

Fujitsu Green Logistics Activities

-Environmental Protection and Economic Efficiency-

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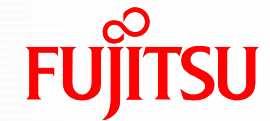
Fujitsu at a Glance



- **Headquarters:** Tokyo, Japan
- **President:** Michiyoshi Mazuka
- **Established:** June 1935
- **Net Sales:** 4,692.9 billion yen (US\$47,888 million)
- **R&D Expenditure:** 249.9 billion yen (US\$2.6 billion)
- **Employees:** 186,000 worldwide
- **Principal Business Areas:** Technology Solutions
Ubiquitous Product Solutions
Device Solutions
- **Stock Exchange Listings:** Tokyo (Code: 6702), Osaka, Nagoya, Frankfurt, London, Swiss

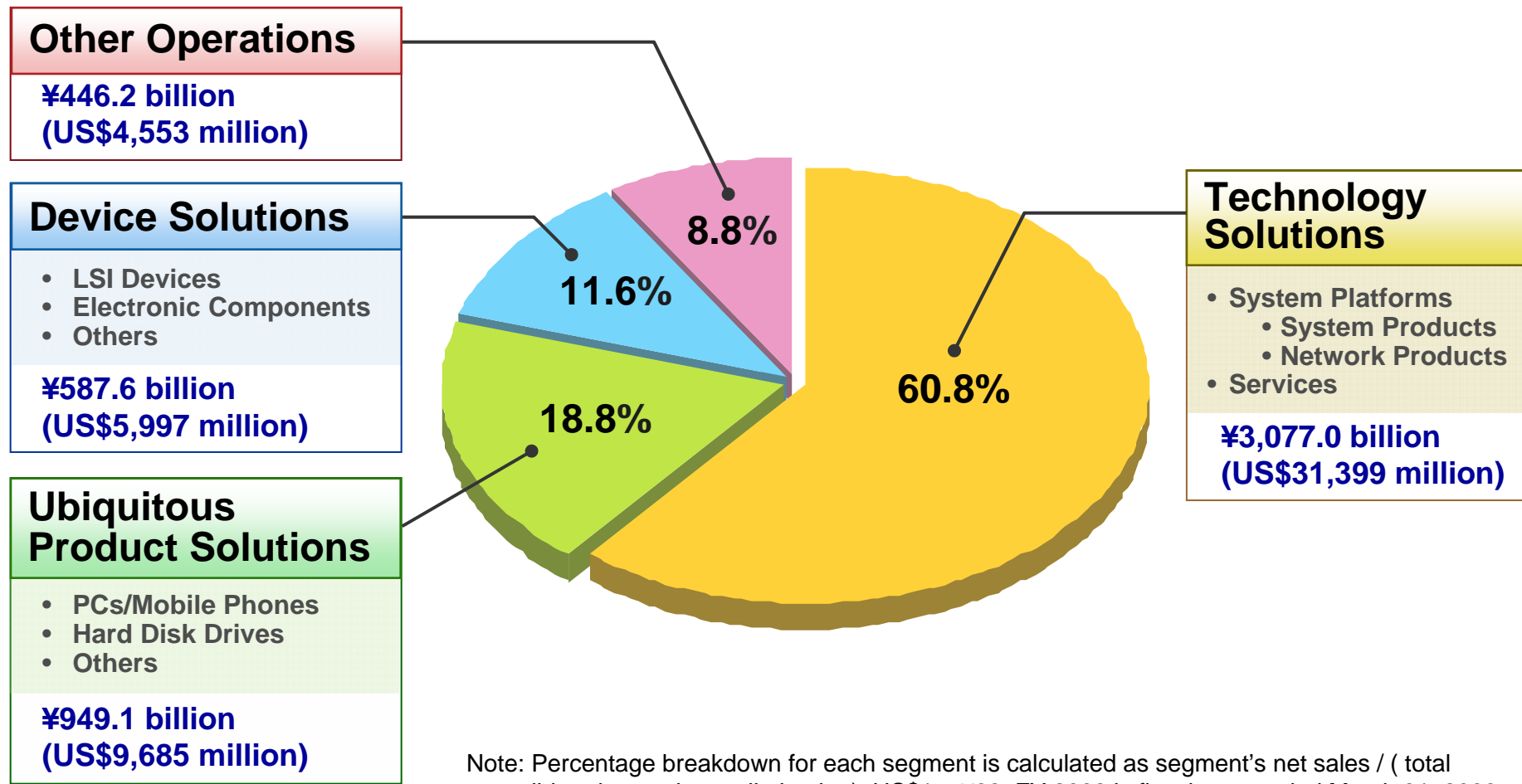
Note: Consolidated net sales and R&D expenditure for fiscal year ended March 31, 2009.
US\$1 = ¥98 . WW employees as of June 2009.

