

A case study in Carbon footprint of ICT solution

～Teleconference Services using Interactive White Board～

2010/02/08

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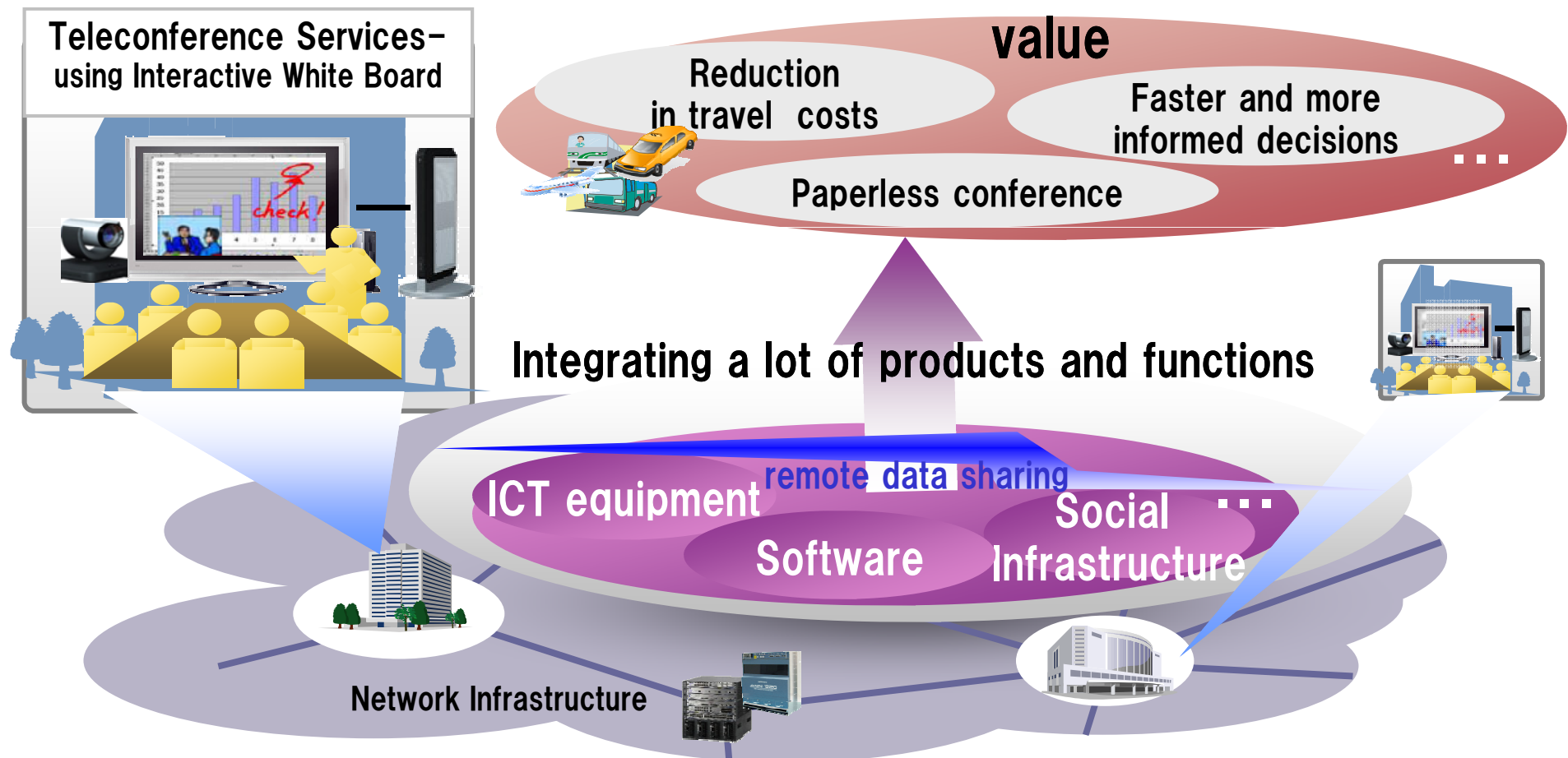
A case study in Carbon footprint of ICT solution ~Teleconference Services using Interactive White Board~

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- 1. The evaluation method for environmental load of ICT solutions**
2. Carbon footprint of ICT solutions
3. A proposal for International Standardisation of the evaluation method

