

Imaginative - Medusa & Cubozo

Peter Lobner, updated 18 March 2022

1. Introduction

Imaginative creates vehicle concepts related to the future of mobility. Two particularly unusual concepts are the Medusa and Cubozo airships. These are neutrally-buoyant, biomimetic craft that resemble the shape of a jellyfish. The gondola is supported and propelled by an ultra-thin gossamer membrane that contains the lifting gas envelope and is able to contract under electrical impulses to control and move the airship through the air in a manner similar to the way a jellyfish moves through the water. The airship structures would be built from ultra-light materials such as graphene.

2. Medusa

Medusa was designed to serve as a research platform to test the biomimetic propulsion system and the use of ultra-strong materials. The concept for Medusa was originated by Charles Bombardier in 2016 and the design was developed by Adolfo Esquivel.

Imaginative describes the operation of Medusa as follows:

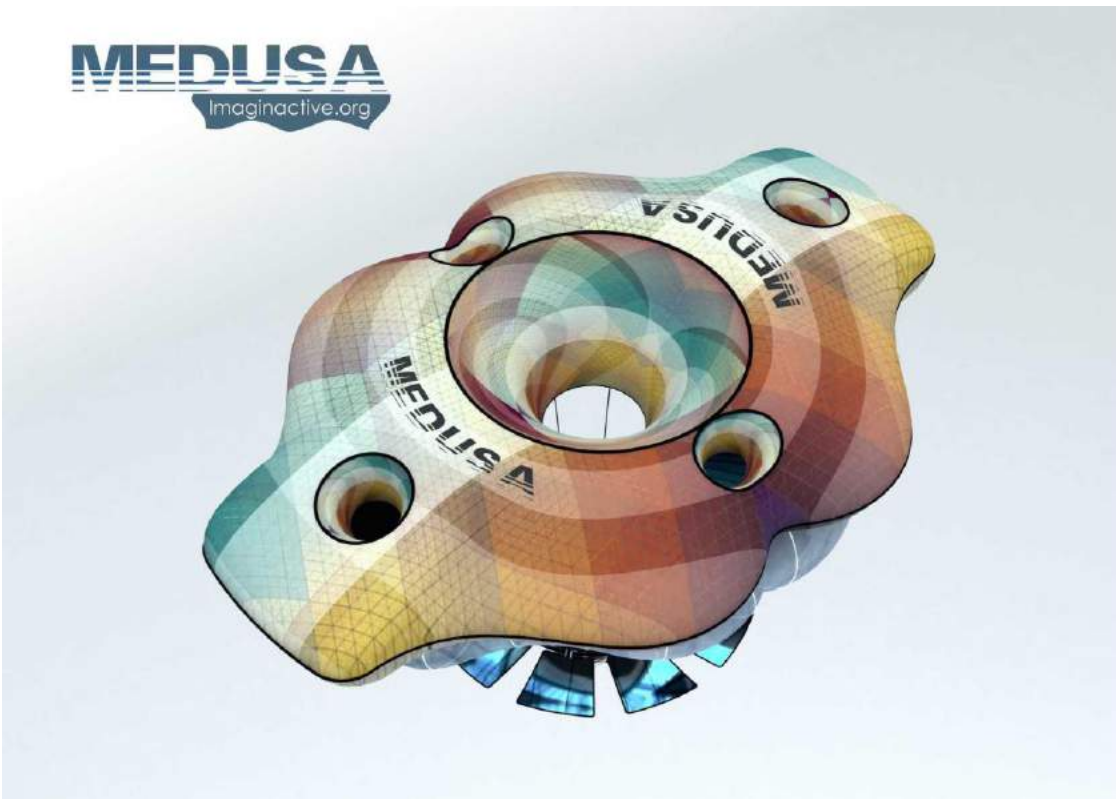
“Medusa would be designed to carry two passengers at a time in an ultra-light spherical cabin made of graphene fiber. This cabin would be suspended under an intermediate drive and propulsion system made of flaps that could also be used to steer the vehicle in one direction or another by varying the amount of force exerted on them.... A way to compensate for the up-and-down movement of the (biomimetic) propulsion system would need to be integrated in the intermediate drive to minimize the effect on the occupant of the spherical cabin.”

