

# Framework of an ‘(In)Efficiency Costing’ based on the idea of Material Flow Cost Accounting

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## Abstract

The industrial production can be interpreted as a systematic transformation of inputs to outputs or, in other words, as an Input-Throughput-Output (ITO) system. In the context of the design and control of this system, numerous approaches focusing on different system elements and serving different goal dimensions (economic, ecological and technical) were developed. A similarity of most of these approaches is that they aim to identify weaknesses of a given system state, which are or at least can be named as inefficiencies. A quite new representative of this type of approaches is the Material Flow Cost Accounting (MFCA) that analyzes the efficiency of material and energy use. Its particular strength is that it values the effects of inefficiencies in monetary units and, thus, makes them more ‘visible’ for management. Seizing the idea and methodology of MFCA, the presentation will develop a framework of an ‘(in)efficiency costing’ expanding the scope from single types of input (material and energy) to all elements of the ITO system. Therefore, a systemization of the relevant issues – ranging from idle time cost to the mudas of Lean Thinking – and an overview of the existing approaches dealing with partial problems will be given.

## Keywords

Production, design, control, (in)efficiency, Material Flow Cost Accounting

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## Biography

**Uwe Götze** is full professor for Management Accounting and Control at Technische Universität Chemnitz, Germany. He studied business administration at Georg-August-Universität Göttingen (Germany) where he also received his PhD and post doctorate degree (habilitation). His teaching and research activities focus on ‘classical’ issues of business administration (strategic management, management accounting/cost management, controlling and investment appraisal) as well as on the interface of management and engineering. Uwe Götze is editor of the Journal

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**Ronny Sygulla** is member of Prof. Götze's professorship. He holds a diploma in business administration and engineering from the Brandenburgische Technische Universität Cottbus (Germany). His research interests are flow-based approaches of cost accounting and the eco-efficient design of industrial process chains.