

Five-Stage Maturity Model for Business Process Optimization and Climate Neutrality

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Abstract. Extensive and rapid climate changes, which result in severe weather conditions, are principally the result of human activity. All these weather conditions have negative effects on human health, agriculture, and the biotic and abiotic diversity of the environment (Hume, 1990). Therefore, the European Union has committed itself to achieving the goal of a carbon-neutral society by 2050. In the maturity model (Potrč et al., 2023), we aimed to provide companies with insights into their business maturity and digital transformation in close connection with the climate neutrality objective. We developed a five-stage maturity model for climate neutrality and business process optimization considering carbon neutrality and factories of the future. Within the model, various ISO standards play a significant role. The most important are ISO 14040 and ISO 14044, which define requirements and guidelines for assessing the life cycle of a product or service throughout its entire life cycle (Finkbeiner, 2006). The model enables companies of different sectors and sizes to identify their maturity level and define strategies to have the lowest carbon footprint possible on the environment. To determine the level of maturity (Gottschalk, 2009), we created a questionnaire divided into five sections: Strategies, Digitalization, Environment, Data analysis, and LCA analysis. The questionnaire was used to conduct 35 interviews with companies from different sectors. Based on the responses we received, we assigned each company to one of the stages in the maturity model - Beginner, Follower, Expert, Leader, and Influencer. By analysing the results, the companies obtained information on which areas they can still improve and what they are already doing well in the context of climate neutrality. This model plays a vital role in accelerating the achievement of climate neutrality objectives and fostering the overall maturity of companies in the realms of business, digitalization, and environmental practices.

Keywords. Climate Neutrality, Maturity Models, Business Process Optimization.

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