



Walmart

Innovation & Automation



Drone Delivery



Dallas / Fort Worth

Taking Care of Our Customers

“When it comes to delivery, our focus is on giving customers convenient and affordable delivery solutions that complement their busy lives.”

In-Home Delivery



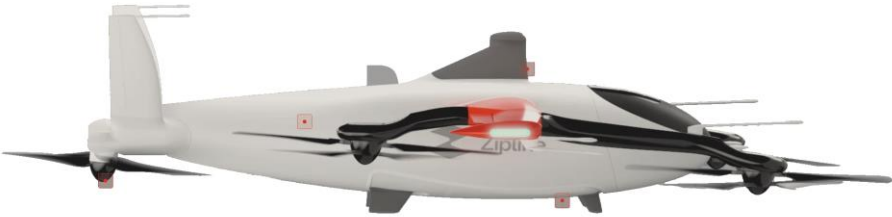
Scheduled Delivery



Express Delivery



What's the next step?



Zipline



Wing



DroneUp

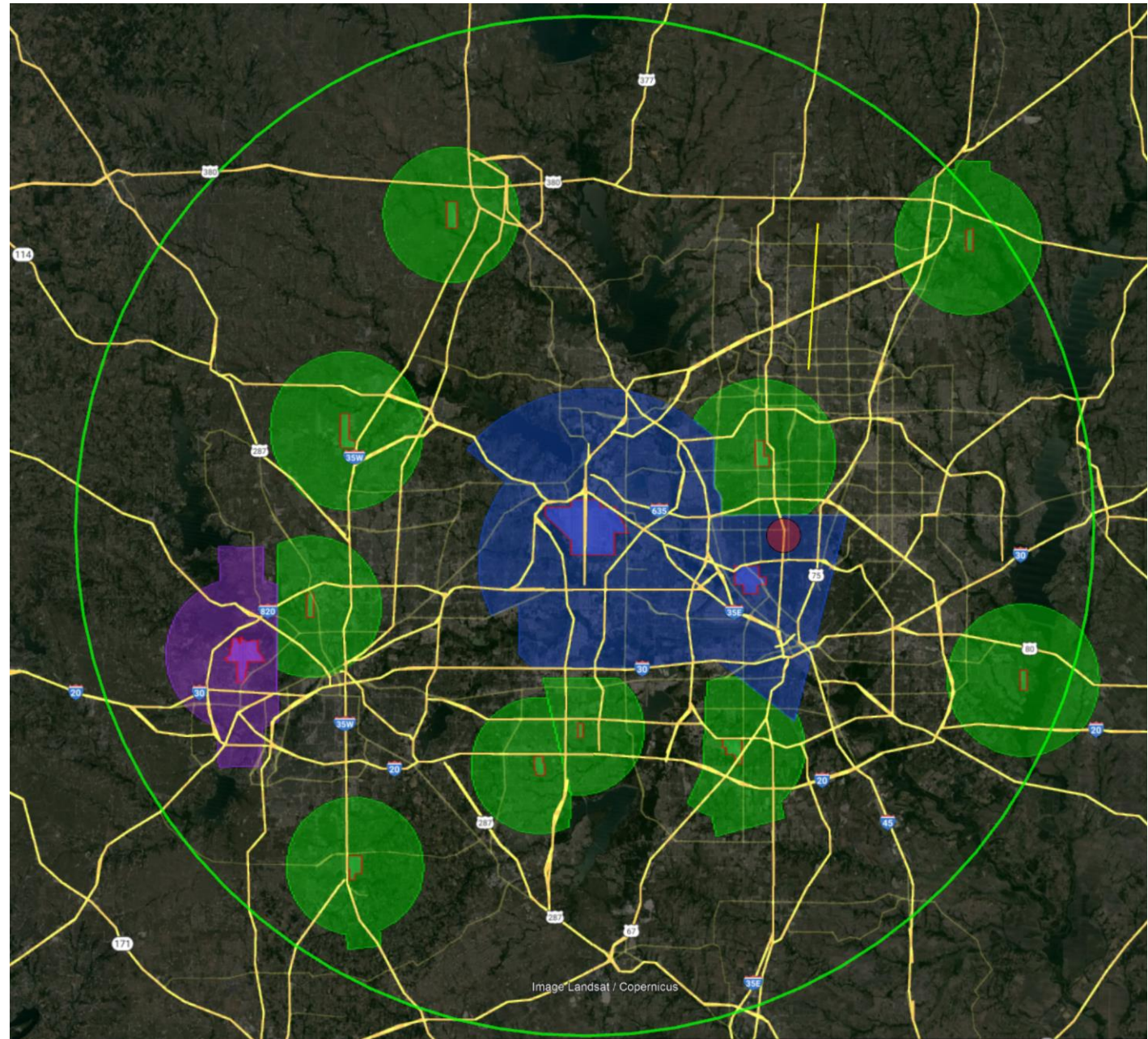


DFW Coverage



Drone Delivery

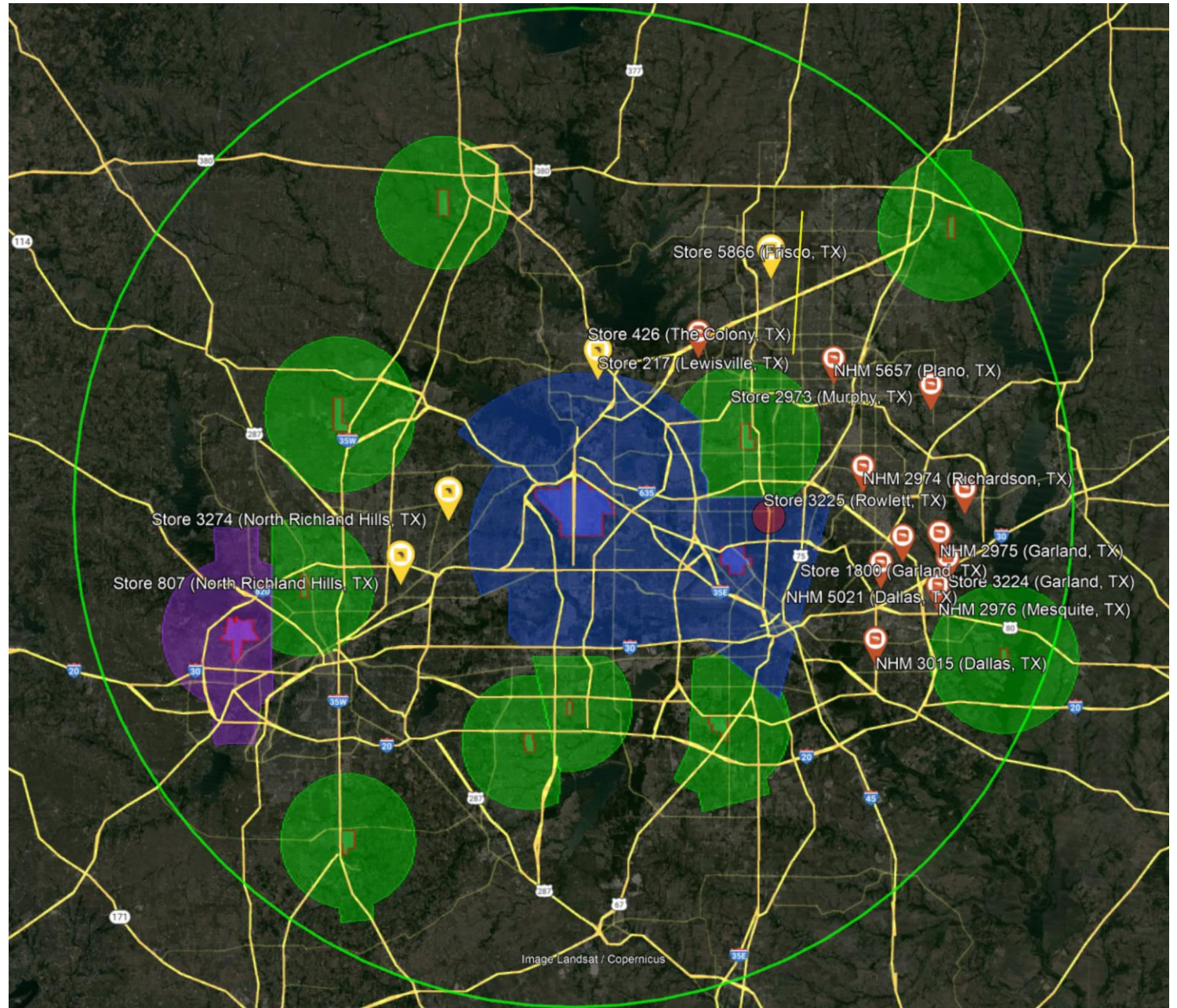
Provide 75% of the Dallas Fort Worth population access to drone delivery, with deliveries as fast as 10 minutes.



