

Establish highest obtainable objectives &
sustainability plans for the industry

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1. Introduction

Packaging Agreement 2013-2022

In the Packaging Agreement 2013-2022 (Packaging Agreement) is agreed that industries should develop plans to ensure the sustainability of the packaging chain. The Packaging Agreement is the agreement between the national government, the municipalities, and the producers and importers of packaged products, on the implementation of the Packaging Decree. The Packaging Decree is based on the EU directive on packaging.

Article 4 of the Packaging Agreement, under the heading Knowledge Institute, states:

4.3 This institute conducts studies and determines in 2013 the highest obtainable objectives for 2018 and in will determine these in 2018 for 2022.

This agreement is elaborated in the addendum of the Packaging Agreement in article 1.2 under the heading prevention plans:

As of 2013 all relevant industries must develop a prevention plan for 2018 to obtain sustainability for the existing product/packaging combinations in the industry. In 2018 they must develop a similar plan for 2022. The starting point are the highest obtainable goals. These will be determined by the Knowledge Institute and are a part of the agenda for sustainability (article 4(3) in conjunction with article 3(1) of the Packaging Agreement). The relevant industries will be determined by the Knowledge Institute Sustainable Packaging (KIDV) based on the industries with the most potential.

The prevention plan is based on an analysis that will take place in the first year. A still to be developed methodology will be applied, which will be determined by the Knowledge Institute (1st half of 2013). Based on this methodology a number of best performing companies of each industry will be analyzed. Dependent on the outcome of the analysis, the highest obtainable objectives per industry will be determined. The path to be followed to accomplish our objectives and our goals, will be specified in the prevention plan (...).

Further into the text the following is specified:

A prevention plan contains the following components:

- *packaging with improved recyclability;*
- *packaging with a higher ratio of recycled material;*
- *refill packaging;*
- *packaging that requires less raw materials (lighter packaging)*
- *packaging of products which contains less water or air;*
- *packaging that extends the shelf life of the product;*
- *packaging that prevents product spoilage, damage or spillage;*
- *packaging which causes less pollution by littering.*

Procedure

In summary the approach of the KIDV is as follows:

- the industries will develop sustainability plans for the industry and based on the data and insights of exemplary companies will determine the highest obtainable objectives for the industry;
- companies and industries can utilize the methodology which has been developed by the KIDV;
- in the approach used by the KIDV, the highest obtainable objectives are logically based on the leading companies in the industry, resulting in a stimulus for the sustainability of the entire industry; the share of front-runners in the population of companies should play a prominent role;
- the KIDV reviews the highest obtainable objectives for each industry and determines these objectives;
- upon request the KIDV will support the leading companies on their further steps, such as research.

Time involved in the development of the methodology

Because of the complexity of the matter the KIDV has asked the University of Twente to develop a methodology. Hence a new way of working is defined, wherein the search for a robust knowledge will be created together with knowledge partners. The methodology was completed at the end of 2013 and was converted into a questionnaire in the first half of 2014. As this is a new approach which applies to all industries and whereby the connection with existing systems was needed (as for example the Essential Requirements of the Packaging Decree), the determining of the methodology for the highest obtainable objectives has taken longer than anticipated in the Packaging Agreement.

Information on the methodology

Industries and companies can use the methodology and questionnaire when determining the highest obtainable objectives- based on performances and ambitions of the front-runners-for their sustainability plans for the industry. In practical terms the sustainability plans for the industry should be developed based on those product/packaging combinations, where considerable environmental benefit is expected, or which will lead to a serious reduction in environmental impact.

Questionnaire version 1.0 & development of a web tool

Version 1.0 of the questionnaire is a Word- document which can be filled out. The KIDV has converted the questionnaire into a web tool which is available in Dutch. This is a digital automated version which is easier to fill out online by industries and companies. Based on the practical experience gained with this new process, updates are expected in the future. These will be processed and converted in the next versions of the web tool.

Essential Requirements and highest obtainable goals (HHD)

The methodology can also assist companies in fulfilling their obligation to comply with the Essential Requirements of the Packaging Decree as shown in the following figure.

