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Life cycle assessment—
Principles and framework**

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law.

This Standard, together with **JIS Q 14044:2010**, cancels and replaces **JIS Q 14040:1997**, **JIS Q 14041:1999**, **JIS Q 14042:2002** and **JIS Q 14043:2002**, which have been technically revised.

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Environmental management— Life cycle assessment— Principles and framework

Introduction

This Japanese Industrial Standard has been prepared based on the second edition of **ISO 14040** published in 2006 without modifying the technical contents.

The portions underlined with dots are the matters not stated in the original International Standard.

The increased awareness of the importance of environmental protection, and the possible impacts associated with products, both manufactured and consumed, has increased interest in the development of methods to better understand and address these impacts. One of the techniques being developed for this purpose is life cycle assessment (hereafter referred to as “LCA”).

NOTE 1 In this Standard, the term “product” includes services.

LCA can assist in

- identifying opportunities to improve the environmental performance of products at various points in their life cycle,
- informing decision-makers in industry, government or non-government organizations (e.g. for the purpose of strategic planning, priority setting, product or process design or redesign),
- the selection of relevant indicators of environmental performance, including measurement techniques, and
- marketing (e.g. implementing an ecolabelling scheme, making an environmental claim, or producing an environmental product declaration).

For practitioners of LCA, **JIS Q 14044** details the requirements for conducting an LCA.

LCA addresses the environmental aspects and potential environmental impacts (e.g. use of resources and the environmental consequences of releases) throughout a product’s life cycle from raw material acquisition through production, use, end-of-life treatment, recycling and final disposal (i.e. cradle-to-grave).

NOTE 2 The “potential environmental impacts” are relative expressions, as they are related to the functional unit of a product system.

There are four phases in an LCA study:

- a) the goal and scope definition phase,
- b) the inventory analysis phase,
- c) the impact assessment phase, and
- d) the interpretation phase.