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Date	2008-08-29
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ISO/TC 207/SC 5/WG 7	N 3

Title of / Titre du TC/SC/WG

ISO/TC 207/SC 5/WG 7 ECO-EFFICIENCY

Secretariat / Secrétariat

SIS, Swedish Standards Institute

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Subject

Approved New Work Item Proposal and Outline

Action

For information / background

NEW WORK ITEM PROPOSAL	
Date of presentation **2008-03-07**	Reference number (to be given by the Secretariat)
Proposer **SIS**	**ISO/TC 207 / SC 5** N 304
Secretariat **AFNOR**	

A proposal for a new work item within the scope of an existing committee shall be submitted to the secretariat of that committee with a copy to the Central Secretariat and, in the case of a subcommittee, a copy to the secretariat of the parent technical committee. Proposals not within the scope of an existing committee shall be submitted to the secretariat of the ISO Technical Management Board.

The proposer of a new work item may be a member body of ISO, the secretariat itself, another technical committee or subcommittee, or organization in liaison, the Technical Management Board or one of the advisory groups, or the Secretary-General.

The proposal will be circulated to the P-members of the technical committee or subcommittee for voting, and to the O-members for information.

See overleaf for guidance on when to use this form.

IMPORTANT NOTE: Proposals without adequate justification risk rejection or referral to originator.
Guidelines for proposing and justifying a new work item are given overleaf.

Proposal (to be completed by the proposer)

Title of proposal (in the case of an amendment, revision or a new part of an existing document, show the reference number and current title)

English title **Eco-efficiency assessment – Principles and requirements**

French title
(if available)

Scope of proposed project

To establish an international standardised methodological framework for quantified eco-efficiency assessment, which provides practical guidance and supports open, comprehensive and understandable presentation of eco-efficiency measures for products. Quantified eco-efficiency for products is understood as a measure or measures that relate environmental performance to value created.

The establishment and description of the principles and framework for producing eco efficiency measures, include

a) definitions

b) the goal and scope including system boundaries, interpretation and limitations,

c) environmental assessment, including the product life cycle,

d) value assessment, economic or functional,

e) calculation of eco efficiency profile,

f) interpretation (including quality assurance),

g) reporting.

Actual choices of economic cost and revenue types, categories of environmental impact and economic and environmental values are not included.

The intended application of the eco efficiency study is considered during the goal and scope definition, but the application itself is outside the scope.

The resulting standard is not intended to be used as a single base for contractual or regulatory purposes or registration and certification.

LCC is one of the central inputs to an eco-efficiency methodology but is outside the scope to standardise.

Concerns known patented items (see ISO/IEC Directives Part 1 for important guidance)

☐ Yes ☒ No If "Yes", provide full information as annex

Envisaged publication type (indicate one of the following, if possible)

☒ International Standard ☐ Technical Specification ☐ Publicly Available Specification ☐ Technical Report

Purpose and justification (attach a separate page as annex, if necessary)

The purpose of this NWIP is to establish an international standardised methodological framework for quantified eco-efficiency, which provides practical guidance and supports open, comprehensive and understandable presentation of measures of eco-efficiency on the product level.

In the context of sustainable development, eco-efficiency is becoming increasingly important. Economic growth, which certainly is one of the major driving forces for many organisations, has an obvious effect on the environment in the sense that all economic activity causes an environmental impact.

Working with the main characteristics of eco-efficiency, reducing the consumption of renewable resources, reducing the impact on nature and increasing the service or products value developed is without doubt a good approach in order to become a more sustainable organisation. However, the question of how and when to measure the eco-efficiency is still an issue that requires further reflection in companies and other organisations around the world.

The applications are not restricted to business applications but include more general applications like in R&D, public policy, consumer information, etc. An example is the eco-efficiency based on cost for environmental improvements or the environmental impact of value created. The type of cost/value to consider may also be more than one, also for business applications.

There is particularly one issue which restrain the use of eco-efficiency; the lack of consistent, well accepted frameworks and definitions. This means that eco-efficiency measures and achievements in development of new methods are difficult to communicate. When e.g. two product concepts are compared towards each other, the selection of boundaries have great impact on the calculations and can be difficult to describe without a harmonized language.

The need for harmonisation of eco-efficiency is often expressed in international fora. The second international conference on eco-efficiency (2006) had a special working group and session on standardisation. Developing a common language and a common framework is a consensus process among experts. An ISO working group would be well suited for hosting such an activity. The market for an ISO standard could be relatively large as eco-efficiency indicators may be used directly by many stakeholders, in companies and other organisations. It could also stimulate the use of other standards in the ISO 14000 family.