Drone Delivery

Current Locations:
Inside Mode C Veil

Expansion:
Outside Mode C Veil
Coming Late 2024



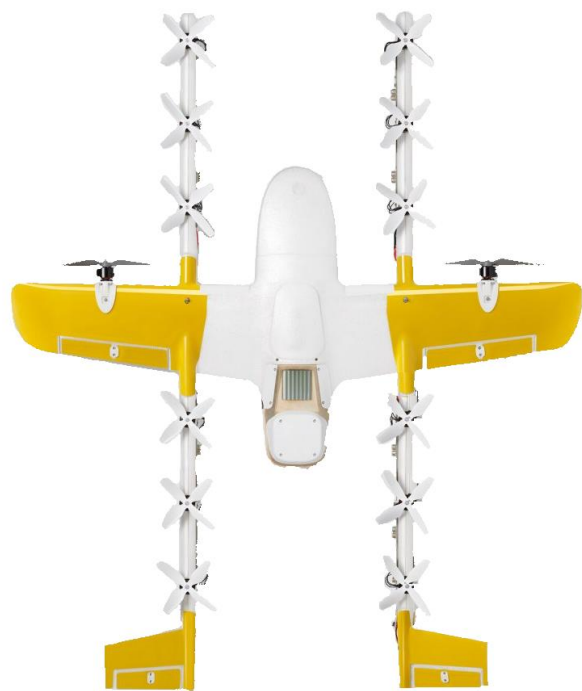
Vendor Technology



Zipline



Wing



Thank you!



City of Arlington Multimodal Delivery Demonstration



Project Overview

- Project Description:
 - Test and evaluate innovative, autonomous food delivery to underserved and mobility challenged populations
 - Using electric, autonomous air and ground robots for deliveries
 - Studying public adoption trends and energy benefits
- Funding from the US Department of Energy
- Project Team:



Project Details

- US Department of Energy, Office of Energy Efficiency and Renewable Energy funding opportunity
 - Promote innovation in the transportation sector to deploy clean energy technologies
 - Provide better and cleaner mobility options that are affordable for all, especially disadvantaged communities
- Total project cost is \$1,601,056
 - \$780,182 from US Department of Energy
 - \$820,874 local cost share from all partners
- Timeline:
 - Two year project, with significant community engagement, two delivery demonstration periods, and robust analysis
 - October 2023 through September 2025

Project Tasks and Timeline

Year 1 Oct. 2023 – Sept. 2024:
Engagement, Analysis, Demo 1

- 1.1 Community Engagement
- 1.2 Location Analysis
- 1.3 Cost Modeling
- 1.4 Community Workshop
- 1.5 Stakeholder Engagement
- 1.6 Concept of Operations
- 1.7 Demonstration 1

Current projects

Year 2 Oct. 2024 – Sept. 2025:
Analysis, Demo 2, Reporting

- 2.1 Analysis of Demo 1
- 2.2 Demonstration 2
- 2.3 Final Analysis and Report
 - Community Feedback
 - Benefit-Cost Analysis
 - ESRI Story Map
 - Policy Recommendations
 - Fleet Electrification Analysis
 - Educational Materials

May 8, 2024:
Community
Workshop



September
2024:
Demo 1



March 2025:
Demo 2

Community Engagement

Conduct engagement with Arlington residents and regional stakeholders about the project.

Goal: Develop better understanding of initial public attitudes about robot air and ground delivery vehicles. Identify opportunities and challenges for the delivery process.

