

DOCTORAL THESIS ABSTRACT

**Assessment and improvement model of the sustainability level
of the SME production system**

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Abstract:

The main goal of the conducted research was to develop a model for assessing and improving the level of sustainable development of a production system, applicable to small and medium-sized industrial enterprises.

As part of the project, an expert assessment was conducted on the impact of processes, methods and tools on sustainable development as well as usefulness of indicators was verified.

Based on the literature reviews and results obtained from both, surveys and consultations with industry experts, a model consisting of 7 elements was developed: sustainable development goals (element 1), mission, vision, strategy (element 2), company objectives (element 3), production intervention area (element 4), indicators (element 5), methods and tools (element 6), and principles (element 7).

The evaluation model for SMEs is based on the EES-VSM map, which facilitates understanding of the processes being carried out and interpretation of the results for the achieved level of sustainable development.

The validation of the model was carried out based on data from a manufacturing company producing aluminum alloy products. The proposed set of indicators enables the assessment of the level of sustainable development. As a result, the usefulness of the proposed method for improving the level of sustainable development has been confirmed.