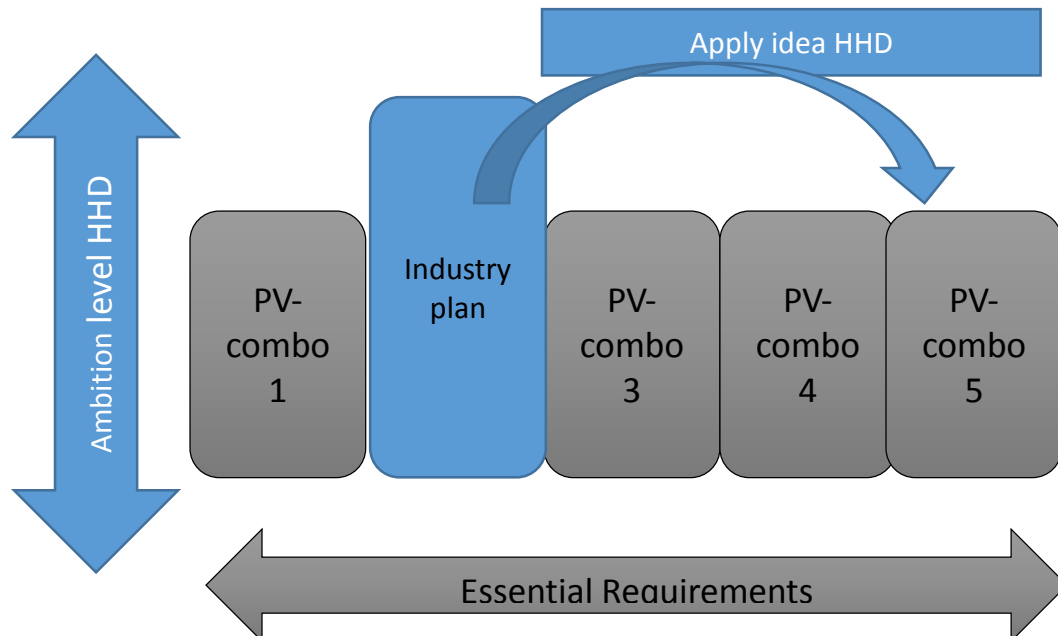


Figure 1. Relationship between the Essential Requirements, sustainability plan for the industry (BVP), product/packaging combinations (PV-combo) and highest obtainable goals (HHD) resulting in continuous sustainability of packaging.

Starting points highest obtainable objectives and sustainability plans for industries

Contribution to the reduction of the environmental impact

The highest obtainable objectives for the sustainability of packaging must be formulated in order to contribute to the reduction of the environmental pressure of the product/packaging combinations. The reduction is a continuous process for which milestones will be defined for 2018 and for 2022.

SMART-formulated

The highest obtainable objectives must be defined SMART (specific, measurable, acceptable, realistic and time-bound), so that they provide focus on the efforts of companies and industries and contribute to achieving the objectives.

Leading performance front-runners

In the vision of the KIDV front-runners will deliver the best performance for sustainability of packaging, assuming that these companies continuously take innovative steps and make choices based on a recognized method for analyzing the Life Cycle Assessment (LCA). For that reason the achievements and ambitions of the front-runners in the industry will have a leading role when determining the highest obtainable objectives. Based on the information of the front-runners the industry will bring forward proposals for the highest obtainable objectives. The KIDV will review them and subsequently determine them.

Assessment framework

The assessment framework of the sustainability plans for the industries is still being developed and will be drawn up based on the starting points of the Packaging Agreement, as described in article 3(2).

Re-duce, re-use, re-cycle and re-view.

The highest obtainable objectives will be compiled and determined from the following perspectives:

- re-duce: prevent wastage of materials and more economical use of raw materials;
- re-use: increasing the percentage of reused packaging materials;
- re-cycle: recovery of packaging materials;
- re-new: using new materials with reduced environmental pressure.

In applying these perspectives it should be taken into concern: that there can be no such thing as one-dimensional conduct, because there can be areas of tension between the different perspectives. Furthermore, that reducing the environmental impact is one of the perspectives: that other relevant aspects are affordability, food safety, raw materials scarcity and technology.

