

# Luffships Ltd

## for Applied LTA Solutions that people will love



**Providing access to new markets and the creation of innovative business opportunities**

### **Introduction**

Luffships Ltd is an R&D business using lighter-than-air (LTA) technology for affordable buoyant aircraft (aerostats and airships) to fulfil operators' needs internationally without the bother of traditional aerostats (balloons, free floating or tethered) and airships (dirigible types).

We also are mindful of commerce and networked infrastructure suitable for adverse weather, so have compatible ground facilities and other designs (shelters) with a strategy for their development in harmonious ways minimising disturbance.

Our goals are to enable aerial services in compatible ways anywhere, only dreamt about at the moment, such as:

- Aerial platforms and dirigibles with exceptional endurance aloft (weeks, months).
- Wide ranging quiet rovers (LTA drones) & patrollers (manned airships) for endless survey and support duties anywhere.
- Air transport of practically anything using natural conveyance methods (winds) and means for power that harness freely available energy sources without causing harm.
- Aerial cranes with precision control (enabling construction) for seriously heavy outsized payloads providing point to point services anywhere – without landing.
- Aerial cruise liners for unhindered joy of air travel and the natural wonders of our world.

To enable these possibilities, we work with aircraft specialists, producers, operators, etc, who know the business and the airworthiness authorities in structured ways from the ground up.

We also work to enable a broad network of international ground infrastructure arrangements tailored to local environments, providing protection against adverse weather/climate conditions.

### **Summary**

As aircraft engineers with significant airship design experience since c1980 we understand the issues of buoyant aircraft development/operation. We also understand their history, where it's clear the industry needs better ways for success. As inventors/innovators with knowhow, we want to help create better ways for air commerce.

From consideration of past doings, we have a strategy for the development of new types that scale up from small projects when the time is right to provide bigger sizes. We have numerous designs that are readily doable, fun and enable new operators to set up. As we and the operators become able to manage bigger projects, these then will go ahead. This enables new technology in development (e.g., rapid response vectored thrust) for better ways.

Our plan is to grow in manageable stages, developing capability leading to buoyant aircraft able to serve serious needs currently very difficult to otherwise fulfil without huge cost, such as:

- Providing people in urgent need of supplies who are starving, freezing and/or suffering from the circumstances they find themselves in – out of reach by other ways.
- Watching over vast areas with interactive capability and lasting endurance to provide immediate help, calling in and working with other services when needed.
- Serving industrial needs with pin-point accuracy (like helicopters) practically anywhere, but for seriously heavy-lift operations with lasting endurance.

To fulfil these purposes, we have a range of buoyant aircraft designs, needing finance, political and public support for development. We thus seek subscribers to help make them possible.

## Offerings

Instead of just more of the same we offer new types with enhanced capabilities, particularly omnidirectional airships that enable:

- Zero to moderate airspeed, enough to make headway against strong winds.
- Very long endurance – days or weeks and potentially months underway.
- Vertical ascent/descent with seriously heavy loads able for stable geostationary positioning with controllable heading to lift and place them.
- Low noise, vibration, emissions and environmental impact.
- Unobstructed viewing or scanning all around for various purposes.
- Reliability with low acquisition, operating and maintenance costs, plus long service life with high utilisation.
- Minimal ground infrastructure (no runways or need for hangars) and ability to access small ground locations in difficult territorial regions.

## Goals

1. Become profitable (securing the business) with readily doable small unmanned projects including: inflatable structures, LTA drones and captured aerostats, each enabling particular aspects and new technology. They also are to develop team skills and cooperation with suppliers, gain airworthiness approvals necessary for later manned aircraft developments, and to cultivate relationships with operators who will need training and supply.
2. Develop, certify and enable sales of manned series airships under Balloon/Normal category regulations for various ‘light-aircraft’ purposes, providing operators with ways to extend aerial services between bases that they arrange.
3. Follow with further development of general air-services airships (luggers) under existing Commuter category rules, enabling operators to expand their services and further facilitate the infrastructure needed for bigger types.
4. Develop aerial cranes, cargo airships and cruisers for serious payloads under Transport Category regulations when the circumstances allow, enabling heavy-lift air services.

## Objectives

From investment granted, attain goals 1 and 2 within a 2 to 3 year period, leveraging things already undertaken. Achieve goal 3 within a further 5 years, after which the technology should be accepted to follow through for goal 4.

Provide technical support services for producers, suppliers, operators, maintainers and people who want reliable LTA Solutions.

Enable business sustainability from sales and technical services income within 2 years.

## Benefits

By way of examples:

- Operators will benefit from affordable products and services with better deployment suiting their needs involving fewer crew and easier ways to securely manage their assets compared with traditional airships.
- Local communities will benefit from employment opportunities and the aerial services enabled, facilitating transport and trade – especially people in isolated places with poor infrastructure.
- National organisations will benefit from affordable ways to provide persistent coverage over regions otherwise difficult to consistently watch over.

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- Industry, agriculture, forestry, earth resource suppliers, etc, will benefit from point to point ways for delivery and extraction directly.

### Investment

Investment in Luffships' proposals is a way to provide sustainable aerial services that don't pollute our atmosphere or waste finite resources (as jets do) enabling better ways for our children's future.

### Contact

To see more about Luffships' projects and perhaps read associated documents available, see our website: [www.luffships.com](http://www.luffships.com)

For more information about the possibilities offered or to register support for our goals, either write to us as below or send an e-mail to: [info@luffships.com](mailto:info@luffships.com)

We hope you enjoyed learning about us and would like to become a subscriber receiving interesting information about buoyant aircraft.

### Illustration depicting Luffships' technology



#### For:

- Border patrol
- Offshore activities
- Drone carrier
- ISR

**An Omni-directional (O-D) airship design  
Manned or Unmanned  
for sustained, low altitude duties**

**Collaboration** is a way that enables us and our shared objectives.