

A Global Language for Packaging and Sustainability

A framework and a measurement system
for our industry

Revised Edition September 2011



A letter from the first edition of this report, published June 2010

Dear Colleagues

It is with great pleasure that we publish this report.

This is the first outcome of the Consumer Goods Forum Sustainability Pillar. We look forward to many more successful products emerging from the programme that will assist our businesses in this very important area.

This Global Packaging Project addresses the need in our industry for a common language to enable intelligent and informed discussion between our businesses on sustainable packaging, and paves the way for meaningful cooperation across our industries.

The team responsible for this report and the other project activities has included experts and practitioners from across the entire packaging chain; retailers, manufacturers, converters, associations and more. This embodies a principle of inclusiveness that we will ensure is part of all of our activity.

Most importantly, the report delivers a framework and measurement system that trading partners can use to help them make better, more informed decisions about packaging and sustainability. The framework includes common definitions and principles, agreed metrics and indicators and guidance on usage.

We trust that you will find time to read the report and ensure it has the right impact within your business or organisation. We would in particular ask you to:

- » ensure your company's full commitment to the pilot programme currently underway
- » start the process of internalising the work
- » engage with your trading partners to promote the framework and the measurement system.

With best wishes



Sir Terry Leahy
CEO, Tesco plc

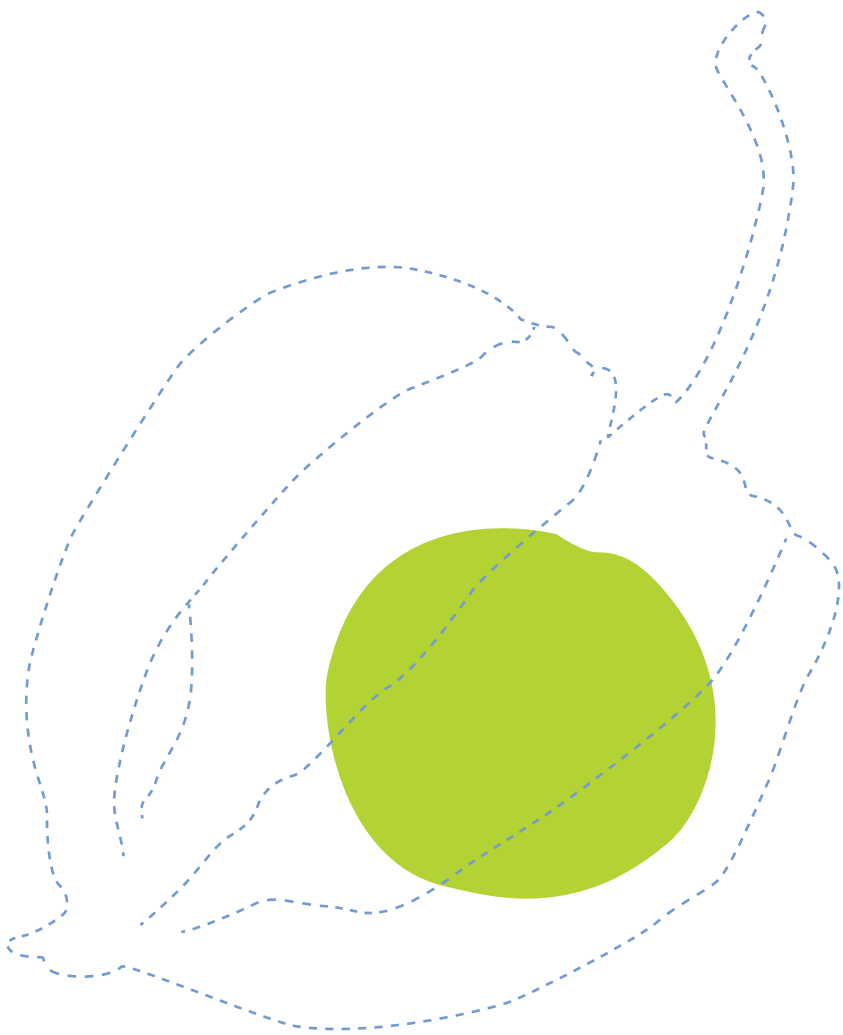


Paul Polman
CEO, Unilever

Board Sponsors for Sustainability
The Consumer Goods Forum
June 2010

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Preface

This is a revised edition of the original publication released in July 2010 and follows completion of the pilot projects which tested the metrics developed for the project. Consequently the original chapters on indicators and the findings from the pilots have now been incorporated in the text of **The Global Protocol on Packaging Sustainability 2.0**.