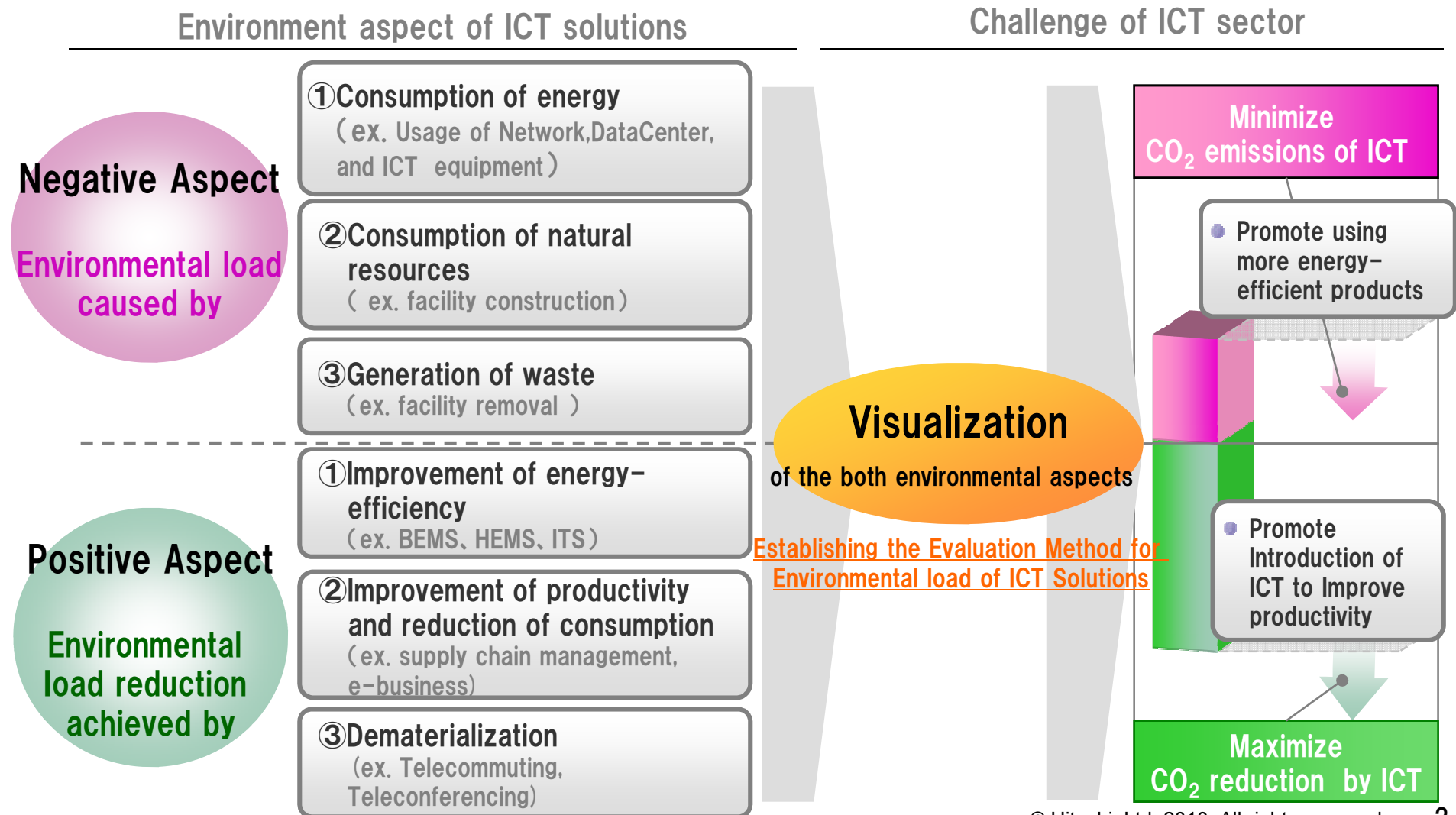
1-1. The Role of ICT Solutions

- Integrating a lot of products and functions such as ICT equipment, software, and social infrastructure, ICT solutions enable business and lifestyle to be more efficient and sophisticated.



1-2. Environment aspect of ICT solutions

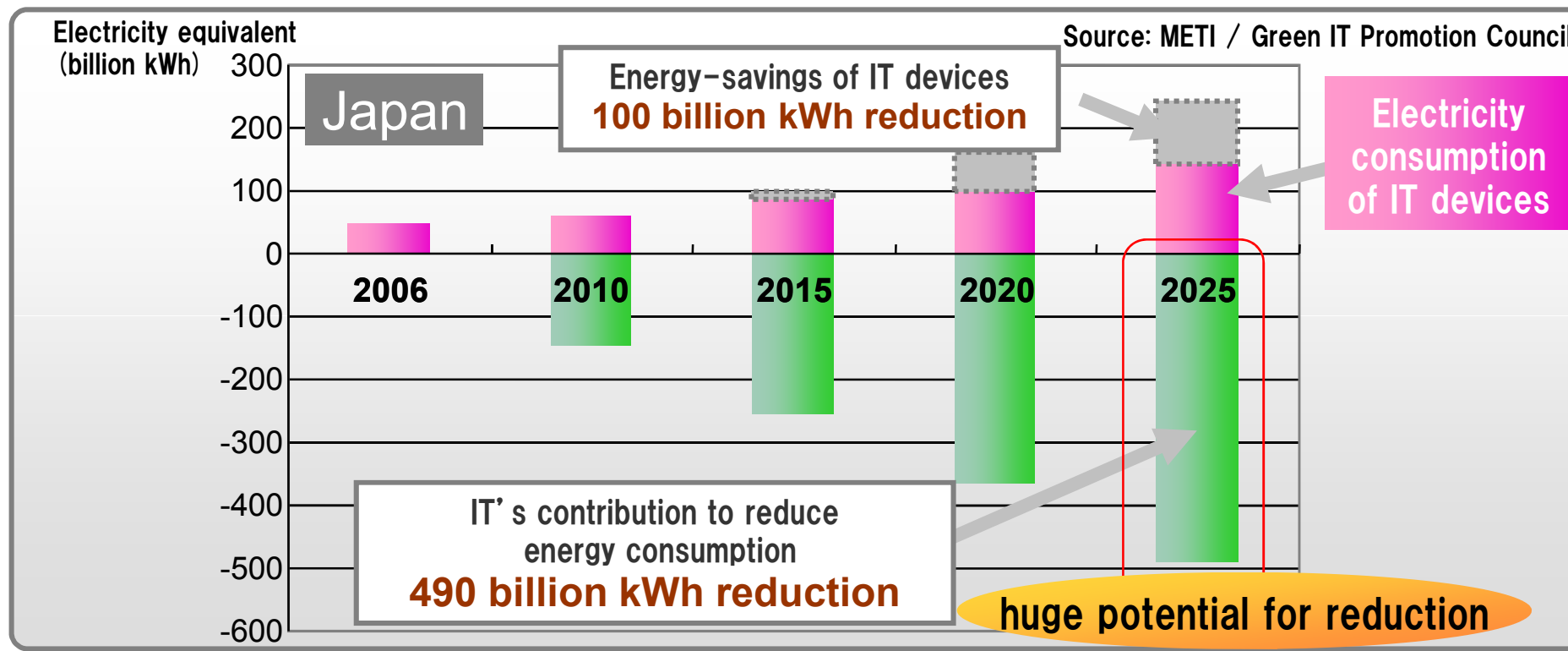
- Visualization of the both environmental aspects of ICT solutions is the challenge of ICT sector.



