

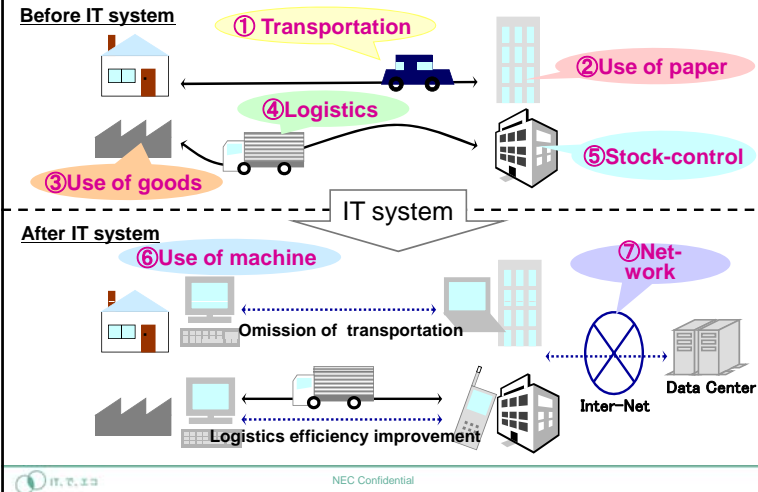
# Practice & Exercising

## - CO2 reduction effect of IT system -

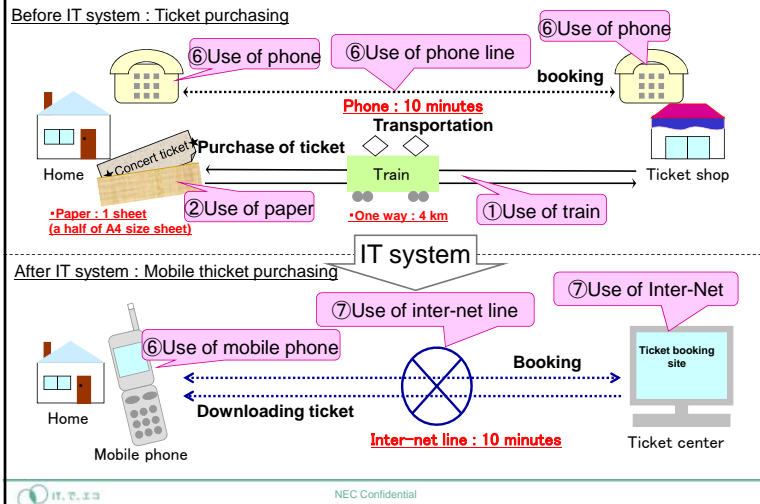
Dec. 14, 2009  
 NEC Corp.  
 Env. Mng. Division  
 RyoSuke UGO



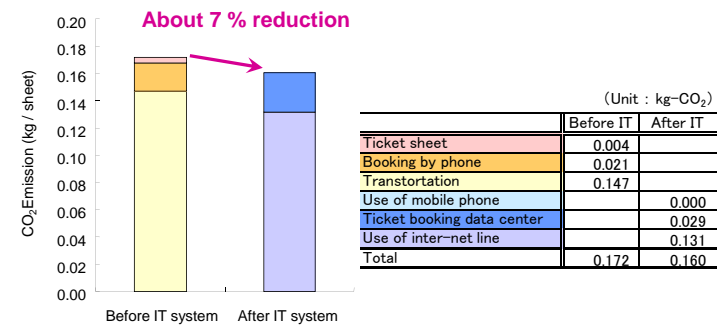
### Classification of 7-CO2 emission elements before/after introducing IT system

