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Revenue potential of flexible cabin elements for airlines under consideration of revenue management and operations

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Purpose

Flexible cabin layouts would allow airlines to quickly adapt the aircraft cabin to volatile passenger demand. This study examines the benefits of a specific flexible cabin solution in the context of revenue management and operational airline procedures.

Methodology

The research takes place within a network project for Efficient Cabin Architectures (Effkab). The flexible cabin solution, where seat pitch and seat number can be changed, is provided by an aircraft manufacturer. To investigate the net benefit of this feature, the number of free seats under volatile demand is modelled with a revenue management model. Moreover two interviews with airline revenue and product managers have been done to identify further aspects to be taken into account.

Expected findings

Preliminary results indicate even in the presence of modern revenue management some potential for further revenues by selling more seat pitch on low demand flights instead of keeping a high density configuration. On the other hand cabin reconfiguration needs to be simple without increasing turnaround-time and alternative cabin configurations are challenging for airline booking and check-in systems. The timing of the reconfiguration decision and the availability for booking is crucial.

Contribution

Different types of flexible cabin elements have been proposed in recent years. This study put such a feature in an operational airline context. Especially it addresses the question, what benefit is left for a flexible cabin, when airline revenue management has already managed prices to fill the available aircraft seats. Moreover the airline interviews provide further airline procedure related aspects.

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