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PRESS RELEASE

Silent Air Taxi: Researchers at RWTH Aachen University and FH Aachen lead the way in silent air travel

Silent Air Taxi for five persons offers affordable stress relief for shuttle and intercity traffic

Aachen, 11 June 2019 – Four years of preparation, various patent applications, several strategic partnerships and the founding of e.SAT GmbH, a manufacturer of electro-hybrid air planes, have led to an invention that will ensure tomorrow's environmentally-friendly mobility. e.SAT GmbH, RWTH Aachen University, RWTH Aachen Campus and FH Aachen introduced their Silent Air Taxi, a futuristic model of a small plane, at an even with more than 100 invited guests from academia, industry and politics. The unique electro-hybrid drive system and the optimized airflow mechanics of the boxwing concept will allow this air taxi to offer affordable strain relief on traditional passenger transport carriers, and reduce individual travel times significantly.

The former airport Aachen-Merzbrück will be transformed into a research airfield with the financial support of North Rhine-Westphalia's state government, where the Silent Air Taxi will be developed to manufacturing maturity and production. The strong partner network on RWTH Aachen Campus will drive its technical development until its official commissioning in 2024 and is preparing for its maiden flight in 2022. Armin Laschet, Minister President of North Rhine-Westphalia, elaborated on the importance of this development for his state at the opening of the event. His personal impression regarding this pioneering project: “Environmentally friendly and affordable air taxis can make an important contribution to mobility in our conurbations. The Silent Air Taxi, a quiet and low-emission hybrid small aircraft, is the next innovation of alternative and climate-friendly mobility solutions 'made in North Rhine-Westphalia'. It is always impressive to see how stakeholders from academia and industry work closely together to develop concrete, everyday technologies for sustainable mobility from futuristic visions. This is how scientific excellence is translated into industrial production.”

The Silent Air Taxi

The small aircraft flies with four passengers and a pilot, has a range of up to 1000 km, and a cruising speed of over 300 km/h. For takeoff and landing, the craft will need an airstrip of max. 400 m length, which will allow it to fly to 95 percent of all German airports and airfields. 80 percent of the German population lives within a 25 km radius of an airfield. At takeoff, the Silent Air Taxi is so quiet that its sound becomes indiscernible at a distance of just 100 meters. The maiden fight is scheduled for 2022 and a type certification is pursued for 2024. The objective is to ensure that Silent Air Taxi operations will be as affordable as first class rail tickets.

“Our understanding of innovative air mobility is consistently aligned with the needs of customers. These are shorter travel times, punctuality and flexibility with regards to individual requirements”, explain the two e.SAT GmbH CEOs Prof. Peter Jeschke and Prof. Frank Janser. Other key founding figures are Prof. Günther Schuh (CFO), Prof. Eike Stumpf (Head of Development) and Prof. Kai-Uwe Schröder (Structural Mechanics), who are set to manufacture the Silent Air Taxi in series production in partnership with e.SAT GmbH in Aachen-Merzbrück.

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Research Airfield Aachen-Merzbrück
The development of the Silent Air Taxi will continue at Aachen-Merzbrück until manufacturing maturity. Various research requests in connection with the project have been submitted. Merzbrück will be developed into a research airfield for more than 12.7 million euros. The takeoff and landing strips will be newly constructed and pivoted (sponsor: Aachen Merzbrück Airfield), while the Aeropark industrial area will be developed and will have direct access to the takeoff and landing strips (sponsor: Stadtentwicklung Würselen (Urban Development Office)). The new research hangar FH.AERO.SCIENCE will be constructed in the industrial area (sponsor: FH Aachen). The Ministry of Transport of the State of North Rhine-Westphalia is funding the transformation into a research airfield with four million euros. Hendrik Wüst, Transport Minister of North Rhine-Westphalia, is proud of the fact that NRW can once again prove itself as an innovative region and a driving force behind the mobility revolution.

“Projects like the Silent Air Taxi and the development of Aachen-Merzbrück into a research airfield show that North Rhine-Westphalia has all the prerequisites of being at the forefront in the creation of groundbreaking technical innovation. We support the development here in Merzbrück, as it will drive the research on electro-powered aircrafts and the options for low-noise air travel forward. In a highly populated and congested federal state like North Rhine-Westphalia, it is a step in the right direction to think of the air as a third dimension for mobility. We want to make sure that the research and development of mobility for the future will happen right here in North Rhine-Westphalia and – best case scenario – will also be manufactured and implemented here. The project allows us to contribute to the development of the Rhine Region, and to give the people living here entirely new perspectives”, explained Transport Minister Wüst.

Innovation Hub Aachen
The Silent Air Taxi is another example of the efficiency of the Innovation Factory on RWTH Aachen Campus. “The ability to develop systemic innovations that benefit society is a strategic goal of RWTH Aachen, which we pursue in collaboration with technology partners on RWTH Aachen Campus. The Silent Air Taxi is another milestone for us, now that the delivery of the first e.GO Life electric cars commenced a few weeks ago. It shows that Aachen is a prime location for interdisciplinary research and development, and that we utilize the option of interlinking academia and industry to its full potential”, explains Ulrich Rüdiger, Rector of RWTH Aachen University and Chairman of the Supervisory Board at RWTH Aachen Campus GmbH.