1-3. The Evaluation Method for Environmental load of ICT Solutions

① Reduction Potential

- According to the estimation by METI / Green IT Promotion Council, there is a huge potential for environmental load reduction by IT



Hitachi Proposal

①

- It is important to evaluate not only environmental load of ICT Solution but also environmental load reduction effects by ICT solution by comparing before and after the introduction of the ICT solution

1-3. The Evaluation Method for Environmental load of ICT Solutions

②Framework

- In 2005, JEMAI/IT's 8 company/Tokyo University developed A Guideline for ICT Eco-Efficiency Evaluation.

Life Cycle Matrix (A Framework)

Source: the Guideline for ICT Eco-Efficiency Evaluation of Japan Forum on Eco-Efficiency

Life Cycle Stage activity	Procure ment	Desing& Devlop- ment	Shipping	Trans- portation	Instal- ation	Startup	Usage	Main- Tenace	Colle- ction	disposal/ recycling
1)Cosumption of energy and goods										
2)Usage of ICTequipment										
3)Usage of Network										
4)Usage of Software										
5)Movement of goods										
6)Movement of people										
7)Storage of goods										
8)Office work										

remark

A Evaluation point of environmental load about this case study

Evaluation Points of environmental load spread over the life cycle

- For ICT Solutions, it is also important to evaluate environmental load throughout their life cycle ranging from raw material acquisition to disposal and recycling.

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2-1. Hitachi's Challenge for Carbon footprint

- Registering for "Japan's 3 years National Pilot Project by METI, Hitachi is formulating the Product Category Rule (PCR) .

PCR Name	● Teleconference Services using Interactive White Board
Subject of quantification	● CO2 emissions of Teleconference Services Using 「StarBoard®」 and reduction comparing before and after the introduction of that services
Term	<ul style="list-style-type: none"> ● 2009/8~2010/1, for 6 months, 7times Working Group ● We have drawn PCR draft and submitted to that draft to METI¹⁾.
Presentation about	<ul style="list-style-type: none"> ● the issues that specified at the WG addressing formulation of PCR (addressing issues) ● the way to deal with those issues as case study ● future problems extracted in it.

Lists of presentation	Formulation of quantification rules	①PCR's Applicable Services
		②Complicated System boundaries
		③ICT Solutions contain a lot of subsets of supply chains
	Formulation of labeling Rules	①Labeling of environmental load reduction effects
		②Labeling CFP per unit