Focus

At the present moment the focus is on the product/packaging combinations where important gains can be expected. The result of the assessment framework could be that industries will start working thematically and that in consecutive years certain themes might receive considerable wider attention.

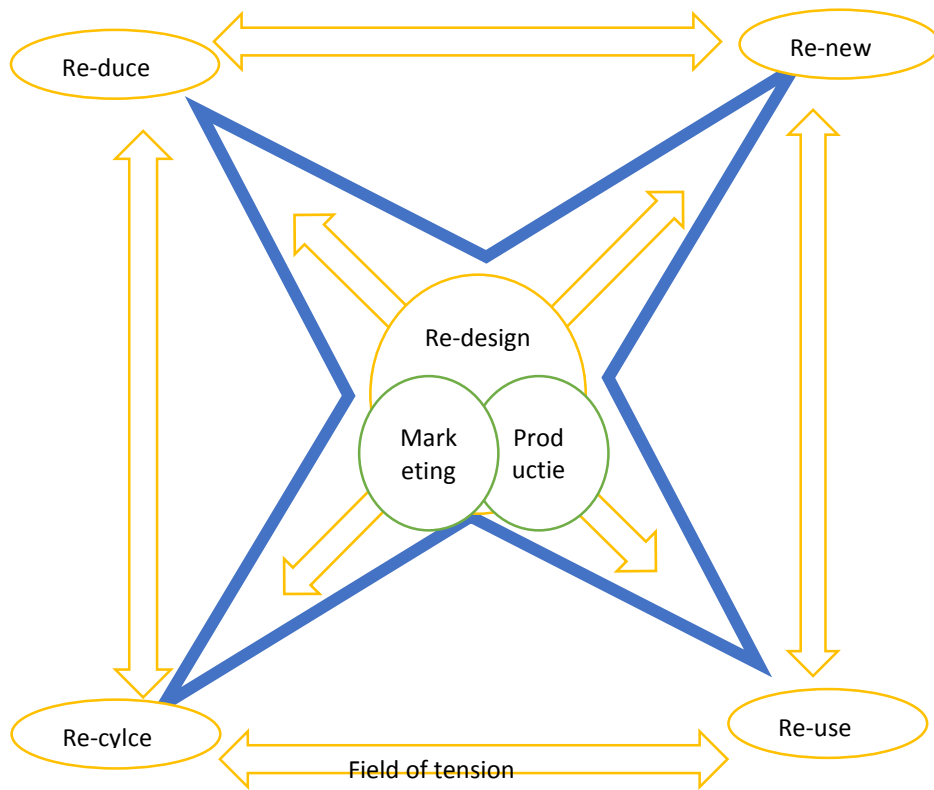


Figure 2 Tension between the different perspectives

2. How does the establishment of the highest obtainable objectives and the sustainability plans for industries work?

The process for establishing the highest obtainable objectives and the sustainability plans for the industry consists of the following steps:

| Process steps | Activities | Who | Methodology/webtool | | | | | | | | | | | | | | |
|--------------------------------|---|---|------------------------------------|----------------------|--|----------|--|--------------------|---|--------------------------------|---|------------------------|--|--------------|---|------------|------------------|
| 1 | Of all the standard product/packaging combinations select the product/packaging combination with which great strides are expected to be made. Make the selection based on the information of the front-runners, the laggards, and the attention seekers. | Industry in consultation with companies | Module 1 A to 1C | | | | | | | | | | | | | | |
| 2 | Use the methodology to select the relevant topics through which most gain can be achieved for the product/packaging combinations in the industry. The themes are: <table border="1" data-bbox="318 772 1088 1507"> <thead> <tr> <th>TOPIC</th> <th>PACKAGING AGREEMENT</th> </tr> </thead> <tbody> <tr> <td>Hazardous substances</td> <td></td> </tr> <tr> <td>Recovery</td> <td>Packaging with improved recyclability. Packaging with an increased proportion of recycled material.</td> </tr> <tr> <td>Product Protection</td> <td>Packaging that extends the shelf life of the product. Packaging that prevents product waste, damage or loss.</td> </tr> <tr> <td>Loss of packaging in the chain</td> <td>Packaging that prevents product waste, damage or loss. Packaging that results in less pollution through littering.</td> </tr> <tr> <td>Packaging optimization</td> <td>Refill packaging, Packaging that contains less water or air. Packaging that requires less raw materials (lighter packaging).</td> </tr> <tr> <td>Raw material</td> <td>Packaging that contains less water or air. Packaging that requires less raw materials (lighter packaging).</td> </tr> </tbody> </table> | TOPIC | PACKAGING AGREEMENT | Hazardous substances | | Recovery | Packaging with improved recyclability. Packaging with an increased proportion of recycled material. | Product Protection | Packaging that extends the shelf life of the product. Packaging that prevents product waste, damage or loss. | Loss of packaging in the chain | Packaging that prevents product waste, damage or loss. Packaging that results in less pollution through littering. | Packaging optimization | Refill packaging, Packaging that contains less water or air. Packaging that requires less raw materials (lighter packaging). | Raw material | Packaging that contains less water or air. Packaging that requires less raw materials (lighter packaging). | Industries | Module 1 A to 1C |
| TOPIC | PACKAGING AGREEMENT | | | | | | | | | | | | | | | | |
| Hazardous substances | | | | | | | | | | | | | | | | | |
| Recovery | Packaging with improved recyclability. Packaging with an increased proportion of recycled material. | | | | | | | | | | | | | | | | |
| Product Protection | Packaging that extends the shelf life of the product. Packaging that prevents product waste, damage or loss. | | | | | | | | | | | | | | | | |
| Loss of packaging in the chain | Packaging that prevents product waste, damage or loss. Packaging that results in less pollution through littering. | | | | | | | | | | | | | | | | |
| Packaging optimization | Refill packaging, Packaging that contains less water or air. Packaging that requires less raw materials (lighter packaging). | | | | | | | | | | | | | | | | |
| Raw material | Packaging that contains less water or air. Packaging that requires less raw materials (lighter packaging). | | | | | | | | | | | | | | | | |
| 3 | Regarding the selected product/packaging combination: analyze the activities which have been undertaken in the past with regard to the sustainability of packaging, analyze the present situation, chart the future opportunities and determine the highest obtainable objectives for 2018. | Companies | Module 2A to 2H | | | | | | | | | | | | | | |
| 4 | Based on the analysis of the performances of the companies, the industry will determine the highest obtainable objectives for the entire industry in 2018. | Industries | Based on Results of Module 1 and 2 | | | | | | | | | | | | | | |

After the establishment of the highest obtainable objectives for 2018 follow the steps below:

| Process steps | Activities | Who |
|---------------|---|--------------------------------|
| 5 | The industries present the highest obtainable objectives to the KIDV. The KIDV reviews the highest obtainable objectives, may or may not modify them, and then determines the highest obtainable objectives for the industries. | KIDV |
| 6 | Industries draw up sustainability plans for the industry, in order to realize these objectives in the period between 2015-2018. | Industries |
| 7 | The KIDV presents the results (highest obtainable objectives) to the State Secretary for Infrastructure and the Environment. | KIDV |
| 8 | The companies implement the sustainability plans for the industry, the industries monitor the progress made and the KIDV ensures the qualitative monitoring of the progress made. | Companies, Industries and KIDV |
| 9 | The industries report to the KIDV when the objectives have been achieved (per 1 January 2018). | Industries and KIDV |

In 2017 the above described process will restart, enabling the KIDV to determine the highest obtainable objectives for 2022. The process is visually displayed on the next page.

