

Airship One - hybrid airship / semi-buoyant aircraft concept

Peter Lobner, updated 18 March 2022

This very unconventionally shaped craft, designed in 2007 by Gosha Galitsky, an industrial designer from Örebro, Sweden, is hard to define. It may be a heavier-than-air, semi-rigid, hybrid airship, or it may be a semi-rigid, semi-buoyant aircraft, both capable of vertical takeoff and landing (VTOL). In either case, Airship One is a stunning design exercise for a very stylish modern airship.



Source. Tuvie.com

Basic design characteristics of Airship One are as follows:

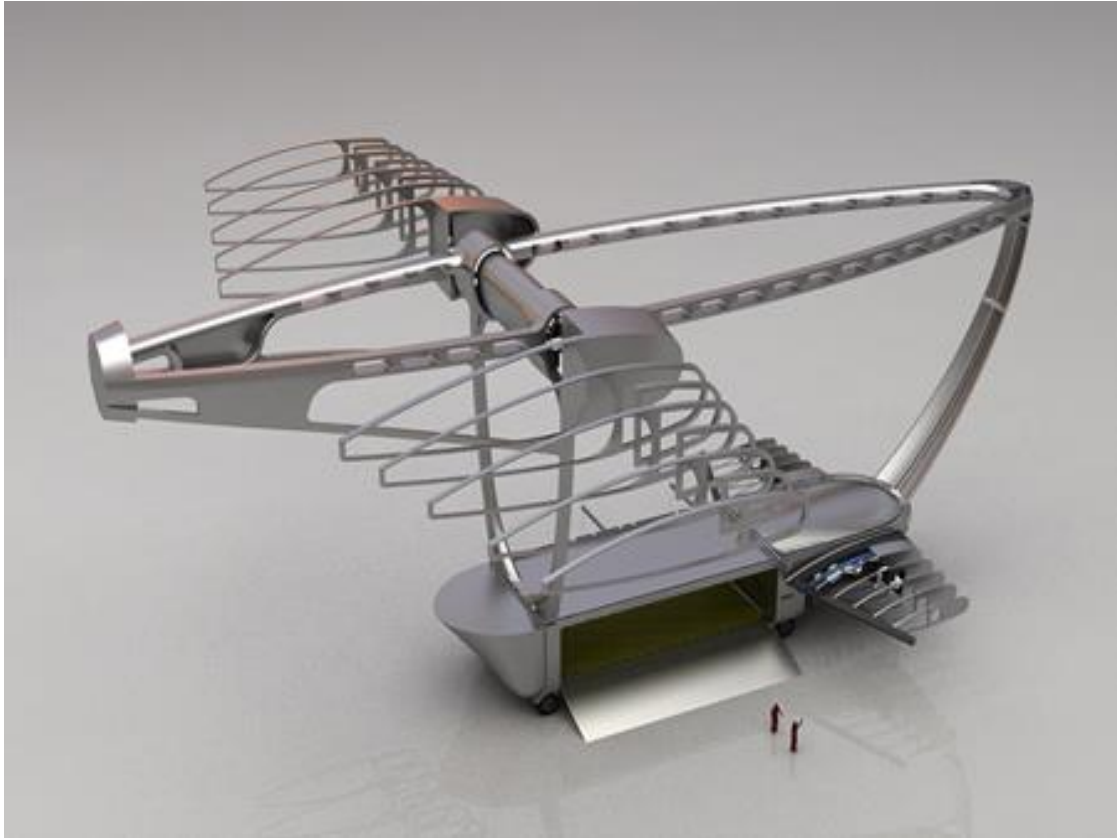
- Semi-rigid structure: an aluminum and fiber composite airframe, carbon fiber paneling and strong PVP (Polyvinylpyrrolidone) fabric.
- Semi-buoyant: two-thirds of the lift is aerostatic, from the buoyancy of the lifting gas. The remainder is generated by

- propulsive thrust from vectored ducted fans during VTOL and hover, and by aerodynamic lift from the wings during forward flight.
- Hybrid solar-electric power system: 125 m² (1,356 ft²) solar panels mounted on the hull and wings can support the power needs during cruise flight, a battery provides energy storage, and a small bio-diesel generator provides supplementary power during takeoff and landing.
 - Very low carbon footprint
 - Electric propulsion: four DC electrically powered vectoring ducted fans provide propulsion during cruise and lift during hover and VTOL.
 - High cruise speed: 193 kph (120 mph)
 - Large payload capacity: 30 metric tons (33 short tons)
 - Cargo bay can accommodate two full-trailer containers
 - Two-level passenger compartment with luxury accommodations for 25 passengers.
 - Minimal need for infrastructure.