Business Composition



■ FY 2008 Revenue by Business Segment

Consolidated Net Sales by Business Segment, Including Intersegment Sales

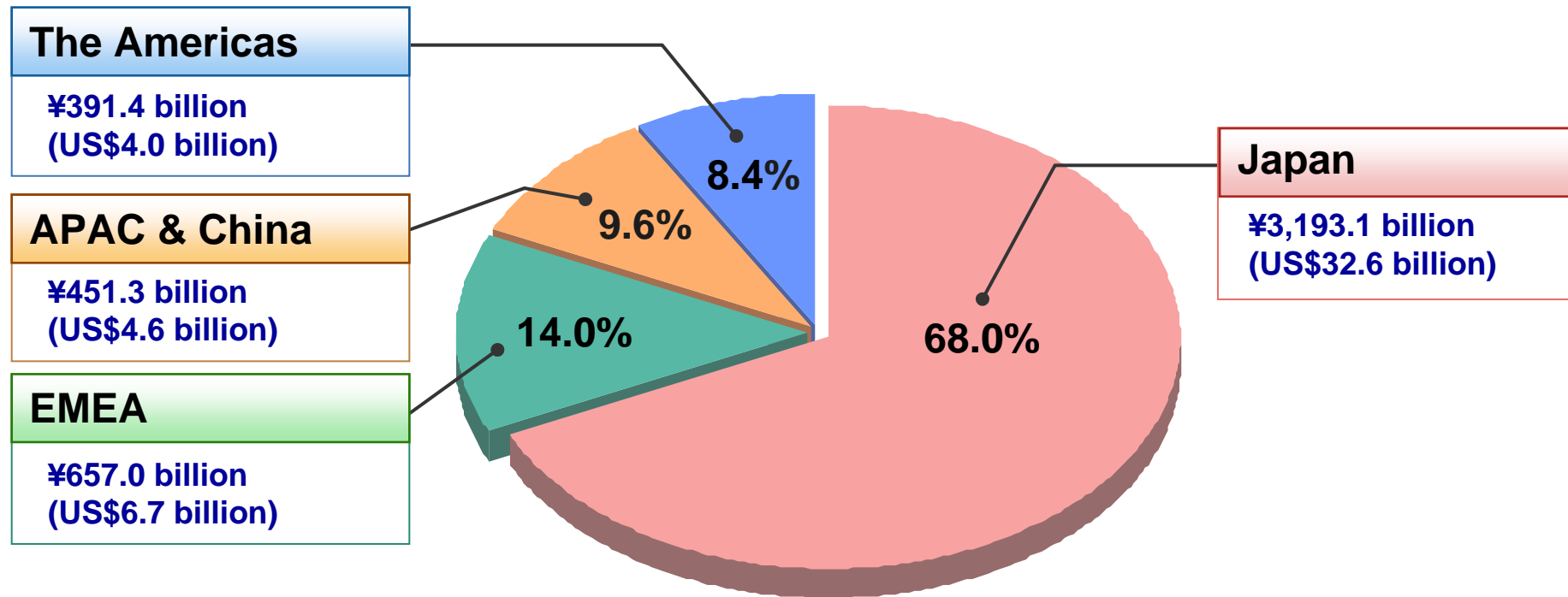


Note: Percentage breakdown for each segment is calculated as segment's net sales / (total consolidated net sales + elimination). US\$1 = ¥98. FY 2008 is fiscal year ended March 31, 2009.

Business Composition



■ FY 2008 Revenue by Region Consolidated Net Sales to Unaffiliated Customers by Customer's Geographic Location



Note: Regional sales outside Japan are sales to customers based in those regions by Fujitsu Limited and Fujitsu Group companies, including subsidiaries within or outside that region. Sales of Fujitsu Siemens Computers are not included in EMEA total. US\$1 = ¥98. FY 2008 is fiscal year ended March 31, 2009.

Contribute to Creating Prosperous, Low-Carbon Society

Fujitsu Group Green ICT



"Green Policy 21"

Long-term Environmental Concept of Fujitsu Group

"We make every activity green"



Fujitsu Group's Green ICT



In Traffic and Transportation

Operations Support System

In-Vehicle Station (Dejitako)

CO2 emissions reduced by about 19%

ETC Infrastructure System

ETC Infrastructure System

CO2 emissions reduced by about 24%

Distribution Center System LOMOS/DJ

CO2 emissions reduced by about 58%



In Factories

Facilities Management System Futuric

CO2 emissions reduced by about 47%

Environmental Performance System

Records Management System SLIMOFFICE

Visualization of environmental performance data

Production Scheduling System GLOVIA/SCP FA

CO2 emissions reduced by about 60%

Environmental Information System

(Contaminant emissions management) e-FEINS

Environmental risk reduction



In Department Stores and Supermarkets

POS Systems for Mass Merchandisers GlobalSTORE III

CO2 emissions reduced by about 30%

Internet Shopping System i . market

CO2 emissions reduced by about 25%

Contact in USA

Ron Mitchell

Senior Vice President

Corporate Marketing

Fujitsu America, Inc

TEL 416-594-4759

E-mail : Ron.Mitchell@ca.fujitsu.com

In Office Buildings, On Farms, In Hospitals, In Local and National Government...
These Green ICT efforts by the Fujitsu Group are contributing to reducing the environmental burden in all areas of society.

Fujitsu Group Environmental Activities

"Green Policy Innovation" Project

Reducing Customer's Environmental loads by Green ICT: **OF ICT and BY ICT**

Contributing to reduction in CO2 emissions of over **7 Million Tons** FY2007 to FY2010



Greenhouse Effect Gas Emission in Japan



(Unit: 1mil ton-CO2)

	1990年	2005年		2007年		2008年		2010年	
	emission amount	emission amount	year baseline	emission amount	year baseline	emission amount	year baseline	emission amount	year baseline
Green house effect gas total	1,261	1,358	7.7%	1,371	8.7%	1,286	2.0%	1,186	▲6.0%
CO2	1,144	1,287	12.5%	1,301	13.7%	1,216	6.3%		
Energy origin Co2	1,059	1,203	13.6%	1,219	15.1%	1,138	7.5%		
Industrial	482	456	▲5.4%	468	▲2.9%	420	▲12.9%		
Transportation	217	257	18.4%	246	13.4%	236	8.8%		
Business Operation	164	238	45.1%	242	47.6%	232	41.5%		
Residential Industry	127	174	37.0%	180	41.7%	172	35.4%		
Energy	69	78	13.0%	83	20.3%	78	13.0%		
Non origin energy CO2	85	84	▲1.2%	82	▲3.5%	78	▲8.2%		
Methane (CH4)	33	23	▲30.3%	22	▲33.3%	22	▲33.3%		
dinitrogen monoxide(N2O)	33	25	▲24.2%	24	▲27.3%	24	▲27.3%		
alternate 3rd freon gas	51	23	▲54.9%	24	▲52.9%	24	▲52.9%		

Kyoto Protocol: Reduce Green House Emission by 6% Compared to 1990 by 2010

Total Emission : 1990 → 2005 +7.7%

Transportation : 1990 → 2005 +18.4%

} **CO2 Emission was Increased Including Transport**

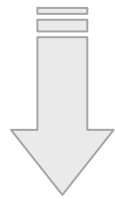
➔ From April 2006, Energy Conservation Law was Revised and Energy Saving was Obligated to Transportation Sector

Revised Energy Conservation Law

In addition to Forwarders, **Cargo Owner's such as Fujitsu** are required to comply with the law and to take energy saving action.

Forwarder and Cargo Owner's

The forwarder that has above certain transport ability.



※Each enterprises baseline of judgment
Auto car cargo use above 200
passenger use above 200 (bus)
above 350 (taxi)
Rail way cargo·passenger use both above 300 etc.

Specific transportation enterprises

- Make energy saving plan
- Report the energy use consumption and CO2 etc.

The cargo owner's that order above the certain amount of cargo transport.



※Transportation amount per year is above 30 million ton·kilo (Including own logistics)

Fujitsu transportation amount (08 Act) 62M ton/kilo

Specific shipper

- Make energy saving plan
- Report energy use consumption and CO2
- Reduce CO2 Emission more than 1%/year etc.

