

Developing a benchmark tool to evaluate operational ground processes efficiency at regional airports

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In collaboration with a regional airport following an operational excellence strategy, a literature study amongst 32 airport benchmarking studies was performed and a gap in the current research has been identified. It was established that there has not yet been a benchmark tool at the level of detail of the efficiency of the operational ground processes in the terminal and at the platform of an airport.

The goal of the research on which this paper reports, is to develop a benchmarking tool to provide the regional airport management with a means to quantify the efficiency of their operational ground processes against other similar airports and that identifies processes or components of processes that are in need of improvement. This way the airport management is provided with an external optimization path in their aim to improve their processes in order for them to be best in class.

This paper focuses on the airport terminal processes. Using literature and industry expert opinions for each process a standardized framework is established, describing the flow, inputs and outputs of the process. The inputs and outputs of the process together form the set of efficiency drivers of the process, from which the Key Efficiency Indicators (KEI) for each process are derived. The term KEI is introduced to emphasize the efficiency and daily operations driven approach of the tool, excluding strategic management decisions on cost or quality of the processes that may influence the efficiency of the processes. The benchmark tool is constructed using partial fraction analysis on KEI level and surface measure of overall performance (SMOP) is used at a process level to benchmark the total efficiency per process. Finally, the tool has been used to evaluate the operational efficiency of three regional airports during peak time and at an annual level.

The first results from the tool indicate that benchmarking operational efficiency across airports is indeed valuable in identifying strategic improvement areas.

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