



LIFE CYCLE MANAGEMENT

A Business Guide to Sustainability

UNITED NATIONS ENVIRONMENT PROGRAMME



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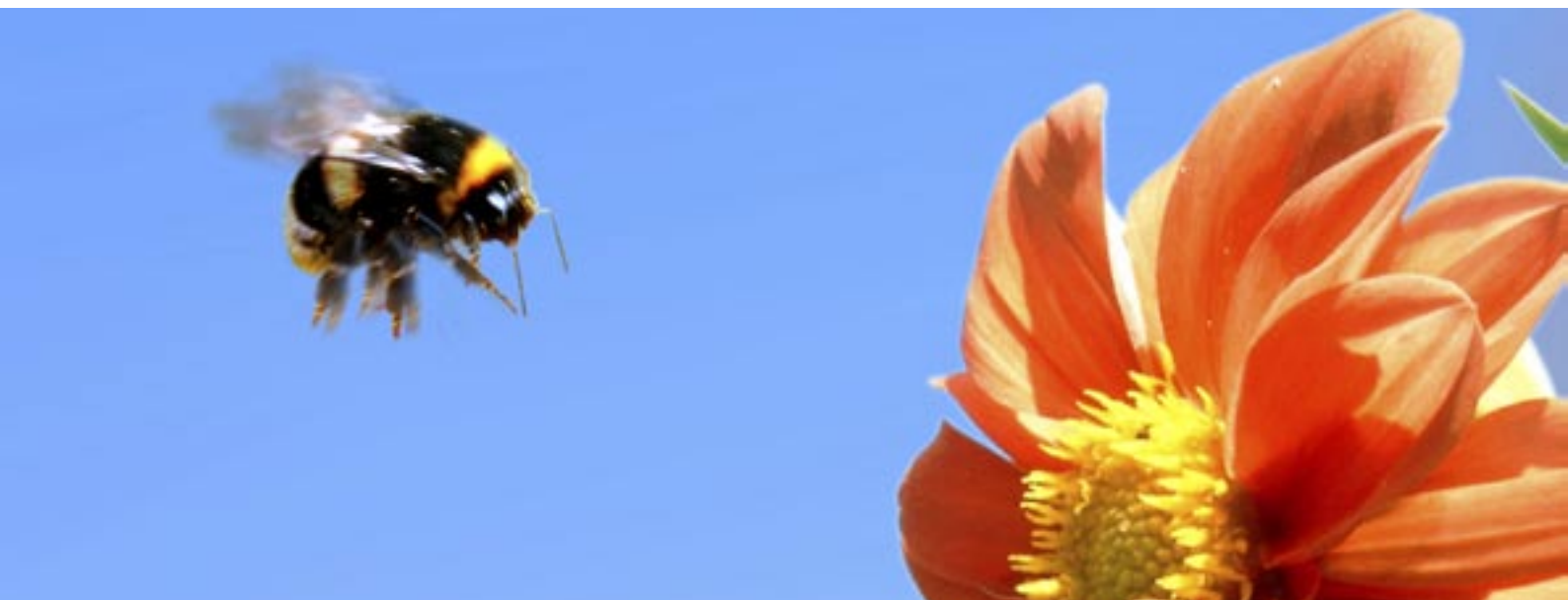


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Producer

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Supervision, technical editing and support

Sonia Valdivia, Guido Sonnemann and Bas de Leeuw, UNEP DTIE

Authors

Arne Remmen, Aalborg University

Allan Astrup Jensen, FORCE Technology

Jeppe Frydendal, Danish Standards

International scientific and professional review panel

Andreas Ciroth, GreenDeltaTC

Chie Nakaniwa, JEMAI

Chris Peterson, Five Winds International

Cornelis Theunis Van der Lugt, UNEP DTIE

Garrette E. Clark, UNEP DTIE

Gianluca Donato, ABB Sustainability Affairs

James A. Fava, Five Winds International

Konrad Saur, Five Winds International

Mark Drybrough, Newcastle upon Tyne

Michael Kuhndt, UNEP/Wuppertal Institute Collaborating Centre on Sustainable Consumption and Production

Mohamed Tawfic, Suez Canal University

Paolo Frankl, Ecobilancio

Stefan Seuring, University of Waikato

Design and lay-out

Jeppe Frydendal, Danish Standards

Photography

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Executive Summary

The journey towards sustainability requires that businesses should find innovative ways to be profitable and at the same time expand the traditional frontiers of business to include the environmental and social dimensions, in other words take account of "the Triple Bottom Line", and to introduce "Life Cycle Thinking".