Collect energy consumption report from forwarders

Fujitsu started activities not only to comply with the law but also to improve logistics efficiency and to meet customer's requirement

Basic Policy for Environmental Protection Activities



Critical Situation of Earth Environment

Increase of Drought, Collapse of Ecosystems, Increase of Typhoon and Flood, Reduction of Grain Productivity due to Drought, Increase of Infection etc

Earlier Protection Activities make More Effects

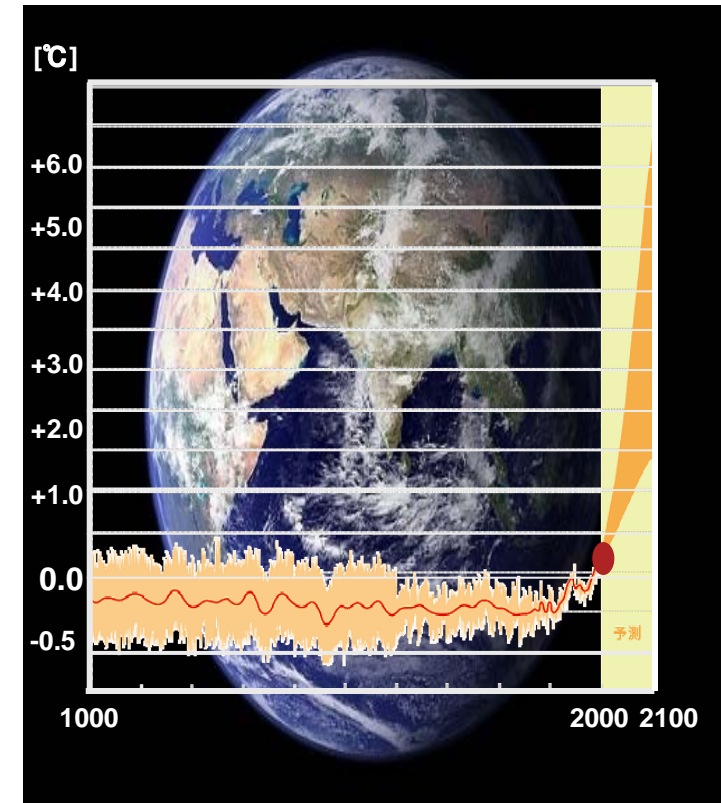
Protection Activities are Essential for Further Enterprise Growth

Economic Rationality is necessary for Protection Activities

In Logistics, Environmental point of view is added to Cost Reduction Activities

Proactively Promote Green Logistics Activities, since it will be a Basis for Company's Growth

Temperature Increase Prospect by 2100



IPCC Report (Nov ' 07)
1.1°C~6.4°C Increase
by 2100
(2° F~11.5° F)

Our Policy for Green Logistics Activities



● Lead Environmental Activities by Setting Top-Level Goal in Electronics Industry

* Fujitsu Set Top-Level Absolute Emission Amount Goal in Industry including Business Growth

<Transport CO2 Emission Reduction Goal>

Fujitsu	Reduce Absolute Amount 40% by 2010 Compared to 2000 (25% Reduction by 2010 compared to 2005)
N	Reduce 10% by 2010 compared to 2005
P,H	Reduce 4% CO2 per production amount by 2010 compared to 2006

- Pursue Environmental Protection and Cost Reduction at once
- Enforce Activities as Fujitsu Group's Activity
- Realize Innovative Activities by Strong Partnership with Service Providers

【Relation to Green Logistics Activities】

	Environment Cost		Leadtime
Eco Friendly Driving	○	○	—
Stowage Improvement	○	○	—
Modal Shift	○	△	△

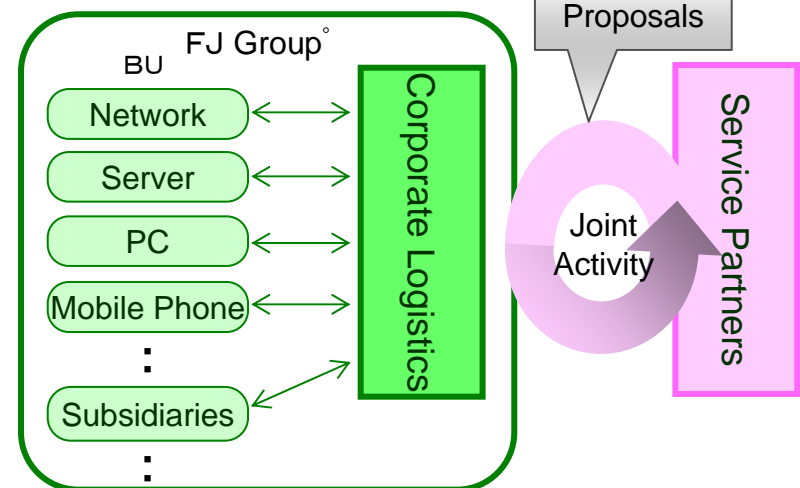
○:Positive Impact, △:Positive/Negative Impact, —:Neutral

Countermeasure

Can be Changed to ○ by

- Apply for Long Distance Transportation
- Earlier Products Release from Factory

【Activity Structure】



Characteristics of Our Products Logistics



Transportation of ICT Equipment : Mainly by Chartered Truck

Bare Product = Packingless Sensitive for Shock 70%



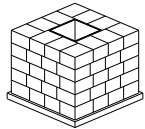
- Server
- Network
- Large Printer



→ Need Protection Pad
→ Require Many Laborers

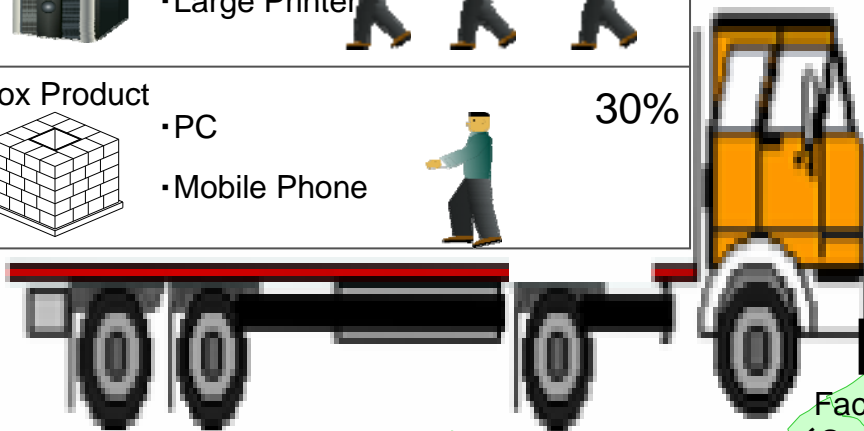


Box Product



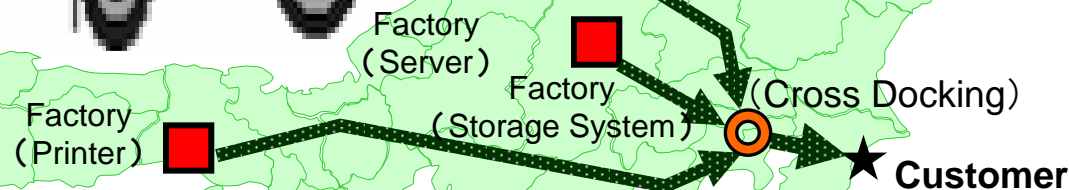
- PC
- Mobile Phone

30%



Green Logistics + Cost Reduction

- Effort by Hole Supply Chain
- Improve Stowage
 - Accurate Logistics Specification
 - Proper Logistics Service
- Expand Modal Shift
 - Devise Operation



