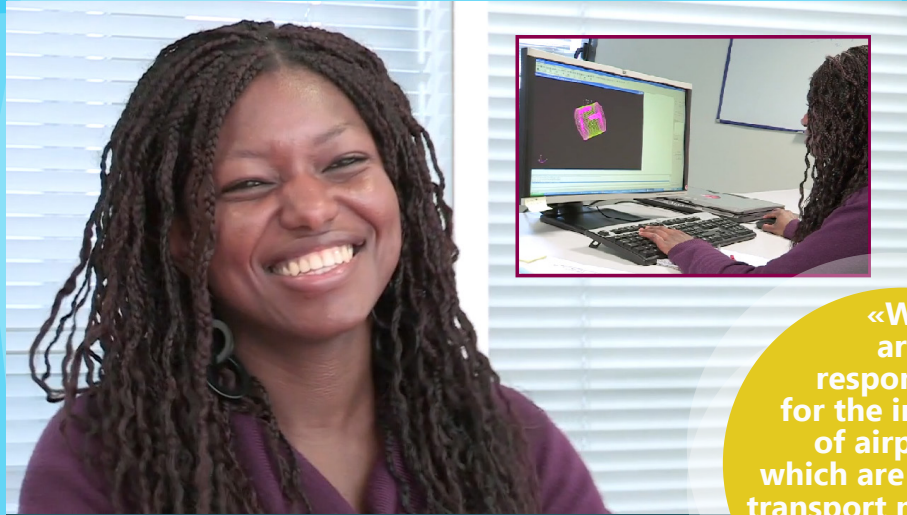


STRUCTURAL ENGINEER

flyhigher



Source: SOGETI HIGH TECH

«We are responsible for the integrity of airplanes which are going to transport millions of passengers»

- DIANE -

OFFICE WORK

A DAY IN THE LIFE OF... a structural engineer

A structural engineer is in charge of modelling the design of aircraft structures. The objective is to propose the most attractive solution in terms of aesthetics, cost, quality, safety, durability and reliability. The structural engineer performs calculations and simulations of the future structure and has to consider the analysis of the aircraft structure performance and resistance. The result of this analysis will allow the structural engineer to advise on necessary variations (materials, structure shape...). This career involves the perfect knowledge of the functioning and use of each aircraft part.

Aeronautics
is an industry worth 220 billion Euros, providing 4,5 million jobs in Europe and is one of the key, high-tech sectors of the European Union.



Regions constituting Europe's leading pool of jobs in the field of aeronautics

STRUCTURAL ENGINEER

MAIN ACTIVITIES

Design and perform simulations of aircraft structures by computer means

Predict the reaction of the aircraft structure under different conditions such as human use or environment pressures

Design and develop new products or processes to improve the quality of the structure

Analyse and choose the most adapted materials according to their reliability, cost, life expectancy and the nature of their use

Draft specifications of the improved version of the aircraft structure and display it to the customer

Test and assess new technical solutions in order to check if they could be used

MISSIONS

Design by modelling the future aircraft structure

Calculation of aircraft materials resistance

Ensure that the aircraft structure will respect technical, environmental and safety requirements

EXAMPLE OF PROJECT

Study the last market trends as regard to technology

SKILLS & KNOWLEDGE

Calculation methods and processes

Quality, Environmental and Safety knowledge

Negotiation skills

3D modelling and Computer-Aided Design

Simulation software

Communication skills (oral and written)

QUALITIES

Curiosity about new technologies and processes

Rigour

Good interpersonal skills

Persistence in problem-solving

Analytical turn of mind

QUALIFICATIONS

Master of Engineering's degree in:

Structural Engineering

OR EQUIVALENT

