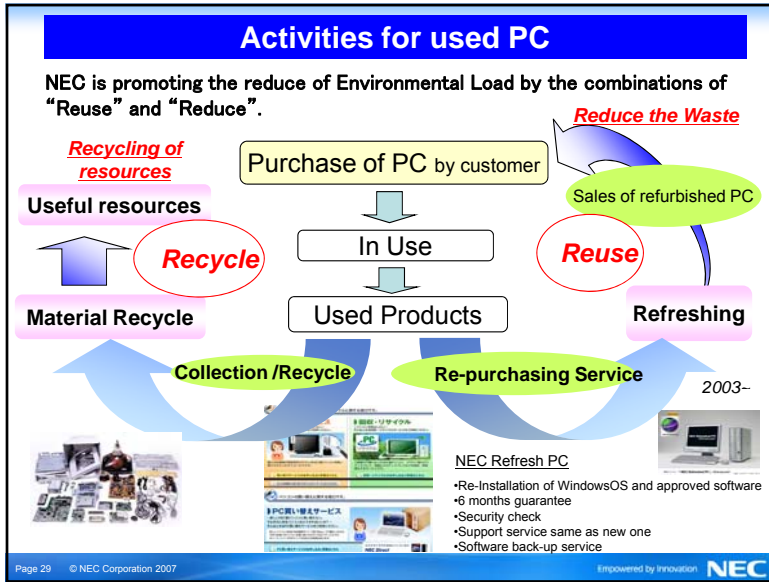
FOMA N701IECO

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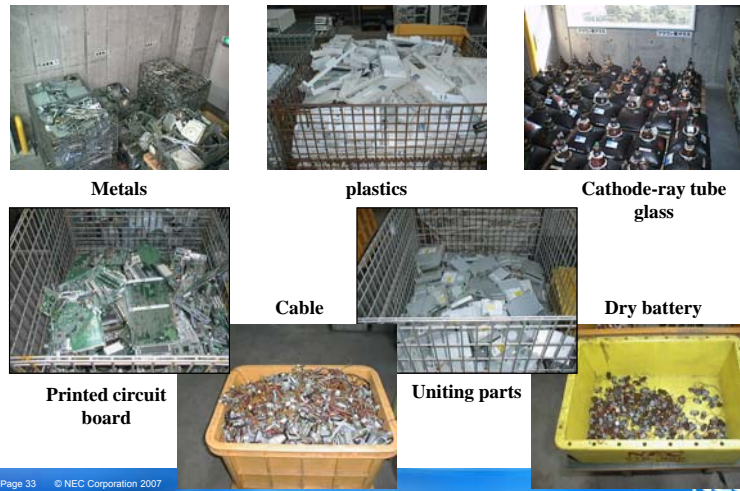
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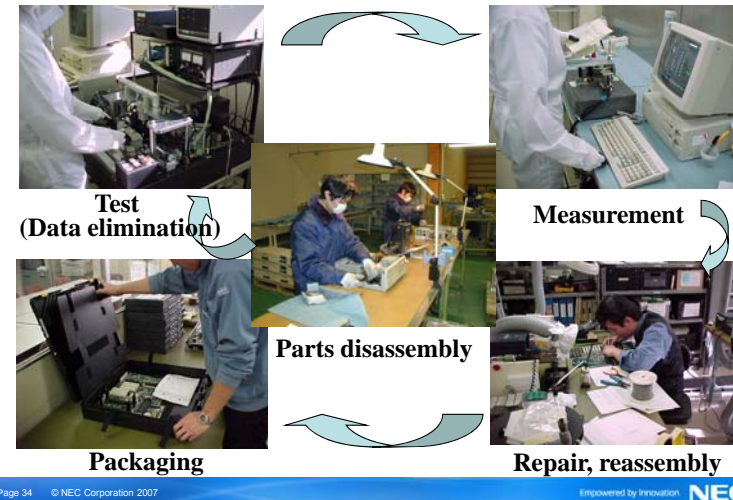