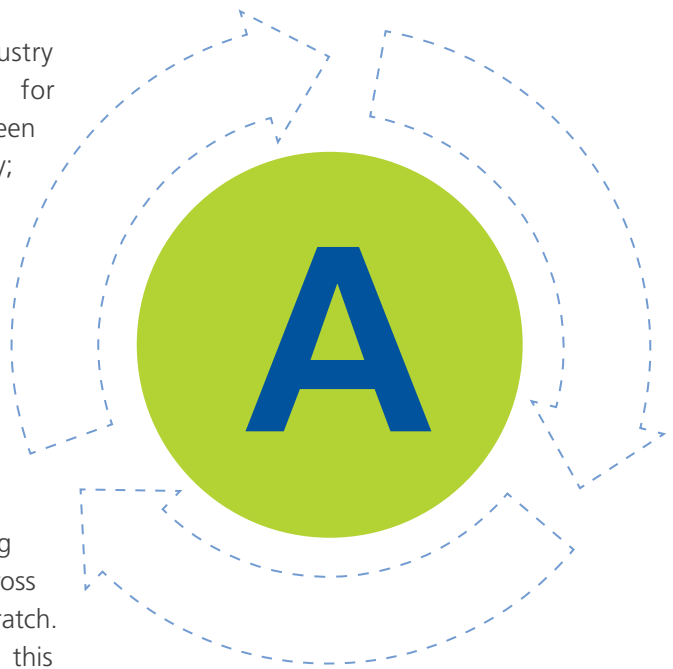
The Global Packaging Project was initiated as a result of a proposal made to the Global CEO Forum by Sir Terry Leahy and Paul Polman in November 2008.

They had identified the need in our industry for a common language to allow for intelligent and informed debate between and within companies on Sustainability; however, understanding the magnitude of this task, they proposed this should be first addressed for a more discrete, manageable area within the larger Sustainability agenda. Packaging was identified as one area of focus, hence this project.

It was also agreed by the Global CEO Forum that the project would bring together existing work taking place across our industry rather than invent from scratch. The project has succeeded in achieving this with the core input coming from projects taking place in ECR Europe, EUROOPEN, the Grocery Manufacturers Association (GMA) and the Sustainable Packaging Coalition (SPC).

This document summarises the output of the project to date.

For a more in depth understanding of the principles, indicators and metrics it is recommended that companies consult the additional project material and the source documents used for this project and the Global Protocol on Packaging Sustainability 2.0. These can be found on the project web site at <http://globalpackaging.mycgforum.com>.



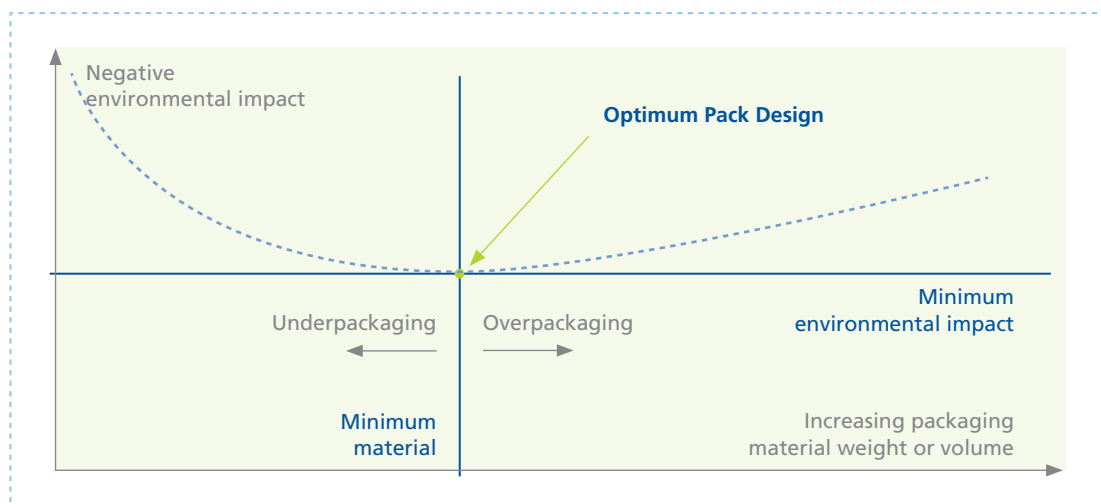
1 Executive Summary

Packaging plays a critical role in the consumer goods industry. It protects and preserves our products and raw materials as they transit through our supply chains.

