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Developing a Sustainable Business Model for Platform-Based Applications in Small and Medium-Sized Enterprise Sawmills: A Systematic Approach

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Abstract : The paper presents the development of a sustainable business model for a platform-based application tailored for sawing companies in small and medium-sized enterprises (SMEs). The focus is on the integration of sustainability principles into the design of the business model to ensure a technologically advanced, legally sound, and economically efficient solution. Easy2IoT is a research project that aims to enable companies in the prefabrication sheet metal and sheet metal processing industry to enter the Industrial Internet of Things (IIoT) with a low-threshold and cost-effective approach. The methodological approach of Easy2IoT includes an in-depth requirements analysis and customer interviews with stakeholders along the value chain. Based on these insights, actions, requirements, and potential solutions for smart services are derived. The structuring of the business ecosystem within the application plays a central role, whereby the roles of the partners, the management of the IT infrastructure and services, as well as the design of a sustainable operator model are considered. The business model is developed using the value proposition canvas, whereby a detailed analysis of the requirements for the business model is carried out, taking sustainability into account. This includes coordination with the business model patterns, according to Gassmann, and integration into a business model canvas for the Easy2IoT product. Potential obstacles and problems are identified and evaluated in order to formulate a comprehensive and sustainable business model. In addition, sustainable payment models and distribution channels are developed. In summary, the article offers a well-founded insight into the systematic development of a sustainable business model for platform-based applications in SME sawmills, with a particular focus on the synergy of ecological responsibility and economic efficiency.

Keywords : business model, sustainable business model, IIoT, IIoT-platform, industrie 4.0, big data

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