

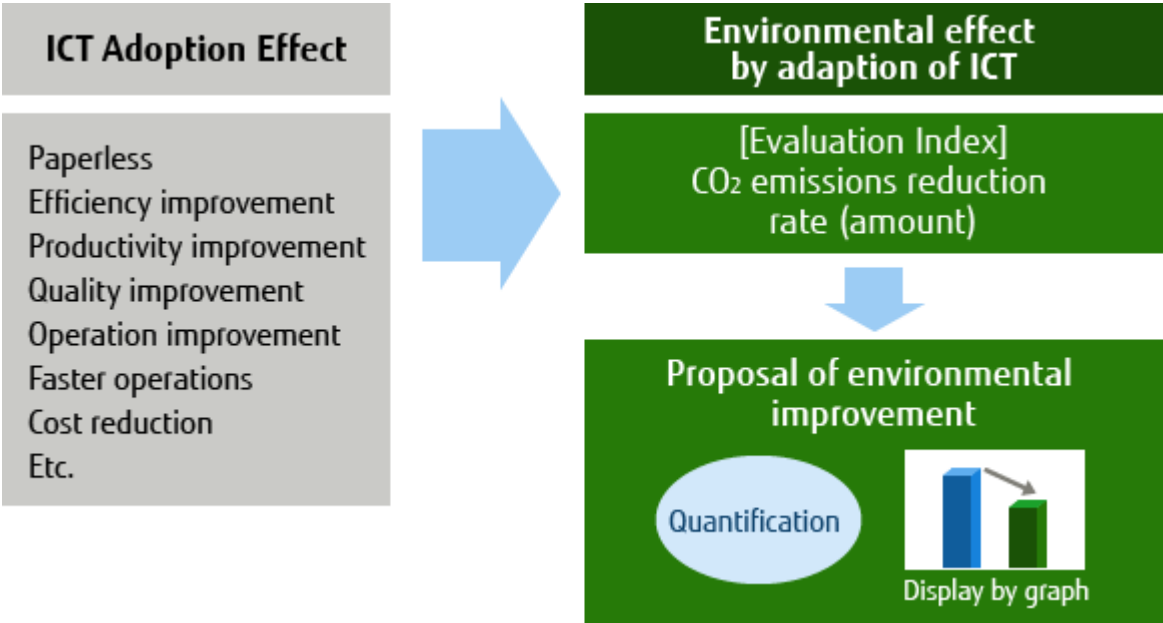
Environmental Impact Assessment Method for Solution Services

The Fujitsu Group quantitatively assesses how much the environmental burden can be reduced when customers adopt its solution services, using an environmental impact assessment method developed by Fujitsu Laboratories Ltd.

Basic Concept of Environmental Impact Assessment

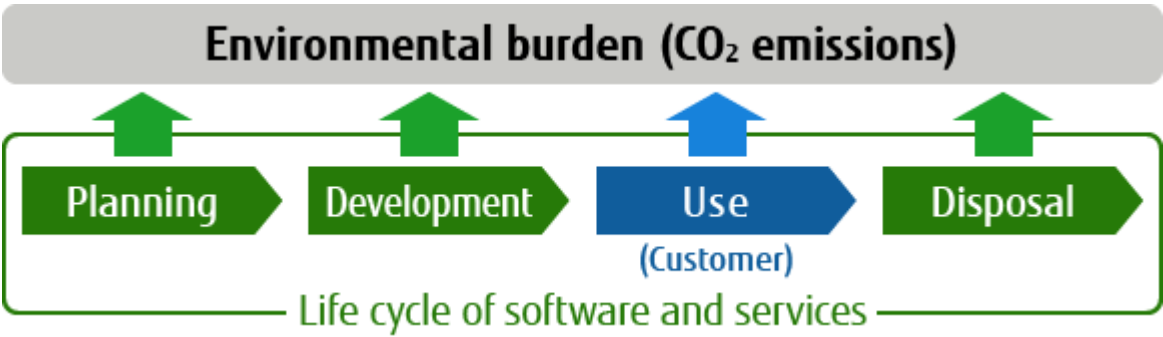
The effect of adopting solution services is converted into the environmental effect.

The environmental effect of adopting solution services (e.g., paperless method (reduction in the use of paper), productivity improvement, work efficiency improvement) is quantitatively calculated and converted into CO2 emissions.



Assessment Target

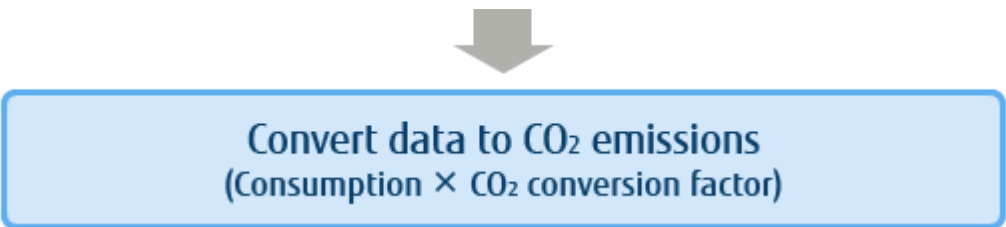
Solution services can be considered to have their own life cycles consisting of multiple stages including planning, development, use, and disposal (e.g., renewal of the system). The present assessment method targets the use stage that take place at customers' locations.



