MARKET BUZZ

Hong Kong Startup Plans to Launch Passenger Drone and Seaplane Service

VTOL Aircraft Market May Set New Growth Story | Lilium, Joby Aviation, Boeing, Volocopter

Lithium-Ion Battery Market Report 2021-2031 By Visiongain Ltd.

Revolution.Aero and Vertiports: “Landing the multibillion-dollar air taxi market”

Ingenuity: Mars drone maiden flight set for “no earlier than April 8th”

- VFS (March 25, 2021)
  - Embraer & eVTOL; Brazilian Amazon and VTOL
  - Numerous articles, threads and panels monthly

- Urban Mobility News (March 25, 2021)
  - More than 100 relevant links to what is going on in the marketplace each month

- sUAS News
  - Revolution.Aero Uplift, landing the multibillion-dollar Air Taxi Market (March 24, 2021)

- Twitter (March 25, 2021)
  - Urban Mobility + The Future of Autonomy panel
  - Mars drone maiden flight news
  - Volocopter spelled out how it plans to exploit the UAM market

- LinkedIn
  - Averages more than 20 daily posts on UAS or UAM news
# MARKET POTENTIAL

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| Urban Air Taxi           | • Air taxi  
                          • Airport transfer  
                          • Aeromedical evacuation  
                          • Regional mobility          | Hyundai, Beta, Bell, Joby, Lilium, Vertical Aerospace, Archer etc. | 2027 | $80 Billion     |
| **Cargo**                |                                                                           |                                               |      |                 |
| Feeder                   | • Middle mile cargo  
                          • Military logistics          | Pipistrel Nuuva                           | 2023 | $20 Billion     |
| Fulfillment              | • Point-to-point cargo  
                          • Military logistics  
                          • Austere/remote logistics | Elroy Chaparral, Bell APT 880/XL          | 2023 | $15 Billion     |
| Local Light Parcel       | • Last mile delivery  
                          • Austere/remote logistics   | Bell APT 70, Wing, Amazon etc.            | 2022 | $3 Billion      |

**Industry is Heavily Investing for the Future in Aviation**
AUTONOMOUS AERIAL LOGISTICS (CARGO)

Solves:
- Low pilot utilization
- Slow hub-spoke logistics

Solves:
- Low pilot utilization
- Slow hub-spoke logistics

Solves:
- Urban road congestion
- Slow hub-spoke logistics

Solves:
- Urban road congestion
- High cost of last mile

15,000 lbs. to 3000 miles

1,000 lbs. to 800 miles

150 lbs. to 150 miles

5 lbs. to 25 miles
URBAN AIR MOBILITY

Still in discovery phase:
- Regulations
- Legislations
- Public Acceptance

Ecosystem Maturity:
- Sky Lanes/Routing/flight planning
- Secure & Reliable Communications (Veh. to Veh., Veh. to Grnd, Veh. to Cloud)
- Vertiports / Ground Infrastructure
- Vehicle Battery Management
- Traffic Management

- Runtime Monitors & Safe Decision
- Tracking & DAA of all Air Vehicles
- Vision Integrity for Aided Navigation
- Emergency Landing
TECHNOLOGIES FOR ADVANCED AERIAL MOBILITY

Integrated Vehicle Management System designed for Simplified Vehicle Operations and autonomy

Compact Fly-by-Wire optimized for UAM and UAS

Integrated Detect-and-Avoid sensor and avoidance solutions

Compact electric Actuation fully integrated with fly-by-wire

Reliable Electric or Hybrid-Electric Propulsion with production scalability

Miniaturized Thermal Management for cabin and battery cooling

Technology Readiness is Advancing Faster than Reg’s & Laws
BECOMING A REALITY

Driver - Market Demand

Technology
Technology readiness is maturing at a very fast rate with unmanned operations taking the lead to advance entry into service operations.

Industry Acceptance
Regulators starting to react favorably to establishing faster rules, Legislation efforts taking shape due to domestic competition, Public acceptance aided by COVID pandemic for UAV deliveries.

Vehicle Manufacturers
Industry players starting to stabilize and becoming more viable as the market is gaining investor strengths.
HONEYWELL MAKES THIS FUTURE A REALITY
by providing vehicle systems and integration for OEMs across all vehicle categories

COMPLETE SYSTEM
for integration and value

MAJOR SUB-SYSTEM
to balance modularity with specialization

INTEGRATED PROPULSION SYSTEM

INTEGRATED AVIONICS SYSTEM

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OUR VISION

AIR CARGO
is autonomous from warehouse to your house – same day delivery anywhere in the populated world

URBAN AND REGIONAL AIR TRAVEL
is ubiquitous with electric urban air taxis that pick up and drop off passengers in every neighborhood

HONEYWELL UAM/UAS

Dedicated business unit
to address the needs of the unmanned aerial systems and urban air mobility, with a specific focus on transportation applications
THANK YOU