<Examples>

- ① Eco-Friendly Logistics Model
- ② Internet Electric Trading System
- ③ Improve Stowage
- ④ Expand Modal Shift

① Eco-Friendly Logistics Model (1)

CO2 Reduction by Concentrated Vehicle Assignment Control through Parts Procurement to Product Delivery

(Before) Each process (Procurement/Manufacturing/Sales) and Each Subsidiaries allocates trucks cars and deliver individually

■ DC Consolidation in Metropolitan Area (5 to 3)

Expand Handling Volume at each DC

■ Establish Concentrated Vehicle Assignment Control Support System

Best Car Allocation by Combining Shipper's Cargo and Information through Procurement to Sales

* Joint Project of 8 companies (FJ, Subsidiaries x 3, Sales Company x 1, Suppliers x 2, Forwarder x1)

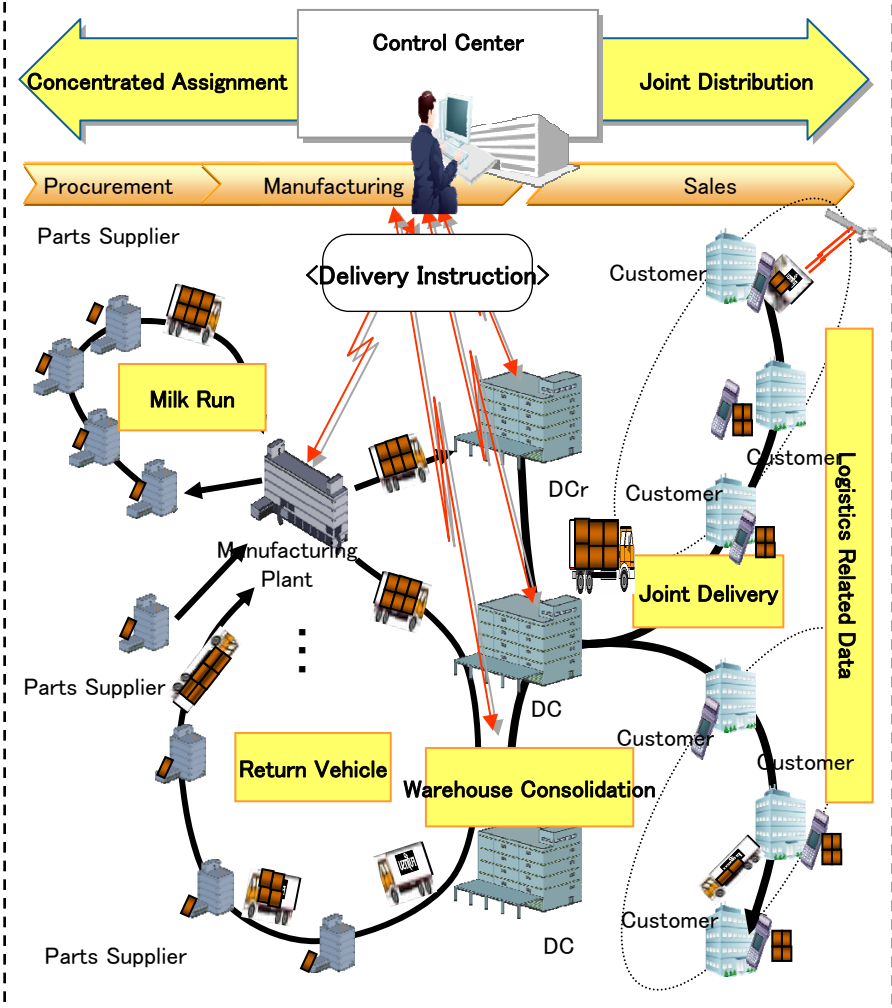
■ Introduce Driving Support System

Eco-Driving with our In-Vehicle Terminal

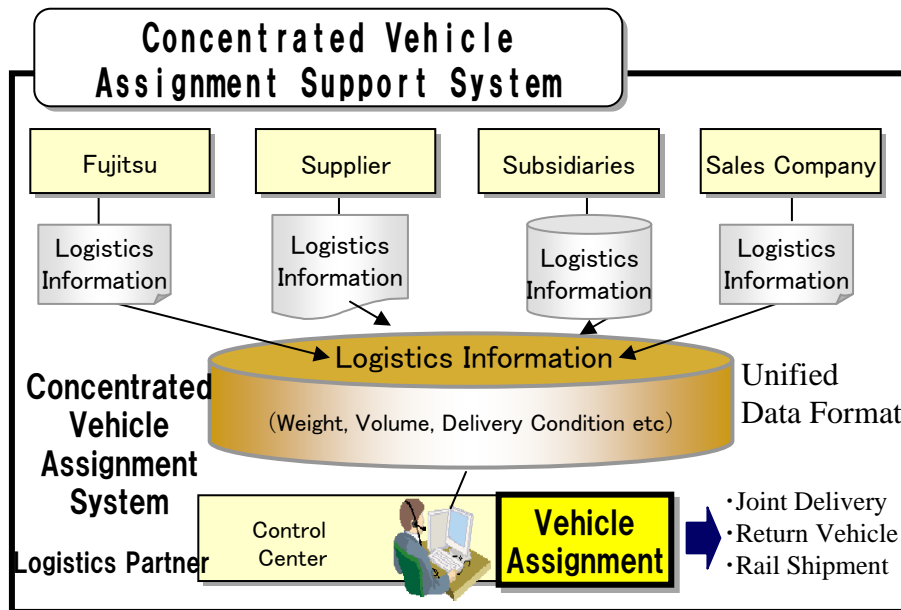
■ Establish CO2 Calculation System

Establish Transportation CO2 Emission Automatic Calculation Tool

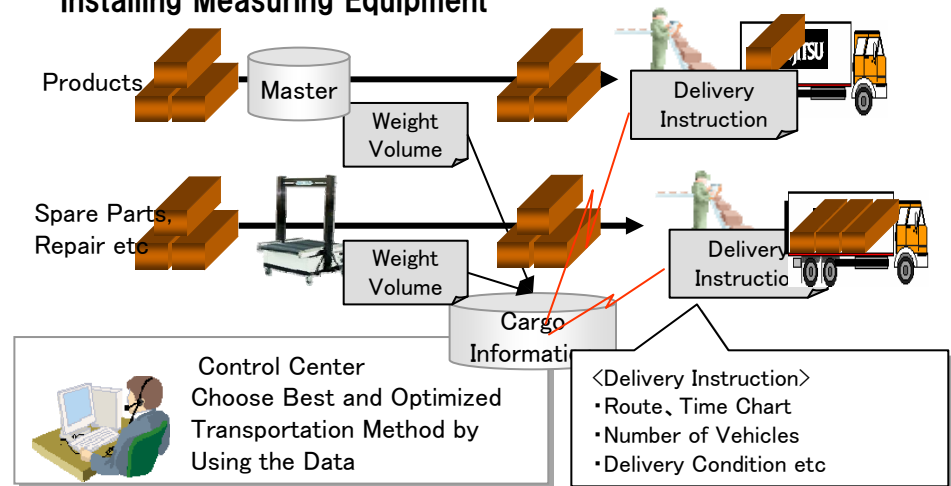
【Concentrated Vehicle Assignment Control (Image)】



① Eco Friendly Logistics Model (2)