2-2. Formulation of quantification rules

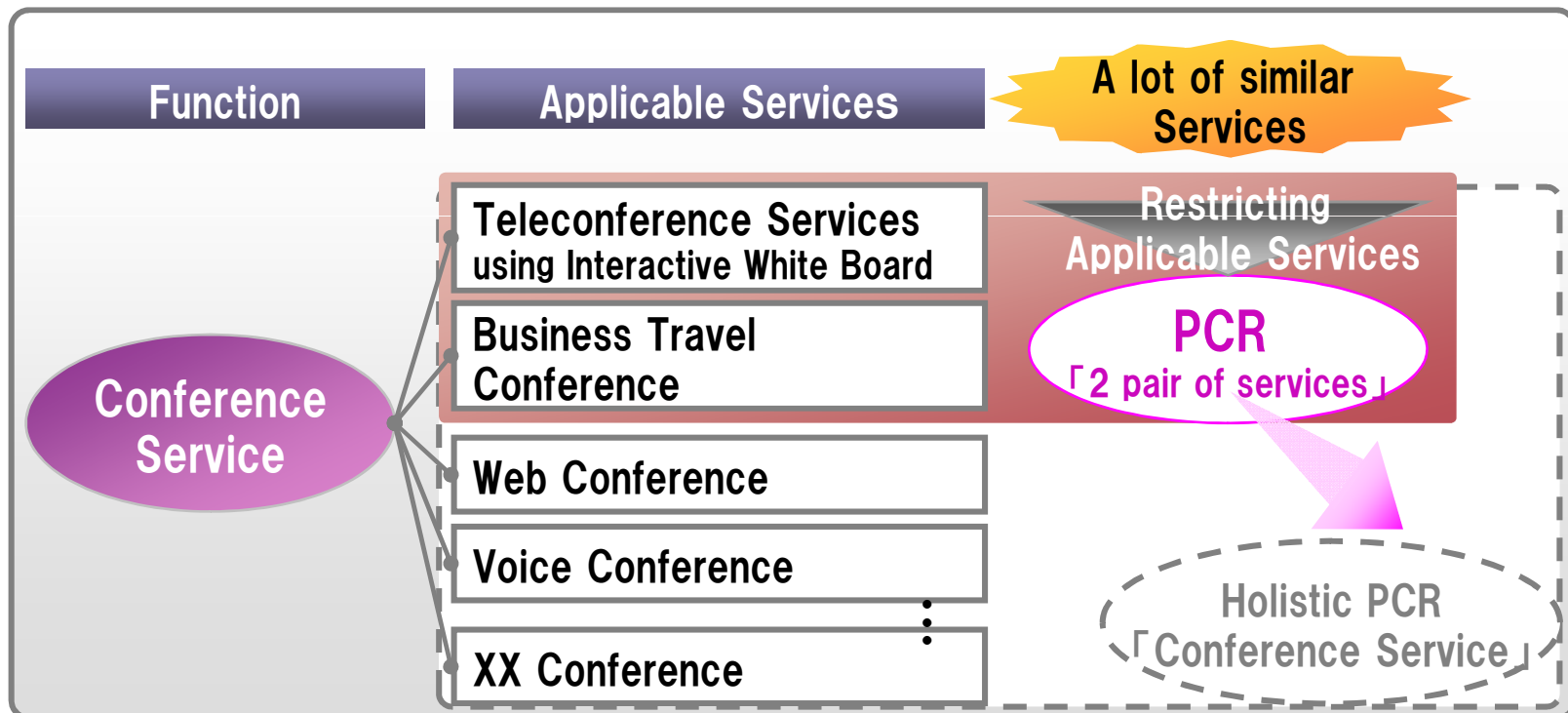
①PCR's Applicable Services

- For the determination of PCR's applicable services, Firstly We defined the function as the 「Conference Service」. But,

Addressing Issues

- Due to a high degree of freedom in ICT solutions, there are a lot of similar services which have the same functions, so that It is difficult to formulate general quantification rules for those services.

