



Weather impacts on medical supply deliveries

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Weather Systems Engineering





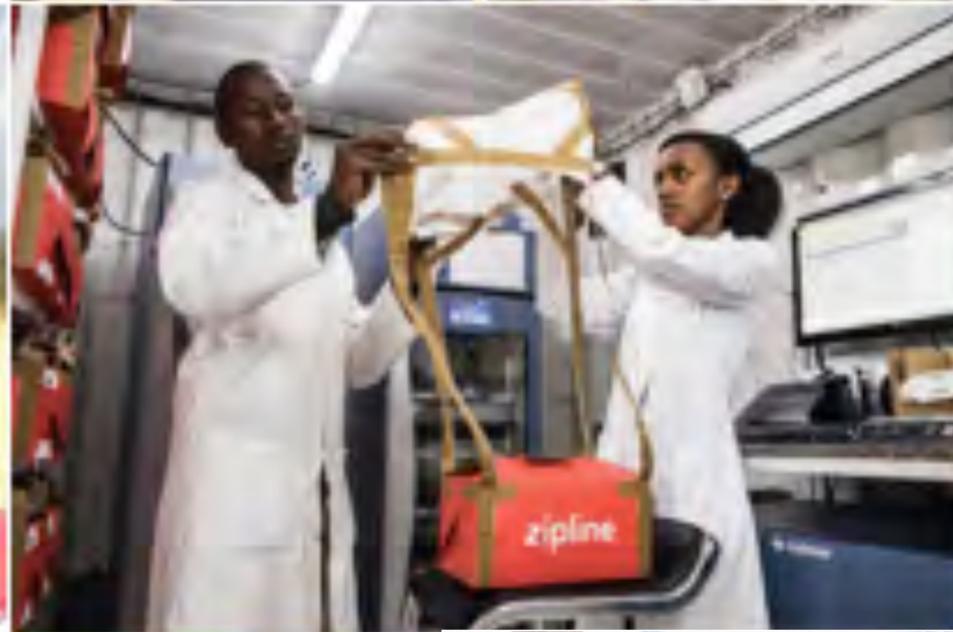
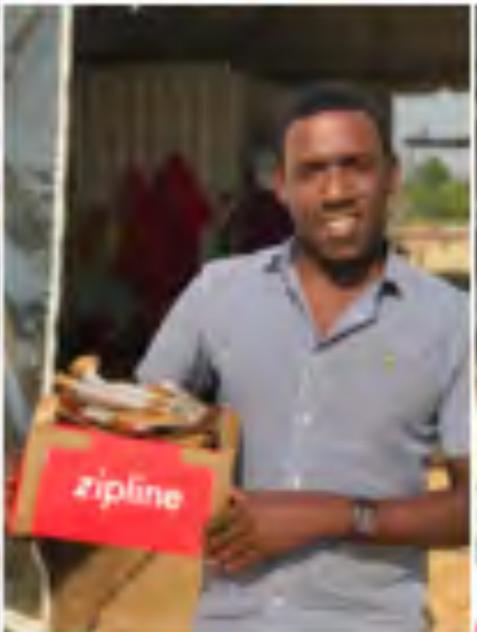
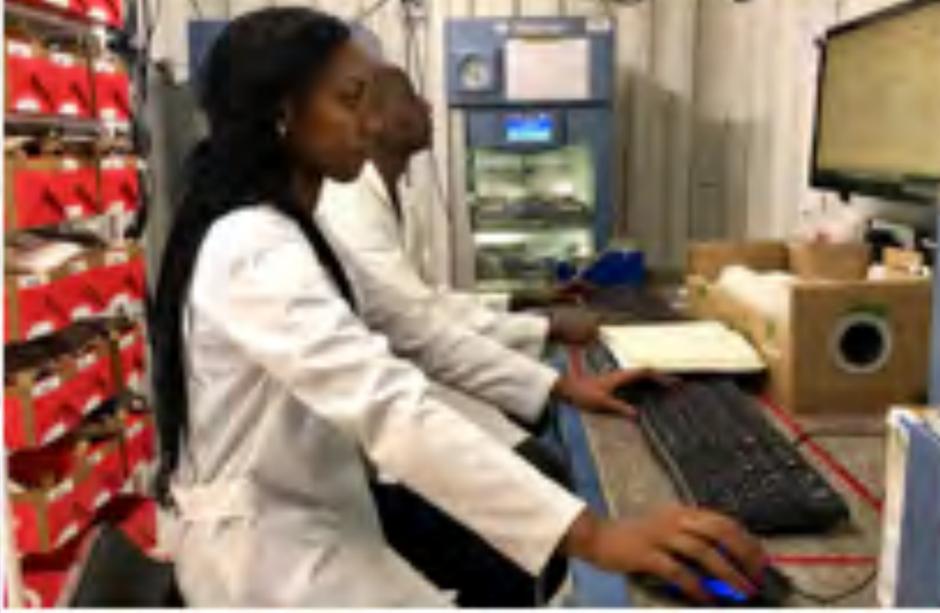
Bloomberg