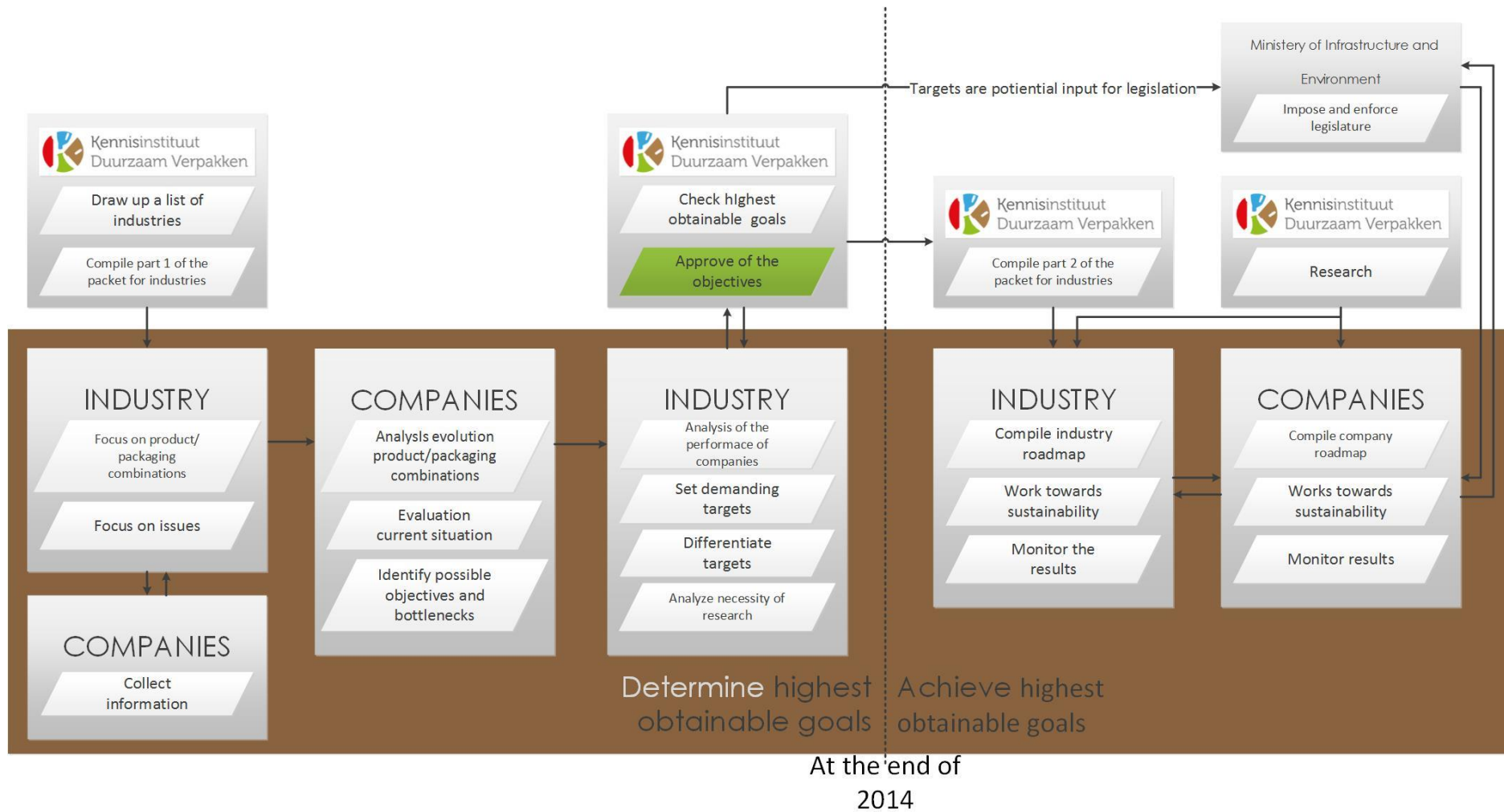


Figure 3 Roadmap sustainability plans for the industry (source: University of Twente, Packaging, Design and Management)

3. How do industries and companies implement the methodology?

The end result of the application of the methodology for the sustainability plans for the industry (step 1 to 5 of the previously mentioned process) are the highest obtainable goals (linked to a theme) for 2018 for the sustainability of product/packaging combinations in a specific industry; it concerns the combinations of steps with which significant progress is expected to be made. These objectives are specific, measurable, acceptable, realistic and time-bound (SMART).

The highest obtainable goals may apply to all sorts of packaging, such as consumer packaging, secondary packaging, transportation packaging, pallets, trolleys et cetera.

Examples of highest obtainable objectives are:

- 20% recycled material in our packaging of product x;
- 10% weight reduction in our packaging of product y;
- et cetera.

