

A Holistic Cabin Conceptualisation Approach (HCCA) framework

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Value Statement:

The presented toolset defines the stakeholders involved in aircraft passenger cabin interior development projects, and their pursued design drivers.

- Stakeholder Definition sheet presents all types of organisations involved in the design of aircraft cabin interiors, disregarding of the involvement extent.
- Stakeholder Analysis sheet contains the pairwise comparison matrices for all stakeholders along the influence and interest axes, and the resulting plot.
- Cabin Design Drivers sheet contains the definition of drivers pursued by the cabin interior projects. These are defined as a multi-level structure including:
 - Top-level profitability-based design drivers,
 - Their constituent factors representing the design considerations and themes, and
 - Bottom-level design criteria representing the detailed product specifications, requirements, features, qualities, performance targets etc.
- Design Factor Weights present a set of pairwise comparison matrices for deriving the relative importance weights at the factor and driver levels.
- R Input sheet contains R code template to use with R Studio software to retrieve Eigenvector values.
- Design Factors Map sheet contains factor applicability mapping to represent stakeholder concern and interaction points on a cabin interior project.
- Cabin Product Breakdown sheet presents the composition of state-of-the-art cabin interiors by listing out the components it may have. The presented list is an all-encompassing version and does not represent the product line of any specific cabin manufacturer or equipment supplier.

The presented sheets may be used as information source, or be amended to reflect the needs of their specific project. Amendments may be performed in the white cells of the pairwise comparison matrices on Stakeholder Analysis and Design Factor Weights; and applicability indicators in Design Factors Map and Cabin Product Breakdown sheets.

Abbreviations:

AIP	Aggregate Individual Priority
AMC	Acceptable Means of Compliance
ANSP	Air Navigation Service Provider
AOG	Aircraft On Ground
BFE	Byer Furnished Equipment
CA	Certification Authorities
CAD	Computer-Aided Design
CDS	Content Delivery System
CEM	Cabin Equipment Manufacturer
CSR	Corporate Social Responsibility
DMO	Destination Management Organisation
FEM	Finite Elements Analysis
FST	Fire, Smoke, and Toxicity
GHP	Ground Handling Provider
IFE	In-Flight Entertainment
LOPA	Layout Of Passenger Accommodation
MRO	Maintenance and Repair Organisation
NDT	Non-Destructive Testing
NPV	Net Present Value
NRC	Non-Recurrent Costs
PE	Premium Economy
PED	Personal Electronic Device
PSU	Passenger Service Unit
QA	Quality Assurance
R&D	Research & Development
RC	Recurrent Costs
RM	Revenue Management
RoHS	Restrictions of Hazardous Substances
RS	Requirements Specification
SFE	Supplier Furnished Equipment
TRL	Technology Readiness Level