□ Make Logistics Related Data Make Logistics Related data (Weight, Volume etc) by Installing Measuring Equipment



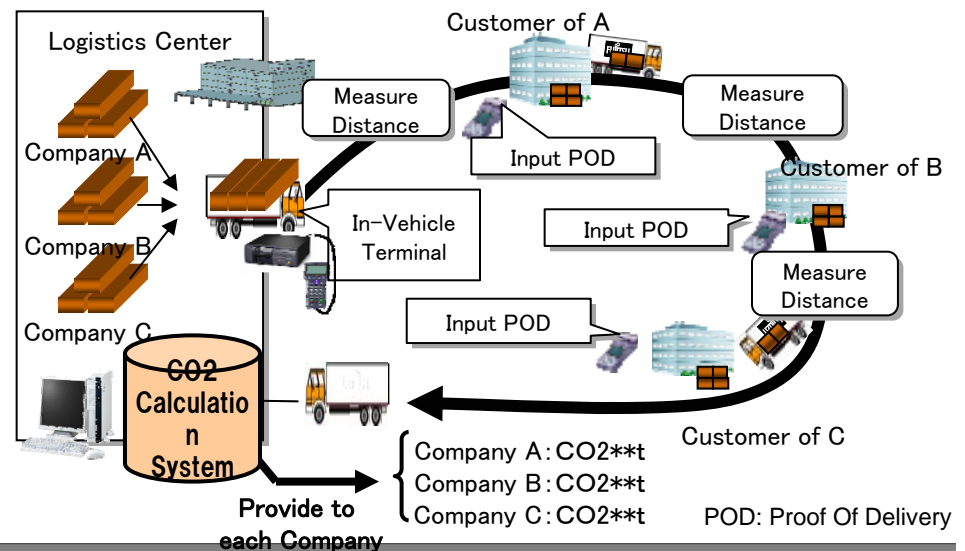
□ Introduce our Driving Support System (In-Vehicle Terminal)

- Measure Vehicle Data (Drive Distance, Mileage etc)
 - Encourage Drivers to Drive Economy and Safety by alarming function for idling and sudden acceleration/deceleration
- ⇒ **Improve Mileage +4% (Average of 2t Trucks)**

□ Introduce CO2 Emission Calculation System

- Automatic CO2 Calculation of each shipper by using Data of In-Vehicle Terminal and Shipping Details

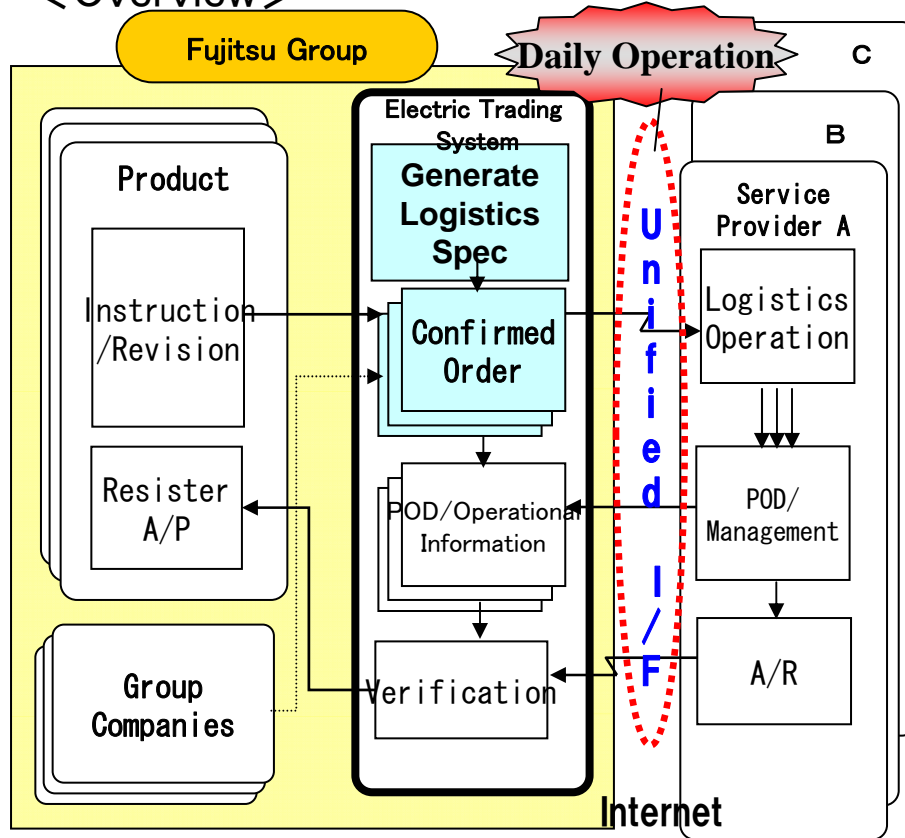
Impact CO2 Reduction : 313t/▲21%
Cost Reduction : US\$1.9M/▲19%



② Internet Electric Trading System

New System= Generate Logistics Specification (Weight, Volume/Package etc) + Confirmed Order Placement/Verification

< Overview >



< Schedule >

	Application Schedule			
	~FY2008	FY2009		FY2010
		1FH	2FH	1FH
Logistics Specification Generating System	Sever Storage System ▼ Mobile System ▼	PC IA Server Network System ▼	2010 Jan Go Live	
Order Placement/ Verification System		Mobile Phone ▼	Data Analysis ▼	2010 May Go Live
			Order / Veri-fication ▼	