Start working with the methodology and the questionnaire

If companies and industries wish to use this methodology in order to reach the highest obtainable objectives, they must complete a number of modules with questions. In any case, the industries must develop a sustainability plan for the industry specifying the highest obtainable objectives.

The questionnaire consists of two modules.

- Module 1 will be completed by the industries in step 1 and 2 of the process. In consultation with companies product/packaging combinations and themes will be selected.
- Module 2 (2A-2H) is to be completed by the companies. Module 2A and B should always be completed. Module 2A contains questions concerning the policy of the company in regard to packaging. Module 2B: the company fills out more details concerning the product/packaging combination. This information will consequently be used as a basis for the remaining modules. One or more modules 2C to 2H must be completed if the industry stated in module 1 that these themes are relevant.

The themes 2C to 2H

- Module 2C Raw Material: determine objectives with concern to the origin of the applied materials in the packaging.
- Module 2D Recovery: determine objectives to accomplish a better reuse and recycling of the packaging.
- Module 2E Hazardous substances: set targets regarding the reduction of the quantity of hazardous substances in the packaging material.
- Module 2F: determine objectives regarding the failure of packaging in the entire supply chain.
- Module 2G Product Protection: determine objectives regarding the function of the packaging for the protection of the product
- Module 2H Package Optimization: determine objectives regarding the quantity of material used in the packaging.

The modules 2C to 2H consistently have the same structure:

- questions concerning activities undertaken in the past concerning the sustainability of packaging;
- questions concerning the current situation;
- questions concerning future possibilities;
- questions concerning the highest obtainable objectives for the future.

After implementing the methodology

After filling out modules 2A to 2H step 3 of the total process is completed. Step 4 comprises that the industries, based on the determination by each company of the highest obtainable objectives, establish the highest obtainable objectives for their specific industries.

In steps 5 to 9 the industries present these objectives to the KIDV. The KIDV reviews if these are the highest obtainable objectives, may or may not modify them and determines highest obtainable objectives. After the objectives have been determined by the KIDV, the industries draw up sustainability plans for the industry in order to actually achieve these goals in 2018.

4. Roles and responsibilities

For companies, industries are the main contact for the sustainability plans. They know their sectors best and therefore can- together with their members- best establish which product/package combinations will make significant progress with concern to making packaging (further) sustainable. The methodology is developed and designed to help with this process.

The use of the methodology is not mandatory when determining the highest obtainable objectives and the sustainability plans for the industry. Industries can also establish their highest obtainable objectives in an alternative way. In that case the KIDV reviews these objectives as well and consequently determines them. Subsequently the KIDV ensures the qualitative monitoring of the progress of the sustainability plans for the industry.

Roles of companies

Companies know best what is or is not possible with regards to their product/package combinations. They also know what has been achieved in the past, and therefore know which significant steps are feasible. Their input is crucial in regards to achieving the highest obtainable objectives.

Legal basis

The company is individually responsible to comply with the Essential Requirements of the Packaging Decree. The approach based on the sustainability plans for the industry will help companies to comply (based on their input and the input of other companies in their industry) with the requirements by determining the highest obtainable goals for a specific product/package combination. Companies can also use the way of thinking and acting in accordance with the methodology for the implementation of other product/package combinations to at least comply with the Essential Requirements.

Role of the KIDV

The KIDV supports industries with the methodology for establishing the highest obtainable objectives and sustainability plans for the industry. Upon request the KIDV also supports the industries with information and knowledge during the process.

The KIDV compiles an assessment framework in consultation with scientific institutions. The KIDV reviews the highest obtainable objectives, may or may not modify them and then determines the goals and ensures the qualitative monitoring of the progress of the sustainability plans of the industry.

Role of the government

The KIDV provides information about the highest obtainable objectives of the industries and the (progress of the) sustainability plans for the industry to the State Secretary for Infrastructure and the Environment. Based on this information the State Secretary determines if sufficient progress has been achieved. If necessary, the State Secretary will, in accordance with the Packaging Agreement, decide on additional regulation and legislation.

Based on the Packaging Decree the Environmental and Transport Inspectorate (ILT) maintains the Essential Requirements for individual companies.