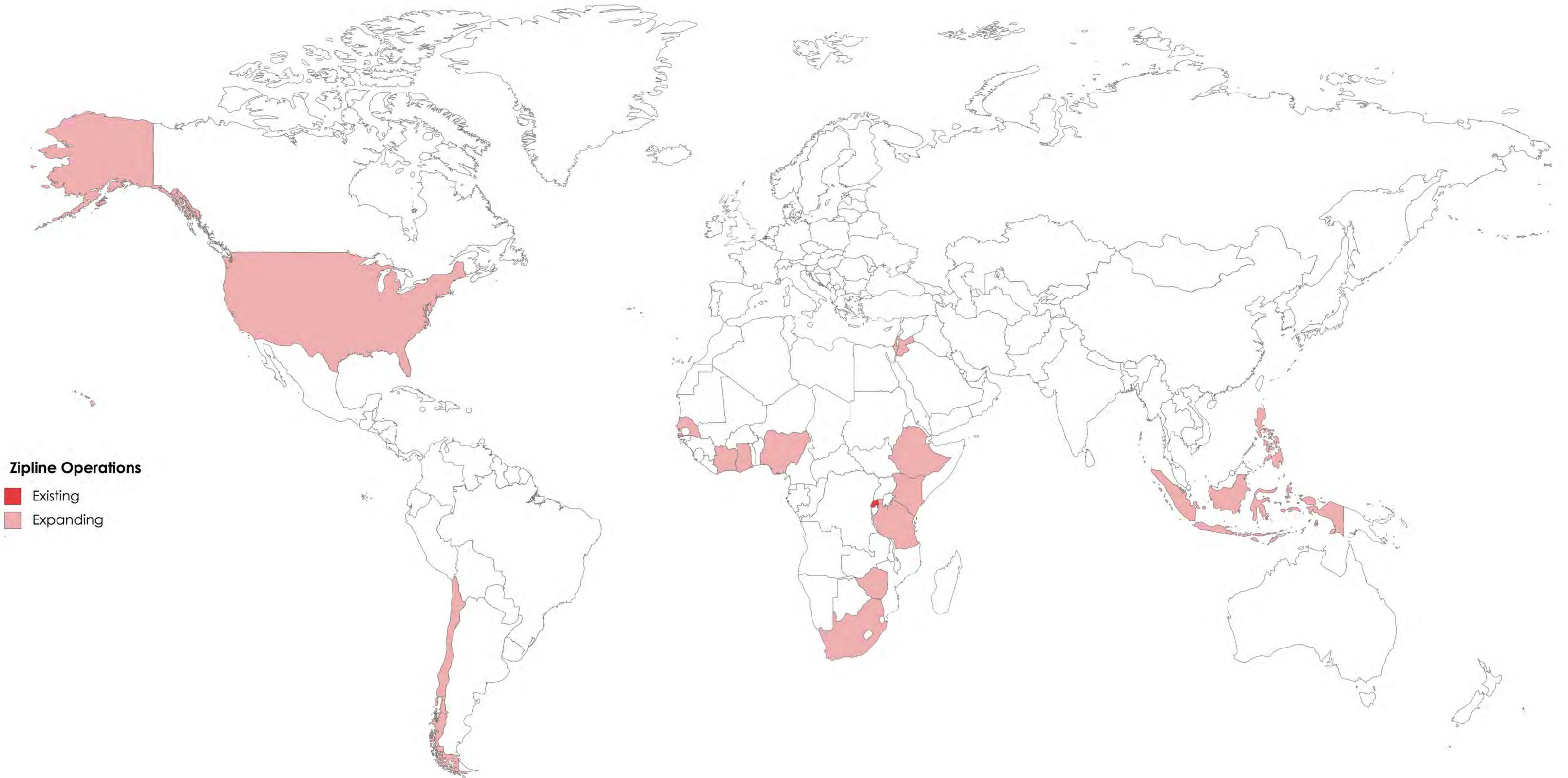












Zipline Operations

Existing

Expanding

zipline

Hello Rwanda!

What's the weather
like today?