Life Cycle Management (LCM) aims to minimize the environmental and socio-economic burdens associated with product or product portfolio throughout its entire life cycle and value chain. LCM makes life cycle thinking and product sustainability operational for businesses through continuous improvements of product systems, as well as, supporting business assimilation of, for example, integrated product policies.

LCM is for organizations, which have expressed a wish to produce or trade products, which are as sustainable as feasible, to improve their public image, visibility, general relations with stakeholders, and increase their shareholder value, as well as, awareness of and preparedness for changing regulatory contexts.

LCM is not a single tool or methodology but a management system collecting, structuring and disseminating product-related information from various programs, concepts and tools. It incorporates environmental, economic, and social aspects of products, which are applied throughout a product's life cycle. The organization must 'go beyond its facility boundaries' and be willing to expand its scope of collaboration and communication to all stakeholders in the value chain.

LCM can be specifically adapted and gradually introduced, in any organization, including SMEs. Organizations may begin with small goals and objectives according to their resources and then get progressively more ambitious over time. To be successful it needs a commitment from top management and the active participation of key employees from relevant departments in the organization.

LCM is a dynamic and voluntary process which is best implemented through a step by step process. Special attention should be given to

activities that can secure continuous improvement. Finally, the Plan-Do-Check-Act cycle, in line with international management systems for organizations, such as ISO 9001 and ISO 14001, is recommended.

This Guide contains twenty one examples, selected by the authors based on relevance, which illustrate how businesses are putting life cycle thinking into practice all over the world. In an effort to be concise there is limited detail in this document. For more information on any aspect covered here the reader should visit the source/website address.

Résumé Exécutif

Le parcours vers un développement durable exige que les entreprises recherchent de nouvelles façons de faire des profits et en même temps, d'élargir les frontières traditionnelles du business pour inclure les dimensions sociales et environnementales de leurs activités. En d'autres termes, elles doivent adopter le concept du « triple bilan » (« triple bottom line » en anglais) et introduire une réflexion sur le cycle de vie des produits (« Life Cycle Thinking » en anglais).

La gestion du cycle de vie (GCV) a pour objectif de minimiser les impacts environnementaux et socioéconomiques associés à un produit ou une gamme de produits pendant son cycle de vie entier et pour toute sa chaîne de valeur. La gestion du cycle de vie concrétise le concept du cycle de vie et du développement durable pour l'entreprise, à travers des améliorations continues des systèmes de production et aussi le développement de politiques intégrées pour les produits.

La GCV s'adresse aux entreprises qui cherchent à fabriquer ou vendre des produits plus durables, afin d'améliorer leur image

publique et leur visibilité et de construire des relations plus étroites avec leurs parties prenantes ; ainsi, elles créent de la valeur pour les actionnaires et facilitent la prise en compte du contexte réglementaire en permanente évolution.

La GCV n'est pas un outil ou une méthode isolée, mais un système pour structurer la collecte et la diffusion des informations sur les produits à partir de différents programmes, concepts et outils. Il prend en compte les aspects environnementaux, économiques et sociaux des produits, qui sont analysés tout au long de leur cycle de vie. L'entreprise doit aller au-delà des limites de ses usines et étendre ses partenariats, sa collaboration et sa communication à toutes les parties prenantes de sa chaîne de valeur.

La GCV peut être adaptée individuellement à l'entreprise et introduite de manière progressive quelque soit sa taille, multinationale ou PME. Selon ses ressources, l'entreprise peut se fixer des objectifs d'abord plus faciles à atteindre qui deviendront ensuite plus ambitieux au fil du temps. Pour réussir, l'engagement de l'équipe dirigeante

est aussi nécessaire que la participation active des employés clés dans les différents départements de l'entreprise.

La GCV est un processus dynamique et volontaire. Sa mise en œuvre se fait idéalement à travers un processus en plusieurs étapes. Par conséquent, il est particulièrement important de diriger son attention vers l'amélioration continue, ce qui est possible à travers l'adoption du cycle « Planifier, faire, vérifier, agir » en combinaison avec des systèmes de gestion internationalement reconnus tels que ISO 9001 et ISO 14000.