Visualize Cost per Products/Operation

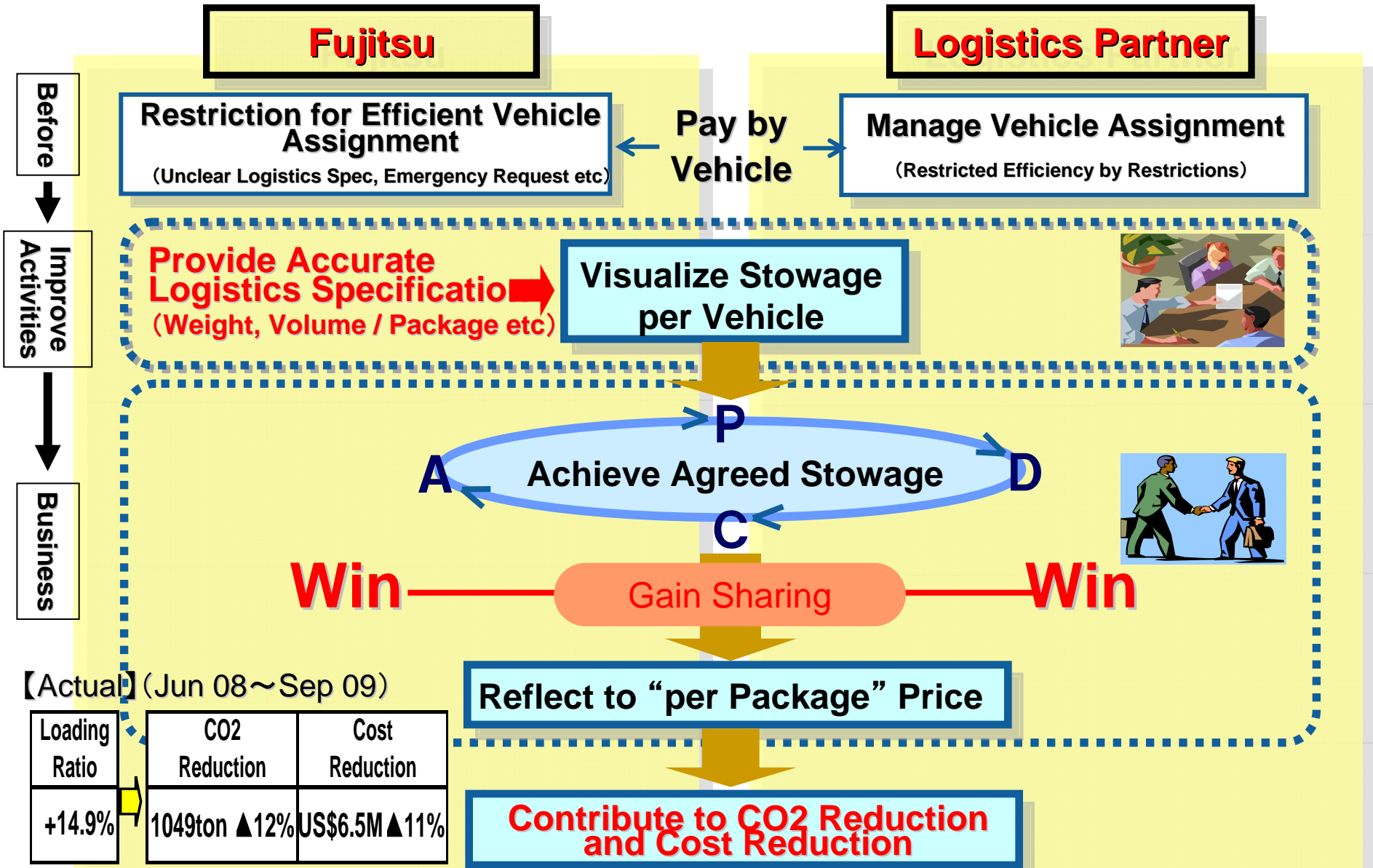


Review Cost, Logistics Spec



Contribute to Reduce CO2 and Cost

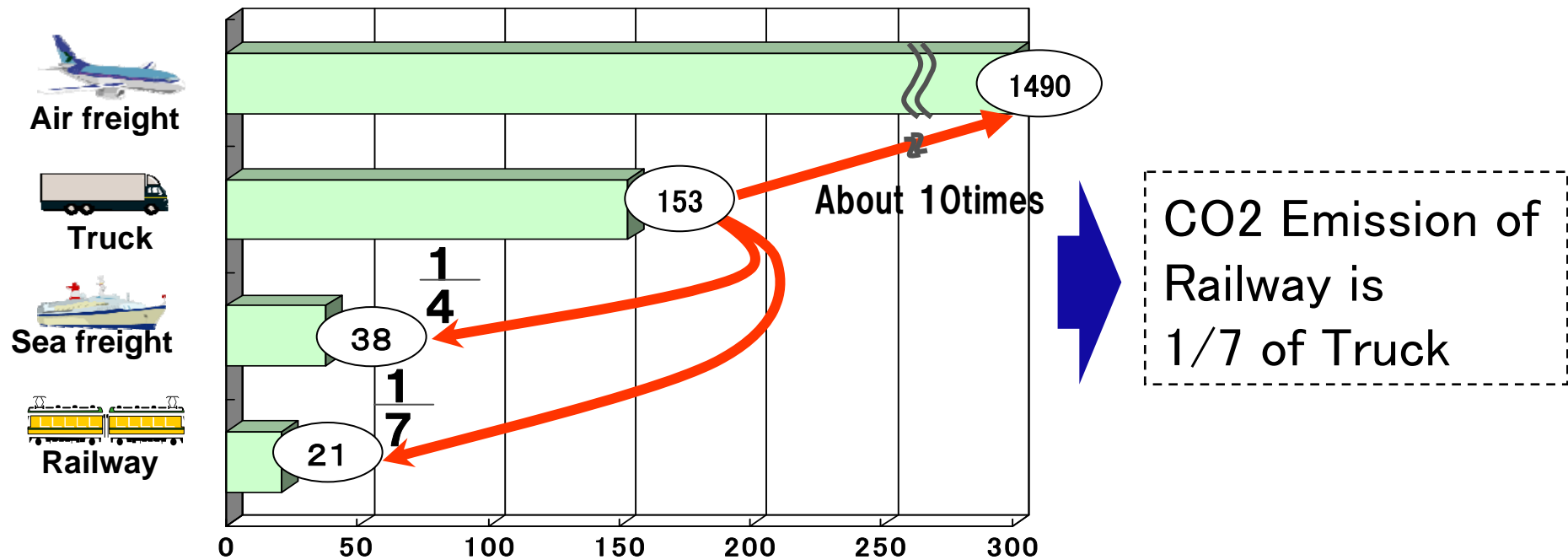
③ Joint Activities with Logistics Partner for Stowage Improvement



④Expand Modal Shift (1)

CO2 Emission of Railway Transportation

■CO2 Emission that is required to carry 1ton package per 1km (g-CO2/tkm)



