

## **Airbia - suburban passenger ferry airship concept**

Peter Lobner, updated 8 February 2022

### **1. Introduction**

In 2010, UK designers Alexandros Tsolakis and Irene Shamma unveiled their design concept for the Airbia passenger airship, which is a key element in a transportation network designed to ferry passengers quickly and easily between their suburban homes and urban city centers. This airship transportation network could greatly decrease surface transportation congestion and associated environmental pollution in sprawling urban / suburban areas. The only infrastructure needed on the ground is a distributed set of station - platforms at selected locations where the airships can land to load / unload passengers.

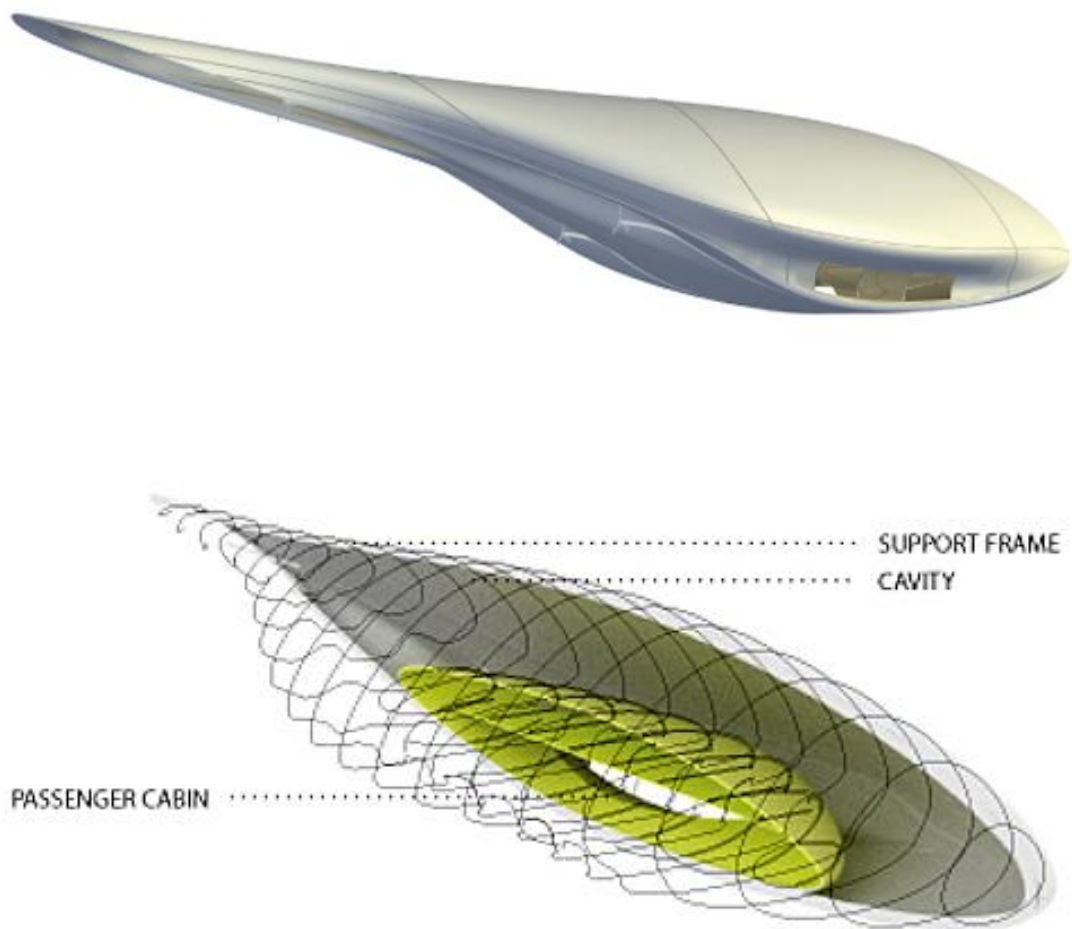


*Airbia ferries converging on downtown. Source: Airbia*

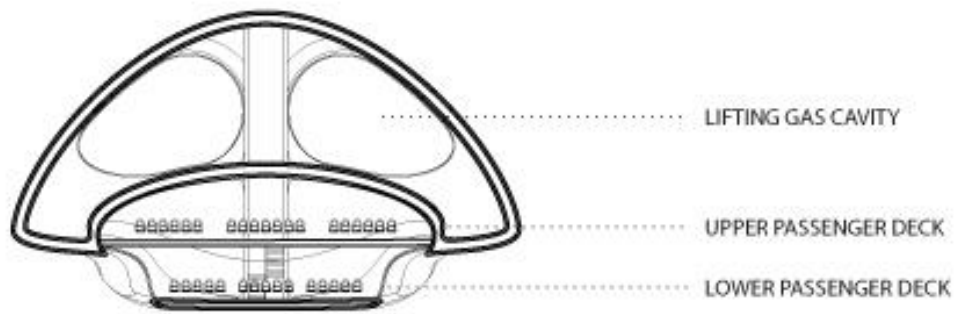
Airbia was a finalist in the 2010 REBURBIA “A Suburban Design Competition” by Dwell Magazine and Inhabitat for talented designers, architects, and urban planners to contribute their solutions to save suburbia.