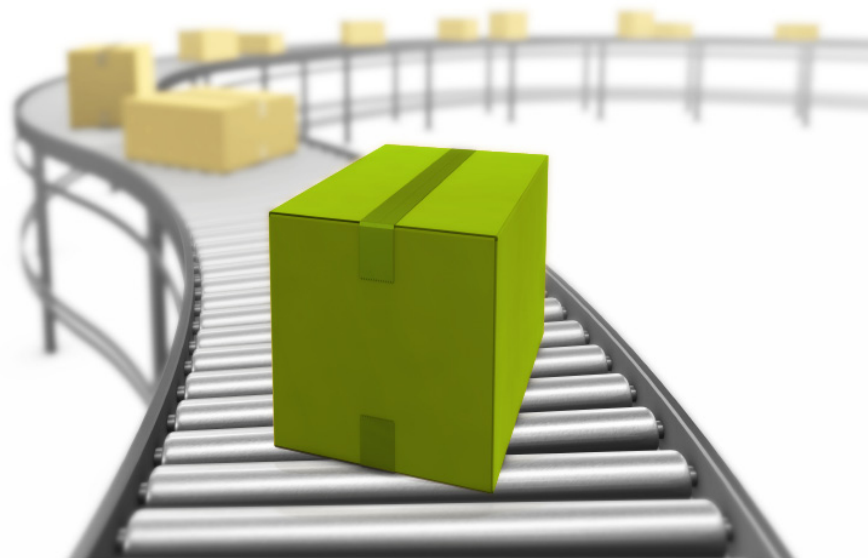
By its nature packaging is very visible and in a world of scarce resources it is something that attracts the attention of consumers, the media and environmentalists. They often challenge us to address it.

The industry has a responsibility to review and optimize the environmental performance of the packaging it uses with respect to all relevant life cycle stages. But this analysis of impacts must be done in the round. It must include the impact of product losses that may result from the use of **too little** packaging as well the impact of using **too much**.

Finding the balance between under-packaging and over-packaging is the aim for all of our businesses.



Optimum Packaging: The Innventia AB model shows that the environmental consequences of product losses caused by excessive packaging reduction are far greater than guaranteeing adequate protection through an incremental excess of packaging.

