
**Environmental management — Life
cycle assessment — Requirements
and guidelines for organizational life
cycle assessment**

*Management environnemental — Analyse du cycle de la vie
— Exigences et lignes directrices pour l'analyse du cycle de vie
organisationnelle*

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Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword — Supplementary information](#).

The committee responsible for this document is ISO/TC 207, *Environmental management*, Subcommittee SC 5, *Life cycle assessment*.

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Introduction

In order to analyse the environmental performance of products, it has become standard to use a life cycle perspective to capture all impacts from resource extraction to the disposal of the product. The benefits and the potential of the life cycle approach are not limited to an application on products. While the Life Cycle Assessment (LCA) methodology was originally developed for products, its application at the organizational level is becoming more and more relevant. However, an Organizational LCA (OLCA) appears to be even more complex. There is more than one product life cycle to follow, as most organizations are engaged in many product life cycles to different degrees and a large part of environmental impact can reside outside the organization's gate, upstream and downstream of the value chain.

The present Technical Specification (TS) is dedicated to the application of LCA to organizations. It, therefore, extends the application of ISO 14040 and ISO 14044 to all the activities of the organization that means the reporting unit of the system allows coverage of different products and unit processes of any organization within the same LCA study.

The choice of goal and scope by the organization during its LCA study is key to assisting this organization in making the relevant choices according to the present TS, including the products and unit processes that are studied, the related system boundary, and the time frame which is covered.

This TS is applicable to an organization for a given time period.

This TS is applicable to all types of organizations. If properly justified, application of this TS to segments or selected companies of an organization is possible.

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Environmental management — Life cycle assessment — Requirements and guidelines for organizational life cycle assessment

1 Scope

This Technical Specification (TS) provides additional requirements and guidelines for an effective application of ISO 14040 and ISO 14044 to organizations.

This Technical Specification details

- the application of Life Cycle Assessment (LCA) principles and methodology to organizations,
- the benefits that LCA can bring to organizations by using LCA methodology at organizational level,
- the system boundary,
- specific considerations when dealing with LCI, LCIA, and interpretation, and
- the limitations regarding reporting, environmental declarations, and comparative assertions.

This Technical Specification applies to any organization that has interest in applying LCA. It is not intended for the interpretation of ISO 14001 and specifically covers the goals of ISO 14040 and ISO 14044.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14040:2006, *Environmental management — Life cycle assessment — Principles and framework*

ISO 14044:2006, *Environmental management — Life cycle assessment — Requirements and guidelines*

ISO/TS 14071, *Environmental management — Life cycle assessment — Critical review processes and reviewer competencies: Additional requirements and guidelines to ISO 14044:2006*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 organization

person or group of people that has its own functions with responsibilities, authorities, and relationships to achieve its objectives

Note 1 to entry: The concept of organization includes, but is not limited to sole trader, company, corporation, firm, enterprise, authority, partnership, charity, or institution, or part or combination thereof, whether incorporated or not, public or private.

[SOURCE: ISO/IEC Directives, Part 1]

3.2

reporting unit

quantified performance expression of the organization under study to be used as a reference

Note 1 to entry: In the case of an OLCA, the reporting unit replaces the functional unit.

3.3

unit process

smallest element considered in the life cycle inventory analysis for which input and output data are quantified

[SOURCE: ISO 14044:2006, 3.34]

3.4

performance tracking of an organization

comparison of the performance of the same organization's products and unit processes over time, based on the same time period, system boundary, and reporting unit

3.5

environmental performance

measurable results of an organization's management of its environmental aspects

[SOURCE: ISO 14001:2004, 3.10]

3.6

facility

single installation, set of installations or production processes (stationary or mobile), which can be defined within a single geographical boundary, organizational unit, or production process

[SOURCE: ISO 14064-1:2006, 2.21]

3.7

competence

ability to apply knowledge and skills to achieve intended results

[SOURCE: ISO 14066:2011, 3.1.4]

3.8

Organizational Life Cycle Assessment

OLCA

compilation and evaluation of the inputs, outputs, and potential environmental impacts of the activities associated with the organization as a whole or portion thereof adopting a life cycle perspective

Note 1 to entry: The results of an OLCA are sometimes referred to as an organization's environmental footprint.

3.9

consolidation methodology

approach to be selected by the organization in setting organizational boundaries, for assessing the inputs, outputs, and potential environmental impacts of the activities associated with the organization

Note 1 to entry: Three distinct approaches are used: the operational control, or financial control, or the equity share approaches.

3.10

operational control

full authority to introduce and implement operating policies at the operation level

Note 1 to entry: Financial or insurance companies may apply this TS by dealing with their funding activities as if it was an operational control (ISO/TR 14069:2013, Annex E provides an example of guidance in the case of GHG).

3.11**financial control**

ability to direct the financial and operating policies of the operation with a view to gain economic benefits from its activities

3.12**equity share**

extent of the rights an organization has to the risks and rewards from an operation based on its equity interest

Note 1 to entry: Equity share is, therefore, the same as the ownership percentage.

4 General

The principles of ISO 14040 generally apply for the OLCA as well. They can be adapted to the organizational context.

This TS provides an explicit adaptation of the requirements of ISO 14040 and ISO 14044 to organizational context, where applicable (Annex A.3). An OLCA shall follow the requirements of Annex A.

This TS shall not be used for LCA studies intended to be used for comparative assertions between different organizations intended to be disclosed to the public (e.g. ranking among organizations).

This TS explains how to calculate the potential environmental impacts of the organization based on ISO 14040 and ISO 14044. The environmental aspects of an organization are generally addressed in ISO 14001. This TS can support the identification and quantification of relevant environmental aspects including those beyond the organizational boundaries.

5 Organizational Life Cycle Assessment**5.1 General**

This TS provides requirements and guidelines for the type of information that is recommended to be used by organizations for assessing environmental impacts considering the life cycle perspective (see ISO 14040:2006, 4.1.2.), including their upstream and downstream supply chain.

The benefits that life cycle assessment can bring to organizations are the following:

- identify, evaluate, and interpret the significance of the environmental aspects related to the management systems as defined in ISO 14001;
- strategic tool for comprehensive environmental assessment, which can lead to management decisions;
- tool for decision making, in order to prioritize the actions aiming at reducing environmental impacts considering products and unit processes of the organizations;
- assist the performance tracking of an organization, and trace the “multi-criteria” environmental improvements of the organizations (see Annex C);
- reporting of the environmental impacts of an organization over a given period of time;
- identify burden shifting (e.g. through outsourcing, upstream and downstream, or between impacts);
- improve transparency, knowledge, control, and management of its supply chain.