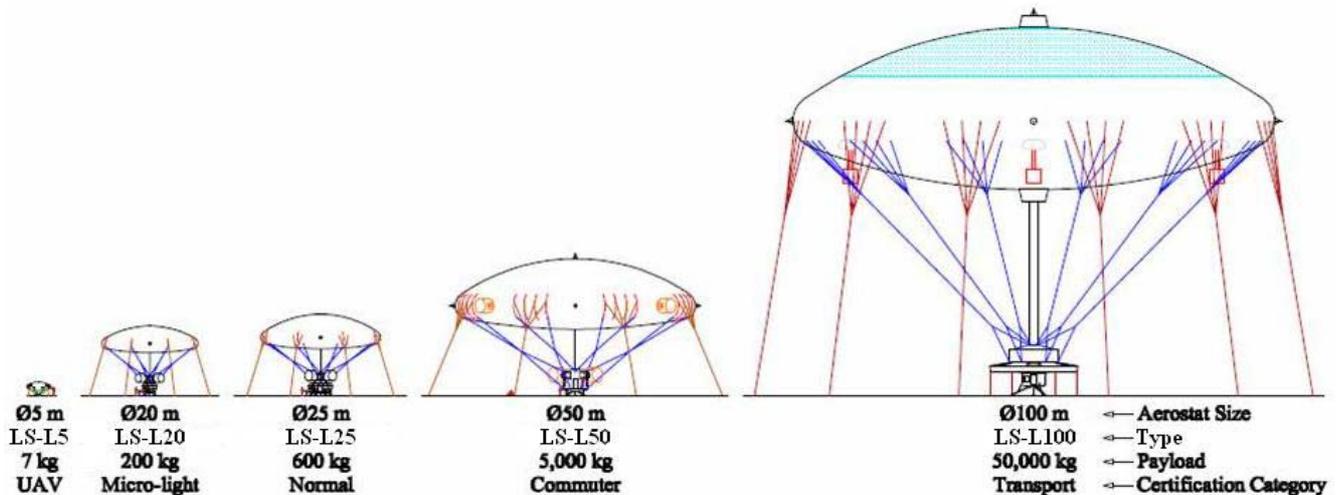


## New Omni-directional Airship Developments

A long term strategy with new omni-directional types for industry development that includes provision of both reliable airships and the operating infrastructure worldwide, focusing on solving past issues in sustainable low risk ways that naturally starts small and grows steadily, as circumstances allow.



Today the airship industry is hardly successful, evidenced by the very low number of manned types in service worldwide (just a handful). However, airships are not stupid and the industry could become successful with new types designed to overcome past issues if pursued in systematic/natural ways evolving from the ground up. As illustrated above, Luffships (see website below) has a strategy for such development (making things pay at each stage) only pursuing more difficult projects in doable steps after proving previous arrangements and profiting from them.

The ultimate goal is for serious aerial-cranes able to pick & put out-sized rather heavy loads anywhere; something that many people in mining, agriculture, forestry, construction, humanitarian aid, recovery, etc, and the military want for logistical purposes. However, the people who want such capability are unlikely to get it until the spadework is done and the industry is ready; where it also needs the network of operators and the infrastructure for international flights to be put in place before such big aircraft enter service.

Luffships' plan is to enable this through much smaller readily doable projects that builds the industry in secure ways - only pursuing bigger types when the operators are pressing for them with enough money on the table for their development. Such aircraft thus are a long term goal that may take generations if not supported.

In the meantime, Luffships plans to prepare the ground work and the path for people to follow. This includes a number of relatively small (thus cheap) low risk projects with earning capability providing useful services in their own way including establishment of new omni-directional types (like drones) with methods that overcome the foibles of traditional unidirectional airships and aerostats. These projects are intended as a way for technology development formulated by Luffships' founder, as one of the few people with the data base, experience, insight, knowledge and particular airship engineering capability, to guide young people eager to establish themselves in the industry plus older hands with specialist capabilities who are willing to cooperate.

1<sup>st</sup> stage projects include:

- 1) Inflatable tents providing comfortable cheap easily set up shelter/living/sleeping quarters.
- 2) Small LTA-drones for various indoor and outdoor uses – supporting existing drones.
- 3) Captured or tethered aerostats as projector screens and elevators for displays/shelter and fixed location area coverage with various systems.
- 4) Balloon-hoists as large readily deployable naturally shaped tethered aerostats using ground control winches at fixed locations for localised load movement over their ground area – functioning as aerial-cranes.

# Strategy for Aerial-Crane Airships



These projects independently enable particular new technology and infrastructure aspects needed to be developed at low cost before attempting manned flights. They also begin the process of establishing new independent international operators (who also will need training and maintenance services) who then become capable and would organise the necessary worldwide infrastructure arrangements needed for manned and bigger types.

The 2<sup>nd</sup> manned flight stage with new low certification (Balloon/Normal) category types then may follow, where the LS-L20 and LS-L25 (as patrollers) provide operators already prepared (or not) with a way to provide aerial services between the network of bases they arrange for such operations. This therefore extends their capability and provides a relatively low cost way to affirm the technology and get necessary accreditation with the airworthiness authorities (approvals) plus essential flight/ground data information necessary for passenger and aerial crane types.

The 3<sup>rd</sup> stage then may follow with the development of initial medium sized free flying aerial-cranes (the LS-L50 for say 5 tonne payloads) and passenger variants under Commuter category rules. These aircraft are intended to enable operators expand their services and further facilitate the infrastructure needed for bigger types; where the LS-L50 was designed as a general carrier for delivery/extraction of ground installation parts and people for extended services into remote regions otherwise inaccessible (except by foot) as well as providing worldwide services anywhere.

The goal (4<sup>th</sup> stage) for large aerial-cranes with long-range capability, like LS-L100 (50 tonne payloads) and LS-L150 (150 tonne payloads), under Transport Category regulations then may follow.

As it happens the arrangements outlined also would facilitate other airship developers with big projects that perhaps will be compatible for long range/endurance purposes when they've found a way to set up the network of operators and infrastructure necessary, and if they survive after starting with a monster and little else to generate revenue/pay the way. Otherwise, Luffships can help with services and projects tailored to their needs.

Well, that's a brief summary, believed to provide a relatively low cost low risk way of starting with modest investment, enabling the industry to get underway properly, sustain itself, grow and become a multi-billion \$ international way for everyone's benefit. Luffships' website provides further information with numerous downloadable documents throughout to explain everything.

Further information from contact, as below.