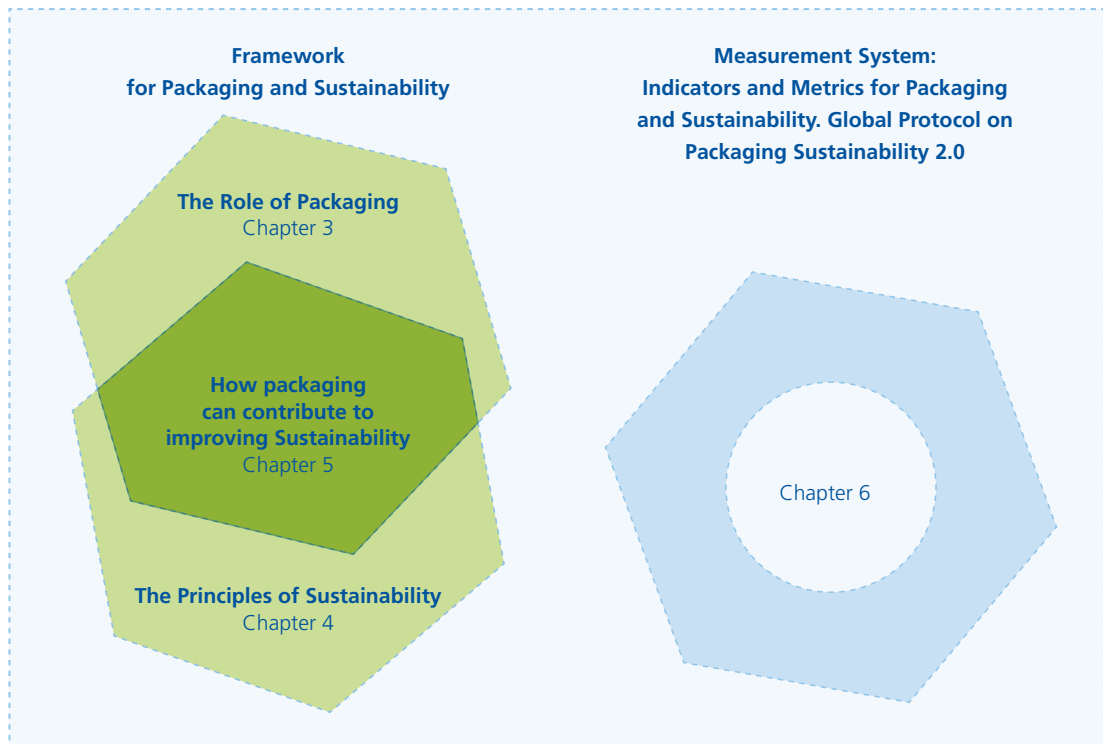
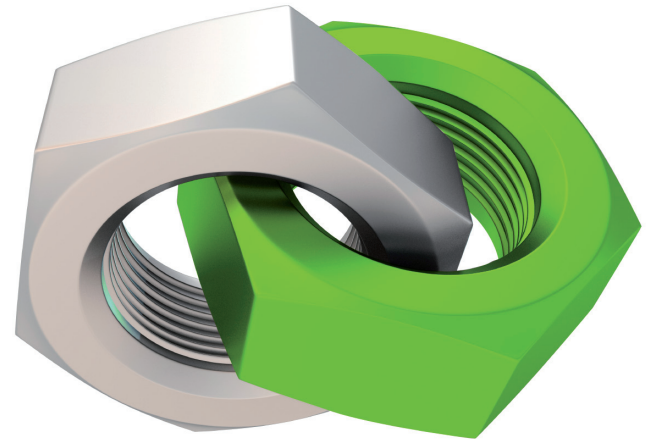


Packaging spans the entire value chain and is a shared responsibility for all trading partners.

To be able to address this responsibility effectively trading partners need to have a common way of talking about packaging and of sustainability. This protocol delivers to our industry a language and simple metrics to enable more informed dialogue between trading partners about the relationship between packaging and sustainability.

It enables better decision making, both within companies and across the value chain. In turn this will result in cost reductions, reduced environmental impact and improved consumer perception.

The diagram below shows how the framework and measurement system are presented in this report and in the protocol.



The framework first explains the **role of packaging** which is to:

- **Protect** the product
- **Promote** the product
- Provide **information**, on product, usage, health and safety, disposal, etc.
- Enable the **convenient** transportation and usage of the product
- Allow **unitisation** of the product through the supply chain
- Support efficient **handling** of the product, again, throughout the supply chain

Next, the framework considers the **principles of sustainability** – specifically the **environmental, economic** and **social** aspects. It also explains the importance of taking a **Life Cycle** approach, covering the consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to final disposal. This can also be referred to as a cradle-to-grave process.

The final part of the framework is the **intersection** between the role of **packaging** and the principles of **sustainability**. It addresses how packaging can positively contribute to the sustainability of a product by increasingly being:

- » designed holistically with the product in order to optimise overall environmental performance
- » made from responsibly sourced materials
- » able to meet market criteria for performance and cost
- » manufactured using clean production technologies
- » efficiently recoverable after use
- » sourced, manufactured, transported and recycled using renewable energy.

Underpinning the framework is the Global Protocol on Packaging Sustainability (GPPS) consisting of indicators and metrics that ensure that the detailed dialogue between trading partners is based on common terms, measures and values. For each metric there is a clear definition, some examples, usage guidance and links to existing industry protocols where available.

When this document was originally published in June 2010 the 'version 1' measurement system was referenced. Since then a series of pilots was undertaken.

Each of the pilots took as a starting point a business question, relating to packaging and sustainability that the trading partners wanted to address. It might, for example, have been to compare different packaging formats for the same product or to consider the impact of changes in secondary and tertiary packaging to support logistics changes.