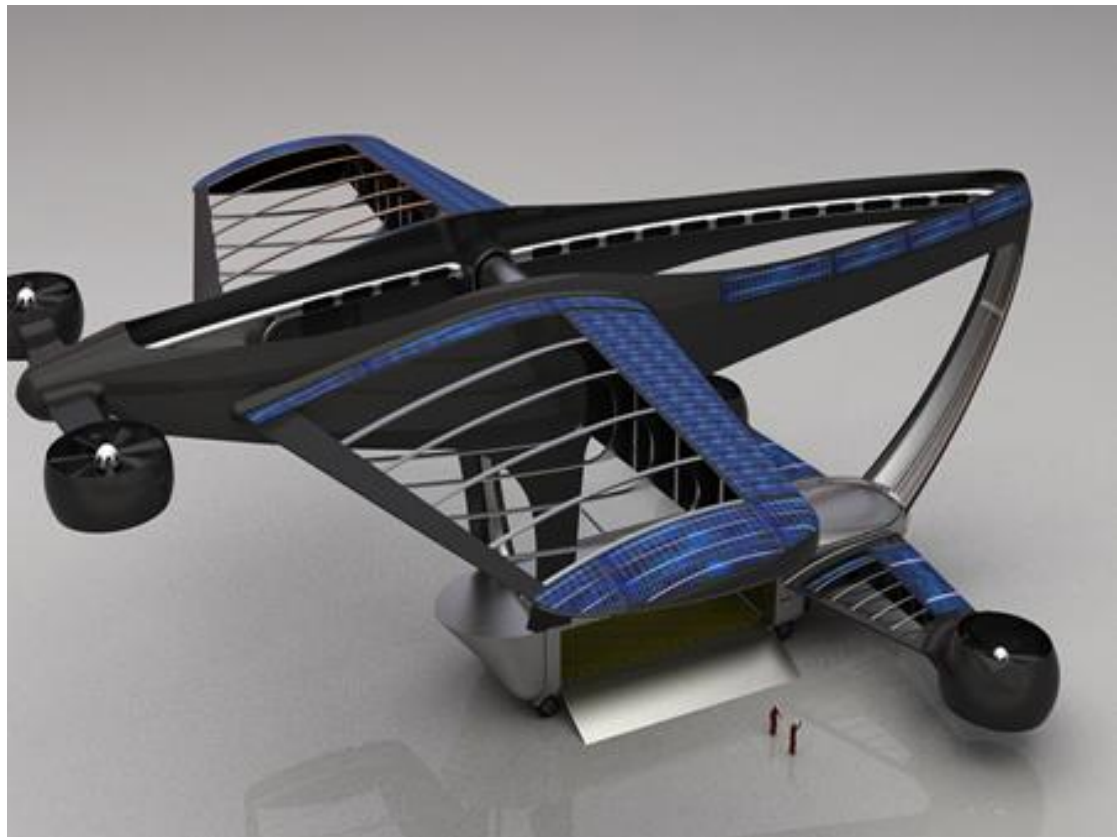
You can read more about Airship One on the Tuvie website here:
<http://www.tuvie.com/airship-one-a-hybrid-between-an-airplane-and-a-semi-rigid-airship/>