MEDUSA
Imaginative.org



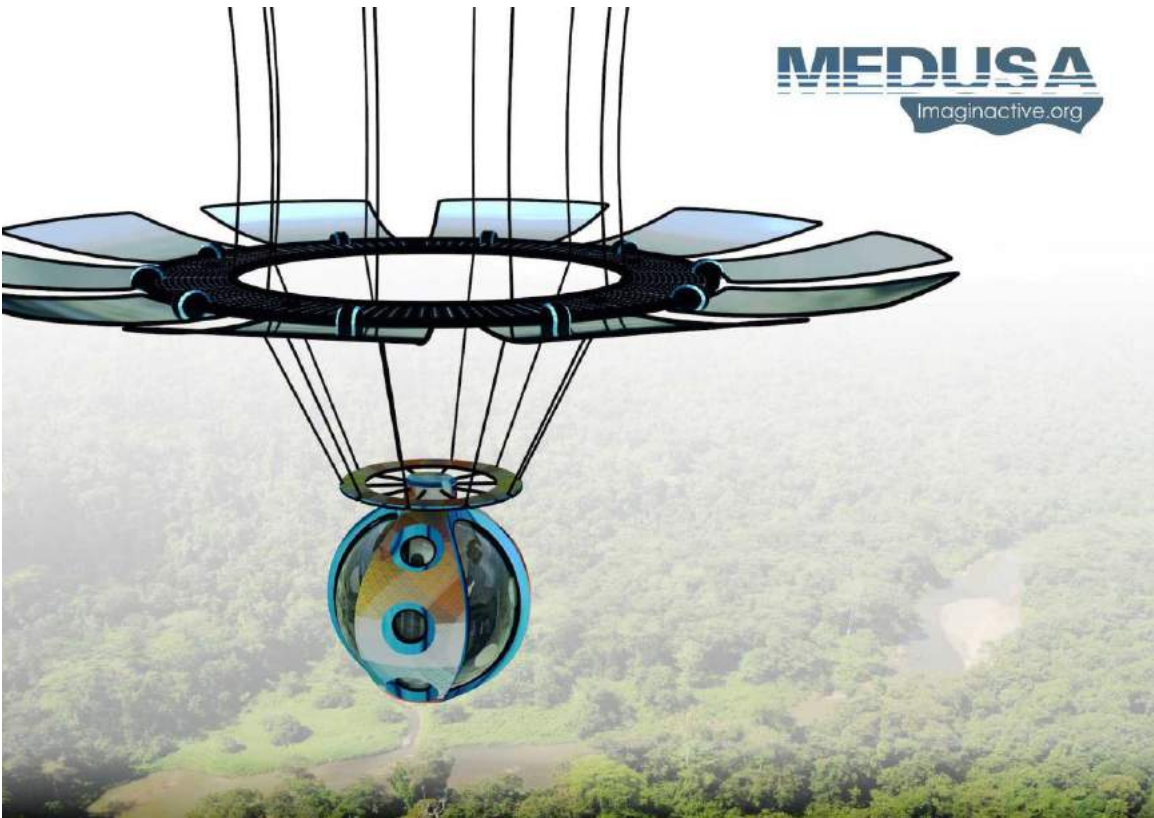
Renderings of Medusa in flight. Source: Imaginative

MEDUSA
Imaginative.org





Renderings of Medusa and its crew capsule. Source: Imaginative



3. Cubozo

Cubozo is much larger than Medusa, but is based on the same biomimetic operating principles. Cubozo was designed as an asset that could be deployed to assist during disaster relief. Imaginactive describes this airship as,

“...a landing and resupply station for various kinds of drones assisting ground teams during a humanitarian crisis. Some drones would be tasked with delivering food, clothing or medical supplies while others would be used to ferry wounded persons or medical personnel. Smaller autonomous drones would handle safety and surveillance.”

Cubozo also could be developed as a floating hotel.

The concept for Cubozo was originated by Charles Bombardier in 2018 and the design was developed by Adolfo Esquivel.



General arrangement of a Cubozo airship. Source: Imaginactive



Renderings of Cubozo deploying drones. Source: Imaginative





Rendering of Cubozo deploying drones. Source: Imaginative



Cubozo after landing. Source: Imaginative

4. For additional information

The Imaginative web resources on Medusa, Cubozo and several more of their airship projects are no longer available.

Other *Modern Airships* articles

- *Modern Airships - Part 1*: <https://lynceans.org/all-posts/modern-airships-part-1/>
- *Modern Airships - Part 2*: <https://lynceans.org/all-posts/modern-airships-part-2/>
- *Modern Airships - Part 3*: <https://lynceans.org/all-posts/modern-airships-part-3/>