Ce guide contient vingt-et-un exemples sélectionnés par les auteurs selon leur pertinence pour illustrer la mise en œuvre par les entreprises du concept du cycle de vie dans le monde entier. Pour rester le plus concis possible, nous avons limité le niveau de détail pour chacun d'entre eux. Pour plus d'informations sur les sujets abordés dans ce livre, le lecteur est invité à consulter les sites Internet indiqués.

Resumen ejecutivo

El viaje hacia la sostenibilidad requiere que las empresas encuentren maneras innovadoras para ser rentables y al mismo tiempo extender las fronteras tradicionales de su negocio para abarcar las dimensiones ambientales y sociales, lo que en otras palabras es tomar en cuenta "la Línea de Triple Base", y para introducir el "Pensamiento de Ciclo de Vida de Producto".

La Gestión de Ciclo de Vida (GCV) busca minimizar las cargas ambientales y socio económicas asociadas con el producto o portafolio de productos durante todo su ciclo de vida y cadena de valor. La GCV hace operacional en los negocios el pensamiento de ciclo de vida y la sostenibilidad del producto a través de mejora continua de los sistemas de productos, así como también, apoyando la incorporación de, por ejemplo, políticas integradas de producto.

La GCV es para organizaciones que han expresado su deseo de producir o comercializar productos tan sostenibles como sea posible para mejorar su imagen pública, incrementar la visibilidad y sus relaciones generales con partes interesadas y afectadas, aumentar el valor ante sus accionistas y estar mejor informados y preparados ante contextos legislativos cambiantes.

La GCV no es una herramienta única ni una metodología, sino un sistema de gestión que recolecta, estructura y disemina información relacionada al producto de diversos programas, conceptos y herramientas. Éste incorpora aspectos económicos, ambientales y sociales de los productos, los cuales son aplicados en cada una de las etapas del ciclo de vida de ellos. La organización debe ir más allá de los límites de sus instalaciones y tener la voluntad de extender su alcance de colaboración y comunicación a todas las partes interesadas y afectadas en la cadena de valor.

La GCV puede ser específicamente adaptada y gradualmente introducida en cualquier organización, incluyendo a las PyMES. Las organizaciones deben empezar con metas y objetivos pequeños de acuerdo a los recursos que poseen y volverse progresivamente más ambiciosos a lo largo del tiempo. Para ser exitosos se necesita un compromiso la Alta Dirección y una participación activa de empleados clave de los departamentos relevantes en la organización.

La GCV es un proceso dinámico y voluntario, y la mejor manera de implementarlo es paso a paso. Se debe dar especial atención a las

actividades que puedan asegurar la mejora continua. Finalmente, el ciclo Planear-Hacer-Verificar-Actuar es recomendado, en línea con los sistemas de gestión internacional como ISO 9001 e ISO 14001.

Los autores seleccionaron para esta Guía veintiún ejemplos, cuya selección se basó en su relevancia. Estos ejemplos ilustran cómo las organizaciones empresariales están poniendo en práctica el pensamiento de ciclo de vida alrededor del mundo. Debido a una necesidad de sistematización, los detalles son limitados en este documento. Para mayor información acerca de cualquier aspecto cubierto en esta guía el lector deberá visitar las fuentes o direcciones de los sitios Web.

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Foreword by UNEP

The desire to realise our vision is driven by human nature.

The collective vision and desire of the UNEP/SETAC Life Cycle Initiative network is the broad-based application of Life Cycle Thinking; making this a reality requires transferring the vision and desire to the key groups that could facilitate a worldwide implementation of Life Cycle Approaches: consumers; small and medium sized enterprises; key growth

importance and scope of intervention that different areas have in the organizations, and a step-by-step guide, adaptable to enterprises of any size, to support the integration of Life Cycle Management in the management process.

Life Cycle Management is for companies that are ready to expand their traditional focus on the production process by incorporating various management aspects

work on cleaner production and eco-efficient industrial systems. It is a next step in broadening the horizons of pollution prevention; a process which has gone from a focus on production processes (cleaner production), to products (Design for Sustainability) and then to product-systems (incorporating transport logistics, end-of life collection and component reuse or materials recycling) and to sustainable innovation (new products and product-systems and enterprises

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