The results from these pilots led to the development of a Version 2 protocol that has now been released.

It is important to note, of course, that to deliver the benefits that have been identified, the framework and protocol need to become part of the way we do business. This means full adoption within the companies that have participated in the project, the wider Consumer Goods Forum and across our industry in general.

2 Introduction

2.1 The Vision for the Protocol

This framework and the GPPS deliver to our industry a common language to enable more meaningful and informed dialogue between trading partners and within industry groups about the relationship between packaging and sustainability.

We believe that this will, in turn, ensure better decision making, both within companies and collectively.

The common language includes common definitions regarding packaging sustainability, principles, indicators and metrics, and guidance on how to use this framework and the GPPS.

2.2 The Business Case

Sustainability has risen dramatically up the agenda in recent years. Once the preserve of NGOs and pressure groups it is now a central part of business strategy and increasingly relevant to the consumers we serve.

Companies increasingly understand that an effective approach to sustainability helps to manage risk, reduce costs, become more innovative and efficient, and grow customer loyalty. There is a risk, though, that action is not always sufficiently co-ordinated; that we, as businesses, do not work as closely together as we might, and, as a result, our response is less strong and less efficient than it could be.

Consumers and regulators see packaging as a key concern. They want an end to what they perceive as over packaging and they want consistency of information, including clarification on what packaging can and can't be recycled.

Businesses, however, whether they are manufacturers or retailers, judge the environmental sustainability of their products from different perspectives and use different approaches.

For example, some companies focus on weight reduction, believing it provides a reasonable proxy for sustainability through lower raw material inputs, reduced transport, less waste and lower CO₂ emissions. But this emphasis on weight has some unintended consequences, including greater wastage if the packaging becomes too fragile.

Other companies use life cycle assessment to help them measure sustainability. This is a more



comprehensive approach but it can be costly in both resources and time.

To support an effective industry response, there is a need for common metrics and definitions on how companies should measure the sustainability of their packaging – bringing together the work of existing programmes which touch on similar areas and adding a global dimension and CEO leadership to the issue.

The more unified approach of a packaging and sustainability measurement system will not only enable organisations to work together more effectively but also allow them to realise new opportunities and manage risks.

The benefits include:

- **Cost reduction:**

By harmonising our approach for measuring and asking for packaging information, organisations can work together more effectively – setting clear expectations of each other and reducing the time needed to respond to requests.

- **Reduced impact:**

Analysing packaging data will help identify sustainability “hot spots” that can then be addressed. It will also help identify opportunities to reduce costs.

- **Improved consumer perception:**

Through measurement and understanding organisations can identify opportunities to deliver consumer expectations.

- **Improved decision making:**

A common and robust set of metrics provide us with a common, rounded, fact based foundation for us to understand priority sustainability issues, agree appropriate industry actions – and understand the implications.

- **Extended influencing:**

Demonstrating leadership by proactively managing the issues related to packaging can allow organisations to:

- demonstrate that by informing and empowering consumers, much more can be achieved than is possible through regulation
- work with local authorities and government to support the development of an efficient recycling infrastructure and maximise the recovery of packaging materials
- respond swiftly and accurately to requests for information on our packaging optimisation work
- demonstrate progress and build the case against the need for further regulation

3 The Role of Packaging

Whilst the fundamental role of packaging is to deliver the product to the consumer in perfect condition, it also serves a variety of other purposes.

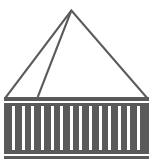
Good packaging uses only as much of the right kind of material as necessary to deliver what is required. As packaging is reduced, the range of scenarios under which product losses occur rises, until eventually a point is reached where the increase in product loss exceeds the savings from the use of less packaging material. Any reduction in packaging beyond that point is a false benefit, since it increases the total amount of waste in the system.

Consumers generally only see sales packaging, that being the packaging of the product that they pick up at the shelf. Packaging used for grouping and transporting products also plays an important role in both the function and impact of packaging.

Well-designed packaging will meet the requirements of the product while minimising the economic, social and environmental impacts of both the product and its package.

