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Intersectoral Synergies

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Lead Author:	Richard Harlow
Project co-ordinator:	Karsten Schischke Fraunhofer IZM Tel: +49-30-46403-156 Fax: +49-30-46403-211 E-mail: schischke@izm.fhg.de
Project website:	www.LCA2go.eu

Executive Summary

This report presents the existing and potential synergies existing across the seven sectors investigated in the LCA to Go project. Eco-innovation is often a cross sectoral issue requiring an analysis to be undertaken to discover any existing opportunities for further development. Additionally some LCA to Go partner sectors are applicable for horizontal integration, e.g. sensors and smart textiles.

The present structure of the LCA to Go tool is focused at the firm level, providing specific features for the needs of the target sector, creating seven bespoke sector based tools each catering specifically to the structural, capacity and technical requirements of each sector. This in turn creates an easily relatable tool for SMEs to incorporate LCA into their practices. This is an effective approach for the low level introduction of LCA principals into SMEs, who might otherwise be unable to apply the practice of LCA to their activities. The prospect of future innovation by an SME may create a need for further technical development that will likely require the involvement of multiple knowledge fields. An example of this may include an SME producing a consumer electrical product that requires an electrical housing. In this circumstance the SME would benefit from LCA features from the PCB, electronics and bioplastics LCA to Go tools. Technologies can also be developed in adjacent industries or at different levels of the value chain requiring a broader approach to an LCA.

This report performs a literature review exploring the concept of intersectoral synergies and its relation to partnerships and innovations. In addition information is gathered from each of the sector leaders to highlight the key points and objectives of the LCA to Go tool and examine the tools effectiveness in meeting its purpose. This report aims to use the concept of intersectoral synergies and intersectoral product development to discover possible opportunities that may exist between the seven sector tools, areas where sectors may benefit from intersectoral information exchange to improve their own data set and considerations of resources that may be used in an entire product life cycle, rather than the product alone.

This paper used the concept of intersectoral synergies to focus the depth of knowledge gathered by the seven sectors. This knowledge was used to find the prevailing strengths of each tool and discover synergies allowing each tool to share in these features. Each of the seven sectors brought a high level of manufacturing knowledge to their tools, which can be applied across sectors. The report finds that creating a uniform allocation method for the LCA KEPI, would allow features of each tool could be applied across the tools increasing the efficiency and scope an SMEs LCA. An additional option of a single tool results section would become possible allowing an SME to use multiple LCA to go tools, enabling them to choose all applicable assessment options to their project. With the exception of the bio-based plastics sector, each of the tools have a grounding in the use of electronics presenting a further opportunity for discovering key resources common to each. An intersectoral partnership exploring this synergy would allow for a greater depth of analysis when considering the sourcing, manufacture and disposal of electric and electronic products.