## 2. Anatomy of the Airbia airship

The Airbia airship has a graceful organic shape, so perhaps the term “anatomy” is the correct term to use when describing its flowing design and structure. Airbia is a large tadpole-shaped airship designed to carry about 400 passengers in a two level passenger cabin with side-loading doors on the lower level. The passenger cabin is shown in green in the following rendered section drawing. The larger surrounding space inside the hull contains the helium lifting gas cells.



*Airbia external view, stern quarter (above) and rendered section view, bow quarter (below). Source: Airbia*



LIFTING GAS CAVITY

UPPER PASSENGER DECK

LOWER PASSENGER DECK

CROSS SECTION



SIDE DOORS

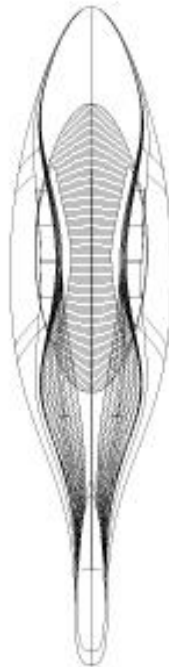
ELEVATION



PROPELLER

SIDE DOORS

DIAGRAMMATIC SECTIONS



PLAN VIEW

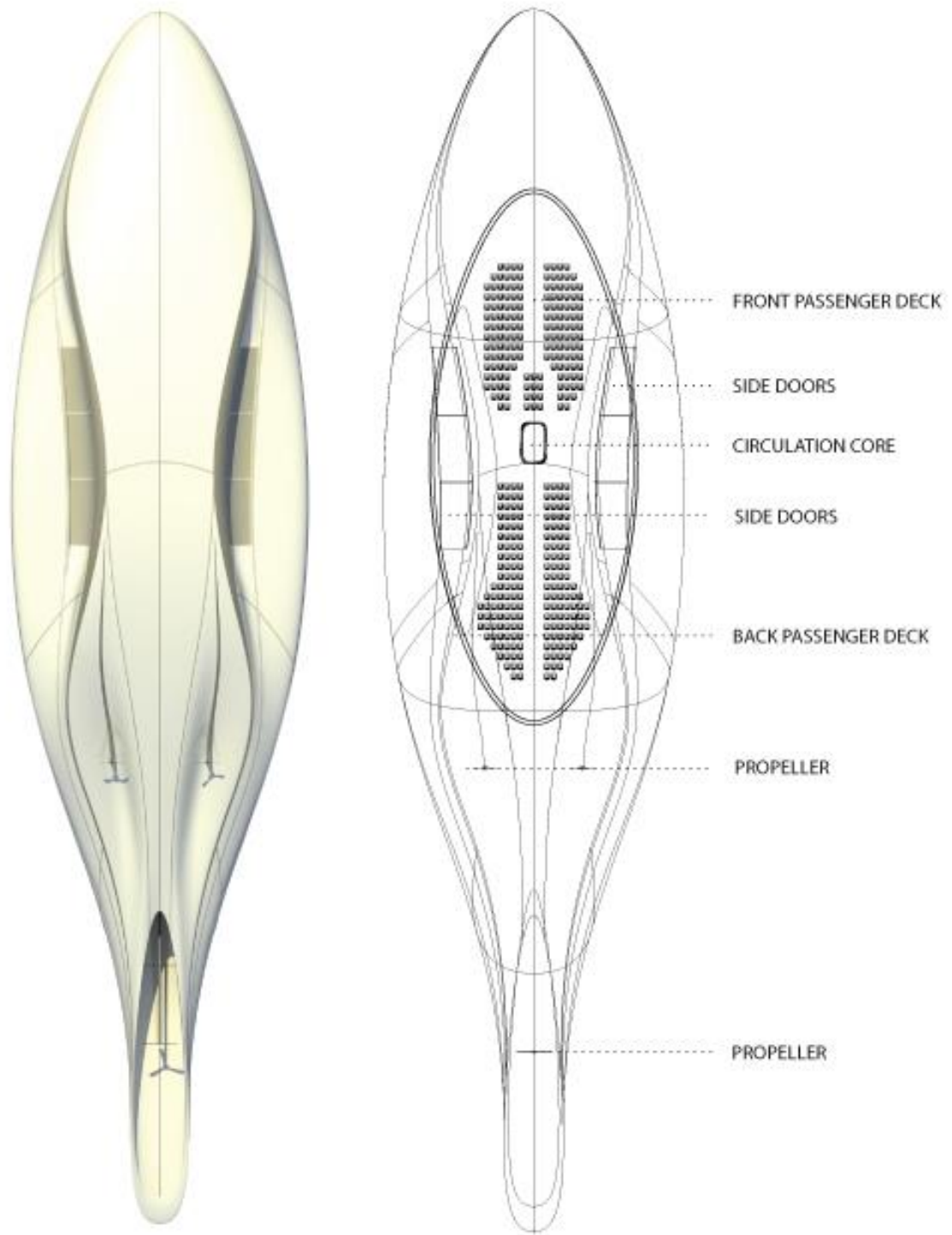


TOP VIEW



OUTLINE VIEW

*Source: Airbia*



RENDERED BOTTOM VIEW

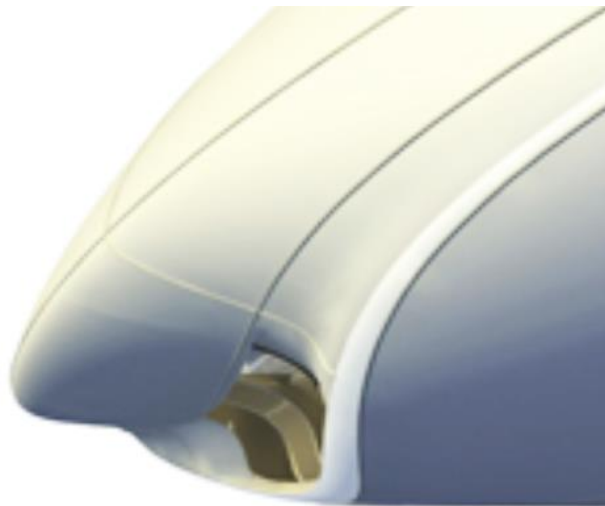
PLAN VIEW

Source: Airbia

Airbia is propelled by three, three-bladed propellers; two are under the aft fuselage and one is shrouded in the tail extension.



On the lower level, the hull is heavily contoured in the mid-section, where the side doors are located.