Case Study



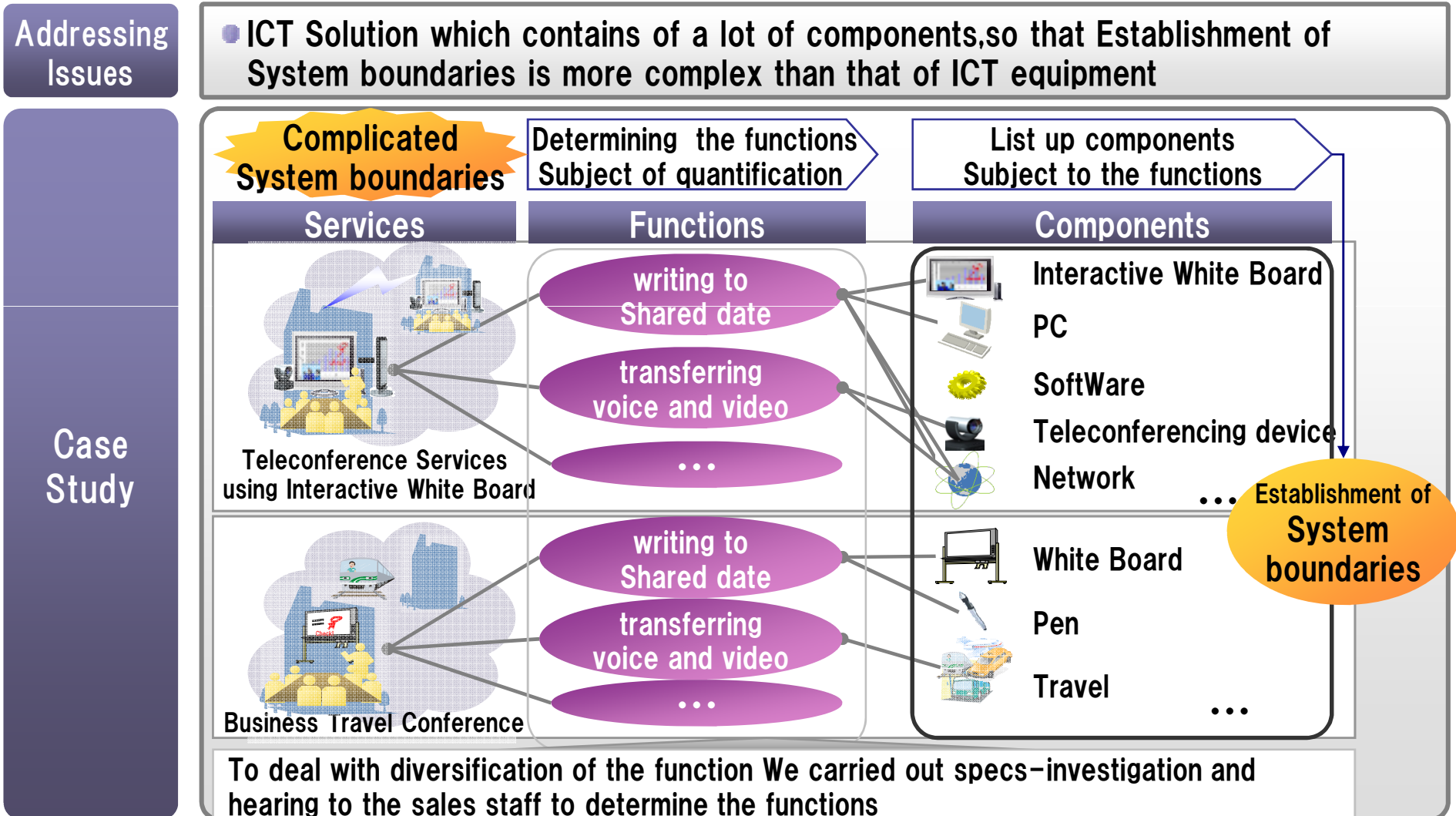
Future Problem

- It is need to formulate ***Holistic PCR which is applicable to similar services*** (and to develop Framework for formulation of Holistic PCR).

2-2. Formulation of quantification rules

② Complicated System boundaries

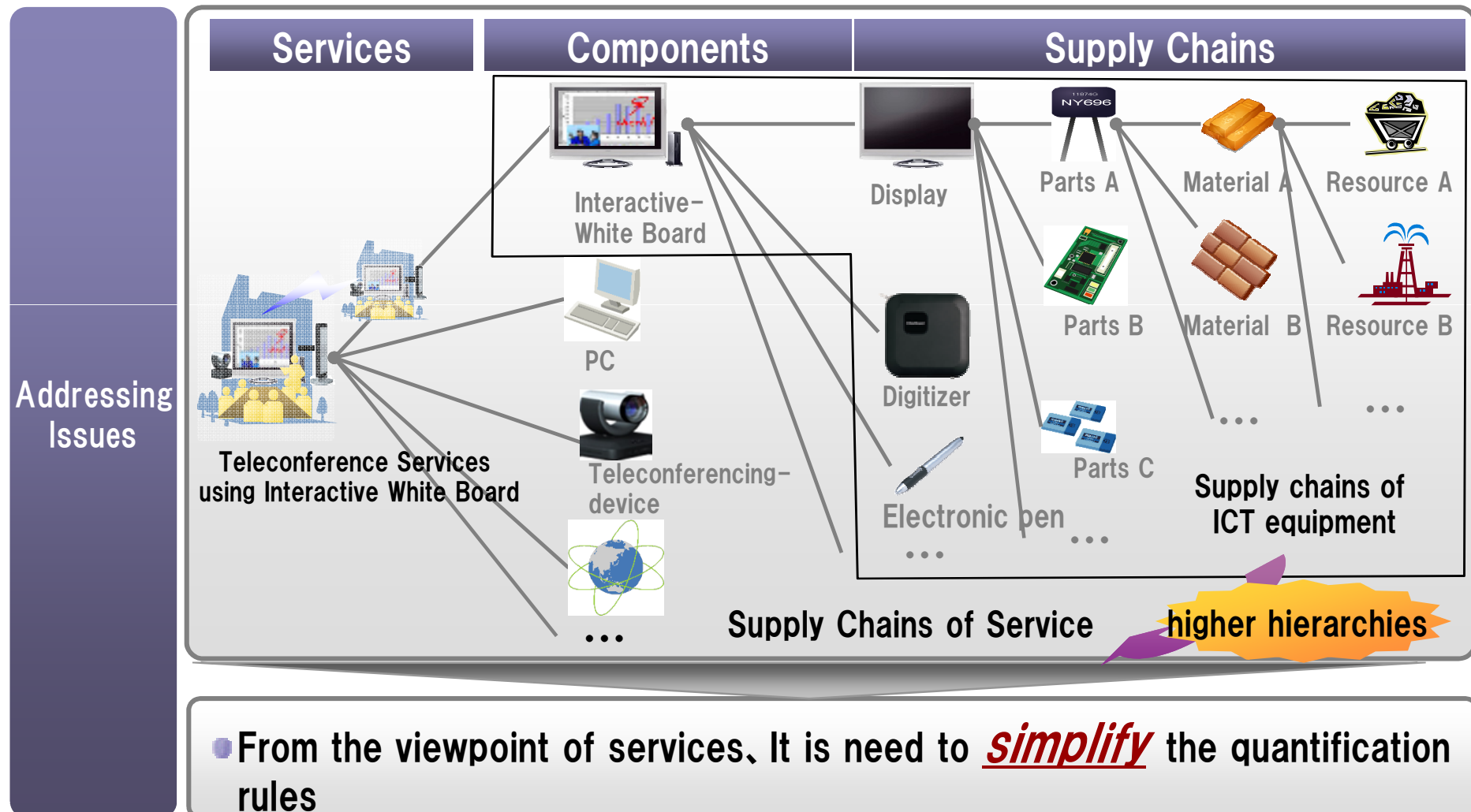
- For each of the applicable services, we addressed establishment of System boundaries



2-2. Formulation of quantification rules

③ ICT Solution contain a lot of subsets of supply chains (about Issues)

