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New aircraft design concepts. Smart turboprop (center) and boxed wing aircrafts (left and right).

Vortragsankündigung: Innovative Aircraft Design (25.06.2015)

Jan Dalski 03.06.2015

Innovative Aircraft Design – Options for a New Medium Range Aircraft

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Date: Thursday, 25th June 2015, 18:00

Location: HAW Hamburg, Berliner Tor 5 (Neubau), Hörsaal 01.12

The "Smart Turboprop" (aircraft in center of the picture) may achieve 17% lower Direct Operating Costs (DOC) and 36% less fuel consumption than a conventional Airbus A320. It is a viable design, meeting limits of existing airport infrastructure, where aircraft in this class are restricted to a wing span of max. 36 m. The question was: Can an unconventional design like the box wing aircraft (BWA) improve values of the "Smart Turboprop" and reach even lower DOC and fuel consumption?

BWAs were designed in two versions (left and right in the picture). Results show that the BWAs can not compete with the "Smart Turboprop" and can not reduce DOC or fuel consumption further. The results are from the research project Airport2030 which was part of the Leading-Edge Cluster Competition of the Federal Ministry of Education and Research in the Aviation Cluster Hamburg Metropolitan Region in which Hamburg University of Applied Sciences worked together with Airbus in one work package.

Link to the announcement poster:

http://www.fzt.haw-hamburg.de/pers/Scholz/dgIrr/hh/poster_2015_06_25_InnovativeAircraftDesign.pdf