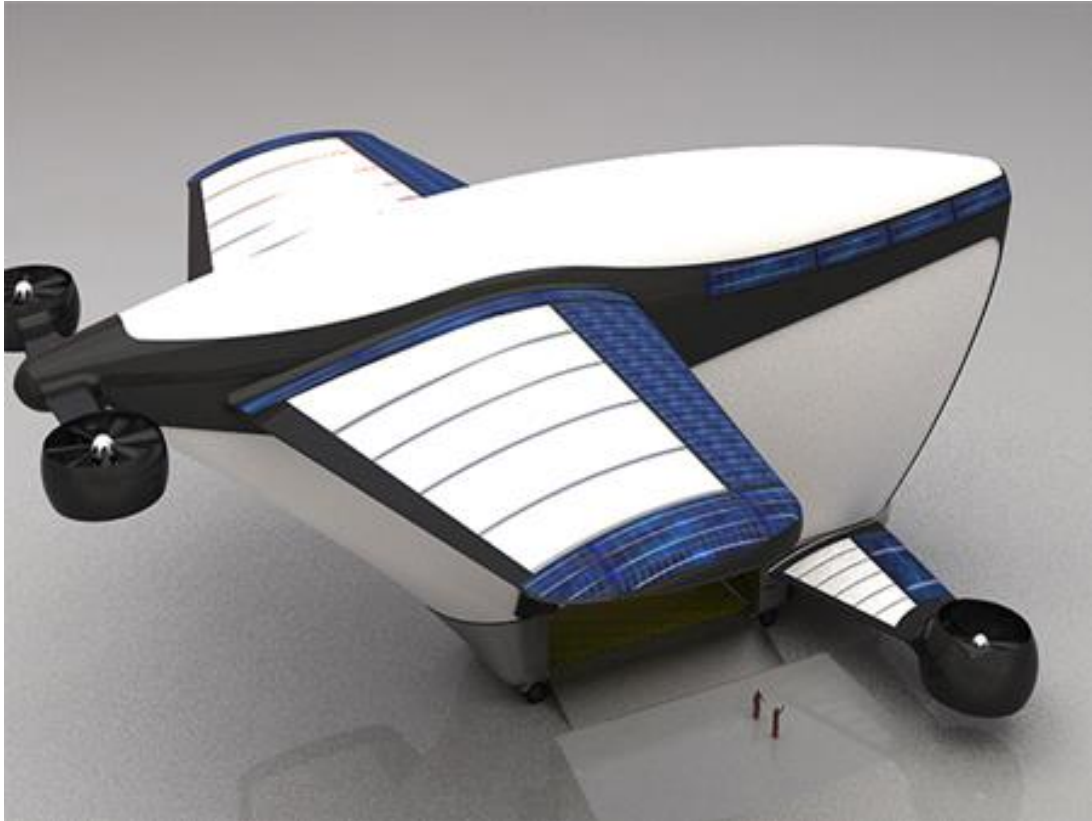
Airship One is only a concept and there are no current plans to actually build one. Nonetheless, designer Gosha Galitsky created the following series of graphics showing a build sequence from the structural frame to the complete airship. These are all from the Tuvie website listed above.

You can view a more detailed construction sequence and additional details on Airship One in a short 2007 video by Galitsky at the following link:
https://www.youtube.com/watch?v=LRTxD_WGSEM



