Abstract

Single aisle aircraft with capacities ranging from 140 to 240 seats dominate the current short range air transport. These efficient aircraft are prone to lengthy boarding times, increasing turn-around times. Repeatedly the question is raised whether a small twin aisle might be a viable future replacement for parts of the current single aisle fleet, especially as average seat number is expected to increase further. As first part of a research into this topic this paper discusses the passenger boarding and de-boarding times of different cabin layouts. The objective is to establish a threshold for number of seats at which a twin aisle is in advantage. Current and alternative single aisles are compared to 6-, 7- and 8-abreast twin aisles. Twin aisles are found to be generally beneficial for all seat counts. The effect of a wider aisle is limited, but changed cabin layout can achieve a meaningful reduction in boarding time for single aisles.