Target date for availability (date by which publication is considered to be necessary) **2012-06-31**

Proposed development track ☐ 1 (24 months) ☒ 2 (36 months - default) ☐ 3 (48 months)

Relevant documents to be considered

OECD (1998) Eco-efficiency, Organisation for Economic Co-Operation and Development Publication, Paris

Lehni, M. (2000) Eco-Efficiency; creating more value with less impact, World Business Council for Sustainable Development, Geneva

Michelsen, O., Magerholm Fet, A. & Dahlrud, A. (2006) 'Eco-efficiency in extended supply chains: A case study of furniture production', Journal of Environmental Management, Vol. 79, pp. 290-297

DeSimone, L. & Popoff, F. (2000) Eco-efficiency: The business link to sustainable development, The MIT Press, Cambridge

Heijungs, R. Towards eco-efficiency with LCA's prevention principle: an epistemological foundation of

LCA using axioms. In: J.E.M. Klostermann and A. Tukker (eds.) 1998. Product Innovation and Eco-Efficiency Dordrecht: Springer, 1998p. 175-185,

Huppes, G. and M. Ishikawa. 2005. Why Eco-Efficiency? Journal of Industrial Ecology 9(4): 2-5.

Huppes, G. and M. Ishikawa. 2005. A framework for quantified eco-efficiency analysis. Journal of Industrial Ecology 9(4): 25-41.

Huppes, G. and M. Ishikawa. 2005. Eco-Efficiency and its terminology. Journal of Industrial Ecology 9(4): 43-46.

Huppes, G., and M. Ishikawa 2007 An introduction to quantified eco-efficiency analysis. In: Huppes, G., and M. Ishikawa (Eds) 2007. Quantified eco-efficiency. An introduction with applications. Dordrecht: Springer

Jollands, N., Lermit, J., & Patterson, M. (2004) 'Aggregate eco-efficiency indices for New Zealand-a principal components analysis', Journal of Environmental Management, Vol. 73, pp. 293-305

ISO 14040 Environmental management - Life cycle assessment - Principles and frameworks

ISO 14044 Environmental management - Life cycle assessment - Requirements and guidelines

ISO 14031 Environmental Management - Environmental performance evaluation - guidelines

Oka, T., M. Ishikawa, Y. Fujii and G. Huppes. 2005. Calculating cost-effectiveness for activities with multiple environmental effects using the maximum abatement cost method. Journal of Industrial Ecology 9(4): 97-103.

Steen, B., Describing Values in Relation to Choices in LCA, International Journal of LCA, 11, (3), 277-283, 2006

Saling, P et al, Assessing the Environmental-Hazard Potential for Life Cycle Assessment, Eco-Efficiency and SEEbalance, International Journal of LCA, 2005

Saling, P et al, Eco-efficiency Analysis by BASF: The Method, International Journal of LCA, 2002

Relationship of project to activities of other international bodies

World Business Council of Sustainable Development, OECD,the European Environmental Agency, UNEP, SETAC are international organisations where eco-efficiency is an important concept. They should be informed and invited to participate.

Liaison organizations	**Need for coordination with:**
	☐ IEC ☐ CEN ☐ Other (please specify)

Preparatory work (at a minimum an outline should be included with the proposal)

☐ A draft is attached ☒ An outline is attached. It is possible to supply a draft by

The proposer or the proposer's organization is prepared to undertake the preparatory work required ☒ Yes ☐ No

Proposed Project Leader (name and address)

Convener (tentative):
Bengt Steen,
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Vice Convener:
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Secretariat:
Lars Jonsson
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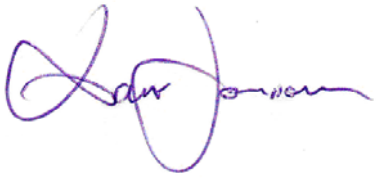
Name and signature of the Proposer
(include contact information)

SIS, Swedish Standards Institute
Lars Jonsson



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Comments of the TC or SC Secretariat

Supplementary information relating to the proposal

☒ This proposal relates to a new ISO document;

☐ This proposal relates to the amendment/revision of an existing ISO document;

☐ This proposal relates to the adoption as an active project of an item currently registered as a Preliminary Work Item;

☐ This proposal relates to the re-establishment of a cancelled project as an active project.

Other:

Voting information

The ballot associated with this proposal comprises a vote on:

☒ Adoption of the proposal as a new project

☐ Adoption of the associated draft as a committee draft (CD)

☐ Adoption of the associated draft for submission for the enquiry vote (DIS or equivalent)

Other:

Annex(es) are included with this proposal (give details)

☒ **ISO/TC 207/SC5/N 305**

Date of circulation	Closing date for voting	Signature of the TC or SC Secretary
7 March 2008	**7 June 2008**	**Mélanie Raimbault**

Use this form to propose:

a) a new ISO document (including a new part to an existing document), or the amendment/revision of an existing ISO document;

b) the establishment as an active project of a preliminary work item, or the re-establishment of a cancelled project;

c) the change in the type of an existing document, e.g. conversion of a Technical Specification into an International Standard.

