

# Project showcase

## The big picture on complexity

Reducing complexity might be one of the major goals of the 21<sup>st</sup> century: every day we are exposed to an increasing amount of information that we are unable to digest and there is no sign of a downturn. In the engineering field, this is translated into a high number of parameters to take into consideration, as development projects increase in size and are often too complex to be grasped entirely by one single person. Now, a European R&D cooperation, the EUREKA 3D TESTBENCH project, might be bringing an improvement in project managers' complicated lives.

Research facility environments are becoming more and more complex and interaction between different units is a growing challenge. The solution proposed by a team headed by Andy De Mets, leader of the 3D TESTBENCH project and R&D projects coordinator at Barco, is the integration of all the tools used by different groups into a single instrument, which, in turn, is compatible with all of them. 'In fact,' says De Mets, 'a lot of engineering tools and software are being used and these tools are not always conceived to interact with each other.'

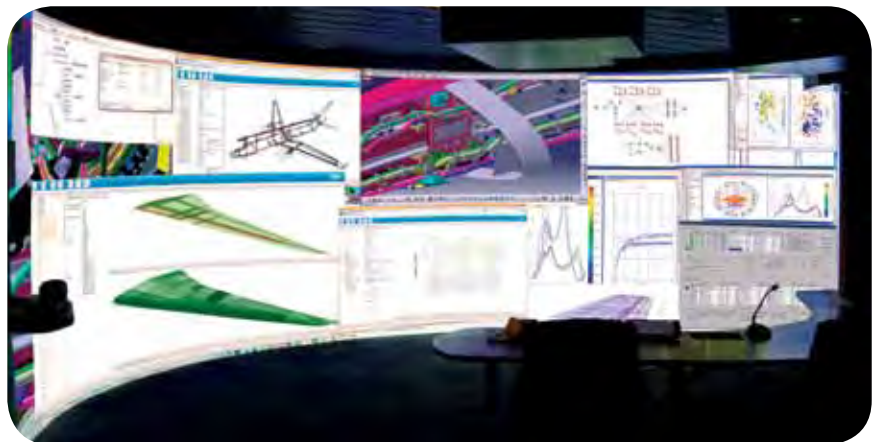
The outcome of 3D TESTBENCH looks like a giant 3D screen or 'wall' where all the stages of the engineering and product conception process are displayed. Change one aspect of the project and the ramifications at all of its stages will show, highlighting potential conflicts. Of course, the system developed within the 3D TESTBENCH project needs to be adaptive. It does not consist of one single application, it is more 'the wall and its workflow management application that are at the heart of the system' says De Mets.

**The complementary expertise and enthusiasm of the human team-force that was brought together was a crucial aspect for the success of the project.**

Andy De Mets

### Failure is not an option

'If you look at the way R&D is performed nowadays, you will see it is characterised by both diversification and specialisation.'



In other words, many different people are overlooking extremely precise parts of a project, nobody gets to see the big picture and the likelihood of somebody making a major mistake is increased. For some companies, failure is not an option: in the aeronautical industry the poor management of a complex project can end up putting many lives at risk.

The first user – but also project partner- of the new device developed was Fokker Elmo, a company specialising in aerospace engineering.

As the consortium's guinea-pig, it supplied the model, which allowed the optimisation of the workflow tool. Barco, a company specialising in visualisation instruments developed the 3D wall, working closely with

NOESIS Solutions, a simulation solutions provider from Leuven, Belgium.

### Major industry players

The Technical University of Delft in the Netherlands, and the Vrije Universiteit Brussel in Brussels, Belgium brought in the academic background in complex project modelling necessary to develop the project. 'The complementary expertise and enthusiasm of the human team-force that was brought together was a crucial aspect for the success of the project', says De Mets.

Possible applications are very broad, as the project offers the solution to a problem potentially faced by every type of organisation. Companies that have already contacted the research team represent major players from the automotive industry and the energy sector. Just to prove their conviction of the need for such a system, the 3D TESTBENCH partners even used the finished system to coordinate the last stages of... the project itself!