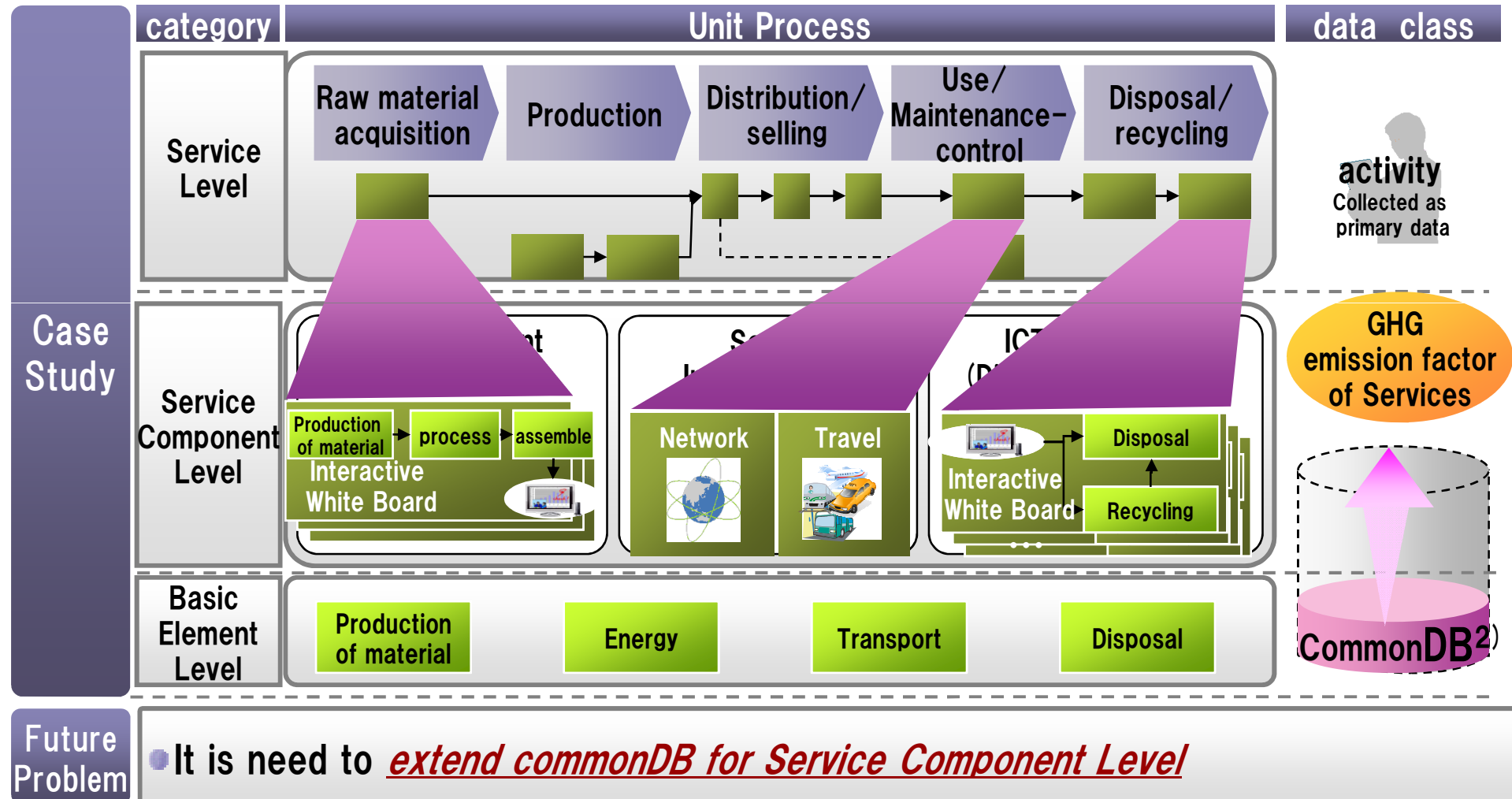
- Compared with ICT equipment, ICT solution has higher hierarchies of the supply chains



2-2. Formulation of quantification rules

③ ICT Solution contain a lot of subsets of supply chains (to simplify)

- Classifying unit process into 3 level, and formulating to use 「GHG emission factors of Services」 which is 3 set of Service Component Level process