This form is not intended for use to propose an action following a systematic review - use ISO Form 21 for that purpose.

Proposals for correction (i.e. proposals for a Technical Corrigendum) should be submitted in writing directly to the secretariat concerned.

Guidelines on the completion of a proposal for a new work item
(see also the ISO/IEC Directives Part 1)

a) Title: Indicate the subject of the proposed new work item.

b) Scope: Give a clear indication of the coverage of the proposed new work item. Indicate, for example, if this is a proposal for a new document, or a proposed change (amendment/revision). It is often helpful to indicate what is not covered (exclusions).

c) Envisaged publication type: Details of the types of ISO deliverable available are given in the ISO/IEC Directives, Part 1 and/or the associated ISO Supplement.

d) Purpose and justification: Give details based on a critical study of the following elements wherever practicable. *Wherever possible reference should be made to information contained in the related TC Business Plan*.

1) The specific aims and reason for the standardization activity, with particular emphasis on the aspects of standardization to be covered, the problems it is expected to solve or the difficulties it is intended to overcome.

2) The main interests that might benefit from or be affected by the activity, such as industry, consumers, trade, governments, distributors.

3) Feasibility of the activity: Are there factors that could hinder the successful establishment or global application of the standard?

4) Timeliness of the standard to be produced: Is the technology reasonably stabilized? If not, how much time is likely to be available before advances in technology may render the proposed standard outdated? Is the proposed standard required as a basis for the future development of the technology in question?

5) Urgency of the activity, considering the needs of other fields or organizations. Indicate target date and, when a series of standards is proposed, suggest priorities.

6) The benefits to be gained by the implementation of the proposed standard; alternatively, the loss or disadvantage(s) if no standard is established within a reasonable time. Data such as product volume or value of trade should be included and quantified.

7) If the standardization activity is, or is likely to be, the subject of regulations or to require the harmonization of existing regulations, this should be indicated.

If a series of new work items is proposed having a common purpose and justification, a common proposal may be drafted including all elements to be clarified and enumerating the titles and scopes of each individual item.

e) Relevant documents and their effects on global relevancy: List any known relevant documents (such as standards and regulations), regardless of their source. When the proposer considers that an existing well-established document may be acceptable as a standard (with or without amendment), indicate this with appropriate justification and attach a copy to the proposal.

f) Cooperation and liaison: List relevant organizations or bodies with which cooperation and liaison should exist.

2008-03-03

Proposed Outline of a Standard on Eco-efficiency

Title:

Eco-efficiency assessment – Principles and requirements

Principles of Eco efficiency

General

These principles are fundamental and should be used as guidance for decisions relating to both the planning and the conducting of an Eco efficiency assessment.

Life cycle perspective

An Eco efficiency assessment considers the entire life cycle from raw material extraction and acquisition, through energy and material production and manufacturing, to use and end of life treatment and final disposal. Through such a systematic overview and perspective, the shifting of a potential environmental burden between life cycle stages or individual processes can be identified and possibly avoided.

Environmental and value focus

Eco efficiency addresses the environmental and value aspects and impacts of a product system. Social aspects and impacts are, typically, outside the scope of the Eco efficiency. Other tools may be combined with Eco efficiency for more extensive assessments.

Value aspects and impacts include the function of the product.

Relative approach and declared unit

Eco efficiency is a relative approach, which is structured around a declared unit [similar to the concept of functional unit within the LCA standards of the ISO 14040-family]. This declared unit defines what is being studied.

Iterative approach

Eco efficiency is an iterative technique. The individual phases of an Eco efficiency assessment use results of the other phases. The iterative approach within and between the phases contributes to the comprehensiveness and consistency of the study and the reported results.

Transparency

Due to the inherent complexity in Eco efficiency, transparency is an important guiding principle in executing Eco efficiency assessment, in order to ensure a proper interpretation of the results.

Comprehensiveness

An eco efficiency assessment considers all attributes or aspects of natural environment, value, human health and resources. By considering all attributes and aspects within one study in a cross-media perspective, potential trade-offs can be identified and assessed.

Priority of scientific approach

Decisions within an Eco efficiency assessment are preferably based on natural [environmental dimension] and economic [economic dimension] sciences. If this is not possible, other scientific approaches may be used or international conventions may be referred to. If neither a scientific basis exists nor a justification based on other scientific approaches or international conventions is possible, then, as appropriate, decisions may be based on value choices.

Disclosure of results

"If results from an eco efficiency assesment are intended to be used in comparative assertions disclosed to the public, the [environmental] results shall not be reduced to a single overall score or number, since weighting requires value choices."