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Eviation Aircraft Developing All-Electric Commuter Plane with Stratasys 3D Printing to Make Short Flights Affordable and Eco Friendly

Electric aircraft manufacturer, Eviation Aircraft, is using Stratasys 3D printing to accelerate its R&D process for everything from prototyping to tooling and evaluation of production parts

Eviation Aircraft has saved several hundreds of thousands of dollars and months of workforce hours with Stratasys 3D printing to make the project possible

[Video](#): Watch video to see how Eviation is using Stratasys 3D printing to accelerate time-to-market for its all-electric commuter aircraft

MINNEAPOLIS & REHOVOT, Israel--(BUSINESS WIRE)-- [Stratasys](#) (Nasdaq:SSYS), the 3D printing and additive manufacturing solutions company, today announced that [Eviation Aircraft](#), a global manufacturer of all-electric air mobility solutions, is using Stratasys 3D printing to develop one of the world's first all-electric commuter aircraft.

This Smart News Release features multimedia. View the full release here:

<http://www.businesswire.com/news/home/20170629005253/en/>



"In the next four years, Eviation aims to make regional air travel a cost-effective and clean option that rivals any existing form of transit today," says Eviation founder and CEO, Omer Bar-Yohay. "With people working and commuting across greater distances than ever before, we believe the solution will bring mid-range cities like Seoul and Beijing, or London and Paris, closer together through all-electric air travel."

[Video](#): Watch video to see how Eviation is using Stratasys 3D printing to accelerate time-to-market for its all-electric commuter aircraft.

There is a race in the aviation industry to develop electric and hybrid-electric commercial aircraft, so to gain a competitive edge, Eviation integrated Stratasys 3D printing throughout its R&D processes.

Eviation electric aircraft designed to take 9 passengers up to 1,000km at more than 240kts - all at the price of a train ticket (Photo: Eviation).

holistic approach to the engineering of its electric commuter aircraft. The entire development process - including aerodynamic testing and the propulsion system - was redesigned to maximize the efficiency of electric flight. Stratasys 3D printing enabled the company to test many of its designs long before it needed to invest in actual certifiable parts, resulting in accelerated processes and more innovative designs, as well as significantly reduced engineering costs.

The company took a "start from scratch,"

"Our ability to create new iterations of designs with 3D printing and see how they perform in real-time is helping us reduce critical capital costs, even as we accelerate our rapid prototyping phase," explains Bar-Yohay. "The kind of highly iterative, in-house manufacturing process that Stratasys 3D printing has refined is crucial to the life of a company in the constantly changing, and highly competitive, transportation space."

For example, Eviation 3D printed its wing-tip motors in a matter of hours, enabling swifter design and functional evaluation, while waiting for the final motors to be shipped. Another key aspect of Eviation's design is its ability to reduce interference drag on the exterior of the aircraft by employing smooth, curved surfaces. Eviation was able to create the required strong, geometrically complex, lightweight parts to support these surfaces by 3D printing a composite lay-up tool in ULTEM 1010

material, which was then covered with carbon fiber.

"All in all, in two years of operation we have saved several hundreds of thousands of dollars with Stratasys 3D printing and I would estimate six months or more of workforce hours, which made this project possible," adds Bar-Yohay. "Today we are using the technology for prototyping test parts and tooling; the ability to produce lightweight parts in complex geometries will also enable us to explore the possibility of 3D printing parts for the final aircraft."

Eviation is expecting to begin flight testing in late 2018 with commercial availability slated for 2021.

"Eviation is a great example of how 3D printing promotes in-house innovation and can accelerate what is typically a long and expensive development phase for both start-ups and mature companies. This enables them to develop new concepts and produce working prototypes quickly, without racking up significant costs up front," says Zehavit Reisin, Vice President, Head of Rapid Prototyping Solutions Business Unit, Stratasys. "Our extensive experience in aerospace - ranging from prototypes and tools to the use of our technology for flight-certified aircraft interior and launch vehicle components - makes Stratasys solutions an optimal fit for aviation companies looking to improve cycle time and development efficiency, while pushing the envelope of innovation."

Stratasys 3D printed parts for Eviation Aircraft are being displayed at the [Goodwood Festival of Speed](#) (FoS) in the Future Lab, June 29 to July 2.

About Stratasys

For nearly 30 years, [Stratasys Ltd. \(NASDAQ:SSYS\)](#) has been a defining force in 3D printing and additive manufacturing, shaping the way things are made. Headquartered in Minneapolis, Minnesota and Rehovot, Israel, the company empowers customers across vertical markets, including aerospace, automotive, healthcare, education, and consumer products, by enabling new approaches for design and manufacturing. Stratasys solutions offer design freedom and manufacturing flexibility, reducing time-to-market and lowering development costs, while improving products and communication. Subsidiaries include MakerBot and Solidscape, as well as Stratasys Direct Manufacturing, which offers 3D printed parts on demand. Stratasys also offers Expert Services in North America and over 4 million free, 3D printable design files through its Thingiverse and GrabCAD communities. Stratasys has 1,200 granted or pending additive manufacturing patents and has received more than 30 technology and leadership awards. Online at: www.stratasys.com or <http://blog.stratasys.com/>. Follow us on [LinkedIn](#).

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