## Sorting / safekeeping of the dismantling product

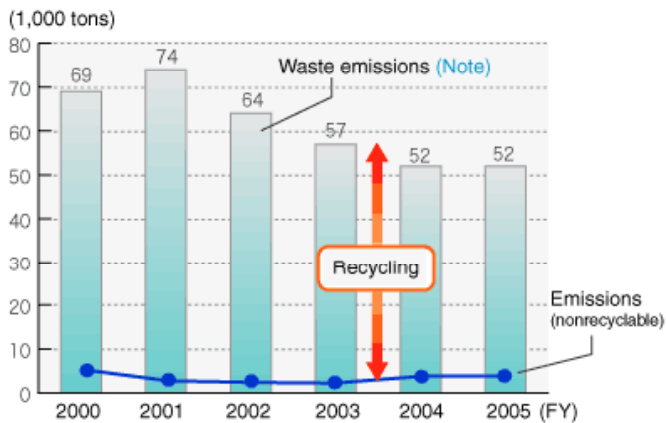


## Parts reuse work



## Waste Material Generation and Recycling

NEC began "Zero waste action" since 1985  
NEC achieved "Zero emissions" since March 2002



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## IT innovates the social system & contributes the Environment

◇ Decrease of losses  
◇ Form physical distribution (logistics) to information distribution

### Home

- Online movie
- On-line shopping
- Online music
- Interactive game
- Virtual community
- Home electronic

• Life style change  
• Increase of freedom

### Company

- TV conference
- Intra-net
- Mobiling Sales
- E-procurement
- ASP-service
- SCM
- SOHO
- E-learning

• Innovation of social system  
• Resources conservation

### Society

- Product innovation
- Logistics innovation
- Less material society
- Social risk management
- Care service
- Environmental monitoring
- E-government
- Remote medical care

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## Sustainable contribution through IT

◎ IT has both aspects of +/- for the Environment.

Plus effects

- Increase of productivity
- Decrease of logistics, traffics
- Decrease of paper consumption

Increase of resource efficiency,  
Prevention of Global warming

Environmental contribution

---

Minus effects

- Increase of electricity consumption, CO2 emission
- Increase of servers/PCs
- Increase of Inter-net access

Increase of electricity consumption,  
CO2 emission

Environmental impact

Maximization of Plus effect

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## Concept for Env. Ass. for IT-solutions

**Ordinary system**

Development

System Integration

Use Phase

After Use

man-power

energy

Transportation

Production

Replacement

Logistics

Energy consumption

Man-power

Transportation

Net-working

Increment or decrement

Increment or decrement

Decrement

Increment or decrement

Environmental Loading

Increment by introducing IT

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## Environmental Assessment Tool for Service / Software

1. 項目名	2. 消費電力(W)	3. 台数	4. 年使用時間(h/年・台)	入力変換
1. パソコン	52	1	72000	
2. サーバ	320	1	5760	
3.				
4.				
5.				
6.				

従来システム

1. 項目名	2. 消費電力(W)	3. 台数	4. 年使用時間(h/年・台)	入力変換
1. OHP	310	1	1440	
2. コピー機	1500	1	740/740/40	
3.				
4.				
5.				
6.				

