ETSI 203 199 Factsheet

How do I use this methodology? Ask for support!

	ETSI 203 199: Environmental Engineering (EE); Methodology for environmental Life Cycle Assessment (LCA) of Information and Communication Technology (ICT) goods, networks and services
Name of Initiative/Methodology	Environmental Engineering (EE); Methodology for environmental Life Cycle Assessment (LCA) of Information and Communication Technology (ICT) goods, networks and services
Link to the latest published version	ETSI ES 203 199 (02/2015): Version 1.3.1 203199v010301p.pdf
Developed by	The European Telecommunications Standards Institute (ETSI) The International Telecommunication Union (ITU)
History and Status	• Work started in 2014 and finished in 2015 • Published in February 2015
Involved companies / parties	• Nokia Siemens Networks • Alcatel-Lucent • Ericsson • Huawei Technologies Co. Ltd.
Scope	✖ **Organisation env. accounting** ✖ Scope 1 ✖ Scope 2 ✖ Scope 3 ✔ **Product env. assessment** ✔ Life cycle approach ✖ Use phase only
	✔ GWP ✔ Energy (focus on secondary energy) ✔ Other environmental impacts ✖ KPIs
System(s) covered by the methodology	• ICT goods • ICT networks • ICT services
Goals	• Revision of the [ETSI TS 103 199] and alignment with the [ITU-T L.1410] • Providing generic and specific requirements for LCA • Assessing environmental impacts of ICT goods, networks and services • Providing detailed methodological framework of comparative analysis of specific ICT goods, networks or services or between ICT and reference products systems.
Generic features	• Data quality analysis, sensitivity analysis and uncertainty assessment shall be conducted. • With regards to emissions: Non-material emissions like radiation, odour, noise and direct impact on health are beyond scope of this methodology. • With regards to resource: Species, biodiversity and eco-system depletion as well as aesthetical values are beyond the scope of this methodology. • A mandatory set of raw materials which shall be included in the LCA of ICT goods is given (Annex D). • It is optional to include the construction of plants concerning the ICT goods • Energy recovery of incineration processes is optional (Annex H). • Allocation recommendations for material recycling (e.g. 50/50 or 100/0) are given. • It is indicated that primary energy usage (e.g. CED) is to be reported as LCI result. • Cut-off rules for end-of-life should not significantly change the overall conclusions and should meet the intended application. In the case of comparative analysis, the same processes or input/output data can be cut-off, if the purpose of the study is to assess the difference of impacts between them, rather than the total impacts of each product.
ICT-specific features	• Handling of Software should be considered • Functional units differentiate between ICT goods, networks and services are described • Eight items should be considered: ◦ ICT hardware, ◦ ICT software, ◦ Consumables and other supportive products, ◦ Site infrastructure, ◦ Transport (movement of goods), ◦ Travel (movement of people), ◦ Storage of goods, ◦ Working environment. • Specifies which type of data (specific/generic) should be used for the required life cycle stages/unit processes • Specifies which life cycle stages/unit processes are mandatory/recommended/optional • Concerning ICT goods: ◦ List of mandatory set of parts which shall be included in the LCA of ICT equipment. The information on important issues which influence LCI data is also provided (Annex H). ◦ Including Testing and Repair in the ICT equipment assembly is optional. ◦ The raw material acquisition and production for the additional PCBAs used during the operational lifetime for maintenance purpose are mandatory. ◦ List of a mandatory set of EoLT (End of Life Treatment) processes to be included (Annex F). • Concerning Networks: ◦ ICT and support equipment use (e.g. cooling) is to be included. ◦ List of network equipment and network types (Annex J). ◦ To calculate the total impact of a network, a top-down approach is recommended, since it is more practicable to assess the overall energy consumption of a network than to assess the energy consumption per service and add up to a total value • Concerning Services: ◦ The datacentres where the services are operating are to be included and assessed in the same way as other ICT goods and support goods. The important data that defines the hardware associated with the service is listed (i.e. number of servers, energy consumption and the data centre overhead energy consumption for cooling and power systems) ◦ The impact from each ICT network supporting the service should be allocated to the service based on access use time or data traffic. ◦ It is optional to include the data centre infrastructure production. ◦ Comparative LCA between ICT and reference product systems • Three priorities for data collection on energy consumption during use stage are given: ◦ The best way is to measure a large number of products in real life operating environments over a long period of time. ◦ The second best alternative is to estimate energy consumption based on available standards for laboratory measurements (e.g. [ETSI TS 102 706]). • The third alternative is to use estimated/measured energy consumption for certain traffic profile and user behaviour
Examples of implementation / experience feedback	None identified – to be filled later
Interaction with other methodologies	• [ISO 14040] Environmental management - Life cycle assessment - Principles and framework • [ISO 14044] Environmental management - Life cycle assessment – Requirements and guidelines • [ETSI TS 102 706] Environmental Engineering (EE) Energy Efficiency of Wireless Access Network Equipment • [ETSI ES 202 336-1] Environmental Engineering (EE); Monitoring and Control Interface for Infrastructure Equipment (Power, Cooling and Building Environment Systems used in Telecommunication Networks) Part 1: Generic Interface • [ILCD Handbook] General Guide for Life Cycle Assessment - Detailed Guidance • [ILCD Handbook] Framework and Requirements for Life Cycle Impact Assessment Models and Indicators

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