DANGER
HIGH
VOLTAGE
ELECTRICAL
SHOCK HAZARD

CAUTION
KEEP CLEAR

MAX HEADWIND FOR LANDING
TAIL WINDS - 4 m/s
IF UNSURE, ASK GROUND

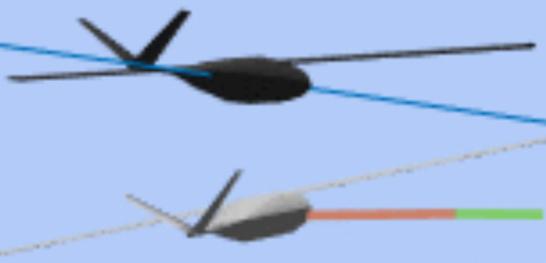


Vehicle Design





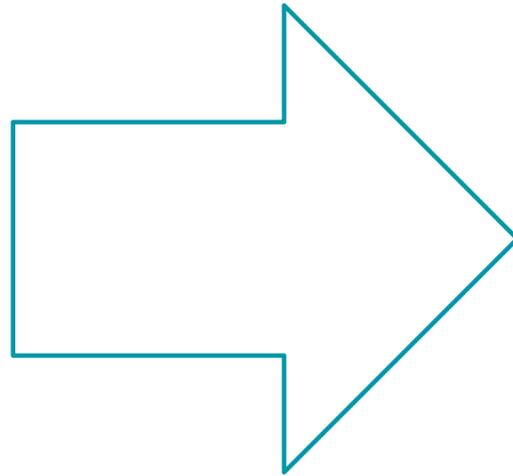
Route Planning



Time: 1050.00s

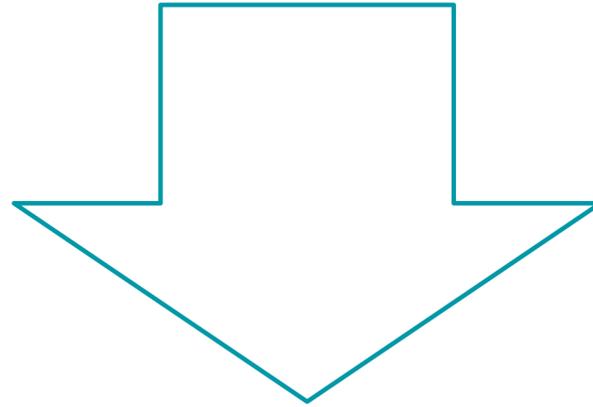
What we have flown through

Absolute wind magnitude



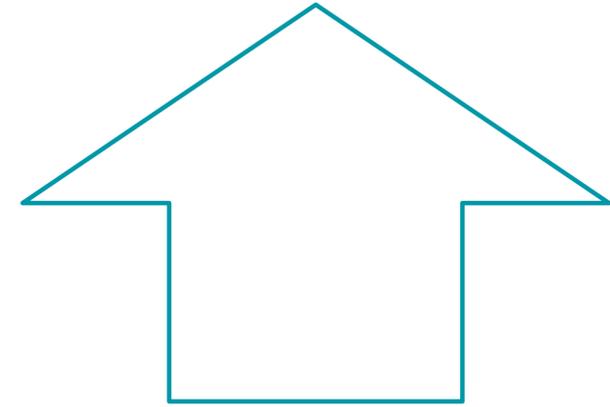
23 m/s

Worst downdraft



12 m/s

Worst updraft



8 m/s



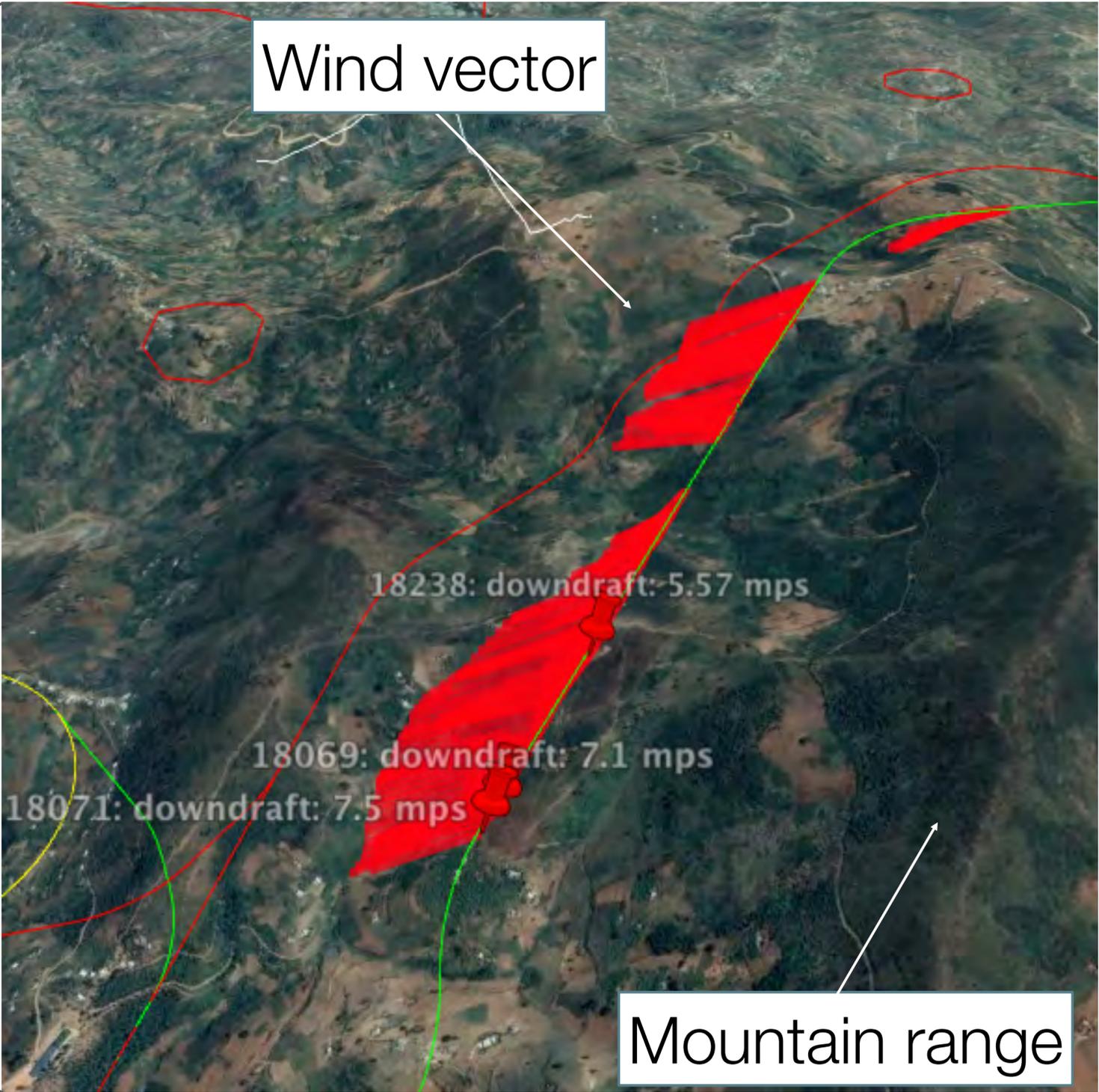
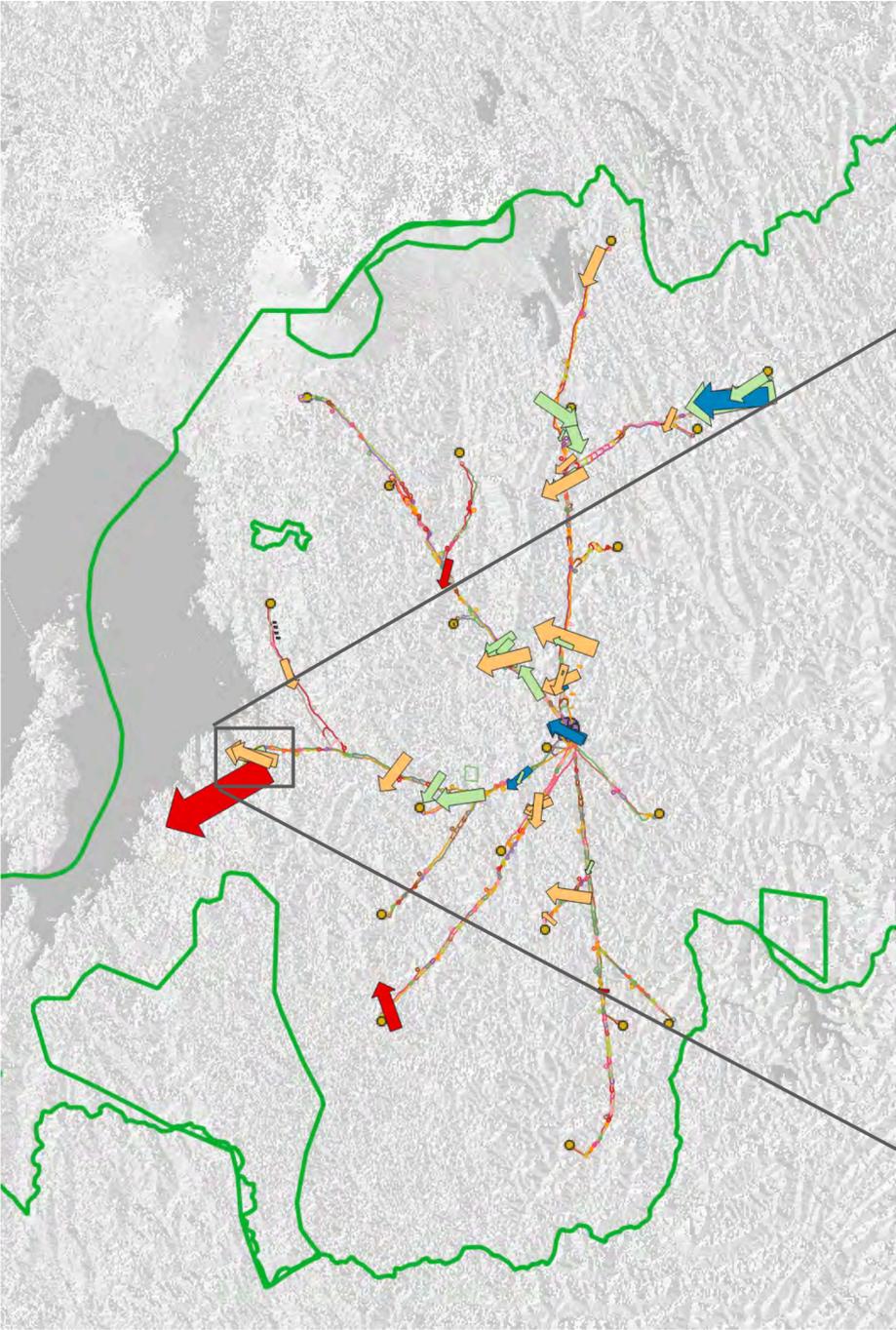
**INCREASE
RELIABILITY OF
DELIVERY**