Impact Assessment Factors (7 Factors)

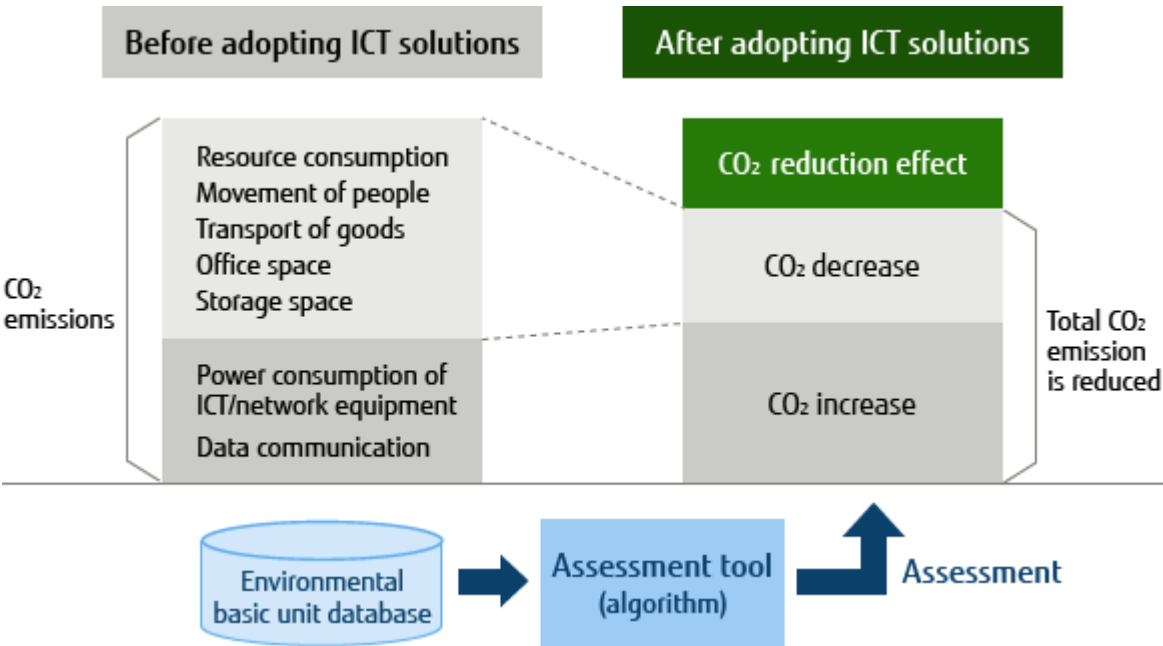
Environmental impacts are quantitatively assessed for the following 7 factors:

Environmental impact factor	Data required for calculating environmental impact
Resource consumption	Paper, CDs, documents, etc.
Movement of people	Airplanes, trains, buses, automobiles, etc.
Transport of goods	Small trucks, commercial-use trucks, rail freight, air freight, etc.
Office space	Space per person, server machine space, etc.
Warehouse space	General warehouses, refrigerated warehouses, etc.
Power consumption of ICT/ network equipment	Power consumption by ICT and network equipment
Data communication traffic volume	Volume of data trafficking the network (includes volume of data trafficking LAN)



Steps of Environmental Impact Assessment

- 1 . Assess CO₂ emissions by environmental impact factor
- 2 . Compare CO₂ emissions-reducing factors and CO₂ emissions-increasing factors before and after adopting solution services



Web-based Environmental Impact Calculation Tool

"EcoCALC-GX" a web-based tool for estimating environmental contribution, quantitatively evaluates the effectiveness of ICT in reducing environmental load with regard to CO₂ emissions before and after the introduction of ICT. Using this environmental impact evaluation method, this tool calculates the amount of CO₂ emissions reduced by ICT as the amount of contribution, and is used globally as an in-house tool by the Fujitsu Group. We are utilizing this tool to proactively promote environmental contribution amount calculations for business negotiations and new solutions.



EcoCALC, the Web tool for estimating environmental contributions that forms the basis of EcoCALC-GX, was [awarded the Special Jury Prize](#) at the Green IT Awards 2011 in 2011. This was in recognition of the innovative and creative use of the tool for visualizing CO₂ reductions through ICT, as well as the active use of the tool in customer proposals.

Efforts for Standardization

The Fujitsu Group aims at contributing to the global efforts on reducing the environmental burden through diffusion of ICT. Standardization is one of such efforts, and Fujitsu actively participates in various activities at external organizations such as an international organization for standardization. Below are the examples of Fujitsu's contributions to standardizing the methods to evaluate the environmental burden reduction effect of ICT solution services.

1. [\[PDF\] "FY2005 Guideline for Information and Communication Technology \(ICT\) Eco-Efficiency Evaluation"](#)

This guideline includes the general framework, principles, and requirements relating to evaluation of the environmental impact of ICT and environmental burden reduced by adopting ICT. Formulation of the guideline was entrusted to the Japan Environmental Management Association for Industry by the Ministry of Economy, Trade and Industry, and was conducted by 8 ICT companies who are the members of the Japan Forum of Eco-efficiency and the University of Tokyo. The Fujitsu Group assisted the project by providing actual evaluation cases and by composing some parts of the guideline.

2. [ITU-T \(International Telecommunication Union, Telecommunications Standardization Sector\) Recommendation "Methodology for the assessment of the environmental impact of information and communication technology goods, networks and services \(L.1410\)" \(2013\)](#)

The present Recommendation stipulates an internationally universal framework of "Methodology for the assessment of the environmental impact of information and communication technology goods, networks and services", whose establishment was mainly promoted by the Ministry of Internal Affairs and Communications of Japan. The Fujitsu Group participated in "ICT and climate change (SG3 WP5)" of ITU-T as an associate rapporteur.

3. Fujitsu participates in the IEC/TC111 WG17 national committee and cooperates in the development of the international standard IEC63372"Quantification and communication of GHG emissions and emission reductions/avoided emissions from electric and electronic products, services and systems – Principles, methodologies and guidance."