Key Components:

- Community Survey: in draft; will be released this spring
- Stakeholder Engagement:
 - DFW Clean Cities Coalition (April 24)
 - North Texas Uncrewed Aircraft Systems Task Force (May 7)
- Community Workshop:
 - Ability for community to see technologies and learn about project
 - May 8, 5:30-7pm, Vandergriff Park in Arlington

Community Workshop

May 8, 2024

5:30pm to 7pm, come and go format

Vandergriff Park in Arlington

Robot demonstrations

Project information from each partner

Take the community survey

Sign up to be considered for the food delivery demonstrations!

MULTIMODAL DELIVERY COMMUNITY WORKSHOP



The public is invited to join the City of Arlington and project partners for live demonstrations and to learn more about an exciting new project to test the delivery of essential food items to Arlington residents via autonomous vehicles and uncrewed aircraft systems.

May 8, 2024
5:30 - 7:00 PM

Bob Duncan Center/Vandergriff Park
2800 S. Center St.
Arlington, TX 76014



The project is funded by:



U.S. DEPARTMENT OF
ENERGY

Delivery Demonstration Location Analysis

Conduct location analysis of Arlington zip codes to define the customer service area and assess all requirements for multimodal delivery

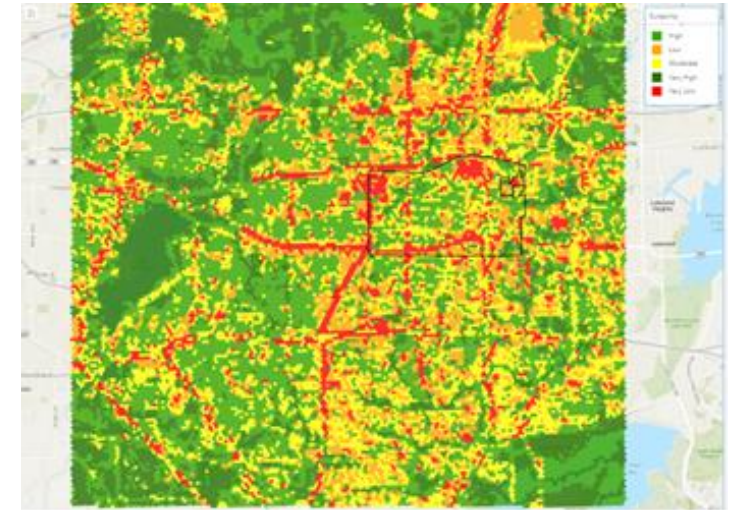
- Airspace Link: overall coordination and analysis
- Aerialoop: air delivery
- Clevon: ground delivery

Goal: Determine potential takeoff, landing, and robot hub sites as well as target service areas and recommended routes for the air and ground robots

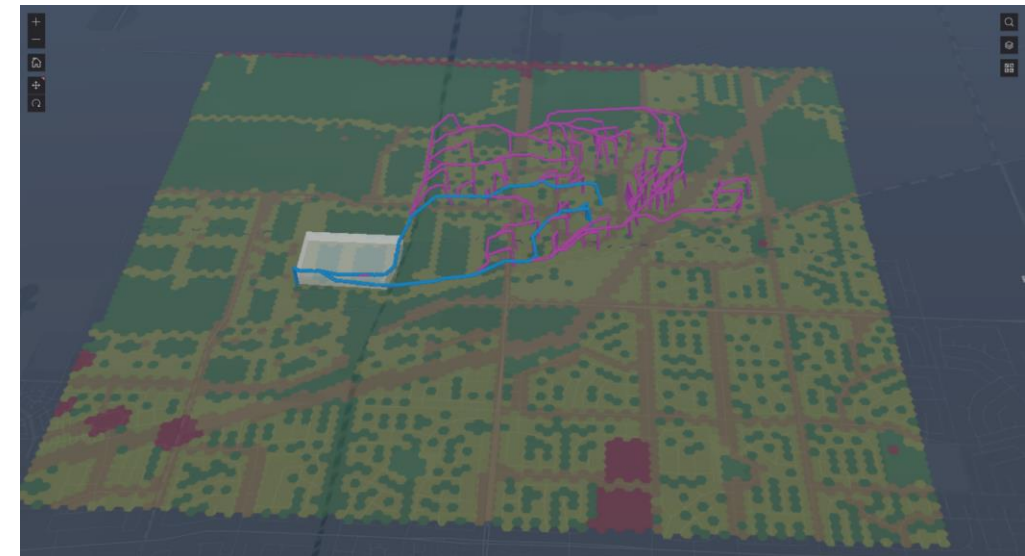
Process:

- Gather relevant data sets
- Understand location requirements
- Create a geospatial map with relevant layers
- Assess ground and air risk criteria/requirements
- Analyze potential site locations and routing
- Align locations and routes with team
- Finalize locations and routes

Current Activities



Initial surface suitability analysis



Example 3D routing map

Delivery Demonstration Location Analysis (Cont.)

Legend

76010 zip code boundary



Suggested Green Space



TAFB Clients





Current clients



1+YR Clients

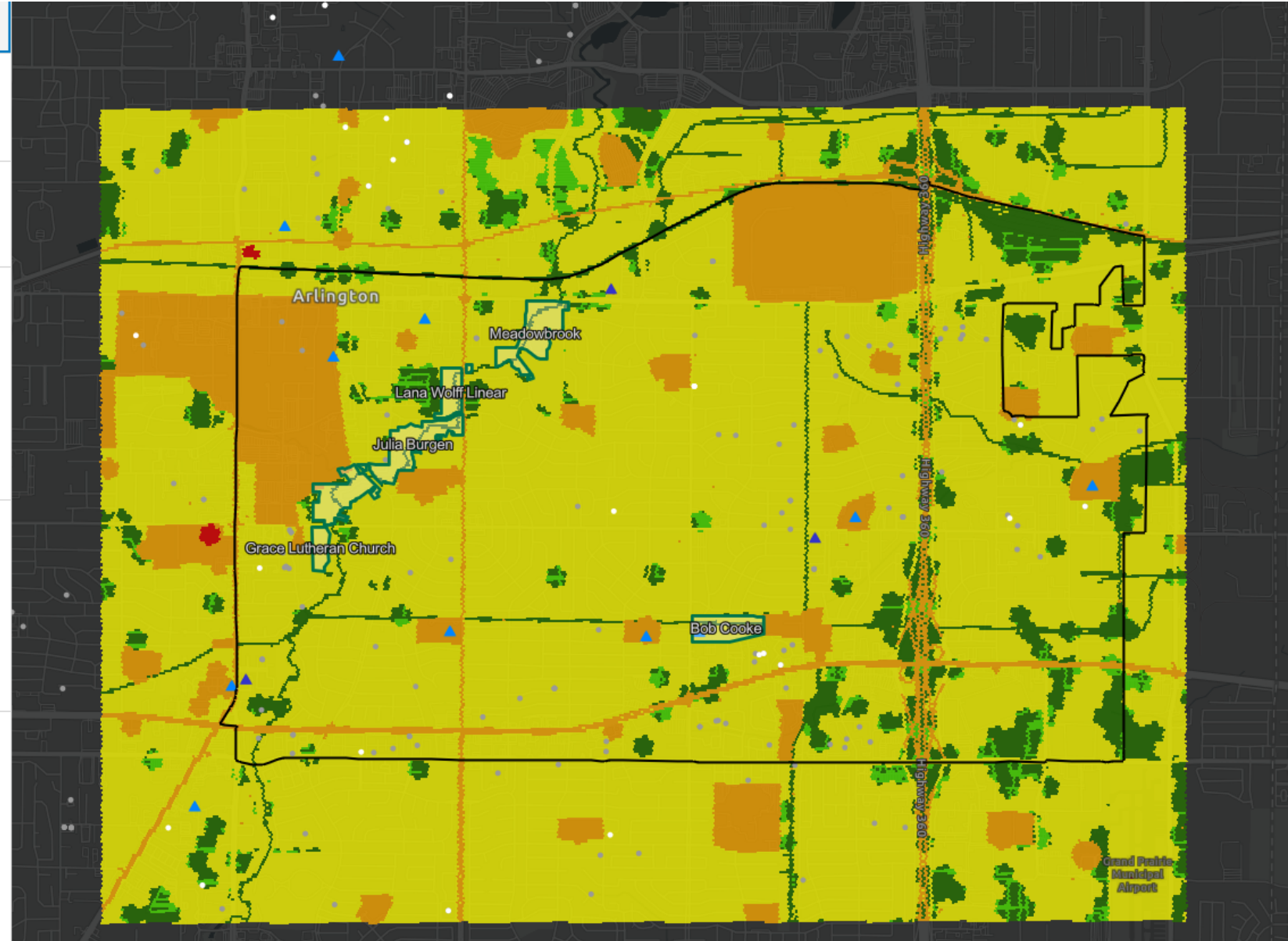


TAFB Pantry, Brick and Mortar, and Warehouses Locations

-  Brick and Mortar Location
-  Mobile Pantry
-  Warehouse
-  others

Arlington 76010 rescored risk surface - updated

-  No risk
-  Low Risk
-  Medium Risk