Function	Features
Protection	<ul style="list-style-type: none"> » Prevent breakage (mechanical protection) » Prevent spoilage (barrier to moisture, gases, light, flavours and aromas) » Prevent contamination, tampering and theft » Increase shelf life
Promotion	<ul style="list-style-type: none"> » Description of product » List of ingredients » Product features & benefits » Promotional messages and branding
Information	<ul style="list-style-type: none"> » Product identification » Product preparation and usage » Nutritional and storage data » Safety warnings » Contact information » Opening instructions » End of life management
Convenience	<ul style="list-style-type: none"> » Product preparation and serving » Product storage » Portioning
Unitisation	<ul style="list-style-type: none"> » Provision of consumer units » Provision of retail and transport units
Handling	<ul style="list-style-type: none"> » Transport from producer to retailer » Point of sale display

Table: Functions of Packaging



4 The Principles of Sustainability

4.1 Sustainable Development

In 1987 the Brundtland Commission developed the most commonly applied definition of Sustainable Development: *“Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”* This involves addressing economic, social and environmental factors and their interdependence in an organization’s decision-making and activities.

4.2 Sustainability Claims

There is a strict ISO requirement (14021) that claims of achieving sustainability shall not be made for self-declared environmental claims.

4.3 Sustainability for Organisations

Sustainability in the corporate sector encompasses strategies and practices that aim to meet the needs of stakeholders today while seeking to protect, support and enhance the human and natural resources that will be needed in the future.

4.4 Understanding Life Cycle Thinking

Genuine environmental improvements require a **Life Cycle Thinking** approach to packaging/ product systems that covers the “consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to final disposal”. This can also be referred to as a cradle-to-grave process.

The United Nations Environmental Program has proposed that *“the purpose of life cycle thinking is to prevent piecemeal approaches and avoid problem shifting from one life cycle stage to another, from one geographic area to another, and from one environmental medium to another.”*

Life Cycle Assessment applies a rigorous quantitative process to Life Cycle Thinking and is the predominant tool used to substantiate the environmental impacts for goods and services. It involves careful compilation and evaluation of the inputs, outputs and the potential impacts of a product system throughout its life cycle.



5 How packaging can contribute to improving Sustainability

In viewing how packaging can contribute to improving sustainability there are some key principles that always need to be considered:

- » Packaging makes a valuable contribution to economic, environmental and social sustainability through protecting products, preventing waste, enabling efficient business conduct
- » It also provides consumers with easier purchasing decisions and, of course, the benefits of the products it contains
- » The fundamental role of packaging is to deliver the product to the consumer in perfect condition
- » Attempts to reduce packaging impacts should only be pursued if they maintain or reduce the impacts of the packed product
- » Because of its role in protecting the product packaging can only be properly evaluated as part of a complete product life cycle
- » Optimal performance is achieved when product and packaging are designed together from conception
- » Packaging design also needs to factor in the post-consumption disposal opportunities available in the local market
- » There is no such thing as a fundamentally good or bad packaging material: all materials have properties that may present advantages or disadvantages depending on the context within which they are used.

Products generally represent far greater resources and have a much higher inherent value than the packaging used to protect them. Thus, product losses due to underperforming packaging are likely to cause much greater adverse effects on the environment than the gains made through excessive packaging reduction. However, it is also true that across our industry

there are opportunities to optimise packaging and so increase its contribution to the overall sustainability of the packaged product.

To positively contribute to the sustainability of a product, packaging should increasingly be:

- » designed holistically with the product in order to optimise overall environmental performance
- » made from responsibly sourced materials
- » manufactured using clean production technologies
- » efficiently recoverable after use
- » sourced, manufactured, transported and recycled using renewable energy.

In addition the packaging will need to:

- » meet consumer choice and expectations
- » be beneficial, safe and healthy for individuals and communities throughout its life cycle
- » meet market criteria for performance and cost.

When these principles are respected, the impact of packaging is minimised and the benefits maximised.



6 The GPPS: Indicators and Metrics for Packaging and Sustainability

6.1 Principles

The indicators and metrics of the GPPS published in the Global Protocol on Packaging Sustainability Version 2:

- » Consider packaging in the context of the packed product and account for the complete packaging system
- » Can be used by all members of a packaging supply chain (although not all indicators and metrics are relevant for all organisations or all types of packaging and associated supply chain functions)
- » Cover the complete packaging life cycle
- » Clearly define terminology
- » Address the need to establish goals and set the measurement boundary and scope
- » Offer a common approach to enable members of a supply chain to measure the same packaging attributes and normalise the data in the same way.