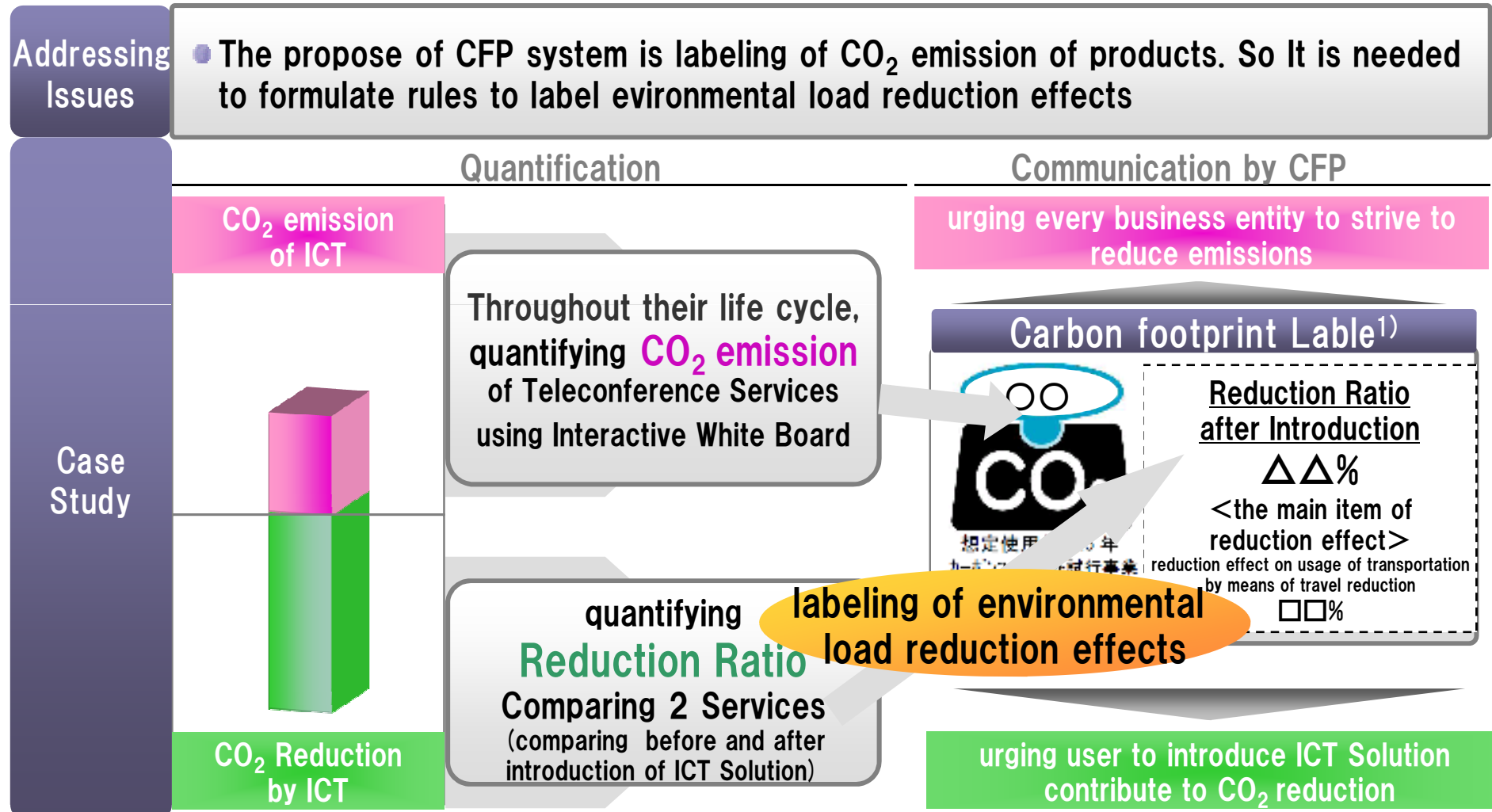
note1 we formulate to use primary data or secondary data to enable business entity to get eco-advantage

note2 Basic element level trial-DB has been released in "Japan's 3 years National Pilot Project"

2-3. Formulation of labeling Rules

① Labeling of environmental load reduction effects

- To visualize the both environmental aspects for Users and business entity, We addressed how to label



