

## Measuring CO<sub>2</sub> emissions level for more sustainable distribution in a supply chain

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**Abstract.** The stakeholders put pressure on supply chain managers to provide the performance which is economically viable and also environmentally sound. The inclusion of environmental factors in the set of periodically measured KPIs, such as the CO<sub>2</sub>e equivalent becomes more crucial. The aim of this paper is to identify the challenges, which appear when measuring the carbon footprint in a supply chain. The emphasis is put on the direct emissions from distribution operations. Through literature review and two case studies conducted in the retailing companies we identify the factors which influence the CO<sub>2</sub> in the area of distribution in a supply chain. The main contribution of this paper is to provide an actionable set of variables which shall be included by supply chain managers in their decision-making process in order to make the distribution operations more sustainable.

**Keywords:** carbon footprint assessment, sustainable supply chain management, environmental approach within supply chain, GHG assessment methods