-  Med-High Risk
-  High Risk



76010 Zip Code Analysis

Project Technologies: Aerialoop ALT6-4 VTOL



- Speed: 50 mph
- Payload: 9 pounds
- Range: 25 miles
- Redundant rotors
- Built-in ballistic parachute
- Vertical take-off and landing, transitions to forward flight

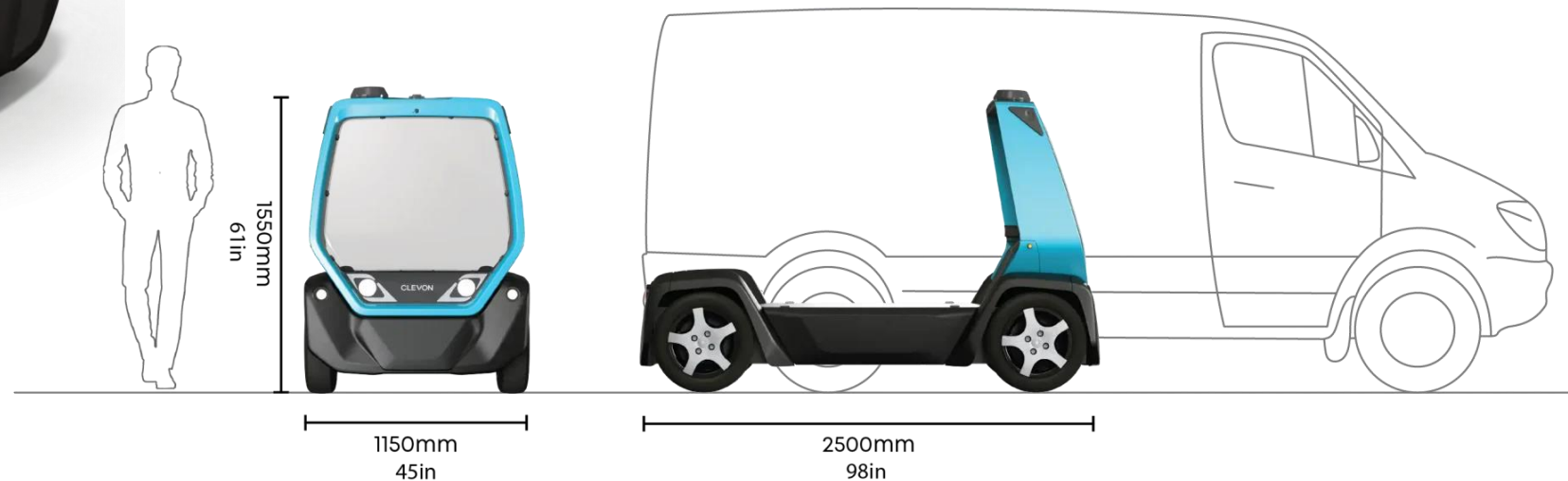
Dimensions:

- Wingspan: 8½ feet
- Length: 6 feet



Project Technologies: Clevon Autonomous Robot Carrier

- Speed: 15 mph max on 40 mph roads
- Sensors: 360 degree view
- Power: fully electric
- Range: 50 miles per charge
- Charging: ~1 hour



Stakeholder Feedback: UAS Task Force

Questions about the project?

Opportunities for food delivery

Technology opportunities

Community acceptance

Challenges

Discussion

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