

PRESS RELEASE

ALIGHT – CPH as a lighthouse

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EU project helping CPH and European airports for carbon-neutral aviation

In close collaboration with Danish Technological Institute, a consortium led by Copenhagen Airport (CPH) in collaboration with 14 other European partners has won an EU tender to create the sustainable airport of the future. A grant of close to DKK 90 million will be spent to develop and demonstrate specific solutions, exemplifying how an airport can be designed to operate completely without carbon emissions and deliver infrastructure to carbon-neutral aircraft. The results of the project are to inspire the entire continent of Europe.

The aviation industry is undergoing a transition that no later than 2050 will see carbon emissions from aircraft and airports completely eliminated. While there are many technological opportunities and solutions, there are also quite a few barriers to achieving a green transition for the sector.

That is why the European Commission has allocated funds from its Horizon 2020 research and innovation programme for a “Smart Airports” project. Copenhagen Airport has been selected as a so-called lighthouse airport to head a European consortium. The purpose is to demonstrate how airport infrastructure of the future should be designed to reduce and eventually completely eliminate carbon emissions:

“With this project, we aim to develop specific solutions and create a comprehensive concept for designing the airport of the future. We must be able to provide an infrastructure for the aircraft of the future, which may be electric or powered by hydrogen or other sustainable fuels. At the same time, we will investigate how we can integrate electrification and solar panels into airport design, so that we can power buildings, vehicles and aircraft and thereby eventually completely phase out carbon emissions,” says Copenhagen Airport CEO Thomas Woldbye. He is delighted that Copenhagen will become the focal point for the project.

“Obviously, we’re very excited that the European Commission chose our project, and we welcome the opportunity together with good partners to spearhead the process of developing concrete solutions and concepts for the sustainable airport of the future,” he explains.

Carbon emissions to be eliminated

The ALIGHT project (a lighthouse for the introduction of sustainable aviation solutions for the future) aims to develop solutions to two overall challenges: One is about the process and logistics of handling sustainable aviation fuels in an operational context, including procurement, blending, fuelling, quality controls and safety processes. The other issue concerns the development of smart energy solutions for other airport operations, including own production of sustainable energy as well as energy storage and

electrification. Another part of the project will be to develop the aircraft stand of the future, supporting sustainable aircraft fuels such as electric power and hydrogen.

Currently, the main barrier is that very few airports are prepared for the many new fuels, because their infrastructure is designed exclusively for the fuels used today.

Copenhagen Airport as lighthouse

The entire development phase and the day-to-day work will be based at the lighthouse airport in Copenhagen but will be closely monitored by the fellow airports in Rome and Lithuania and the organisation building a whole new airport in Warsaw that is scheduled for completion in 2027.

Accordingly, the ALIGHT project will first and foremost create solutions and contribute with know-how, scope and guidelines for developing the sustainable airport of the future; initially in Copenhagen and later when the results are replicated and applied elsewhere. In other words, the project will contribute to the achievement of the climate targets of reducing emissions from aviation that national governments committed to at the Paris Agreement, while at the same time creating a clear vision for sustainable airports of the future.

In this way, the project at CPH will become a source of inspiration to other airports, as they can benefit from the knowledge being compiled over the coming years. The partners in the project will contribute with self-financing of more than DKK 22 million, bringing the total value of the project to more than DKK 111 million.

The project will also consider which green energy sources that will work in the complex infrastructure of an airport, including its very high security requirements. Overall, the new project will provide new perspectives that will be of interest not only to aviation but also to its other project partners:

“Implementing green sustainable aircraft fuels, such as biofuels, hydrogen and electric power, and the green transition of other airport operations will require access to the very best knowledge within a number of professional disciplines. With the ALIGHT partnership, we’ve brought together a powerful and innovative international team that’ll enable us to achieve the ambitious targets of the lighthouse project, and we’re really looking forward to the pan European cooperation,” says Lars Overgaard, Business Manager with the Danish Technological Institute, who headed up the application process.

Sustainable inspiration for all of Europe

As already mentioned, CPH will act as the lighthouse where to solutions are developed and subsequently implemented. At the same time, replication of the project results will be prepared at the project partner airports in Italy, Lithuania and Poland. Together with the airport in Copenhagen, they cover four geographical areas and four different climate zones, supporting that the solutions can be designed adapted to local conditions:

“It is absolutely essential that the know-how being accumulated, and the solutions being developed as part of the project can be transferred and replicated to other airports both during the project and after. The project is based on a large grant from the European Commission, why it makes fully sense that the results

we achieve at CPH can be used elsewhere. But most importantly, this is our way of helping the aviation industry identify opportunities and strengthen the green transition,” says Woldbye.

In its project definition, the European Commission emphasised that results and experience from CPH lighthouse should be shared and replicated to other airports. In fact, we must all keep in mind that the entire foundation for aviation in the future depends on sustainable transition:

“In order to support optimal dissemination and exchange of knowledge and of the results achieved, the project will i.e. develop a solid toolbox with best practice, guidelines and manuals. Here, the cooperation with the other airports represented in the project will be absolutely central, as efficient replication requires knowledge of the regional conditions,” Overgaard concludes.

FACT BOX

ALIGHT will run for four years from the project start-up date of 1 November 2020.

Apart from CPH and the Danish Technological Institute, the following organisations are partners in the project:

The airports of Lithuania and Rome along with Solidarity Transport Hub Poland (CPK), which is in charge of the new airport in Warsaw, Fuel Storage and Hydrant company Copenhagen Airport I/S, Scandinavian Airlines System (SAS), Nordic Initiative for Sustainable Aviation (NISA), International Air Transport Association (IATA), German Aerospace Center (DLR), AirBP, The Roundtable on Sustainable Biomaterials (RSB), Hybrid Greentech, BMGindroz Consulting, the University of Parma and Hamburg University of Technology.

The Horizon 2020 programme has existed since 2014 and expires at the end of 2020. Horizon 2020 has allocated almost DKK 600 billion to various projects, of which DKK 7.5 billion is earmarked for sustainable development.

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