



Piotr Syryczyk Technical Manager in NCAB Polska Sp. z o.o.

The company NCAB Polska Sp. z o.o. specializes in PCB manufacturing, in factories located in China. NCAB Polska produces short term and QTA products in factories in Western Europe as well. It is a small enterprise and operates mainly on the Polish market.

The company NCAB Polska Sp. z o.o. supported by project leaders ITR had the opportunity to take part in the discussion and mentoring, during a site visit in the company, concerning Life Cycle Assessment of products for PCB sector and to check practical possibility of the tool offering by the "LCA to go" project. The "LCA to go" tool was used for the product assessment marked NCAB PL6WW1538. It was chosen the standard version of the tool.



The product used for assessment.

During case studies several opinions and conclusions regarding "LCA to go" for PCB sector were identified:

- 1. **Navigation**: The navigation of the website looks simple and easy to read. NCAB focus on PCB manufacturing process and the data input for most important factors is very easy. We need to remember only to use the area of single PCB, not whole manufacturing batch.
- 2. **Usefulness for business**: Definitely yes. We made a simulation for the 6 layer PCB in volume production about 5000 pcs. Very often is switching the ways of delivery from the AIR to SEA transport. NCAB has own targets regarding environmental policy and the tool is useful to achieve this goals.
- 3. Improvement the environmental efficiency of products and company: For all our factories, the main goal is to reduce water pollution from PCB manufacturing. We Ensure all our main factories comply with the local authority's production water discharge standard. Therefore the enclosed in reports from the "LCA to go" tool information about water consumption are very interesting for us but we need to refer this result to different types of factories, different technical capabilities and different volumes. We need to use sophisticated version of the tool for these study.
- 4. Results that surprised us: In our environmental work, we focus on production and transport, the functions which have the biggest impact on the environment. The examples from tool simulations showed the difference between AIR and SEA transport. It confirmed why more often our biggest customer decided to choose the sea transport, which complies with NCAB environmental policy.



5. **Tool application in marketing:** It was stated that for the marketing purpose the key issue is advantages of SEA freight compare to other ways of delivery. Sea freight seems to be most cost effective and most environment friendly compare to others.

Mr Syryczyk said: "Definitely we plan to use the "LCA to go" tool. NCAB is not responsible for product design and END product life cycles, but we focus on quality of manufacturing process, to reduce the material/energy consumption, reduce the waste and improve efficiency of manufacturing process and for these goals we plan to use the tool "LCA to go" in the future. Moreover we assess, check and evaluate factories co-operated with us to ensure that they consistently maintain environmental standards that comply with regional laws. And this tool could be one of the important points in their assessment".

Examples of results from case studies:



PRODUCT INFO

Mark of the PCB	PL6WW1538
Type of PCB	Rigid
Number of layers	6
Type of finish coating	HASL

ROHS compliance information
The product marked PL6WW1538 meets the EU-directive 2011/65/EU (RoHS) requirements.
Comments

Transport - AIR

CARBON FOOTPRI	NT (CF)										
Total CF				10.84							
CF of materials		3.95									
CF of production processes	-		6.5								
CF of gas emissions to air	0.02										
CF of transport	0.38										
	Ó	4	8	12	16	20	24	28	32	36	40
kg CO ₂ eq											

Transport - SEA

С	CARBON FOOTPRINT (CF)												
	Total CF				10.47								
	CF of materials	-	3.95										
	CF of production processes	-		6.5									
	CF of gas emissions to air	- 0.02											
	CF of transport	- 0.01											
		Ó	4	8	12	16	20	24	28	32	36	40	44
	kg CO ₂ eq												