Sub: *Buses in the Sky* - A study by **Deven R Choksey**

Deepinder Goyal, the co-founder of Zomato, is venturing into the regional aviation sector with a new startup called LAT Aerospace, co-founded with former Zomato COO Surobhi Das. The concept they are promoting is **"buses in the sky."**

"Buses in the Sky" - The Concept:

Addressing a Broken System:
The core motivation stems from the observation that regional air travel in India is often expensive, infrequent, and inaccessible, especially for Tier 2 and Tier 3 cities. Despite India having over 450 airstrips, only about 150 are commercially operational, leaving a significant portion of potential unused.

Affordable, High-Frequency Travel:
LAT Aerospace aims to provide affordable, high-frequency air travel, making it as accessible as taking a bus for shorter distances.

STOL Aircraft:
They plan to deploy **12-24 seater STOL (Short Take-Off and Landing) aircraft**. These aircraft require much **shorter runways**, allowing them to **operate from smaller, more compact** "**air-stops**."

Compact "Air-stops":
A key innovation is the use of "**air-stops" that are no larger than a parking lot**, situated closer to where people actually live. This aims to eliminate the traditional airport hassles of long queues, security checks, and distant locations, offering a "walk-in and fly" experience.

Connecting Overlooked Regions:
The focus is on connecting cities and towns currently underserved by traditional airlines, providing a viable alternative to long and often arduous road or rail journeys.

Is it an Aggregator Model - Is it like Uber/Ola for flyers?

While the "buses in the sky" concept emphasizes accessibility and frequency, drawing a parallel to bus services, **it's not strictly an aggregator model like Uber or Ola** in the way you might think for personal car rides.

- **Uber/Ola:** These platforms primarily connect existing drivers (individual owners or fleet operators) with riders. **Uber and Ola do not own the vehicles themselves** (or only a very small fraction for specific services).

- **LAT Aerospace:** From the information available, **LAT Aerospace seems to be involved in designing and potentially developing/owning the aircraft** (STOL aircraft) and **setting up** the infrastructure (**air-stops**). This suggests a more vertically integrated approach, at least initially, rather than simply aggregating existing regional airline capacity.
- **Service Model:** The "walk-in and fly" experience from compact air-stops points towards a direct service provider model, where LAT Aerospace controls the flight operations and the user experience from end-to-end.

However, **there could be elements of an aggregator model in the future**:

- **Franchising or Partnerships:** Once the model is proven, LAT Aerospace could potentially partner with other operators or franchise their "air-stop" concept and aircraft designs to expand rapidly.
- **Demand-based Scheduling:** The mention of "demand-based" services suggests they might leverage technology similar to ride-hailing apps for dynamic scheduling and route optimization based on passenger demand, making it feel "on-demand" like Uber/Ola.

Benchmarks and Challenges for such an idea:

This venture operates in a highly complex and regulated industry with significant challenges and potential benchmarks:

- **Regulatory Hurdles:** Aviation is heavily regulated for safety, airworthiness, and operations. Obtaining necessary licenses, approvals, and managing air traffic for a high-frequency, smaller aircraft network will be a monumental task.
    - **Benchmark:** Current regulatory frameworks for regional air connectivity, drone operations (though this is for passenger transport, not cargo drones), and small aircraft in India. The DGCA (Directorate General of Civil Aviation) will be a key player.
- **Aircraft Development and Manufacturing:** Designing and manufacturing STOL aircraft, especially with a focus on affordability and efficiency for regional routes, is capital-intensive and requires deep aerospace expertise.
    - **Benchmark:** Existing small aircraft manufacturers (e.g., **Cessna**, **Pilatus**, **Viking Air DHC-6 Twin Otter**, which is a popular STOL aircraft), and emerging eVTOL (electric Vertical Take-Off and Landing) companies that are also innovating in short-haul air mobility.

- **Infrastructure Development:** Building numerous "air-stops" across various locations, even if compact, requires land acquisition, civil engineering, and specialized equipment.
    - **Benchmark:** Development of heliports or smaller regional airports. Cost and time for land acquisition in India.
- **Operational Efficiency and Cost-Effectiveness:** Making air travel "affordable" and "high-frequency" means achieving significant operational efficiencies in fuel, maintenance, crew, and turnaround times.
    - **Benchmark:** Low-cost carriers (LCCs) like IndiGo in India, which have mastered efficiency for larger aircraft. The challenge is to replicate this for smaller, shorter routes.
- **Market Adoption and Demand:** Convincing people to shift from road/rail to a new form of air travel, even if affordable, requires building trust and demonstrating reliability.
    - **Benchmark:** Success of regional airlines in other countries, or the growth of intercity bus services.
- **Safety and Reliability:** As with any aviation venture, safety is paramount. Any incident could severely impact public trust and the viability of the business.
    - **Benchmark:** Global aviation safety records, and the incident rates of existing regional airlines.
- **Talent Acquisition:** Building a team of aerospace engineers, systems designers, and aviation professionals is crucial, especially in a niche area like STOL aircraft development and operations.

