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Environmental management systems — Guidelines for incorporating ecodesign

*Systèmes de management environnemental — Lignes directrices pour
incorporer l'écoconception*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 14006 was prepared by Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 1, *Environmental management systems*.

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Introduction

International concern over damage to the environment (e.g. in the form of climate change, depletion of resources, and air, water and soil environmental pollution) is encouraging organizations to pay more attention to managing the environmental impacts of their activities and products and to focus on continuously improving their environmental performance. In order to reduce detrimental effects on the environment, more and more organizations are recognizing the need to include environmental performance in the design of their products.

NOTE In this International Standard, the term "product" is understood to cover both goods and services.

The fact that legislation relating to the environmental impact of products is being implemented at an ever increasing rate worldwide is also encouraging many organizations to improve the environmental performance of their products. Such organizations need guidance on how to apply their efforts in a systematic manner, in order to achieve environmental objectives and to maintain continual improvement in the environmental performance of their products as well as their processes.

Ecodesign can be understood as a process integrated within the design and development that aims to reduce environmental impacts and continually to improve the environmental performance of the products, throughout their life cycle from raw material extraction to end of life. In order to be of benefit to the organization and to ensure that the organization achieves its environmental objectives, it is intended that ecodesign be carried out as an integral part of the business operations of the organization. Ecodesign might have implications for all functions of an organization.

In order to carry out ecodesign in a systematic and manageable way, it is intended that organizations implement an appropriate process and then have, or have access to, the necessary competence to carry out and manage this process. This needs the support of top management (see 4.2).

An ecodesign process takes place within an organization's design and development area, and it is here that the knowledge required in carrying out and managing ecodesign is to be found. However, when it is intended that ecodesign be carried out under the umbrella of an environmental management system (EMS), then the person responsible for the EMS needs to have an understanding of what this process is and how it is going to be managed and controlled. In this way, the integrity of the EMS is not jeopardized and the environmental objectives for the products can be achieved.

The general areas of knowledge required to incorporate ecodesign within an EMS are the following:

- a) assessment of the impact of the products on the environment;
- b) identification of appropriate ecodesign measures to reduce the adverse effects of environmental impacts;
- c) the design and development process and an understanding of how an ecodesign process and its management fit within an EMS.

The first two of these areas are likely to be situated within the design and development area, but the third is clearly of major significance to the person responsible for the EMS. This International Standard primarily provides guidance on this third area.

This International Standard is the first to cover and interrelate all three knowledge areas required for ecodesign within an EMS.

ISO 14001 links management of an organization's processes with environmental impacts, but does not include design management processes. ISO 9001 covers the design management process, but does not explicitly cover environmental impacts. ISO/TR 14062 and IEC 62430 assist incorporation of the evaluation of environmental aspects and impacts into the design and development process, but as such, they do not fully

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explain the activities involved within an environmental and business management framework, such as those described in ISO 14001.

Figure 1 illustrates the relationship between the aforementioned International Standards, their scope of knowledge and their relationship with this International Standard, which links all three areas and related documents.

This International Standard incorporates the necessary information from the other International Standards, such that the appropriate processes and procedures can be put into place to implement structured and managed ecodesign under the umbrella of an EMS. By using this International Standard, organizations can build on their existing management processes and competencies without necessarily having to implement or use all of the related International Standards.

When applying this International Standard, it is intended that an organization always uses its existing processes and procedures as a starting point, and that it uses the guidelines in this International Standard in a flexible and practical manner.

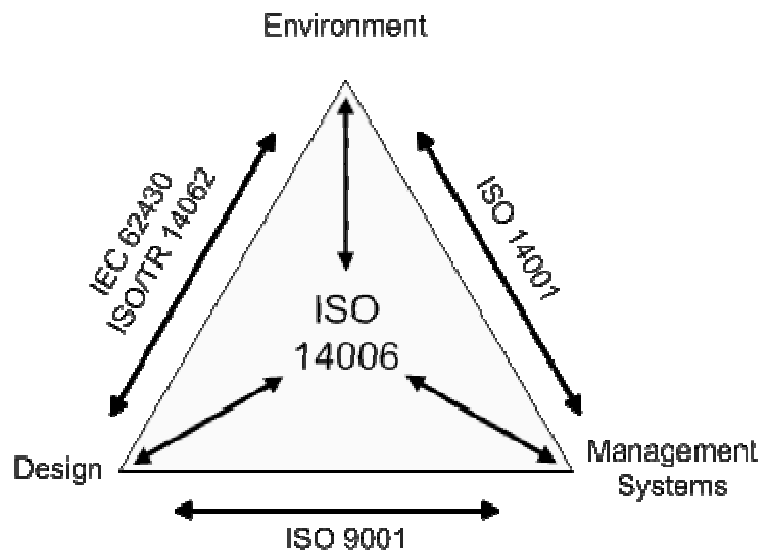


Figure 1 — Relationship between ISO 14001, ISO 9001, ISO/TR 14062, IEC 62430 and ISO 14006 and the functional areas of knowledge

This International Standard provides guidelines to assist organizations in establishing a systematic and structured approach to the incorporation and implementation of an ecodesign process within an EMS such as that described in ISO 14001. The guidelines are intended to be applicable to all organizations, regardless of type, size and product provided.

This International Standard contains three principal clauses that provide guidance to the person responsible for the EMS.

- Clause 4 addresses the role of top managers. It explains the potential benefits of ecodesign and discusses the strategic issues of relevance to business and management.
- Clause 5 shows how an ecodesign process can be incorporated into and managed under an EMS. It provides guidelines for addressing ecodesign as part of an EMS in line with the structure of ISO 14001. The requirements of ISO 14001:2004 are given in boxes and for each subclause, specific guidance is given on how the subclause relates to an ecodesign process. The product design and development activities of an organization are the focus of 5.4.6, which incorporates the method described in ISO 9001:2008, 7.3 (the requirements of which are given in boxes), supplemented by specific guidance related to ecodesign.

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- The product design and development activities of an organization are the focus of 5.4.6. Although there are different ways of carrying out a design and development process, this International Standard follows the method described in ISO 9001:2008, 7.3.
- Clause 6 explains how ecodesign is addressed in the design and development process.

Annex A supplements Clause 4 by providing more detailed information on the strategic issues and the role of top management in ecodesign.

Annex B shows how this International Standard relates to existing International Standards.

Although aimed primarily at organizations that have an EMS such as that described in ISO 14001, whether or not combined with a quality management system (QMS), this International Standard is also of value for organizations that only have a QMS. It can also be useful for other organizations without a formalized EMS or QMS but which are interested in reducing the adverse environmental impacts of their products.