



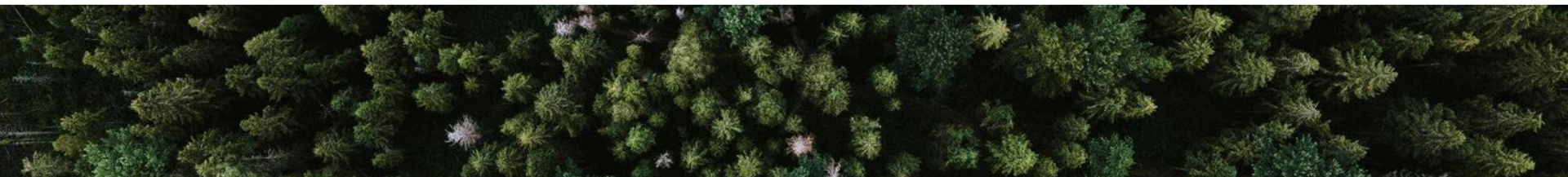
STRATOFLY RESEARCH

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Market Need

- Lack of low-cost, easy navigable access to the stratosphere and troposphere
 - Large(group 4 & 5) drones and manned airplanes are cost inefficient for long duration high altitude flights
 - Current Altitude controlled HABs (large superpressure and zero pressure balloons) are cost inefficient for HAB constellations
 - Balloon size complicates launch logistics for non-skilled operators
 - Requires significant volumes of LTA gas (helium shortage + rising prices, significant safety concerns with hydrogen)
- A major lack of in-situ weather data above cruising altitude of planes (>35k ft.), over the oceans (71% of Earth's surface), and in the southern hemisphere and polar regions



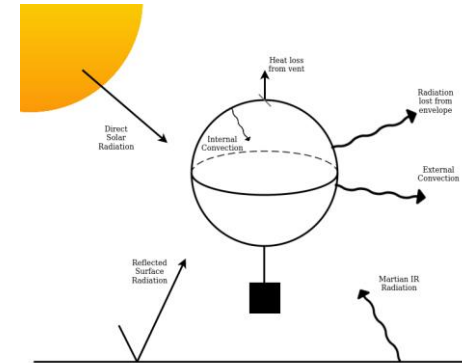
Gaps in HAB Technology

- **Lack of medium-sized altitude controlled (AC) High Altitude balloons (HAB) platforms**
- **Weather balloons** - typically lift <3 kg (15+ kg possible)
 - Rarely altitude control
 - Short flight time (typically < 2 hours, 2 days possible)
- **Supre Pressure (SP) and Zero Pressure (ZP) balloons** - typically lift 50-100 kg (3000+ kg possible)
 - Frequently use altitude control, long duration
 - Large, expensive, and more complicated launch/recovery
- **Pico Balloons** - typically lift <1kg
 - Typically cheap low-cost sensing (no altitude control)

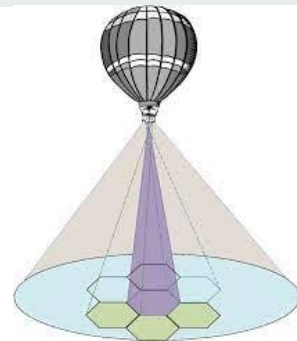


Solution Technology

- HABs rely on solar and IR Radiation to generate lift
 - Solar Balloon - relies on solar radiation for heat
 - IR Balloon - Earth's emitted IR radiation for heat
 - Passive lift, no LTA gas (helium/hydrogen) required
- **Mechanical Vent (Patent Pending)** regulates temperature
 - Allows for continuous accurate altitude control
- Adjust altitude to follow trajectories
 - Leverage Opposing Winds
 - Autonomous path planning



Business Model

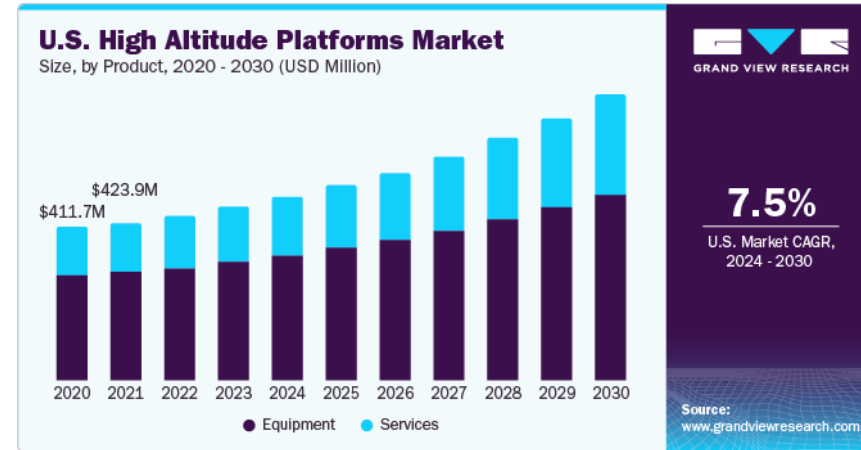


- Direct sale of free-lift HABs from warehouse to consumer
- Contract-based missions for altitude controlled balloons
 - Determine best altitude control HAB for mission requirements
 - Develop unique CONOPS: mission plan, trajectory forecasting and planning, operational logistics, etc.
 - Optional add-on where we execute launch and recovery for customer
- Selling of meteorological data from balloon constellations to the weather forecasting, airline industry, and government partners