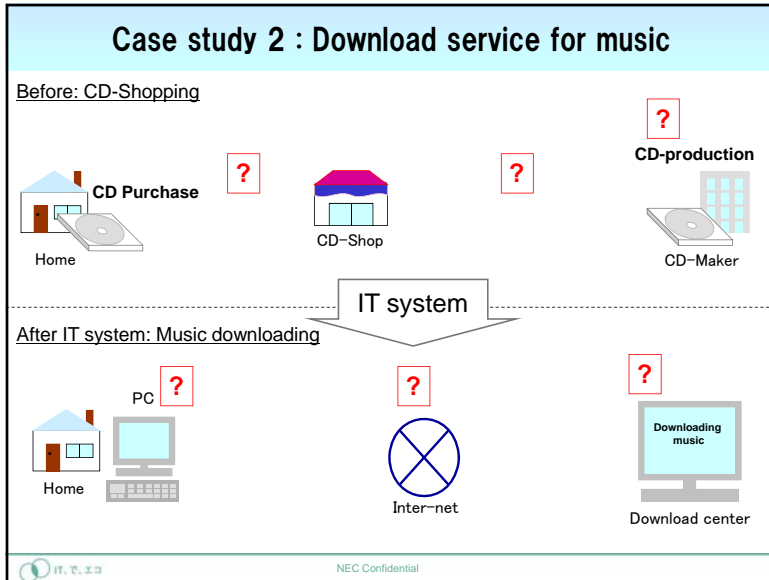


### Case study 1 : Mobile ticket purchasing service



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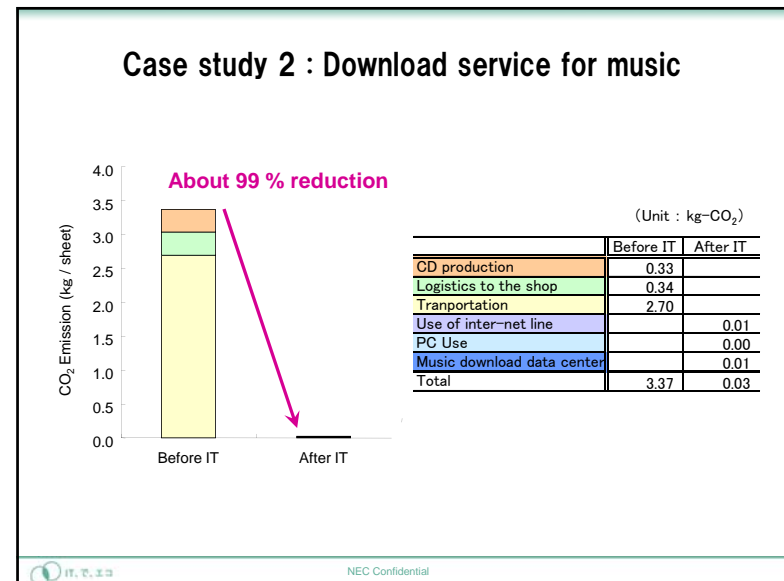
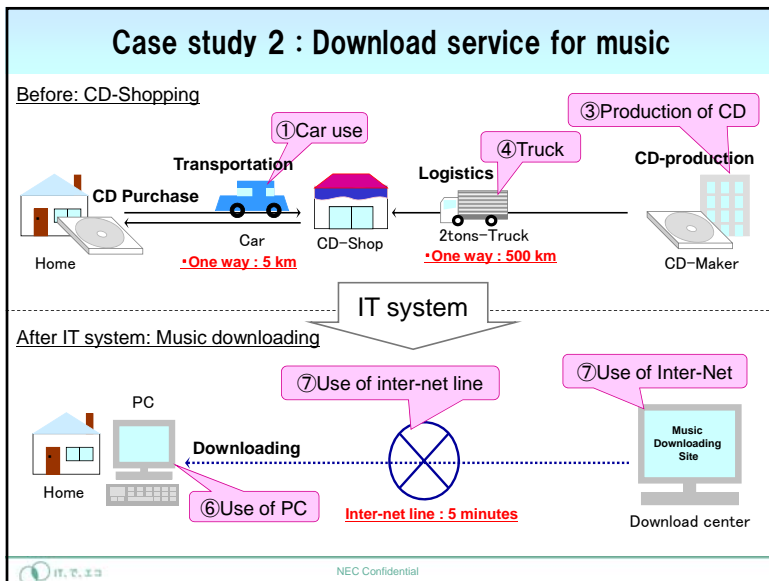