**INCREASE
RELIABILITY OF
FLIGHT**

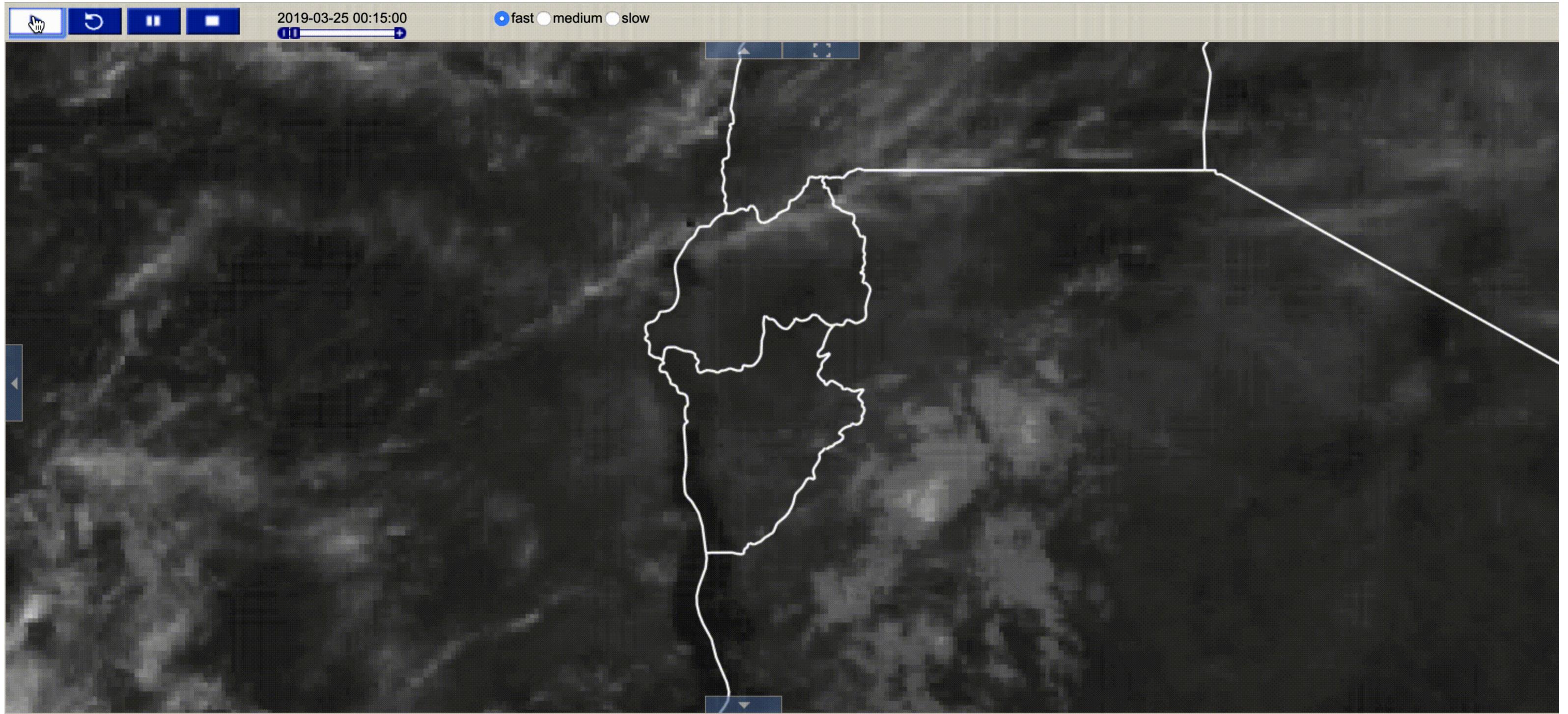


WHAT ARE THE
SOURCES OF THOSE
EVENTS?