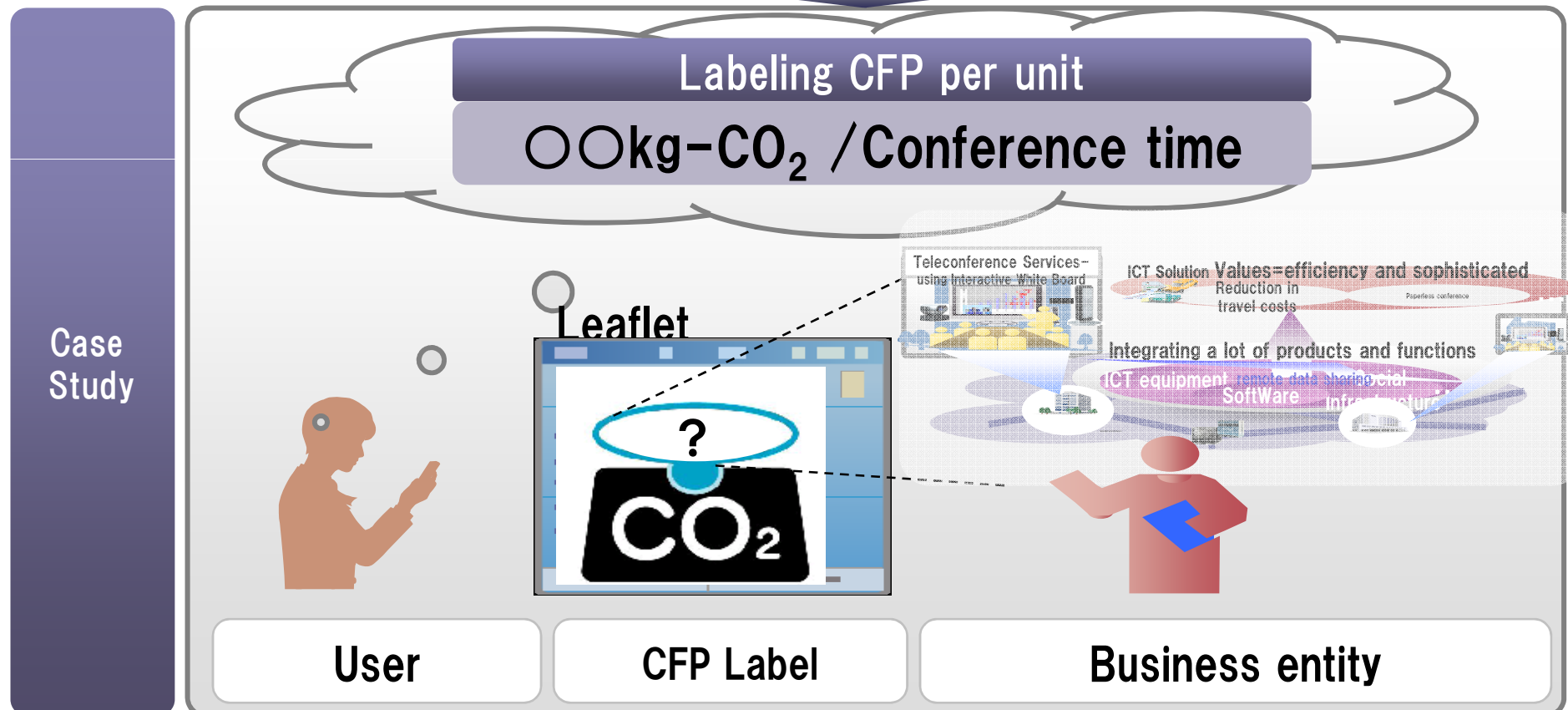
2-3. Formulation of labeling Rules

② Labeling CFP per unit

- Easy-to-understand label for User

Addressing Issues

- scale and configuration of ICT solutions is different individually, so that, it is difficult to grasp the subject service on labeling

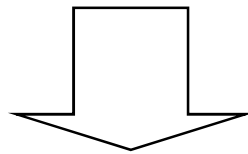


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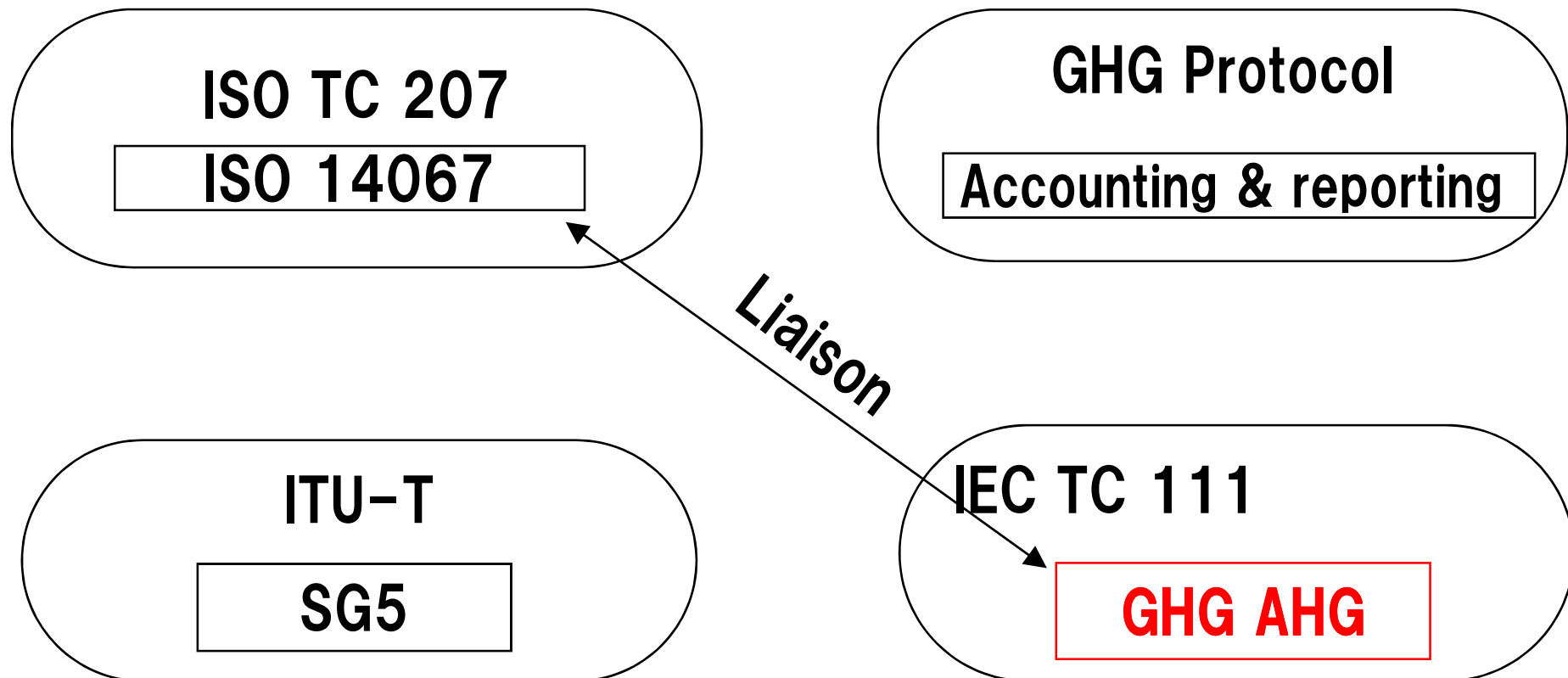
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- Many companies over the world announce their contribution to GHG emission reduction *through their products* with target values.
- Industries and governments are emphasizing the prospect of *IT technology's effective contribution* to the enhancement of energy efficiency in various social scenes (e.g. smart grid).



But no international standards have been established for harmonized evaluation.

3-2. Worldwide bodies addressing GHG in a product life cycle perspective



Harmonization between all bodies is also needed

END

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