

# STRAND Aerospace Malaysia

Aerospace & Defense Case Study



## Challenge

STRAND Aerospace Malaysia (SAM) faced the dual challenge of streamlining its engineering processes and expanding its engineering services across various industry verticals.

## Solution

SAM uses three applications from the Dassault Systèmes 3DEXPERIENCE Platform, ENOVIA V6, CATIA and 3DVIA, to optimize efficiency and enable growth.

## Benefits

SAM's 3DEXPERIENCE technology allowed it to automate its document processes, develop its engineers' skills and expand SAM's market opportunities into new industries.

## Streamlining engineering processes with 3DS experiences

Founded in 2006, STRAND Aerospace Malaysia (SAM) is an engineering services company and part of the STRAND group of companies. With offices in the UK and Malaysia, the company specializes in stress analysis and design of aircraft structures.

SAM services include initial design, continuous product development (CPD), checkstress, manufacturing support, in-service support, aircraft structural integrity, aircraft teardown, training and research. Among its key customers are Airbus, Messier-Dowty, BAE Systems, GKN, Assystems, Atkins, CTRM, Sitec and GED. In addition to the aerospace industry, SAM provides engineering services to the energy, nuclear, civil, rail and space industries.

To improve its aerospace industry customers' experiences with its products and expand SAM's offerings into new industries, including

architecture and civil engineering, SAM needed sophisticated new capabilities. For help in achieving these goals, SAM turned to Dassault Systèmes (3DS), the 3DEXPERIENCE Company and world leader in PLM, DMU and 3D. 3DS applied three of its industry-leading applications for Aerospace & Defense – ENOVIA Version 6 (V6) for collaborative innovation; CATIA for virtual product; and 3DVIA for 3D communication, all on the 3DEXPERIENCE Platform - to help address the company's challenges.

## Realizing a product through robust processes

Traceability is a key metric in the aerospace industry. With an emphasis on quality and a focus on expansion, SAM sought to improve its manual document system, which manages printing, writing and checking of documentation. To facilitate SAM's plans for growth, a more robust system was required.

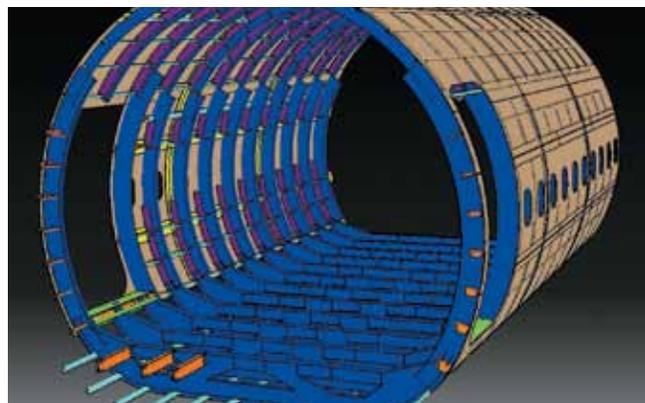
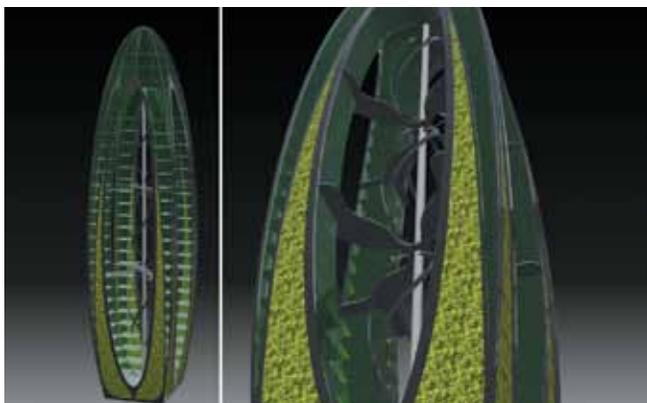
With the global collaborative lifecycle management capabilities of ENOVIA on the 3DEXPERIENCE Platform, SAM was able to automate its entire document process while complying with Airbus AS9100 standards. These standards have a strong focus on continual improvement. With the business intelligence capability of its 3DS experiences, SAM automated the process of data collection and gained the ability to measure improvement in its production process. This enabled SAM to comply with the Airbus standards.

As a result, SAM was able to significantly reduce the risk of manual errors and increase the speed of production, improving overall efficiency and its customers' experience of working with SAM.

## Equipping engineers with the right tools

Much of SAM's operations prior to 2011 were focused on structural analysis rather than design work, and included performing design refinements on engine products.

SAM hires graduate engineers and grooms them to be well versed with standard industry applications and meet the stringent demands of the aerospace industry. With that goal in mind, the company's choice of CATIA, the 3DS application for virtual product, was a natural one.





SAM applied the capabilities of its 3DS applications on the 3DEXPERIENCE Platform to challenges in the field of city planning, expanding its services to new markets and providing training experiences for its young engineers.

“Dassault Systèmes CATIA is the standard design tool for the aerospace industry,” said Naguib Mohd Nor, SAM’s chief operating officer. “The challenge was to equip our engineers with the necessary skills that would enable them to utilize CATIA for the aerospace industry.”

### Expanding the horizons of engineering services

Because CATIA is a cross-industry application, it enabled SAM to explore verticals outside the aerospace industry in which its engineers could hone their skills. Construction and city planning was one such industry vertical that allowed SAM to develop its engineers’ skills. By leveraging the 3DEXPERIENCE Platform to combine the capabilities of CATIA and 3DVIA, the 3DS application for 3D communication, SAM was able to expand its offerings into new markets.

SAM used CATIA as a modeler and the basis for creating engineering information. “CATIA provided us with the flexibility to explore other industry verticals and develop design capabilities among our engineers. We then migrated these skills and applied them to the aerospace industry,” Nor said.

To maintain a competitive edge in the A&D industry, SAM wanted to offer a virtual experience that would allow for testing and simulation. SAM used its combined capabilities on the 3DEXPERIENCE Platform to provide Malaysian developers of futuristic cities with the ability to plan and simulate these urban environments.

3DVIA enabled SAM to present information to its customers in different ways. For example, SAM was able to offer futuristic Malaysian developments the facility of planning their future cities on the computer in lifelike virtual detail. 3DVIA has thereby provided SAM with increased business reach and a wider offering to its customers.

“Dassault Systèmes’ applications serve as growth drivers for us and are key enablers to our business,” Nor said.

*“Dassault Systèmes has enabled us to better engage various industries and deliver state-of-the-art engineering services.”*

**Naguib Mohd Nor, Chief Operating Officer,  
Strand Aerospace Malaysia**



## Delivering Best-in-Class Products



Virtual Product



Information Intelligence



3D Design



Virtual Planet



Realistic Simulation



Dashboard Intelligence



Digital Manufacturing



Social Innovation



Collaborative Innovation



3D Communication

Dassault Systèmes, the **3DEXPERIENCE** Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 150,000 customers of all sizes, in all industries, in more than 80 countries. For more information, visit [www.3ds.com](http://www.3ds.com).

### Europe/Middle East/Africa

Dassault Systèmes  
10, rue Marcel Dassault  
CS 40501  
78946 Vélizy-Villacoublay Cedex  
France

### Asia-Pacific

Dassault Systèmes  
Pier City Shibaura Bldg 10F  
3-18-1 Kaigan, Minato-Ku  
Tokyo 108-002  
Japan

### Americas

Dassault Systèmes  
175 Wyman Street  
Waltham, Massachusetts  
02451-1223  
USA

Visit us at  
**3DS.COM**