Downslope wind



Rapidly evolving thunderstorms

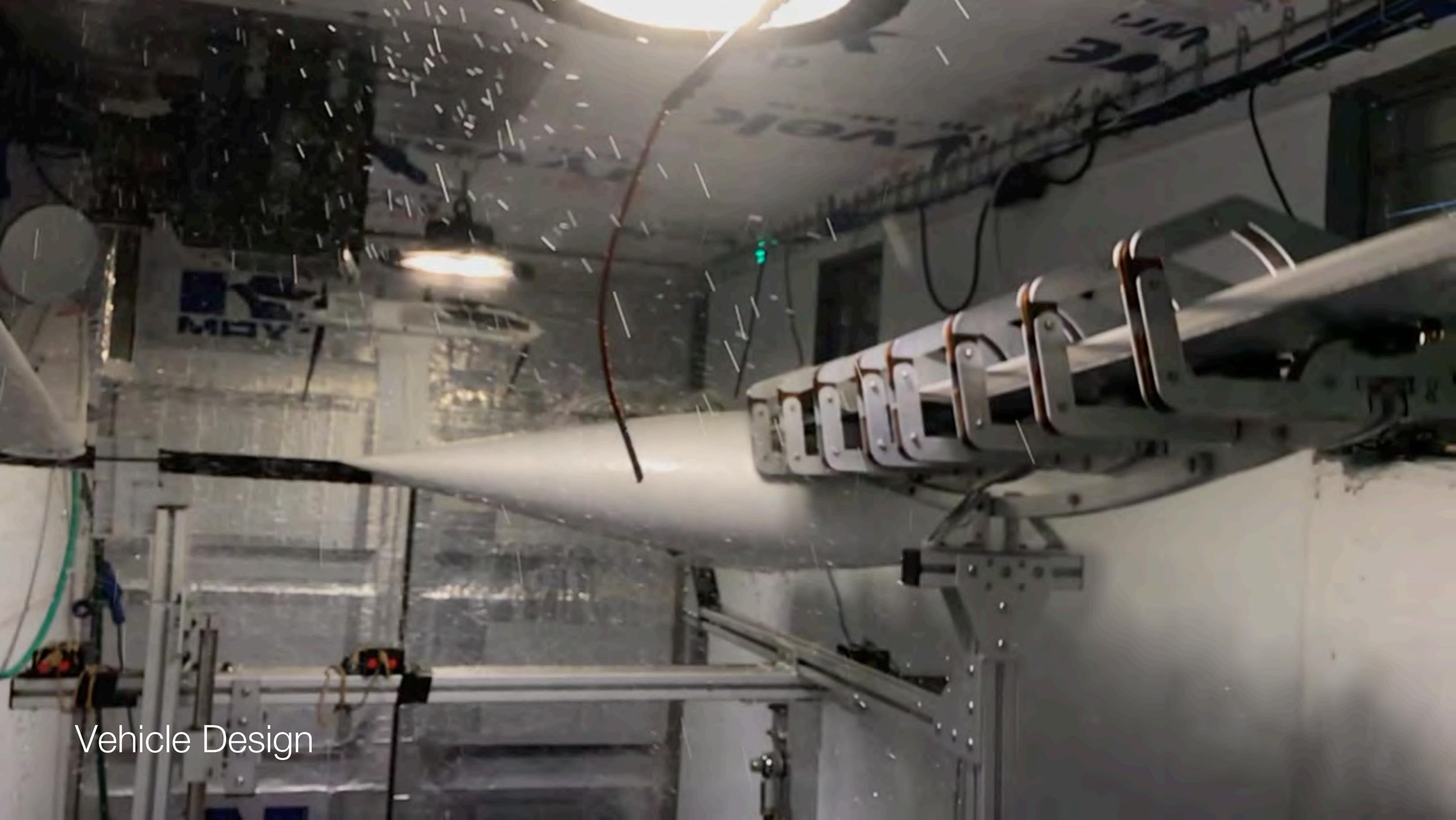


Microbursts



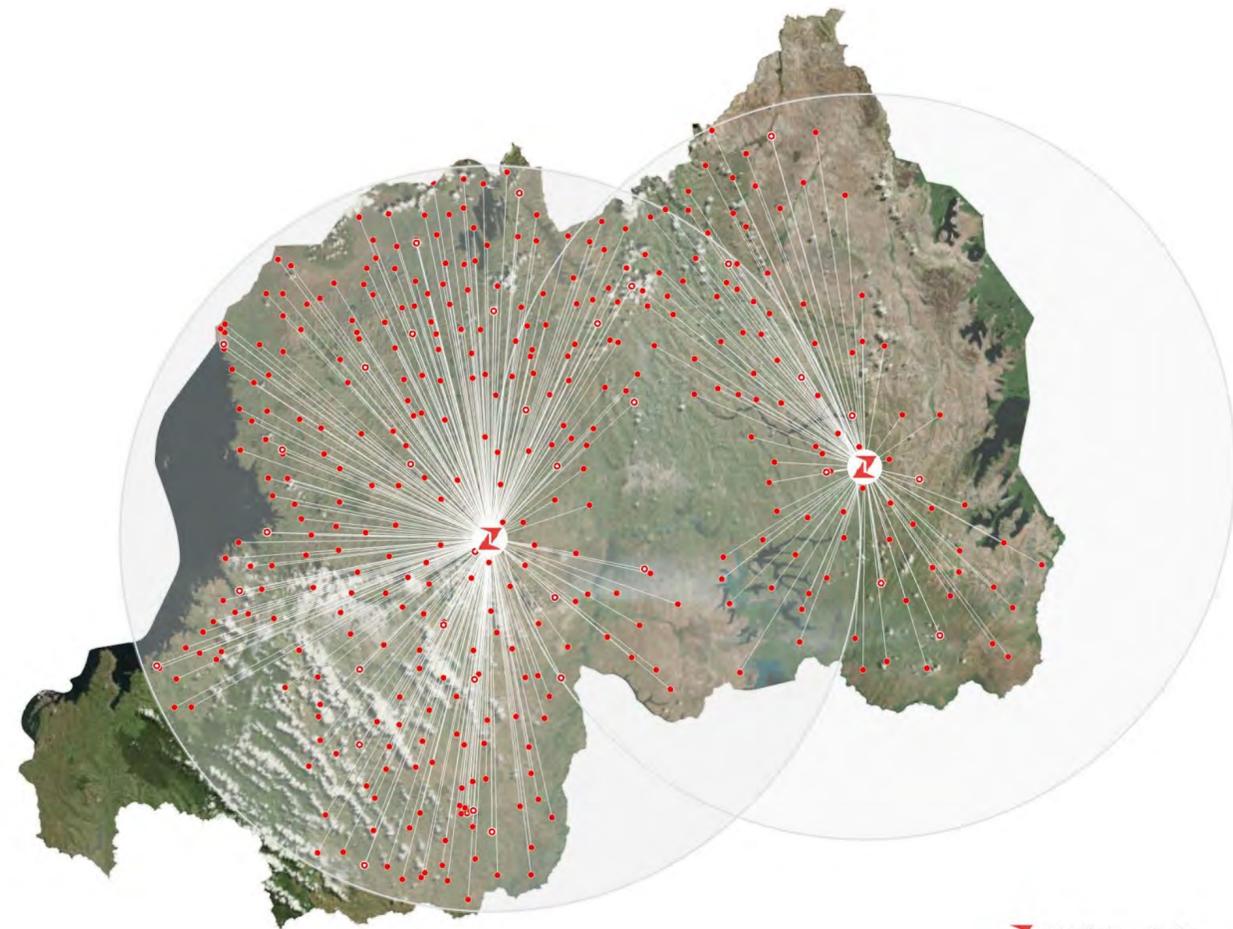
WHAT IS THE
STRATEGY?