Market Analysis

- **The Weather Forecasting Industry** is growing at a CAGR (compound annual growth rate) of 12% and is estimated to surpass \$40 billion by 2040.
- **Unmanned Aerial Systems Technology** is growing at a CAGR of 14% and is estimated to surpass \$50 billion by 2030.
- **Remote Sensing Technology** is growing at a CAGR 12% and is estimated to surpass USD 55.36 billion by 2032.



Competitive Landscape

- **Totex** - Largest Manufacturer of Weather Balloons
- **Aerostar** - Long Duration Large Altitude Controllable Super Pressure Balloons
- **Near Space Corporation** - Custom Large High Altitude Balloons and Inflatable Structures
- **WorldView** - Long Duration Super Pressure Balloons for Aerial Imagery
- **UrbanSky** - Medium Duration Altitude Controlled ZP Balloons for Atmospheric Sensing
- **Windborne Systems** - Medium Duration Altitude Controlled ZP Balloons for Imagery and meteorological data collection



Funding Needs

- **Currently seeking investment** for commercialization of our HAB platforms
 - Envelope Material Acquisition
 - Automate HAB envelope manufacturing
 - Vent Manufacturing
 - Minimal payload development (closed system)
 - Develop software for external integration
- Plan to have 3 different types of MVPs within a year
 - At which point will be seeking significant additional funding for HAB constellation development



Current Status and Milestones

- Received a technology asset development grant to further develop our vent patent with the University of Arizona
 - Conducting R&D on new balloon envelope materials and developing new manufacturing methods to improve balloon quality and performance
 - Developing methods for commercialization of our technology
- Applying for small business government grants

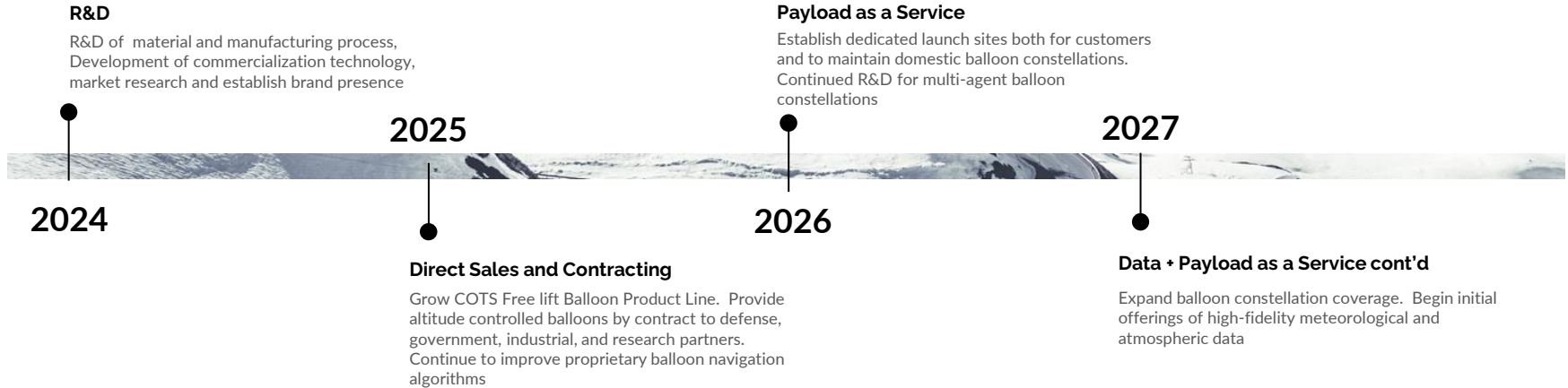


Regulatory Compliance (FAA Part 101.1 Section D)

- Most of our HABS are exempt from regulations due to the following:
 - 1. HABS under 6 pounds
 - 2. Flights with multiple payload packages carried by one balloon must weigh less than 12 pounds in combined total.
- Launching/operating of larger balloons requires following the unmanned Free Balloon Regulations.



Vision



Team

Together we have 8+ years experience in designing and operating lighter than air platforms. Our expertise is in mechanical design, payload development, GNC algorithms, and launch logistics and operations.





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