

AVATAR is a really innovative concept where we develop a smart skin with new sensors that will be embedded all over the plane and data should be collected from the skin and that data is very valuable from not only safety perspective, but also for an extended duration of the aircraft.

This project can help us reduce greenhouse gas emission and optimize our natural resource usage

We have a chance to create an innovative product, which does not exist in the world and our customers have a chance to touch this the first.

For a more sustainable world maintenance is going to be everything, right?

And doing that in an optimum way, we need more new, novel ways to actually predict when and where these aircrafts actually need maintenance.

The aviation industry is one of the carbon intensive ones and technology requires more resources to be put in to continue to evolve so it can continue to reduce their environmental impact.

AVATAR brings together different partners from different sectors and disciplines.

Imperial College London, who is a coordinator of this project with Evektor, contacted us to bring our expertise. We've been working on the concept of structural health monitoring for aeronautic structure for more than a decade now.

Condition based maintenance and digital twin can enable the efficient operation of an aircraft.

The project is expected to revolutionize the air transport lifecycle management.

Since we are collaborating with NTT who has in-depth expertise in networking and data transmission, we brought them on board. We contribute to build a data platform and also define data transfer from the aircraft till the edge services, till the cloud.

By collaborating with different institute partners, we have a chance to make real world applications and we find solutions for real world problems.

Our institute will help to develop printed skin for preventing the maintenance.

Our main role will be to develop printed sensors. We have our own two aircrafts we provide information gathered by the sensors and our partners process it.

We are gaining much broader information about what's going on during the flights.

We make this work by building a digital twin that gives insight in the actual behavior during flight and not only in the design phase.

Data analytics is strongly linked to the use of AI and in this regard SnT has high expertise making sure that the solutions we develop are aligned with European regulation.

This is one of the core examples where the industry is leveraging the IT and the Cloud Technology to unlock the opportunities.

This solution could be adopted by many aircraft companies in the future and could really reshape the ways of designing the aircraft.

The project's development also creates opportunities for skill development in emerging technological fields contributing to the economic growth.

And this technology can be applied to other industries such as automotive and space industry.

Being able to know better when to maintain the drones, we're going to provide a safer network for urban air mobility. This will have an impact on the whole concept of sustainable cities.

We are enabling our clients and society to confidently step into the digital future.