The Industry Partners
More than 50 experts are currently developing and building the low-noise Silent Air Taxi in collaboration with renowned industry players of the German aviation sector – such as MTU Aero Engines AG. For MTU Aero Engines, the Silent Air Taxi is a courageous and convincing future concept with very high chances of realization. This is why we not only participate as a technology partner but also in e.SAT Powertrain GmbH,“ says Lars Wagner, Chief Technology Officer, MTU Aero Engines. e.SAT Powertrain GmbH, a subsidiary of e.SAT GmbH, is a manufacturer of electro-hybrid drives.

Other comments about the Silent Air Taxi at the event on 11 June 2019 (in German):
https://e-sat.de/en/media-center/quotes-on-the-silent-air-taxi/

Further information and pictures in the Mediacenter:
https://e-sat.de/de/mediacenter/pressecenter/

Text length: 6,712 (with blank spaces)

Image material:

Caption: Unveiling of the Silent Air Taxi model: left to right: Prof. Dr. Kai-Uwe Schröder (e.SAT GmbH), Prof. Dr. Eike Stumpf (e.SAT GmbH), Prof. Dr. Frank Janser (e.SAT GmbH), Dr. Hendrik Schulte (State secretary, Ministry of Transport of the Federal State of North Rhine-Westphalia), Prof. Dr. Günther Schuh (e.SAT GmbH), Hendrik Wüst (Minister of Transport of the Federal State of North Rhine-Westphalia) and Prof. Dr. Peter Jeschke (e.SAT GmbH)

e.SAT GmbH
The Aachen-based e.SAT GmbH was founded in 2018 as a manufacturer of electro-hybrid air planes. The managing directors of e.SAT GmbH are Prof. Dr. Frank Janser, Prof. Dr. Peter Jeschke and Prof. Dr. Günther Schuh.
www.e-sat.de

e.SAT Powertrain GmbH
The Aachen-based e.SAT Powertrain GmbH, a subsidiary of e.SAT GmbH, was founded in 2019 as a manufacturer of electro-hybrid air planes and drives. The managing directors of both companies are Prof. Dr. Frank Janser, Prof. Dr. Peter Jeschke and Prof. Dr. Günther Schuh.

RWTH Aachen University
With around 260 institutes in nine faculties, RWTH Aachen is among the leading European scientific and research institutions and is one of the Universities of Excellence in Germany. More than 45,000 students in 150 courses of study are registered for the winter semester of 2018/19, including 9,000 international students from 125 countries. Teaching at RWTH Aachen is first and foremost application-oriented. Its graduates are therefore sought-after as junior executives and leaders in business and industry.
www.rwth-aachen.de

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RWTH Aachen Campus
RWTH Aachen Campus contributes significantly towards highlighting the research competence available at RWTH. The project creates a unique symbiosis of science and economics. Here, experts research specifically defined, relevant topics. Long-term areas of research are represented in clusters. These clusters are subdivided into centers, in which interdisciplinary teams and industry consortia work jointly on specific issues of the future and develop visionary solution approaches.
www.rwth-campus.com/en

FH Aachen
With more than 14,500 students, almost 2,000 graduates per year, 10 faculties, more than 90 courses of study, nine in-house and three affiliated institutes as well as four competence platforms, the FH Aachen University of Applied Sciences, with its Aachen and Jülich locations, is one of the biggest and most important universities of applied sciences in Germany. Around 230 professors as well as approximately 900 employees work here, in teaching, in research and in administration.
The FH Aachen offers its students a first-rate course of study that superbly prepares them for jobs in modern and trendsetting professions. Apart from the traditional MINT subjects, such as mathematics, informatics, natural sciences, and technology, the range of courses offered by the university also includes business studies and design. In line with market requirements, more than 90 Bachelor's and Master's degree programs aren't just offered as full-time courses of study, there is also an ever increasing number of dual study programs.
The university focuses on modern teaching which is guided by the latest didactic insights and utilizes up-to-date methods such as e-learning. Students are provided with individual personal support which allows for an intense exchange of knowledge and experiences with the teaching staff. The incorporation of current research and development findings optimally prepares students for their professional careers after graduation.
www.fh-aachen.de

Flugplatz Aachen-Merzbrück GmbH
Embedded in the Aachen metropolitan area, close to the borders to Belgium and the Netherlands and positioned at the touchpoints between east and west, and north and south, Aachen-Merzbrück airfield has served the region for over 105 years. Flugplatz Aachen-Merzbrück GmbH is the operator of this airfield. With a total of 45,000 flight movements, it is a teaching location for two Aachen-based chairs for aerospace technology – one at FH Aachen and one at RWTH Aachen. Financial support from the NRW state government will fund the development of the airfield into a research facility for the development of aviation-related hybrid drive systems and autonomous flight.

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