新構成機器

0. 番号: 1

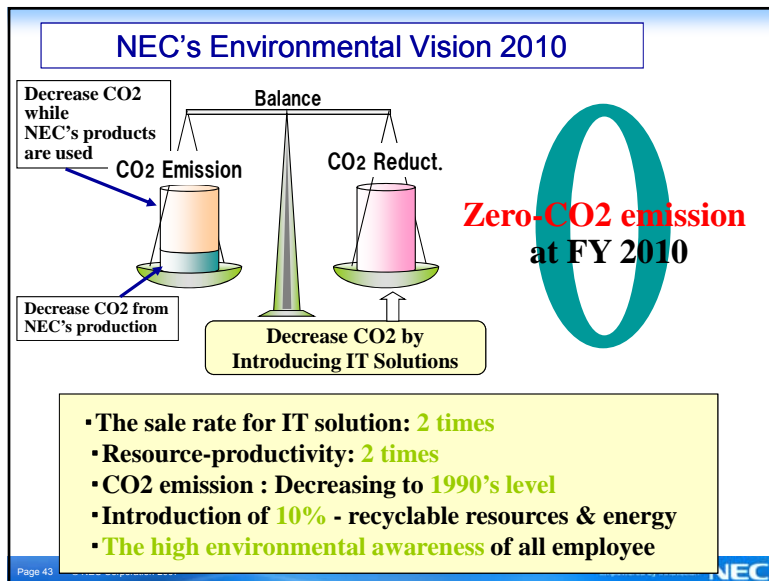
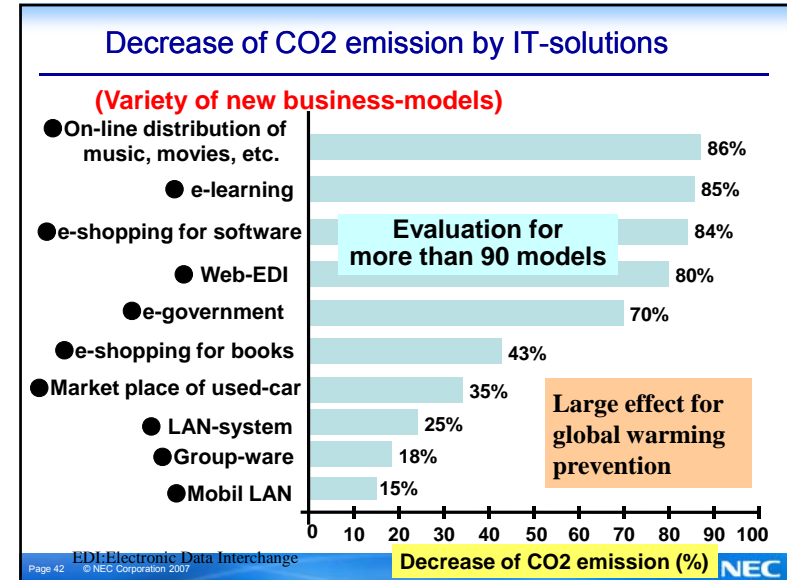
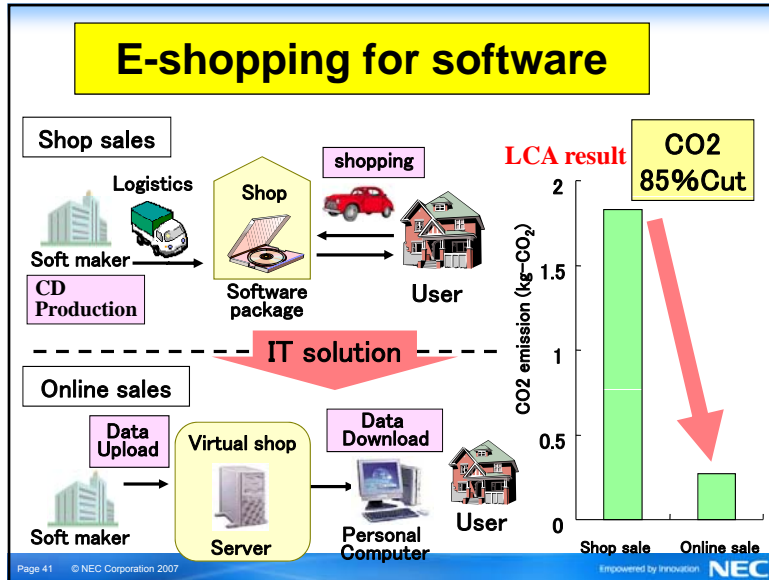
1. 項目名: パソコン

