



Electronics: Packaging Paxpring B.V.



Paxpring B.V. designs and delivers complete packaging solutions, frequently for customers from the information and communication technology sector. Among others, Paxpring (www.paxpring.com) is used to working with brand name companies such as Blackberry and Microsoft.



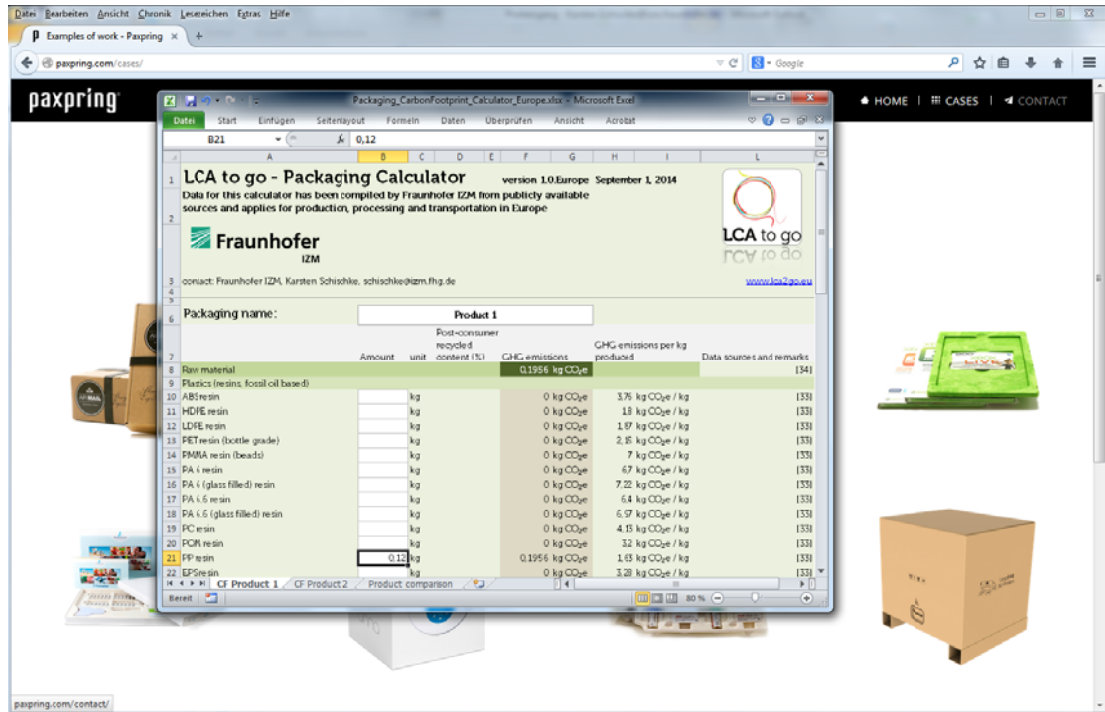
Besides costs and design, it is increasingly the environmental performance of a packaging solution, which matters for Paxpring's clients when it comes to deciding for a packaging design option. Actually, Paxpring observes the trend, that more and more companies ask for LCA evidence, but have got only a limited understanding what Life Cycle Assessments actually are and what the results might tell you. Therefore Paxpring also anticipates a kind of educational role to familiarise clients with the LCA background of packaging design. Paxpring's Joost van AnDEL was searching for an easy to use tool to calculate carbon footprints of packaging, when he was referred to "LCA to go" by a business contact from a sustainability consultancy in the Netherlands and checked out the webtool for electronics products. With this tool electronics products can be

assessed thoroughly, but as the packaging is less relevant for the whole life cycle of most electronics products, this part of the life cycle is addressed only weakly by the tool – not enough for a company, for which packaging is the core business: A distinction of several paper and plastics options is needed, preferably also considering recycled content.

At this point of time Karsten Schischke of Fraunhofer IZM got in contact with Joost to explore the possibility to support Paxpring with some lean LCA approach. Actually the same philosophy, which is embedded in the "LCA to go" tools – focus on the main issues and don't get lost in too much detail -, can be easily transferred to a less complex sector, such as product packaging. Within a few days the team of "LCA to go" developed a Carbon Footprint calculator for packaging from publicly available sources, checking in particular that these datasets are based on similar methodological approaches for both, paper and polymer



materials. Calculations with the excel based tool are now straight-forward, so the carbon footprint can be calculated almost in “realtime” as designs are refined. Joost phrased it in his first feedback as follows: “We have now done our first trial run with your absolutely beautiful calculator. Also it works really well and is easy to understand.”



But this is not only about juggling CO₂ figures. In the course of explaining the background of the calculator and the challenges to set something up like this for packaging products methodological issues have been identified and discussed: Including the end-of-life of packaging might change the whole carbon footprint as landfilling and decomposing of paper products might release methane, a greenhouse gas much worse than CO₂. Here a distinction of the target market might matter: In the US there is still much more landfilling than in Europe, where recycling and incineration is dominating. Consequently, a paper based package might be the environmentally better option in Europe, but not for the US market. Another lesson learnt from looking into LCA data of paper packaging: Recycling is a good thing to do, definitely, but for paper products the carbon footprint of recycled paper is only slightly lower than that of primary material.

Assessing with the Carbon Footprint calculator the various packaging options compared to the current design of a small plastic sleeve gave a clear indication, that the option of a bleached or unbleached corrugated board alternative yields a similar carbon footprint, a mixed corrugated board / plastic foil option comes with a significantly higher carbon footprint and a folded cardboard package with a significantly lower one. In this sense, the calculator provides good indications, how the individual options can be ranked environmentally.

After presenting the design concepts along with the carbon footprint results to one of the clients, Joost enthusiastically reported back, how the complementary LCA results contributed to a really successful concept presentation: “Our customer was really impressed!”