Vehicle Design

zipline

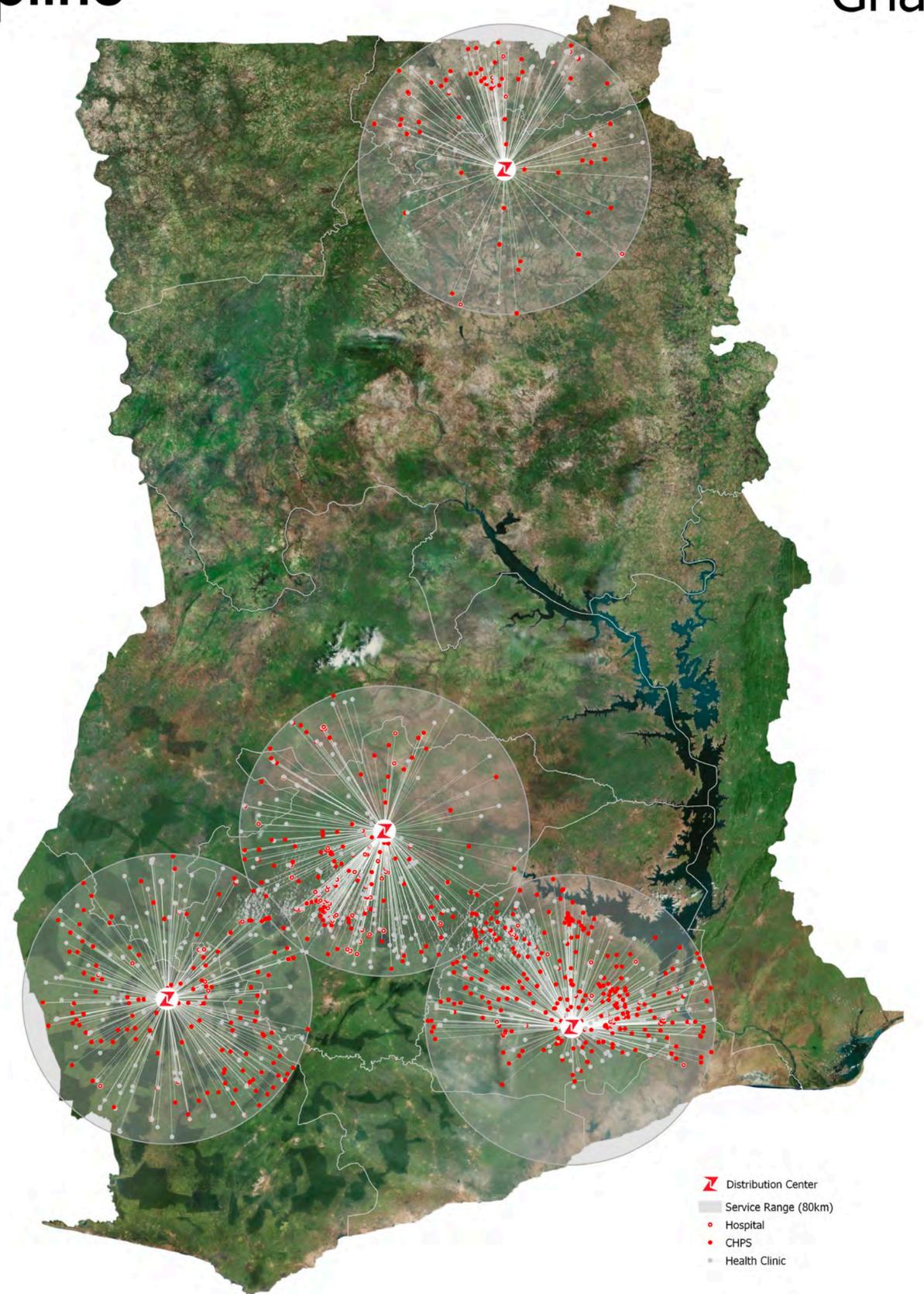


Rwanda

-  Distribution Center
-  Service Range 80km
-  Hospital
-  Health Center

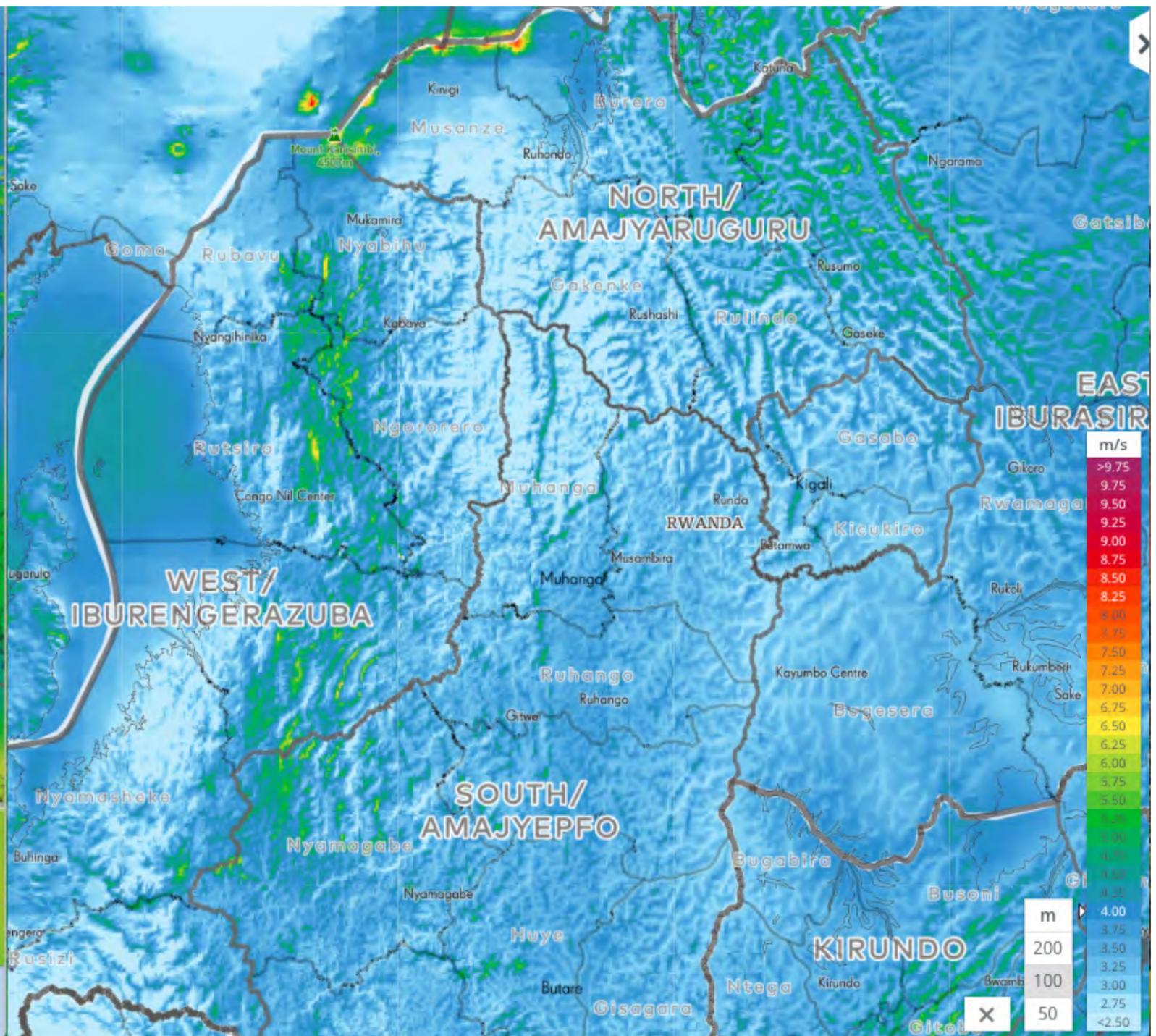
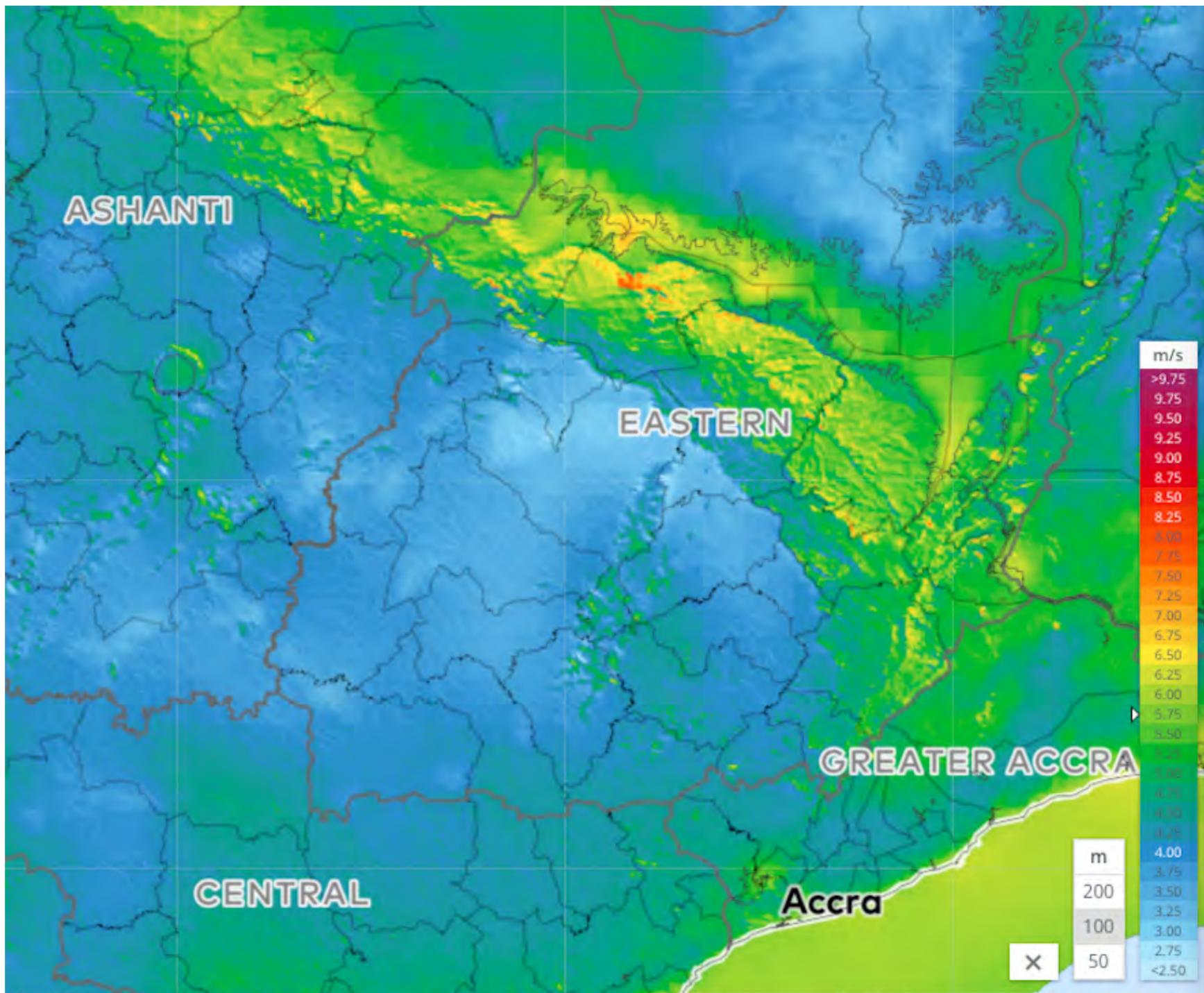
zipline