2. 消費電力: 62 W

3. 台数: 1

4. 1台あたりの年使用時間(h/年・台): 72000

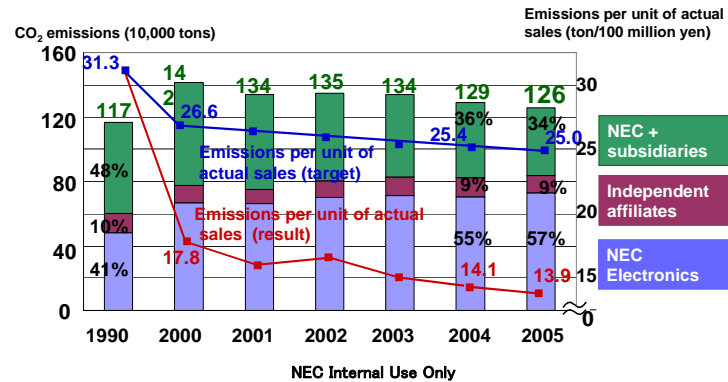
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## Development of Target and Actual Energy-Derived CO<sub>2</sub> Emissions

FY 2011 target Absolute value 1.25 million tons  
 Per unit of actual sales (compared with FY 1991) 22.5 tons / 100million yen  
 Per unit of actual sales (compared with FY 2005) 13.3 tons / 100million yen



NEC Internal Use Only

## Forestation Operations in Australia - NEC Forest -

As an effort to absorb CO<sub>2</sub> through trees



planting operations (2002)

Growth to 10m in 3.5years(2006)

© Summary of NEC Forest

- **Period of Plantation** : from 2002 to 2011 more 10years Growth
- **Place** : on Kangaroo Island, in South Australia
- **Total surface area** : 30 million m<sup>2</sup> (equivalent to some 2,300 times of the Tokyo Dome)
- **Absorption of CO<sub>2</sub>** : 1 million tons of CO<sub>2</sub> in the 20 years

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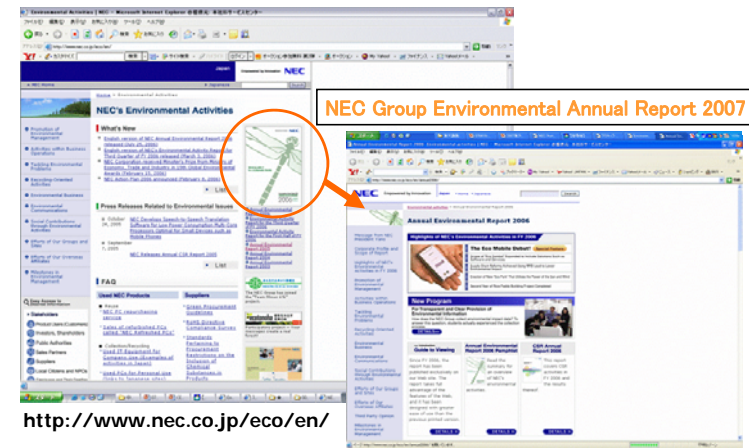
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## For more Eco Information



<http://www.nec.co.jp/eco/en/>

<http://www.nec.co.jp/eco/en/annual2006/>

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## NEC's Corporate Social Responsibility

Promote CSR communications including the disclosure and accountability with multi-stakeholders

The image shows two components of NEC's CSR communication. On the left is a screenshot of the CSR website, which features a navigation menu with categories like 'For All Stakeholders', 'For Stakeholders in Our Society', 'For Communities', 'For Employees', and 'For the Environment'. The main content area is titled 'Corporate Social Responsibility' and includes a brief statement about NEC's commitment to sustainable growth. On the right is the cover of the 'Annual CSR Report 2006', which has a colorful abstract design and the slogan 'Empowering Society With Innovation'.