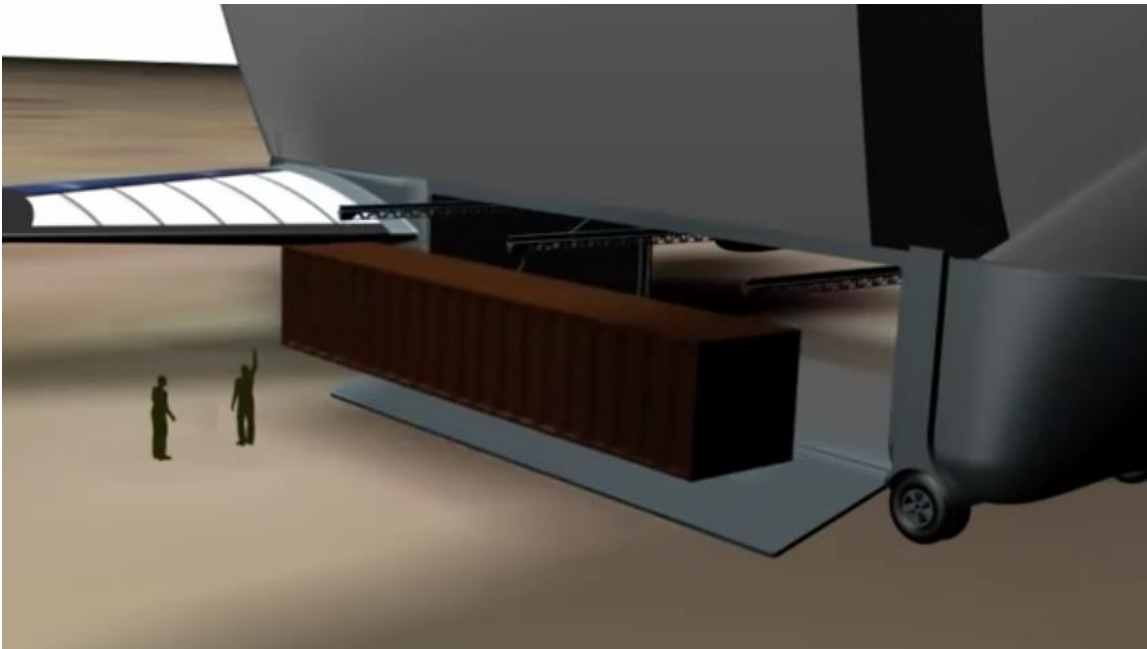
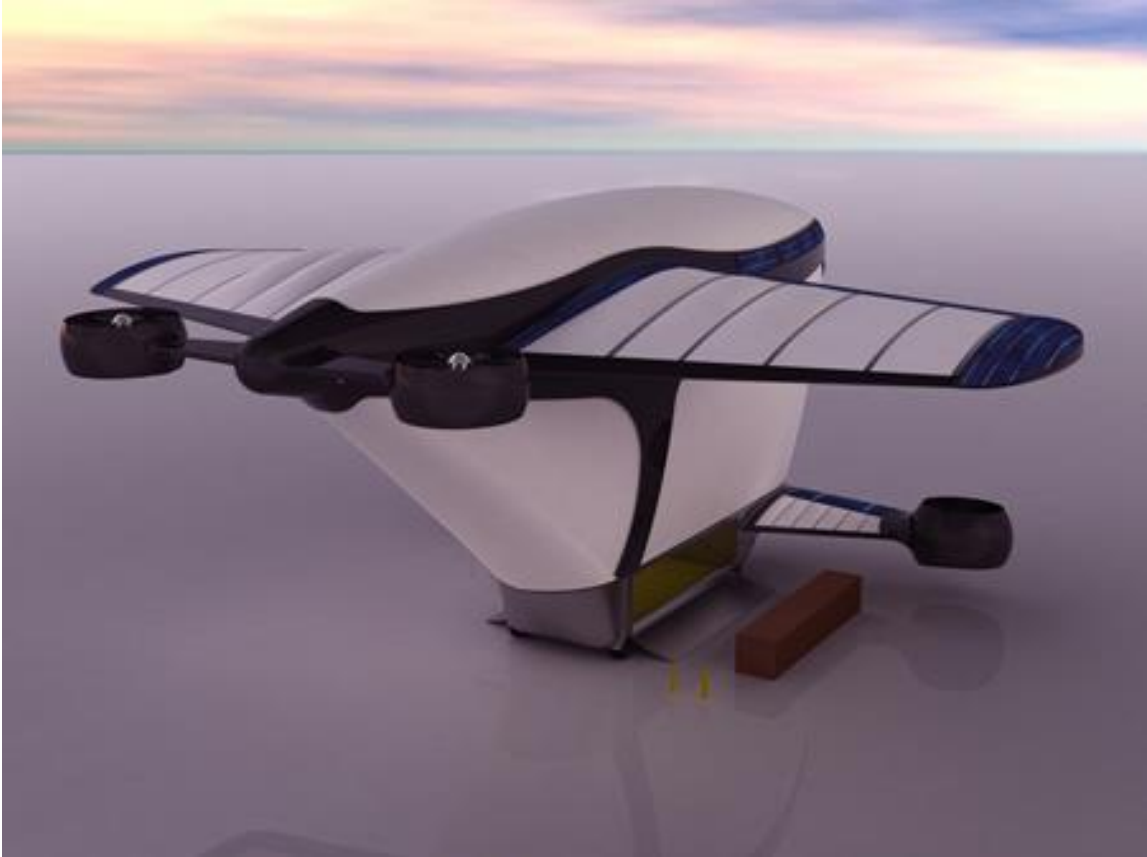
Source. Tuvie.com





Source. Tuvie.com





30 metric ton cargo capacity; cargo handling from side-mounted cargo bays. Source: Screenshot from video



The stub wing supporting one of the forward thrust vectoring propulsors. Source: Screenshot from video



The stub wings supporting the rear thrust vectoring propulsors. Source: Screenshot from video

For additional information

- Gosha Gakitsky, “Airship One: A Hybrid Between An Airplane and A Semi-Rigid Airship,” Tuvie, 2007:
<https://www.tuvie.com/airship-one-a-hybrid-between-an-airplane-and-a-semi-rigid-airship/>

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