*Source : "Global warming protection of transport field" by The Ministry of Land, Infrastructure and Transport

Issues of Railway Transportation

Countermeasures

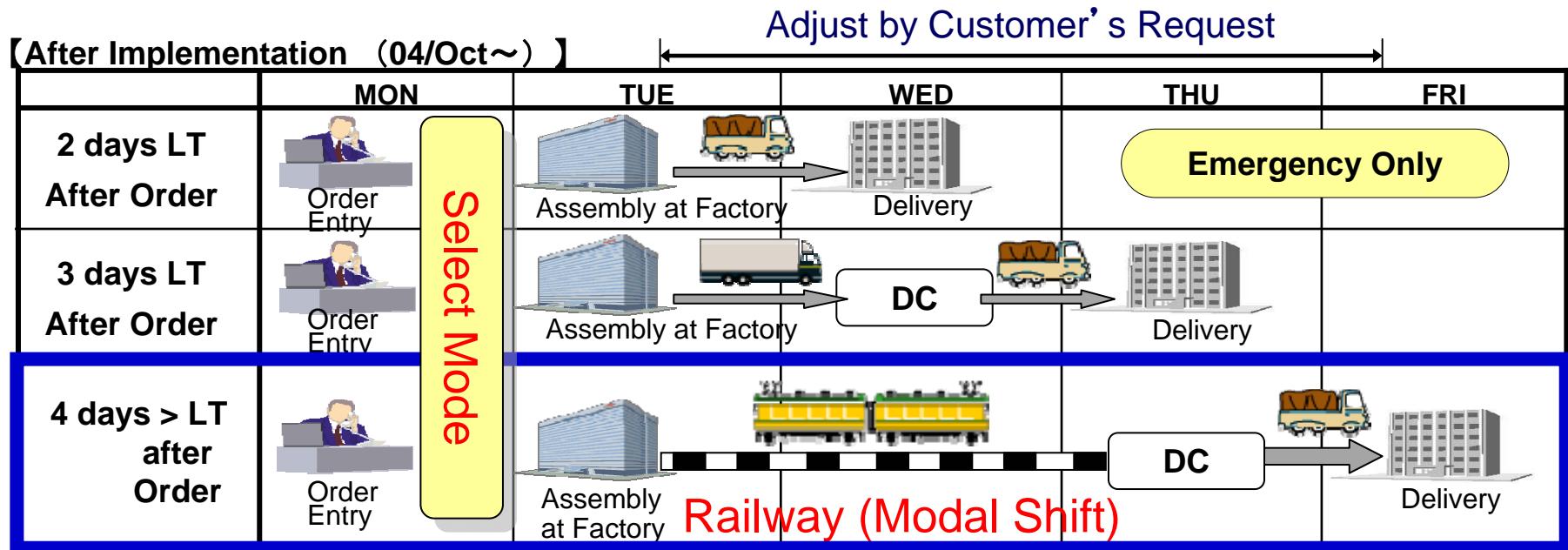
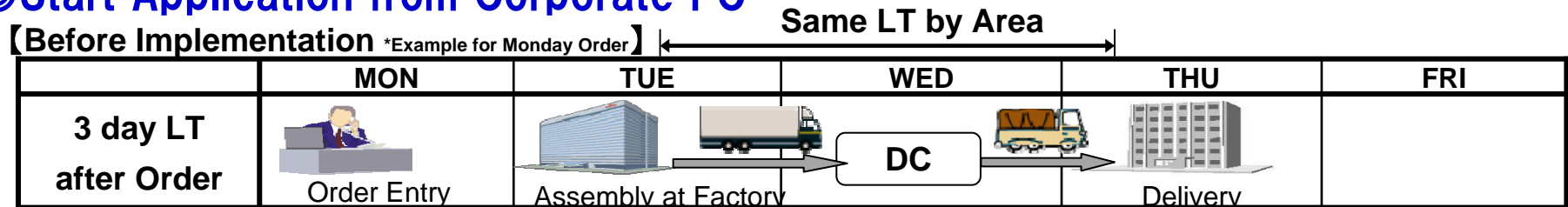
- ①Leadtime : Restricted by Japan Railway Time Table ⇒ Transportation Plan based on JR Schedule
- ②Cost : More Expensive than Truck for Short Distance Shipment ⇒ Use only for Long Distance
- ③Quality : Difficult to Use for Precise Equipment ⇒ Review Packing Specification

④ Expand Modal Shift (2)

Installation of “Transpiration Mode Selection System” Enables to Choose Various Delivery Leadtime *Previous 3days LT Only ⇒ 3 patters (2/3/4 days LT)

Start Modal Shift for 4 or more days LT (04/Oct)

◎Start Application from Corporate PC

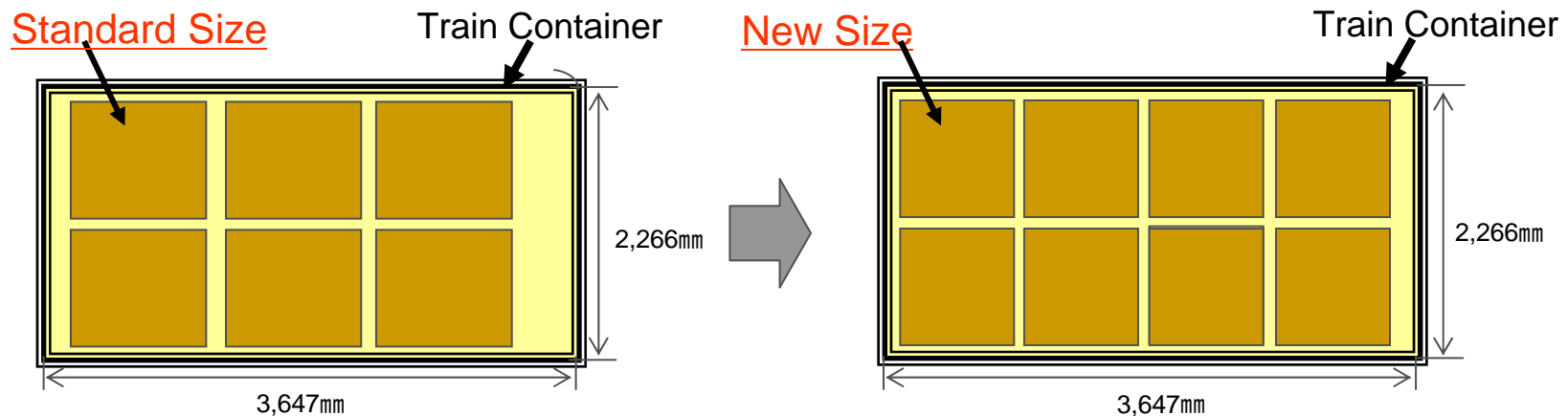


④ Expand Modal Shift (3)

