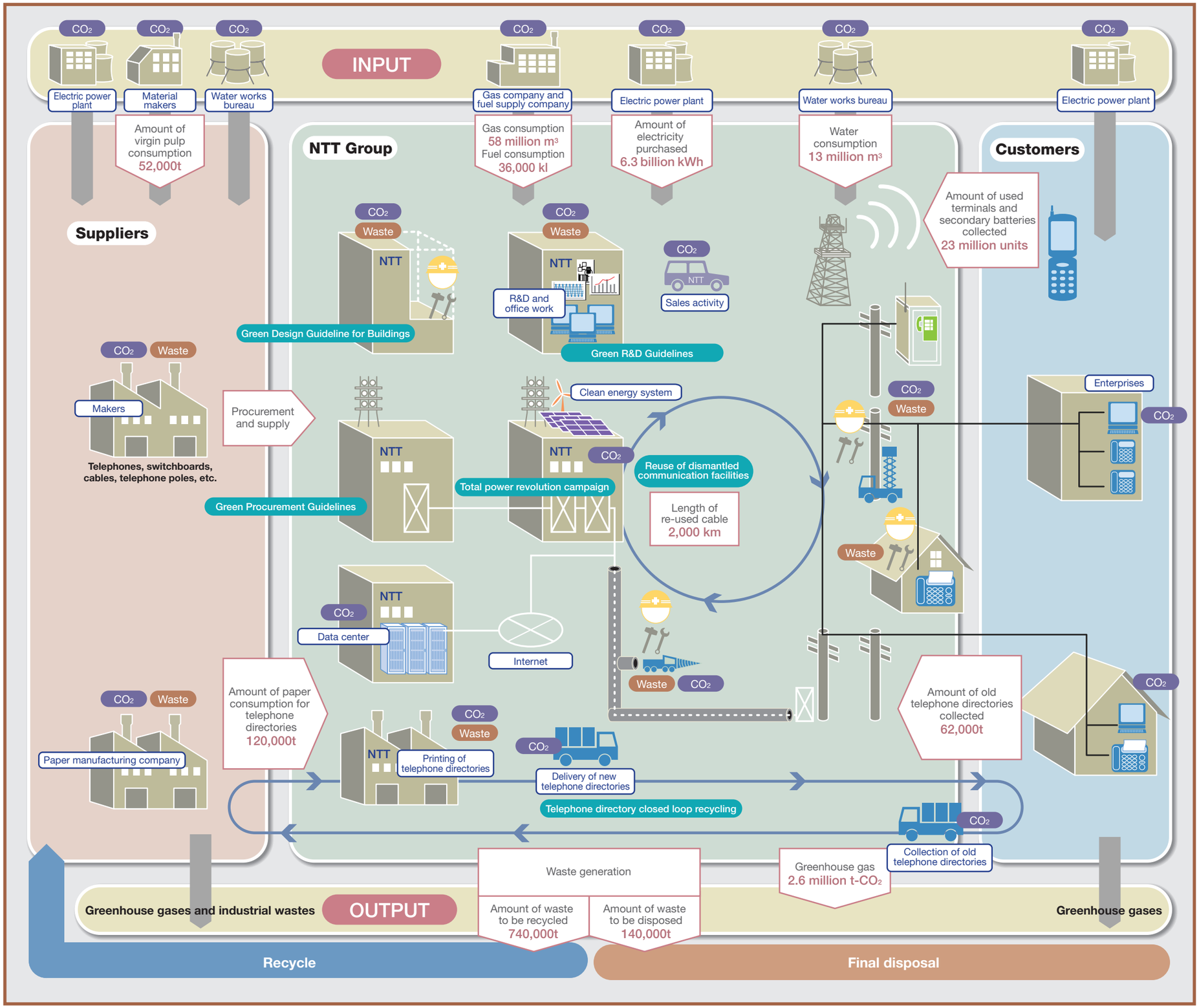
LCA Environmental Loads of NTT Group



Environmental Load Map illustrates the process stream from input to output, from suppliers to customers

According to the Basic Law for Establishing a Recycling-based Society, corporations, on the basis of EPR (Extended Producer Responsibility), are expected to reduce environmental loads across the entire life cycle of products and services, and not only in the course of business operational activities. Therefore LCA (Life Cycle Assessment) has been generally used to quantitatively assess environmental loads caused by products and services from production through disposal. The NTT Group plays a positive role as a Global Information Sharing Corporate Group in creating an affluent, more comfortable society by increasing the connections between people through IT. However, the large-scale business activities associated with these benefits place a significant burden on the environment. For example, the NTT Group consumes 0.7% of the total electricity purchased in Japan, disposes 0.2% of total national industrial wastes, and represents 0.5% of the total national consumption of paper resources.

Conversely, IT has proven to be beneficial by improving efficiency in the process of distribution and production and reducing the use of energy and resources, thereby alleviating environmental loads. Mindful of its importance, we strive to center our efforts toward the realization of an IT society. The NTT Group will further strengthen its activities to reduce environmental loads by means of expanding the scope of LCA in order to fully comprehend the environmental impact of communication services on society and promote further measures for the reduction of environmental loads.

Environmental impact assessment of local call services

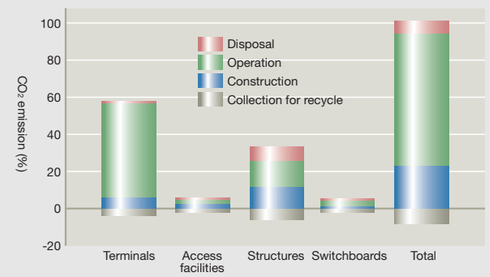
We have evaluated the environmental load associated with our local call service as an initial application of LCA.

The NTT Lifestyle and Environmental Technology Laboratories and NTT EAST have implemented LCA to assess the environmental loads caused by local calls (access-type fixed network). The assessment model assumed an average configuration of facilities* (terminals, access facilities, structures, switchboards) for a population of 10,000 people in the suburbs of a metropolitan area and assessed the environmental loads of the construction of each product (manufacturing and cabling) with the operation and waste treatment (removal, disposal, and recycling) of each product assessed at each phase. The results to date are:

- Among the three phases, construction, operation, and waste treatment, the largest amount of CO_2 emissions, accounting for 70% of the total, is a result of operations.
- Terminals, structures, switchboards, and access facilities, in that order, generate the largest volumes of environmental loads.

Therefore it has been verified that reducing the loads caused by the terminals during the operation phase would be the most effective way to decrease environmental loads caused by local calls service.

Results of LCA on Local Call Services



* ■ Terminals: telephones, fax machines, PCs
■ Access facilities: cables
■ Structures: buildings, air conditioning equipment