6.2 Understanding Indicators & Metrics

The measurement system developed for this project is based on the use of **indicators** and **metrics**.

An **indicator** is used as a proxy for an issue or characteristic an organisation wants to measure. An indicator describes a concept and can express movement – whether positive or negative – toward a goal. Generally, an indicator focuses on a piece of a system that can provide a sense of the bigger picture. For example, the indicator “small business survival rate” provides information about the overall economic health of a region.

A metric is the method used to express an indicator. Metrics are often computational or quantitative, but can also be a qualitative assessment. Metrics are typically expressed as a numerator and a denominator, i. e., “A per B.” For example, a metric to quantify the indicator “recycled content” could be expressed as “% of total material used”.

Indicators and metrics serve distinct purposes in the measurement process. Together, indicators and metrics provide an effective means by which an organisation can understand where they are, where they are going and how much further they need to go relative to a stated goal or objective. Therefore it has become commonplace to use “metrics” to refer to an indicator and metric as a single entity.



6.3 GPPS Indicator and Metric Overview

Starting from a base of the SPC Indicators and Metrics work, a protocol for assessing the sustainability of packaging in the context of the packaged product was developed. For the first time this provides a globally agreed language for trading partners to undertake business discussions about how to implement packaging sustainability programmes.

ENVIRONMENTAL ATTRIBUTES & LIFE CYCLE INDICATORS	
ATTRIBUTES	
Packaging Weight and Optimization	Assessment and Minimization of Substances Hazardous to the Environment
Packaging to Product Weight Ratio	Production Sites Located in Areas with Conditions of Water Stress or Scarcity
Material Waste	Packaging Reuse Rate
Recycled Content	Packaging Recovery Rate
Renewable Content	Cube Utilization
Chain of Custody	
LIFE CYCLE INDICATORS – INVENTORY	
Cumulative Energy Demand	Land Use
Fresh Water Consumption	
LIFE CYCLE INDICATORS – IMPACT CATEGORIES	
Global Warming Potential	Photochemical ozone creation potential (POCP)
Ozone Depletion	Acidification Potential
Toxicity, Cancer	Aquatic Eutrophication
Toxicity, Non-Cancer	Freshwater Ecotoxicity Potential
Particulate Respiratory Effects	Non-renewable Resource Depletion
Ionizing Radiation (Human)	
ECONOMIC & SOCIAL ATTRIBUTES	
ECONOMIC	
Total Cost of Packaging	Packaged Product Wastage
SOCIAL	
Packaged Product Shelf-Life	Community Investment
CORPORATE PERFORMANCE CHECKLIST	
ENVIRONMENT	
Environmental Management System	Energy Audits
SOCIAL	
Child Labor	Freedom of Association and/or Collective Bargaining
Excessive Working Hours	Occupational Health
Responsible Workplace Practices	Discrimination
Forced or Compulsory Labor	Safety Performance Standards
Remuneration	

7 Acknowledgements

More than 70 people from a wide variety of companies have actively contributed to this project. The industry is indebted to them for their efforts.

Retailers

Asda, Carrefour, Giant Eagle, Hannaford, Harris Teeter, Kroger, Loblaw, Marks & Spencer, Metro Group, Migros, Pick'n Pay, Royal Ahold, Sam's Club, Safeway, Supervalu, Target, Tesco Stores, Wakefern Food Corporation, WalMart

Manufacturers

Beiersdorf, Campbell, Colgate-Palmolive, Conagra Foods, Danone, Freudenberg, Fritolay, General Mills, GSK, Heineken, Henkel, JM Smucker, Johnson & Johnson, KAO Corporation, Kellogg, Kimberly-Clark, Kraft Foods, L'Oréal, Mars, McCormick, Nestlé, PepsiCo, Procter & Gamble, Reckitt Benckiser, Sara Lee, SC Johnson, The Coca-Cola Company, Unilever

Packaging Converters

Amtor, Arcelor Mittal Packaging, Ball Packaging, Crown Europe, Dow Chemical, Dupont, Exxon Mobil Chemical Films, MeadWestvaco, Novelis, Owen Illinois Inc, SCA Packaging, Sealed Air Corporation, Tetrapak, Treofan