□ Improve Stowage by Optimizing Pallet Size

Add New Size (850mmx1,100m) to Standard Size (1,100mmx1,100mm) by Corporation with Design Section

➔ **Pallet Quantity per Train Container 6 pcs ⇒ 8 pcs [Stowage 30%UP]**



□ Modal Shift Ratio (Desktop PC, IA Server)

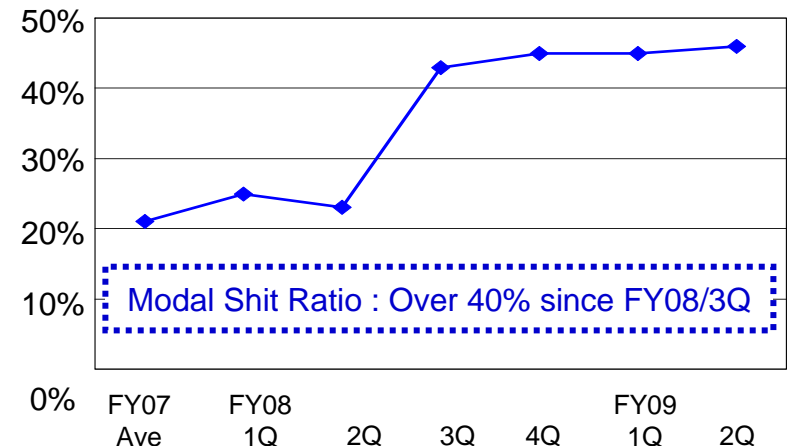
• **FY07 : 21% ⇒ 1FH08 : 24% ⇒ 1FH09 : 45%**

□ Impact

(Transportation Mode Selection System + Pallet Size Optimization)

• **CO2 Reduction : 363t/year (▲30%)**

• **Cost Reduction : US\$0.7M/year (▲2%)**



⑤ Other Activities

➤ Introduce Eco Friendly Vehicle, Eco Driving

- Reduce Number of Trucks by Double Decker Truck (Sep '09)
- Improve Mileage by Hybrid Trucks (Planned in Jan'10)
- Improve Mileage by Low Rolling Resistance Tire (Planned in Jan '10)

[Double Decker Truck]



➤ Promote Activities with Upstream Divisions (Design, Manufacturing, Sales etc)

Clarity Restrictions to Stowage from Upstream Process, and Improve with Other Related Divisions

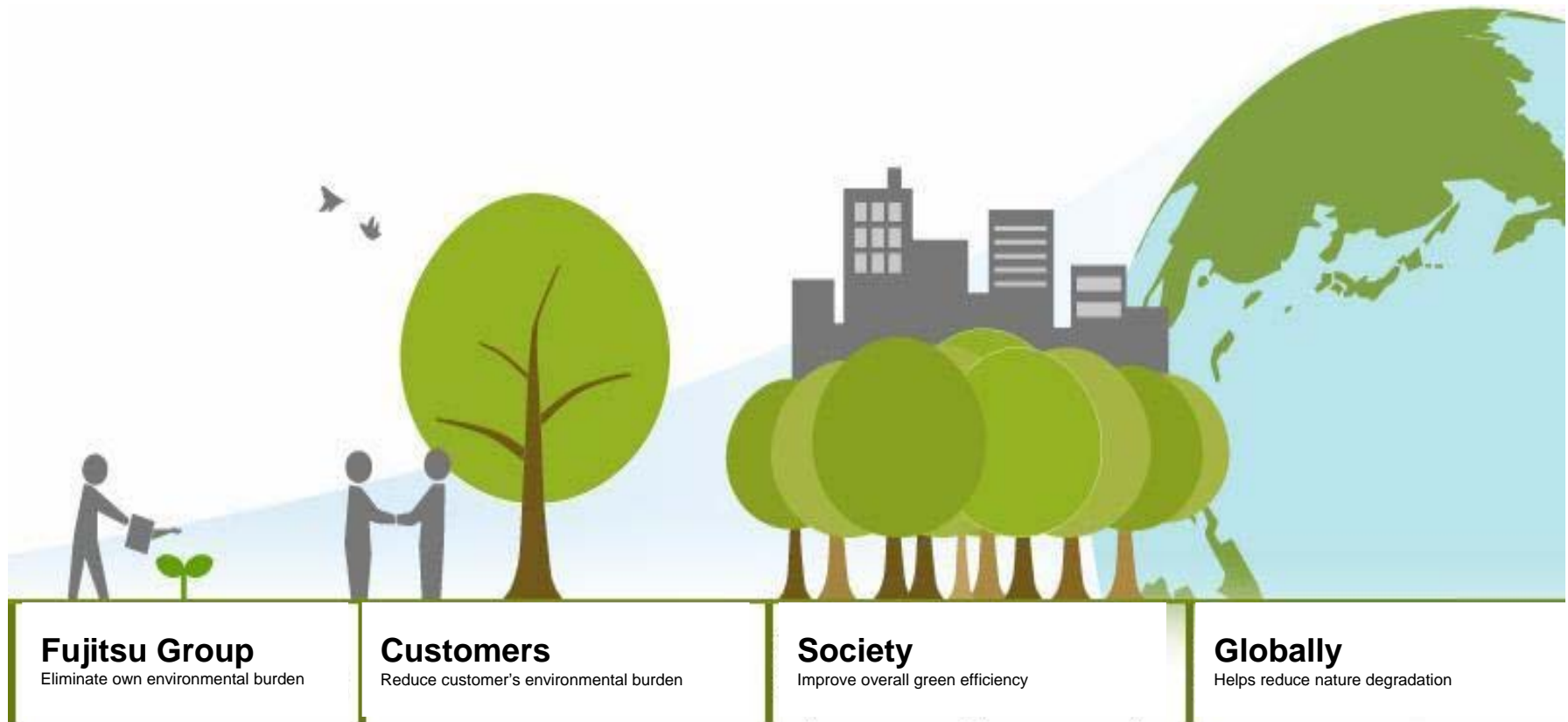
- Improve Stowage by Changing Packing Specification
eg. Note PC : 5 tiers → 6 tiers (Jun '08)
- Improve Stowage by Changing Products/Packaging Size Specification
eg. Mobile Phone : 600 units/pallet → 700 units (Dec '08)

[Fujitsu In-Vehicle Terminal]




➤ Joint Transportation with Other Shippers

- With Other Electronics Companies, Joint Transportation Project is on going (Studying Conditions, such as Time Chart, Delivery Condition, Cost etc)



Fujitsu Contributes to Creating a Prosperous, Low-Carbon Society and Earth Environmental Protection Consequently



FUJITSU