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**A CONCEPTUAL FRAMEWORK FOR ECO-INDUSTRIAL PARKS**

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**ABSTRACT**

An eco-industrial park is a set of businesses that share resources in order to increase profitability and reduce environmental impact. The implementation of eco-industrial parks may significantly contribute to the creation of a sustainable economy. Despite this prospect, the actual development of ecoindustrial parks is challenging, as a variety of factors must be considered. Not only technical, economic, and environmental factors are relevant but numerous stakeholder relationships as well, such as between firms, governmental bodies, and local communities. This paper presents a conceptual framework that is used to capture these diverse aspects and the relationships between them. The Unified Modeling Language (UML) is used for modeling its concepts and relationships. First, based on a literature survey, relevant concepts of eco-industrial parks are identified. One central concept is “industrial symbiosis”. A novel value-based interpretation of industrial symbiosis is presented. Second, the park’s economic, local and regional development context, as well as its internal technical components and their relationships are modeled. Finally, the framework is used for modeling a concrete eco-industrial park, in this case part of the Kalundborg eco-industrial park.