Lucerne University of
Applied Sciences and Arts

HOCHSCHULE
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Technik & Architektur

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Bachelor's thesis in Business Engineering | Innovation

Forecasting Repair Inbound Volume

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Abstract

This bachelor thesis involves the development, evaluation and implementation of a time series forecast model for short-term predictions of detailed repair inbound volumes. Forecasting is of significant importance for capacity planning in operations management. Accurate forecasts allow the operations manager to optimise capacity utilisation and thus reduce costs. The development and evaluation of the forecast is based on operational data provided by Hilti's Tool Service Centre in Glasgow and was carried out with the data analytics application Microsoft Power BI. The evaluation findings led to several recommendations for improving the repair inbound process, the forecast model, and the company's data management.

Purpose – Forecasting repair inbound volume to allow detailed short term capacity planning

Design/methodology/approach – Quantitative experimental research approach

Findings – Improvement recommendations within the repair inbound process, the forecast model, and the company's data management.

Originality/value – Short-term and detailed capacity planning, suggestions for improvement of the repair inbound process, the forecast model, and the company's data management

Keywords – Forecasting, Operations Management, Capacity Planning, Change Management, Microsoft Power BI, Business Intelligence

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