### Data for the case study

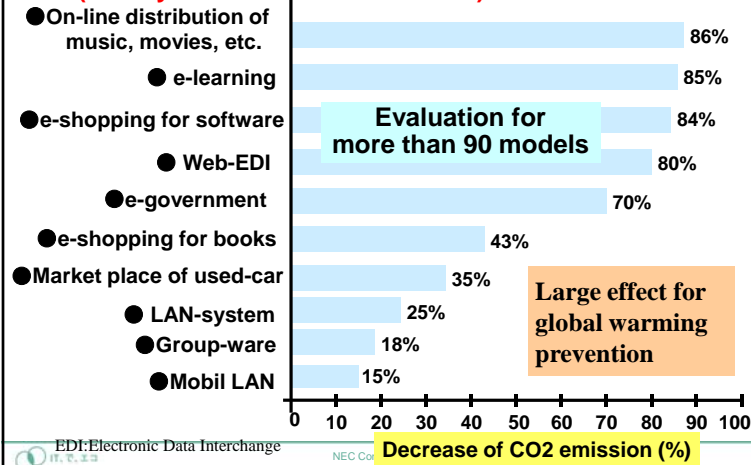
CO2 reduction elements	Content	Values	Unit
① Transportation	Car	0.270	kg / person·km
③ Use of goods	CD production	0.330	kg / unit amount
④ Logistics	Truck : 2-tons type	0.338	kg / t·km
⑥ Use of machines	Power of Desk-top type PC	59.100	W
	Power of Display	24.000	W
	Power of Server	411.111	W
⑦ Use of inter-net	Inter-net line	0.120	kg / unit usage

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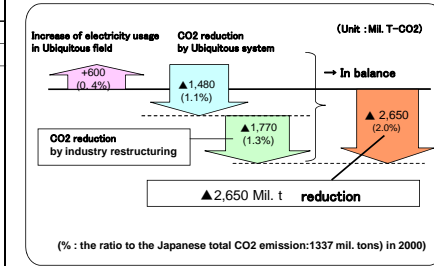
## Decrease of CO2 emission by IT-solutions

(Variety of new business-models)



## The estimation of CO2 reduction effect all over the Japanese society by IT in 2010

	CO2 emission (Mil. t-CO2)
Electricity use in Ubiquitous field	+6.0
Ubiquitous system total	▲ 14.8
ITS	▲ 0.8
Eco-drive	▲ 0.8
Logistics supporting system	▲ 0.2
SCM	▲ 0.8
Reuse supporting system	▲ 0.9
Tele-works system	▲ 3.3
Paper less system	▲ 0.2
BEMS	▲ 6.1
HEMS	▲ 1.2
E-Publishing system	▲ 0.4
On-line shopping system	▲ 0.1
Additional reduction by industry restructuring	▲ 17.7
<b>Total reduction of CO2</b>	<b>▲ 26.5</b>



Source : "Research report for the Ubiquitous society development and the Environment", Mar. 2005, Ministry of Internal Affairs and Communications

## The themes for the next discussion

Dec. 21, 2009  
 NEC Corp.  
 Env. Management. Div.  
 Ryosuke UGO



## The next discussion - Debating -

☆Let's consider the following issue ?

◎Themes for the debate;

' Are the following technologies or systems effective or ineffective for CO2 reduction ? '

- (1) Carbon tax
- (2) Carbon trading system
- (3) Free of high-way charge
- (4) Eco-point to replace TV, air-conditioner, etc.
- (5) CCS (Carbon Dioxide Capture and Storage )

## The next discussion – Debating –

### ★Debating process

Step1 : Select your option: theme (1) - (5)

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 Collecting 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, Collecting information or data supporting your opposite opinion
- ④ Speculating on the opposite side logics
- ⑤ Establishment of your conclusion



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## Debating Team making and time table

○Team making : 1 team – 2 members

\* Please, selection your partner each other taking account of  
your schedule or situation

○Time table : 60 minutes for 1 debating

<Step 1> Initial insistence from both teams

5 minutes : The 1st team presentation

5 minutes : The 2nd team presentation

<Step 2> Debating

3 minutes : The 1st team - Additional and opposite explanation and questions

3 minutes : The 2nd team - Answer and additional explanation, questions

\* Repetition of 3~5 times

<Step 3> Discussion with audience

10 - 15 minutes : questions from audience and answers from teams

<Step 4> Judgment of audience and comments from coordinators



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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 ...



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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.



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