

### Life Cycle Assessment and Ecodesign at Nestlé

Urs Schenker, Nestlé Research Center, Lausanne





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## **The Nestlé Story**



- 449 factories in 83 countries
- 10'000 different products, 2'500 brands
- Sales of 107.6 billion in 2009



#### The Nestlé Environmental Sustainability Policy promotes a life cycle approach





During the manufacturing and distribution of our products, we use efficient technologies and apply best practices to:

 reduce the amount of energy consumed per kilo of product;

 utilise sustainably-managed renewable energy sources, where economically viable; control and aim to eliminate emissions,

including greenhouse gases; - recycle or recover energy from by-products.

The packaging of our products is critical to guarantee our high quality standards, to prevent food waste and to inform consumers. We strive to:

reduce weight and volume of materials: lead the development and use of materials from sustainably-managed renewable resources;

- support initiatives to recycle or recover energy from used packaging: - use recycled materials.

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# Conventional LCA allows 3<sup>rd</sup> party communication & claims, but is costly & time consuming



- LCA for a new NaturNes baby food packaging<sup>1)</sup>
  - Replaces glass by plastic + new preservation process (aseptic fill)
  - Uncertainty & sensitivity assessment, peer review
  - Long and costly process

 Claim for lower CO<sub>2</sub> emissions and energy consumption

1) Humbert et al, 2009, Int J LCA 14, 95-106



#### Un bol pratique respectant l'environnement



## Ecodesign delivers results much faster than conventional LCA





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# **PIQET** allows streamlined LCA on every packaging innovation & renovation project

- Web-based interface to SimaPro
- Adapted to food and beverage packaging development
  - User interface adapted to use by non-experts
  - Short turn around time (approximately 30 minutes with data available for experienced user)
  - Contains simplifications and assumptions relevant only to the food sector
- Further information:
  - <u>http://www.sustainablepack.org/</u>
  - leanne@birubi.com.au



Good Food, Good Life

**lestlé** 





## PIQET allows us to answer the most important questions of ecodesign



- Evaluation of trade-offs between impact categories
- Scenario comparison
- Packaging life cycle improvement analysis



- Comprehensive set of LCIA indicators available
  - Different geographic areas focus on different issues (water, waste)
  - Different indicators are relevant for different materials (e.g. bioplastics vs. aluminium)

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Packaging serves to protect

the food it contains

 Packaging only represent a small share of total impacts





Ecodesign only on packaging fails to identify opportunities to reduce environmental impacts



### **Requirements for a product ecodesign tool:**



Harmonized LCA Methodology (ISO 14'000ff, EU Food SCP Rt, Sustainability Consortium)

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## Nestlé is partnering with Selerant to develop a product ecodesign tool







- An established provider of product lifecycle management solutions for manufacturing based industry
- DevEX tool used at Nestlé previously to support recipe management, in particular regulatory compliance





# Nestlé contributes to harmonized guidelines for LCA in the food industry

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- See separate presentation on the EU Food Sustainable Consumption and Production Roundtable (D. Pennington)
  - Methodological alignment for food sector

 "A global Languange for Packaging and Sustainability " Report (June 2010)

- Sustainability Consortium in the US
  - Global alignment of approach and methods



European Food Sustainable Consumption and Production Round Table