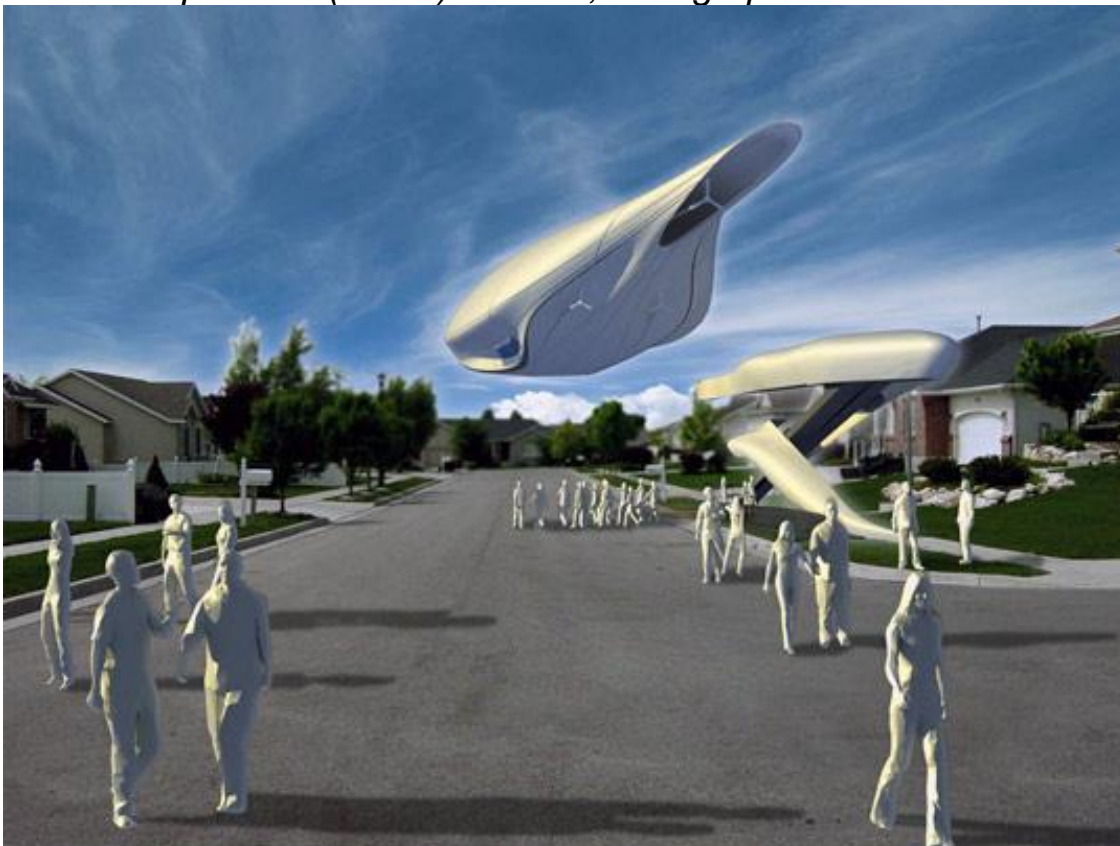


*Source, both graphics: Airbia*

On its commuter routes, Airbia flies at a low altitude of 30 to 500 meters (100 to 1,640 feet) as it transits between station-platforms at an average speed of 150 kph (93 mph).

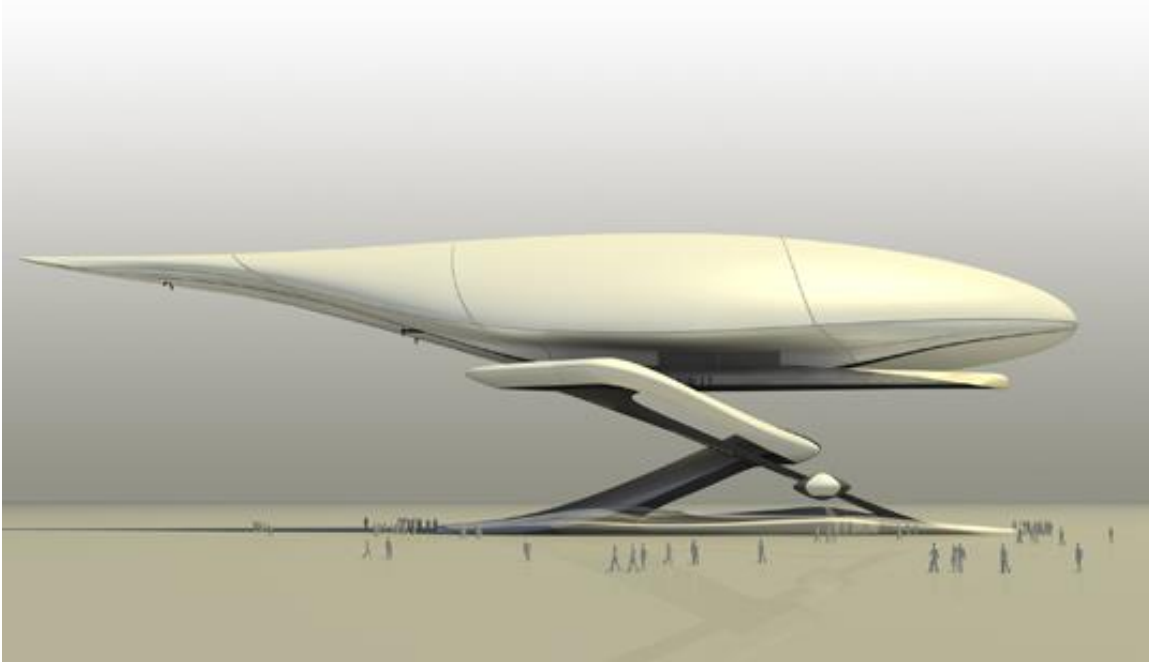


*Airbia over a large city (above), and departing a suburban station – platform (below). Source, both graphics: Airbia*



### 3. The station - platform

The architecturally stunning station-platform has an elevated platform for landing the airship, staircases and elevators for passenger access, and ticket machines. To make the transportation system flexible, the station-platforms can be placed almost anywhere in the city and suburbs.



*An Airbia airship on a station-platform (above) and an empty station-platform (below). Source, both graphics: Airbia*





*A station-platform. Source: Airbia*

All graphics in this article are from the Airbia website at the following link: <https://airbia.wordpress.com>

#### **4. For more information**

- Alexandros Tsolakis & Irene Shamma, “AIRBIA, A Suburban Airship,” 22 January 2010: <https://airbia.wordpress.com>
- Mike Chino, “AIRBIA: Awesome Suburban Airships Take Flight,” Inhabit, 8 October 2009: <https://inhabitat.com/airbia-suburban-airships-take-flight/>

#### **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/>