Organisations

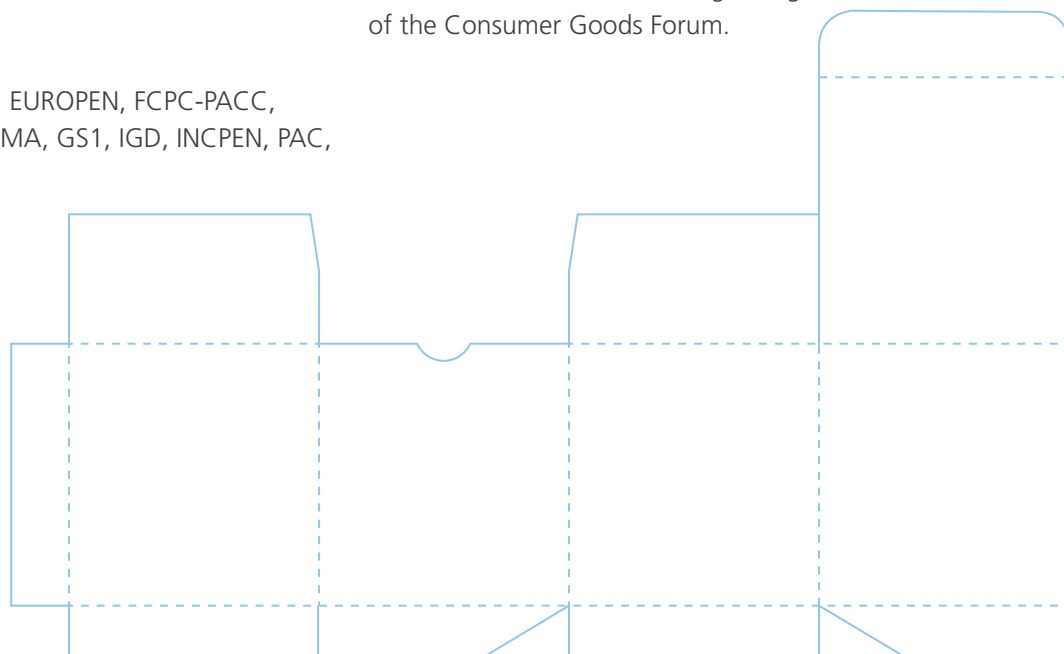
AIM, CCGD, CGF, EUROPEN, FCPC-PACC, FEVE, FPE, FMI, GMA, GS1, IGD, INCPEN, PAC, RPA, SPC

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The project was managed by Alain Galaski and Katrin Recke from AIM – the European Brands Association, and Ruediger Hagedorn of the Consumer Goods Forum.



About the Consumer Goods Forum

The Consumer Goods Forum is an independent global parity-based consumer goods network. It brings together the CEOs and senior management of over 650 retailers, manufacturers, service providers and other stakeholders across 70 countries.

The Forum was created in June 2009 by the merger of CIES - The Food Business Forum, the Global Commerce Initiative (GCI) and the Global CEO Forum. The Consumer Goods Forum is governed by its Board of Directors, which includes an equal number of manufacturer and retailer CEOs and Chairmen. Forum member companies have combined sales of €2.1 trillion.

The Forum provides a unique global platform for thought leadership, knowledge exchange and networking between retailers, manufacturers and their partners on collaborative, non-competitive issues. Its strength lies in the privileged access it offers to the key players in the sector as well as in the development and implementation of best practices along the value chain.

It has a mandate from its members to develop common positions on key strategic and practical issues affecting the consumer goods business and to focus on non-competitive collaborative process improvement.

With its headquarters in Paris and its regional offices in Washington, D.C. and Tokyo, The Consumer Goods Forum serves its members throughout the world.

Sustainability in the Consumer Goods Forum

The activities of the Consumer Goods Forum is organised into a series of strategic pillars. 'Sustainability' is one of the strategic pillars.

Sir Terry Leahy, CEO of Tesco, and Paul Polman, CEO of Unilever, sponsor the Sustainability pillar on behalf of the Board of the Consumer Goods Forum.

A Sustainability Steering Group consisting of twenty five business leaders from across the Forum companies lead the activities within the pillar on behalf of the sponsors.



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