CSR web site;  
<http://www.nec.co.jp/csr/en/>

Annual CSR Report

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## As a good Corporate Citizen



## Corporate Philosophy

NEC strives through "C&C"  
 to help advance societies worldwide  
 toward deepened mutual understanding  
 and the fulfillment of human potential.

Established in 1990

## Environmental Charter

### Environmental Principles

NEC will contribute to a sound environment  
and a livable society  
through technology that harmonizes  
with nature and production  
that is environmentally friendly.  
Our vision is a world where our natural  
environment  
is preserved, enabling all people of the world  
to pursue their full potential.

Established in 1991

Empowered by Innovation 

## Environmental Charter

### Action Plan

Preamble to the NEC statement for environmental action  
NEC will make harmony with the environment one of its primary goals  
so that each individual within the company will act with this in mind.  
Respect and preservation of the environment is our priority.

1. To produce energy and resource saving products, while giving careful thought to environmental and safety issues in development and planning.
2. [To encourage the development of environmental technology on all levels: production, sales, distribution, use and disposal of a product. To introduce materials, engineering and recycling methods that will minimize adverse effects on the environment.](#)
3. To respect and adhere to national and regional environmental regulations. To strive to strengthen and enforce even stricter environmental NEC standards.
4. To contribute positively to society through an environmental management program with a global perspective, while educating and raising the environmental consciousness of all company members.
5. To provide a structured administrative organization for environmental management, with executives in charge of different areas, delegate responsibilities, and be in the forefront of environmental matters at all times.
6. To maintain and strengthen an independent environmental management, and implement improvement measures based on internal environmental company audits.
7. To contribute to environmental protection, by continuously making public announcements on the latest NEC developments in environmental technologies and management methods.

Established in 1991 

### Basic Policy for

### FY2005 Mid-term Environmental Plan

Realization of "Ecology through IT" with a unified effort by NEC!

1. Promotion group-wide environmental management
2. Environmental soundness in all products and solution businesses
3. Thoroughgoing environmental impact reduction (Zero Emissions, etc.)
4. Fulfillment of Environmental communications
5. Increasing of all employees' environmental awareness



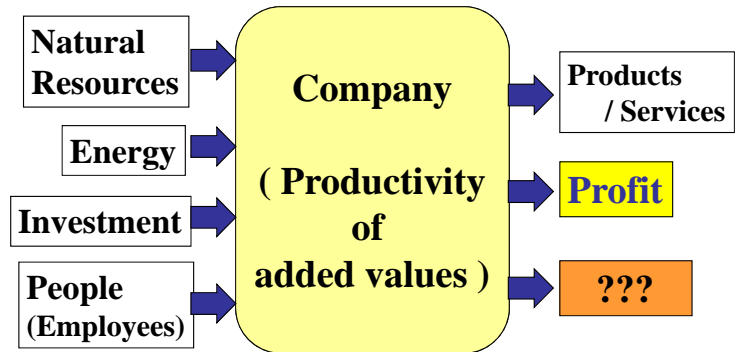
**Let's think about (1)**  
**- Environmental Policy of Private Company -**

Nov. 10, 2008  
NEC  
Env. Mng. Division  
Ryosuke UGO

# 1. What's the private company ?

What's your Answer?

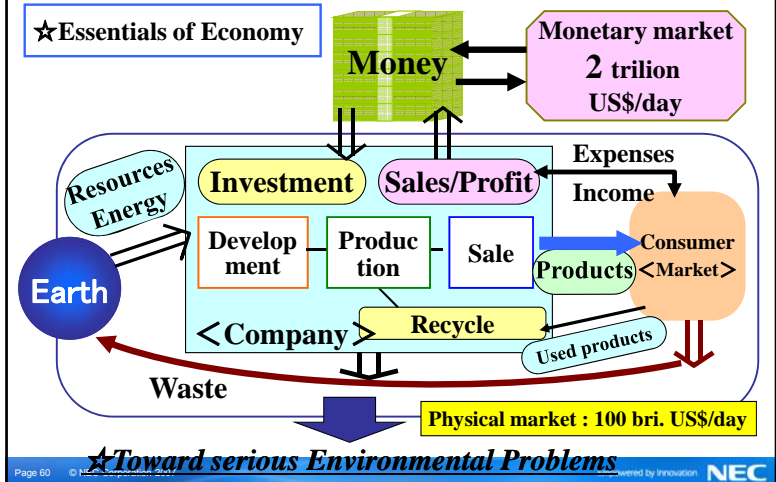
# What is "The Company" ?



