

Case study No. #4, Industrial Sector: Electronics Kimball Electronics Poland (Poland)



The Kimball Electronics Poland is a member of Kimball Electronics Group. The Kimball Electronics Poland designs and produces high quality

electronic products on behalf of clients from the automotive and industrial sectors as well as medical apparatus and devices.

Mr Jakub Kielczewski from Kimball Electronics Poland had the opportunity to take part in the workshop organized by ITR in Poznan concerning Life Cycle Assessment of products from PCB and Electronics sectors as well as in the presentation and tests of the "LCA to go" tool. Remotely he discussed also about the tool with project leader ITR. The main conclusions from case studies were presented below.

Assessed product "Test product 01" for Electronic sector from this case study was not a specific product manufactured by Kimball Electronics Poland Company. Due to non-disclosure agreements with customers it was not allowed to present any design or photos of manufactured product. Assessed product was only a typical example of a device that could be produced in the factory.

Based on obtained results during case study Mr Kielczewski gave the following opinions and observations:

- The navigation of the tool is practical and does not take too much time to get known with it.
- The results of the "LCA to go" tool are beyond the current needs of the company. Business profile is limited to only one aspect of the product life cycle production and do not include issues related to the later usage of the final product or recycling. However, the tool can be used to assess what is the impact of the production of the product concerned on the total Carbon footprint in the life cycle.
- Results showed that manufacturing in our company has relatively low impact on the total Carbon footprint these results surprised me.
- Our company at the moments is not designing products by its own, therefore it is low chance, that it will result in changes in the products. It is more likely to improve the production processes.
- The tool might be used for marketing purposes, if there will be a request from our customers to present Carbon footprint indicators.
- Lack of requests from customers for such analyses and also not very clear vision how production indicators like production scrap rate have impact on the Carbon footprint influences on the use of tool in the future.
- Taking into consideration profile of the company the toll should allow to choose more types of components (PCBs, capacitors, resistors, typical ICs, connectors and chemicals used in electronics – solder paste, conformal coating, etc.) used to manufacture electronic devices in data entry sheet. This would allow to create more detailed reports and assessments of carbon footprint for manufactured devices.



- Also the technology impact for manufacturing certain product would be interesting – for example how amount of used energy or other media effect in Carbon footprint result. This might help to assess impact of the manufacturing process and might be one of the factors to decide which machines should be chosen in future production line development to decrease Carbon footprint.
- Similarly scrap rate of materials used in manufacturing process could be included in the Carbon footprint results. And how decreasing of scrap rate improves the result.

Carbon fo	otprint (kg CO ₂ -eq)								
	TOTAL MANUFACTURING Printed Circuit Board Assem DISTRIBUTION USE	0% 0% 26%				120% 73%			
	END-OF-LIFE	0%	20	30 40	50	60	70 80	90	100
Carbon fo	otprint - Production (%)				_				
	Processor(87.36 %)						– Housing ar ∼ Display(1.6	nd internal 14 %)	structural elements(1.9 %)
Carbon fo	otprint - Use (%)								
	Power short idle(73.68 %) —						– Replaceme – Power long	rnt(0.0 %)) idle(26.32	2 %)

Fig.1. Some results from case study.