



Sleeping in economy class has never been so easy

ECONOMY SKY-DREAM – A new design that allows affordable full lie-flat sleeping on long haul flights

Aiming to provide comfort for everyone on long haul flights, consultancy and engineering firm, ADSE, introduces a new approach to sleeping comfortably in economy class. Introducing the ‘Economy Sky-Dream’: the long-haul economy class sleeping solution. ADSE develops innovative transport solutions, offering design, integration and certification services.

The aviation market is increasingly developing into the direction of (ultra) long, point to point flights. This makes sleeping comfort a more important aspect for passengers as well as airlines. The innovative cabin design from ADSE creates a new economy comfort class that is aimed at wide-body aircraft such as the Airbus A350 and Boeing 787 and 777. Based on stakeholder perspectives over the product life cycle, ADSE has been rethinking passenger comfort. The ‘Economy Sky-Dream’ is briefly introduced below, focusing on the perspectives of passenger comfort, airline operations, cost of ownership and airworthiness.

- The passenger comfort is increased by delivering an improved sleeping experience and extra wide seats. A full-lie flat experience is created through a bunk-bed concept. The design makes optimal use of the height in the middle of the aircraft; the central overhead luggage bins are taken away to create vertical space for a three person full lie-flat bunk bed. During Taxi, Take-off, Cabin Service and Landing passengers of two rows will be seated opposite to each other in club seating configuration, with their hand luggage stowed under the extra-wide seats. The middle bed will easily move down during the long cruise to make room for three equally spaced beds in bunk bed configuration. The beds are 76-80 in. (1.93-2.05 m) long beds, depending on the aircraft, and have a width of 23.6 in. (60 cm) - 20% wider than a regular economy seat, giving enough space for a comfortable sleep.
- Airlines do not compromise on revenues as the ‘Economy Sky-Dream’ has a passenger density similar to a regular economy comfort class. Additionally, the increased passenger comfort provides an increased revenue potential. The current operational and evacuation procedures fit within the design space, therefore, the impact on these procedures is minimized. Only additional operational support can be expected when converting to bed configuration or vice versa. Based on an operational procedure set by the airline or a joint arrangement by the passengers that sit on the same bunk bed, the moment of seat-to-bed conversion can be determined.

- The business case for the 'Economy Sky-Dream' is based on a technically-acceptable investment risk, by opting for a modular concept which allows for easy installation and retrofit into wide-body aircraft. It can be built into the existing seat tracks and luggage rack suspension, that makes the system relatively quick to build in and out using existing installation techniques. The residual value of the aircraft will also remain unaffected.
- Finally, although novel in nature, the concept design can meet the latest airworthiness requirements to fit the broadest range of new aircraft and will have a non-significant effect on the certification base of the aircraft.

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About ADSE Consulting and Engineering BV. ADSE is a consultancy and engineering firm based in the Netherlands. We focus the transportation systems and its required infrastructure of today and tomorrow within our key markets Aerospace, Defence and Mobility. Transportation systems which are becoming more and more autonomous, digital and sustainable. We add value to our customers with our expertise, providing integrated design solutions for the system life cycle, improving (engineering (development), certification manufacturing (production), operational and maintenance) processes and organizations, and make innovations successful. For over 20 years we made it work.