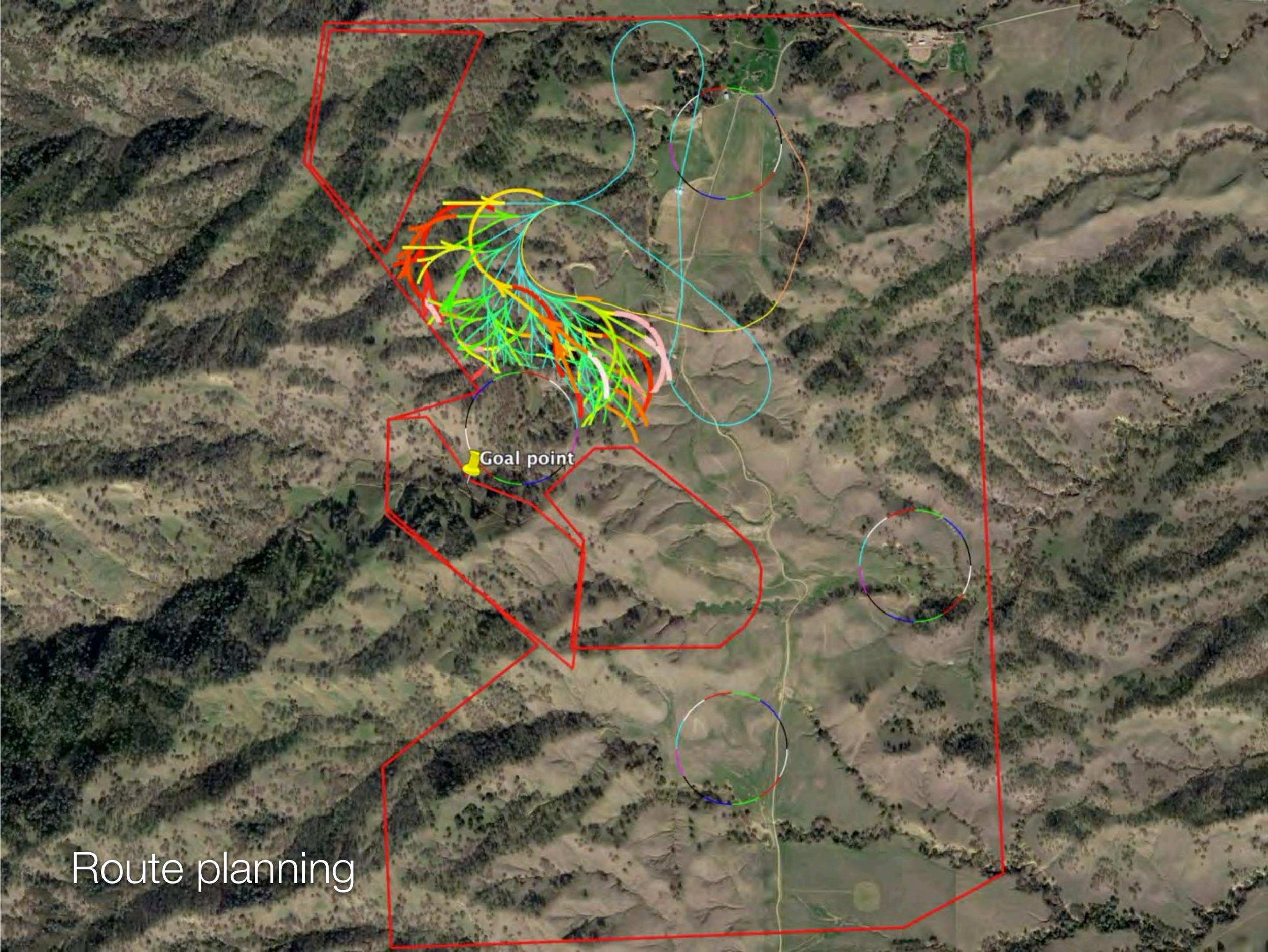
Ghana



-  Distribution Center
-  Service Range (80km)
-  Hospital
-  CHPS
-  Health Clinic

Taking the lead with new deployments





Route planning



Go/no-go flight decisions

WHAT DO WE
NEED?



