Implementing an eco-design process in major food manufacturing companies

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About Selerant

Software company specializing in
- Product Lifecycle Management software
- Environmental, Health & Safety software

Industry served
- Food & Beverages
- Chemicals
- Flavors & Fragrances
- Household goods & Personal Care
- Specialty Ingredients

Global presence
- Europe, North America, China, India
- Founded in 1990
Customers Include:

- McCormick
- Nestle
- PUIG
- Brown-Forman
- Hillshire Brands
- Welch's
- Wrigley
- Cosmo
- Abbott Nutrition
- Sherwin Williams
- Stegeman
- DM
- Lee Kum Kee
- Barilla
- Ashland Specialty Ingredients
- COFCO
- Intercos
- Bauli
- Boulder Brands
- Bacardi
- Colgate-Palmolive
Conventional LCA shortcomings

- Standard LCA is a time-consuming and expensive process
- Not enough freedom of choice during the project
- No room for "what-if" option
A lesson from a pioneer

*Il semble que la perfection soit atteinte non quand il n'y a plus rien à ajouter, mais quand il n'y a plus rien à retrancher.*

Antoine de Saint-Exupéry
*(Terre des Hommes, 1939)*
• Needs of a major food manufacturing company

• Simplified Eco-Design LCA methodology
• Usage by non-LCA experts - requires guidance
• Transparent, credible and independent data and methodology
• Fact-based decision making leading to product improvement
• Discussion with suppliers and customers

Valid and credible communication
Required features

- System linked to SAP (or other PLM used)
- Usage of ecoinvent (or other peer-reviewed) data
- ISO 14040-14044 certified methodology
- Ease of usage
- Support for „What-if“ analysis
- Rapid view analysis
- Multi-language support
**Predefined set of steps**

- Easier to understand
- Easier to gather data
- Simplifies data entering
- Full food product and packaging only scenarios
- Cradle-to-grave analysis
Pain points to be solved in the process

- Reduce possible number of data errors by usage of previously verified data
  - Link the LCA software to company PLM system
  - Use LCI profiles from the peer-reviewed databases
  - Use the known statistics as default data
  - Reuse the scenarios - make new ones as copies of existing ones
- Make the assessment fast enough to be competitive
- All possible security issues must be foreseen
Pain points to be solved in the process

- Non-expert users must be guided
  - Wizard-like software
  - Help available everywhere
- Nobody wants to work with slow and uncomfortable software
  - Good design reduces the impact of fatigue
- Control the input
The Times They Are a-Changin'

- Customers are getting interested in the environmental footprint of the product
- Smaller companies also need LCA
- Dedicated infrastructure is expensive
- Limited palette of products - no need for big PLM

Software as a service (SaaS)
Mitigating the lack of PLM

- Recipes creation and import must be performed in an appropriate and controllable way
- Excel template - simple and effective way of data distribution
Attractive and comprehensive final results display

- When negative values are present, diamond marks the total sum
- User can choose between relative and absolute values
- Tabs can be moved, resized, shown, hidden...
- Click on a chart provides detailed result for the selected step
Getting better results with scenario comparison

- Scenario comparison reduces the impact of simplification
- Some data can be omitted if equal on both sides
**What next?**

- Align the methodology with legislation and business associations guidance
  - Credibility
- Peer-reviewing of the LCI data and LCIA methods
  - Reusability
- Detailed documentation of the gaps between the eco-design assessment and a full LCA
  - Simplify moving towards full LCA
Any questions?

• Thank you for your attention!
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