

# Safran Nacelles uses Virtual Reality Solution ESI IC.IDO to Validate Nacelles Manufacturing Tooling



## Challenge

When developing new aircraft programs, Safran Nacelles needed a validation method that would allow them to visualize and validate process design, without relying on physical prototypes. They also needed a way to validate the installation of new assembly and manufacturing lines, study ergonomics, and train operators.

## Benefits

After implementing IC.IDO, ESI's virtual reality tool, Safran Nacelles improved their overall efficiency, reducing the number of product and process development cycles required. Additionally, they now conduct collaborative sessions on-site in their 3D cave, and include the participation of external partners.

The company has now fully integrated IC.IDO and virtual reality into their development and validation processes.

*"Virtual reality represents a technology of the future that will have an impact on the efficiency of our developments. The factory of the future is already here."*

**Nicolas Lepape**

Virtual & Augmented Reality R&T Project Manager  
Safran Nacelles



Work posture ergonomics

## Story

Safran Nacelles is one of the world's two leading aircraft engine nacelle producers. In their process of developing new aircraft programs, they realized they needed new methods that would allow them to visualize and validate their process designs – without building full sized prototypes.

After six months of testing and benchmarking different virtual reality (VR) tools, which included exchanges with VR users at Boeing, Airbus, and Renault, they finally selected ESI's immersive technology software, IC.IDO.

Safran Nacelles invested in an on-site two-sided "cave": a system, 4m wide by 2.5m high. The cave was commissioned in March of 2016. Six months later, the team had already addressed more than 60 use-cases.

ESI IC.IDO creates, within the cave, a 3D, life-size image of objects and environments defined in CAD, thereby creating a virtual workspace. Users immerse themselves in the image and can then check the feasibility of an operation, validate the design of a tool or work station, and simulate work operations.

For Safran Nacelles, VR saves time and encourages evaluation of new workflows because the need for related physical prototypes can be eliminated. VR facilitates discussions between experts from different fields, allowing quick and efficient problem solving and the avoidance of late tooling revisions.

Safran Nacelles is sharing information quicker than ever before. Project managers can collaborate, on a daily basis and in real time, with all members involved a project, whether working on-site or remotely. VR allows them to get their new aircraft programs right on the first try.

Six months after the initial deployment of ESI IC.IDO, Safran Nacelles already has ten VR "super users" from different departments. This network of users shares best practices and prepares use cases within their departments. They also hold collaborative review sessions and distance learning sessions with contractors equipped with the same technology.



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