# 2. What's the Environmental Problems ?

What's your Answer?

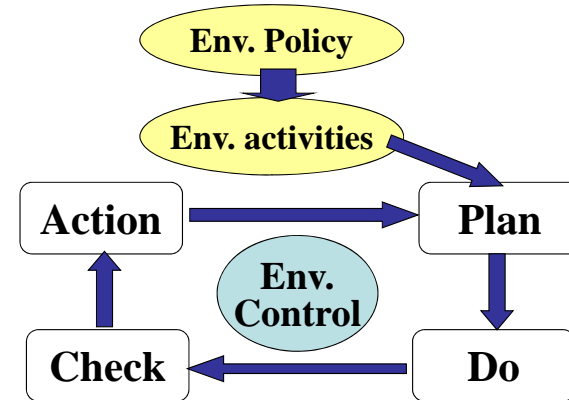
# Review of the modern economic system



### 3. What's the Management System ?

What's your Answer?

### Environmental Management System (EMS)



### 4. What's is "the sustainability" for the private company ?

What's your Answer?

**Let's think about (2)**  
**- Environmental Reporting for myself -**

Nov. 10, 2008  
NEC  
Env. Mng. Division  
Ryosuke UGO



★Short Practice **Environment & I**      •Name :      •Date :  
 •Address:

•Your policy on the Environment					
•Time period	April 1, 2002 ~Mar. 31, 2003	•Target area	Your home and Laboratory	•Action range	Ordinary lifestyle
•Yearly Expense		•Energy •Water •Food		•Paper recycle •Used goods sales	
Environmental aspects	Targets (Action items)	Activities	Performance (Action results)	Evidence (Transparency)	
Global warming (electricity, gas, etc.)					
Waste management (Recycling, reuse, etc.)					
Water management (bath, laundry, cleaning)					
Social contribution and volunteer					
Study of research on Environment (credit for this lecture)					
(Topics: appeal point of you environmental activities)					

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Tokyo University: Global Env. Policy 2008      Empowered by Innovation **NEC**

## The themes for the next discussion

Dec. 1, 2008  
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 Env. Management. Div.  
 UGO, Ryosuke

### The next discussion – Debating –

★Let's consider the following issue ?

◎Themes for the debate;

- (1) Introducing “Carbon tax”.
- (2) Is the Carbon trading system effective on the global warming issue ?
- (3) Use of bio-resources.  
- Bio-fuel (Ethanol), - Bio-plastics
- (4) Others (if you have recommendations, )

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### The next discussion – Debating –

★Debating process

Step1: Select your option: theme (1) - (4)

Step2: Check your opinion : Approval , Opposite

Step3: How are you conducting the logics for your opinion ?

Please try to follow the processes as the bellow.

- ① The clarification of the reason for your opinion
- ② Collection information or data supporting your opinion taking account for the following key-words:  
-technology, -cost, -environmental resources or loadings, - management resources (people, capital, resources), etc.
- ③ Also, Collection information or data supporting your opposite opinion
- ④ Speculating on the opposite side logics
- ⑤ Establishment of your conclusion

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## The next discussion - Debating -

◎How do you think about the balance between Environment and your business !?  
I'll do support or opposite (the theme (1) - (4) ) !

Because ...



IT、で、エコ  
その変わるところにNECのソリューション

## (Ecology through IT)

★ We are helping customers and society as a whole  
contribute to environmental conservation through  
our IT businesses.