



# THE **PUMA** MANIFESTO

working together to the end of packaging as  
an environmental issue worldwide





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## WHAT IS PUMA?

PUMA is the collective effort of the packaging business community to end packaging as an environmental issue worldwide.

## WHAT IS PACKAGING?

Packaging is the activity of temporarily integrating an external function and a product to enable the use of the product.



*Waste essentially is an unwanted by-product of a (manufacturing) process*



## WHAT IS NVC?

NVC Netherlands Packaging Centre was established in 1953 to stimulate the knowledge and expertise in packaging. Since then, we have grown into an association with over 500 member companies in the Netherlands and abroad. The packing-filling (FMCG) industry, packaging manufacturers, retailers, manufacturers of packaging machines, wholesalers, recyclers, designers, even a number of financial institutions: they all are members of the large and vital NVC business family. The NVC membership, innovation projects (like PUMA), information services and education programme stimulate the continuous improvement of packaging worldwide.

## WHEN IS PACKAGING AN ENVIRONMENTAL ISSUE?

Environmental issues are harmful effects of human activity on the biophysical environment. Waste essentially is an unwanted by-product of a (manufacturing) process. The activity of packaging creates environmental issues when the resources involved, either wanted or unwanted ('waste'), constitute an environmental issue.



*Environmental (planetary) problems caused by us, People, can – and will – also be solved by us, People*



## WHY DO WE HAVE TO ACT NOW?

Packaging has been with mankind already since ancient times in some moderate form, but the 20<sup>th</sup> century has brought a dramatic acceleration. The world 'does it' now at least 320,000 times per second and this is causing substantial environmental concerns. Packaging will only keep it's societal licence to operate if these concerns are properly addressed.

## ABOUT THE MANIFESTO

This Manifesto outlines the way forward to end packaging as an environmental issue worldwide. It consists of the PUMA Model to describe the essentials of the packaging activity and its relation with the resources involved. A conceptual roadmap is presented to be applied by every individual actor and the world packaging community as a whole in a self-organising manner. Key elements are open-minded sharing of reliable information, continuous knowledge development and truly holistic innovation. Environmental planetary problems caused by us, People can – and will - also be solved by us, People.



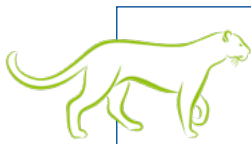
*Packaging will only keep it's societal licence to operate if the environmental concerns are properly addressed*



# THE PUMA MODEL

## THE VOCABULARY

First, PUMA defines the activity of packaging: temporarily integrating an external function and a product to enable the use of the product. There is no Law prescribing that we must do it (packaging). For instance in recorded music, streaming services like Spotify show that we can live without. If we decide to engage in the activity of packaging, the pack-use-empty (verb) spiral P-U-E is a consequence. This results in emptied packs later in time and at a different location. Waste is defined as an un-wanted effect of a (human) activity. Consequently a collect-control step must be built-in, followed by a postulated backend (BE) process step. Mirror-wise, a frontend (FE) step is required to obtain the necessary packaging materials. Philosophically and thermodynamically and in terms of information science, the situation at the backend is fundamentally different from that at the frontend. Both processes may be described in terms of converting, though.

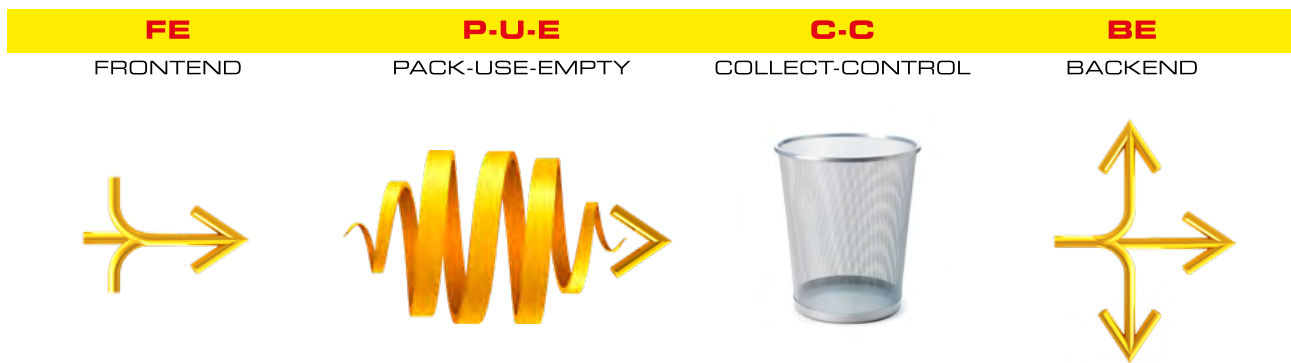


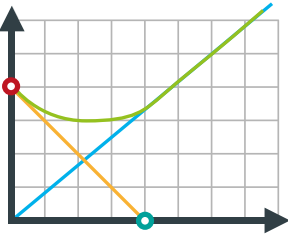
*Holistic innovation is needed as we all interconnected in packaging*



## ADDRESSING THE ENVIRONMENTAL ISSUES

Environmental issues may come and go, depending on the many different interactions between our human activity and planet earth. Whereas the PUMA model remains unchanged, its application to environmental issues may vary in the course of time. In this first edition of the PUMA Manifesto we focus on litter, CO<sub>2</sub> and (inadequate) pack optimisation. These three issues are deemed to be the most important in the current environmental packaging debate. The resulting table serves as the basis for addressing (future) environmental issues adequately.



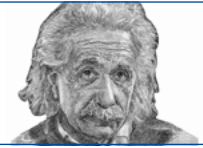
	FE	P-U-E	C-C	BE
Litter			✓	
CO <sub>2</sub>	✓			✓
Inadequate pack optimisation <div style="text-align: center;"> <span style="color: red;">Product</span>  <span style="color: blue;">Packaging material</span> +  <span style="color: green;">Total environmental impact</span> </div>				
Future issues	✓	✓	✓	✓



# SUPPORTING PUMA



*Success comes from deeper understanding and supplementing earlier insights*



## I SUPPORT THE PUMA MANIFESTO AND HEREBY PLEDGE TO:

- ✓ Reference the PUMA Model as an insightful source to address the activity of packaging worldwide
- ✓ Apply the vocabulary as used in the PUMA Model and positively contribute to possible improvements
- ✓ Contribute to the PUMA annual plenary meetings to the best of my capabilities
- ✓ Make my decisions and base my opinions on the state-of-the-art in packaging (i.e. on reliable, verifiable and up-to-date information) and using all information and knowledge that is brought to my attention
- ✓ Stimulate continuous education and training of those with a responsibility within the activity of packaging
- ✓ Contribute to helping facilitate all phases of PUMA (FE, P-U-E, C-C, BE)



*Everything flows and so does the activity of packaging; we can put a clock back, but not the time*



## MY DETAILS:

Company name

Initials and surname

Date of birth

Address

Phone

E-mail

**For an overview of recent references and background information worldwide please visit [www.nvc.nl/puma](http://www.nvc.nl/puma)**

*Sharing the future in packaging*

☎ +31-(0)182-512411

✉ Mail your completed manifest to: [info@nvc.nl](mailto:info@nvc.nl)