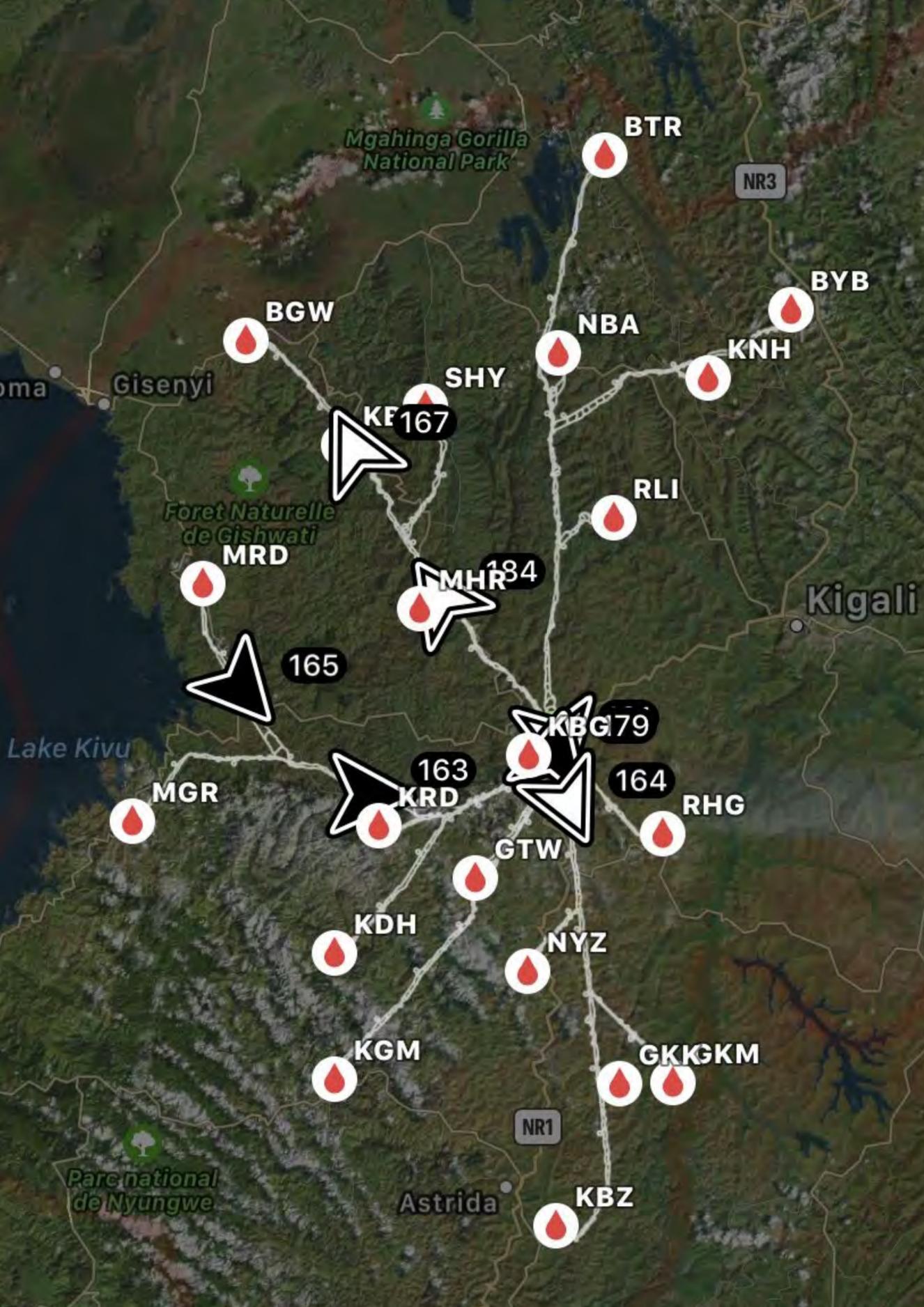
- Temperature
- Precipitation
- Clouds
- Wind speed
- Wind gusts
- Air pressure
- Humidity
- Waves
- Snow cover
- Freezing level

Model: ICON

Wind animation: Normal

Play
Previous
Change date
Saturday, 2019/02/09
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM
Next





164 Outbound

Gakoma DH GKM



4 • 6



165 Inbound

Murunda DH MRD

46 • 6



167 Outbound

Kabaya DH KBY



24 • 6



179 Inbound

Murunda DH MRD

74 • 6



181 Outbound

Kibilizi DH KBZ



0 • 5



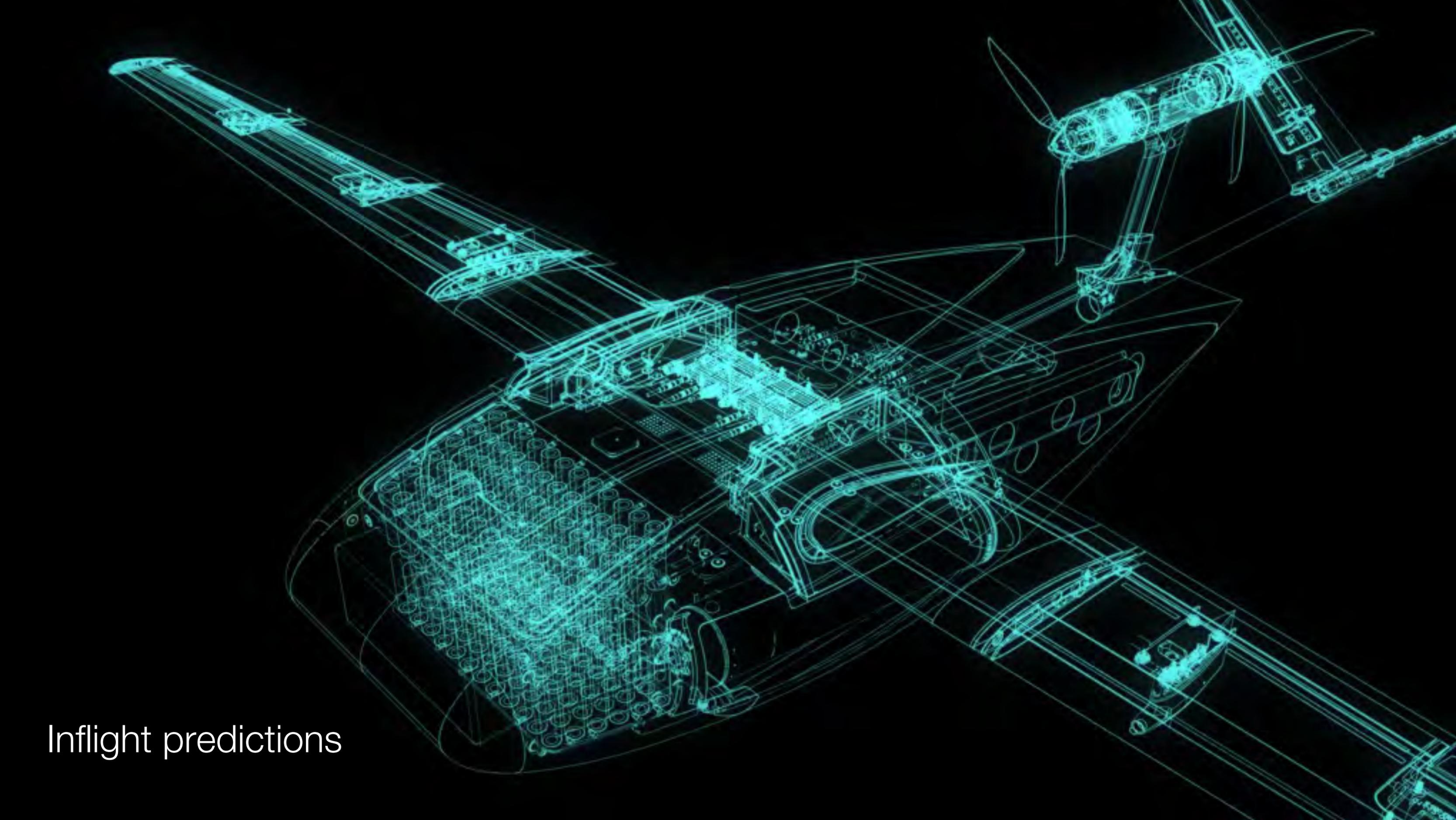
184 Outbound

Kabaya DH KBY



12 • 6





Inflight predictions



DANGER

HIGH VOLTAGE
ELECTRICAL SHOCK HAZARD



MAX HEADWIND FOR LAUNCH: 7.5 m/s
TAILWIND: 4 m/s
IF UNCURE, ASK CONTROLLER FOR WIND CHECK

zipline



Thank you