Funding and Investment:

- LAT Aerospace has reportedly raised $50 million in funding, with **Deepinder Goyal personally investing $20 million**. This demonstrates significant initial backing but highlights the substantial capital required for an aviation venture.

In summary, Deepinder Goyal's **"buses in the sky" concept through LAT Aerospace** is an ambitious and potentially disruptive idea aimed at revolutionizing regional air travel in India by making it more accessible and affordable. While it draws inspiration from the high-frequency nature of bus services, **it appears to be a direct service provider rather than a pure aggregator in its current form**, with potential for partnership models in the future.

The success will heavily depend on navigating complex regulatory environments, achieving technological breakthroughs in aircraft design and operations, and effectively building out the necessary infrastructure.

Part 2:

Is there a Comparative Model Globally?

While a direct, large-scale "buses in the sky" model like the one LAT Aerospace envisions, using a network of ultra-compact "air-stops" for mass regional travel, **isn't widely operational globally**, the concept of **regional air mobility (RAM)** and the use of STOL (Short Take-Off and Landing) aircraft for connecting underserved areas is a well-established and evolving field.

Here's a breakdown of global parallels and emerging trends:

1. **Traditional Regional Airlines with STOL Aircraft:**

- **De Havilland Canada DHC-6 Twin Otter:** This is a classic example of a STOL aircraft that has been in production since the 1960s and is widely used globally for regional connectivity, especially in remote or challenging terrains like the Canadian North, the African Bush, and island nations. These operate from smaller airports or even unpaved airstrips.
- **Cessna 208 Caravan:** Another popular STOL aircraft often used for regional passenger and cargo services, including "bush plane" operations in remote areas.
- **ATR Aircraft** (ATR 42, ATR 72): While not as extreme in STOL capabilities as the Twin Otter, these turboprop regional airliners are designed for efficient short-haul flights and operate from many smaller airports globally.
- **Widerøe** (Norway): This airline is a good example of an airline that effectively uses a network of smaller aircraft (including Dash 8s, which have good STOL performance) to connect remote communities along Norway's vast coastline, often operating from very short and challenging runways.

These existing models are the closest "global models" in operation.

However, **they typically operate from existing regional airports**, which are still larger and more structured than the "parking lot sized air-stops" LAT Aerospace proposes. They also generally follow traditional airline models with scheduled flights, rather than the high-frequency, potentially on-demand nature implied by "buses in the sky."

2. **Emerging Regional Air Mobility (RAM) and Advanced Air Mobility (AAM) Startups:** This is where the closest parallels to LAT Aerospace's disruptive vision can be found. Many companies globally are working on new aircraft designs and operational models to revolutionize short-haul and regional air travel.

These include:

- **Electra.aero** (USA): This company is developing hybrid-electric "Ultra Short" STOL aircraft (like their EL9) that they claim can take off and land in as little as 150 feet. They are specifically targeting regional air mobility and connecting underserved communities, with pre-orders from operators on multiple continents. Their focus on ultra-short runways aligns very closely with LAT Aerospace's "air-stop" concept.
- **Heart Aerospace** (Sweden): Developing the ES-30, a hybrid-electric regional aircraft designed for shorter routes (up to 200 km fully electric, 800 km hybrid). While not strictly STOL in the extreme sense, it aims to serve regional markets with smaller airports.
- **Manta Aircraft** (Italy): Developing Hybrid-Electric Vertical and Short Take-off and Landing (HeV/STOL) aircraft, aiming to combine the benefits of helicopters (vertical take-off) with fixed-wing aircraft (efficiency in cruise) for regional distances.
- **Cligent Aerospace** (USA/India): Focused on hydrogen-electric fixed-wing STOL aircraft for regional air logistics (cargo initially, but the technology is transferable). They also emphasize minimal runway infrastructure.
- **Numerous eVTOL** (electric Vertical Take-Off and Landing) companies: While many eVTOLs are focused on Urban Air Mobility (UAM) – short intra-city trips – some are also looking at regional routes. Companies like Joby Aviation and Lilium, while primarily VTOL, represent the broader trend of developing new electric aircraft for shorter distances.

Key Differences and Innovations of LAT Aerospace:

What makes LAT Aerospace potentially distinct from existing regional airlines and even some emerging RAM players is the explicit focus on:

- **Ultra-compact "air-stops":** The idea of a take-off/landing zone no bigger than a parking lot, integrated closer to communities, is a significant departure from traditional airport infrastructure. This aims to eliminate the "last-mile" problem of getting to and from airports.
- **"Buses in the Sky" mentality:** This emphasizes high-frequency, affordable, and accessible travel, aiming to make air travel a viable alternative to road/rail for

relatively short distances, akin to how people use buses. This implies a different operational philosophy and pricing model.

- **Vertical Integration** (potential): While not confirmed, if they are designing and developing their own aircraft and infrastructure, it's a more vertically integrated approach than a pure aggregator.

So, while the technology of STOL aircraft for regional travel exists and is being further developed globally, LAT Aerospace's emphasis on the **"air-stop"** concept and the **"buses in the sky"** operational model **represents a novel application and scale** that is not widely operational in a fully integrated system anywhere in the world yet.

It's at the forefront of the **emerging Regional Air Mobility** sector.

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