



# Design to Build

## Engineering for Aircraft Interiors

## INTRODUCTION

Today's new aerospace designs have increased in complexity and need to address more stringent societal, environmental, financial and operational requirements. Aircraft manufactures are looking for simpler ways of having complex systems designed. Advances in computing power, computational analysis, and numerical methods have also significantly transformed and impacted the way design is conducted, bringing new challenges and opportunities to design efforts.

Without a doubt, design activities involve a considerable allocation of resources, be it money, personnel or infrastructure. Manufacturers also need to do a considerable amount of analysis to help choose an alternative/ service providers that align with their strategic goals, product objectives, customer needs and technical requirements. The implications of choosing a wrong partner might result in cost overruns, cause schedule delays and in overall aircraft performance attrition, it can create outcomes that are costly in today's competitive environment.

Today's aircraft passengers expect luxury and functionality while choosing an airline to fly with. This incessant demand by the end customer puts considerable pressure on the manufacturer to look for options that not just adhere to quality but also provide value on the balance sheet. Aircraft suppliers are looking to resolve this yin-yang problem by letting engineering partners and experts in the engineering design services domain do the heavy lifting of designing every tiny detail of an aircraft before it has even been commissioned to fly.

In this case study, let's look at how a French aircraft supplier solved their engineering and design challenges.





### Customer:

A French supplier providing an extensive range of interior equipment and cabin furnishing to airlines and aircraft lessors

### Business Scenario:

With various airline interior configuration requirements and a short product design cycle time, choosing an engineering partner that can provide end to end engineering solutions at an optimized cost was a challenge. The supplier needed to meet the levels of quality when it came to aircraft interior furnishings and had competition demands from multiple airlines.

### Solution:

The French supplier chose AXISCADES, that has strong expertise in design and analysis of interior monuments and knowledge based engineering for commercial and business aircrafts, as their engineering partner.

AXISCADES supported the supplier with engineering activities from concept-to-build, including certification support.

A team with extensive experience in the product lifecycle of aircraft interior structures, monuments, stowage, hatracks, headliners, lavatories among others was deployed to execute and support the customer on end to end solutions.

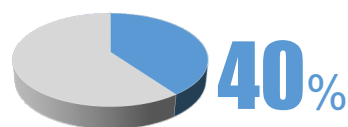
The design and development of multiple monuments for over 40 airliners encompassed key activities such as comparative analysis, structural design and analysis, electrical, plumbing and equipment installations, drawing release, static and flammability test plans and reports for certifications support, and technical publications where required.

AXISCADES' team of engineers collaborated with the customer to systematically develop an optimized baseline structure for monuments of 100+ configurations with optimized material specification. To meet the requirement of catering to various airliners, they developed an innovative library for customizing various configurations on monuments in minimal time.

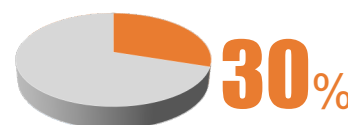
### Key Benefits :

- Saved Time & Money - worked with one qualified team, not multiple partners
- Increased Efficiency - met all requirements the first time
- Simplified Management - focused on their priorities rather than on the engineering details
- Ensured Quality and Mitigated Risk - spread the development risk to a qualified supplier

### Outcomes:

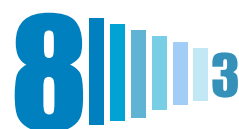


Improved profitability through cost optimization of Data management methods.



Productivity gain by implementing knowledge-based engineering and process harmonization across programs.

From 8 months to 3 months



### Why partner with AXISCADES?

- Deep aerospace domain expertise and vast technical knowledge in handling complex programs.
- Best practices and processes knowledge acquired by working with multiple global OEMs.
- Flexible business models including Risk Reward partnership.
- Certifications and key design signatory approvals from OEMs and industry regulatory authorities.
- Reliable ecosystem to deliver turnkey projects.
- Ability to meet Offset obligations of OEMs and Tier 1 suppliers both from commercial and defence programs.