

## *Rethinking the integration of Unmanned Aircraft Systems (UAS) into Supply Chain systems*

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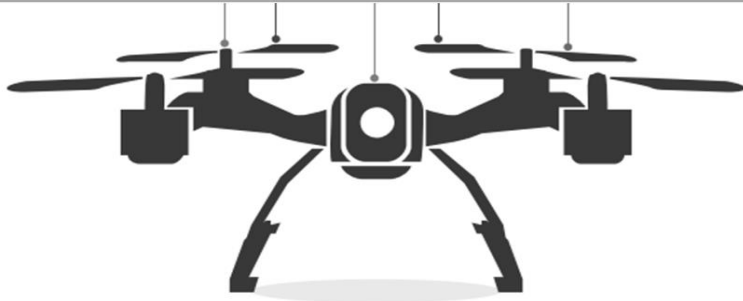


*Credit: Village Reach*

# Interagency Supply Chain Group (ISG)

## UAVs in Global Health

Defining a Collective Path Forward



<https://www.usaid.gov/cii/uavs-global-health>

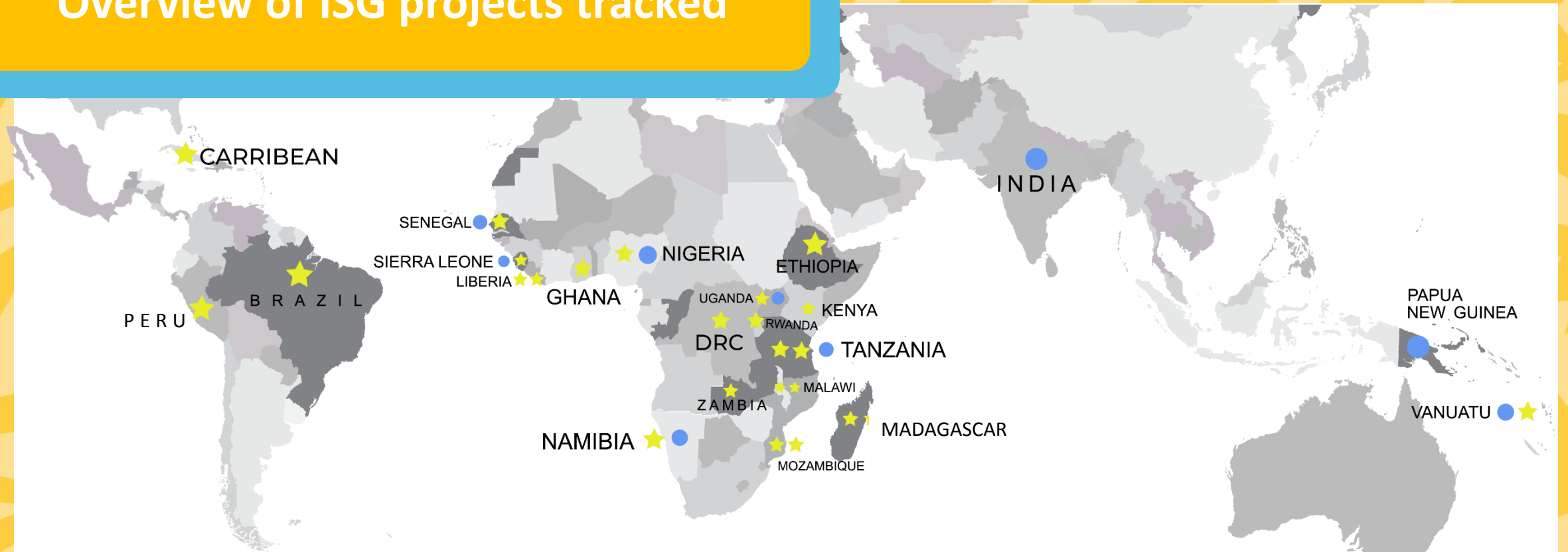
**UAS COORIDNATION** Hosted since June 2018 by The Global Fund and UNICEF

**PARTNERSHIPS** 7 ISG member + 2 Observer agencies (IDB, CDC)

**WEBSITE** [www.isg-health.org](http://www.isg-health.org)



# Overview of ISG projects tracked



## Health Supply Chain Drone Projects

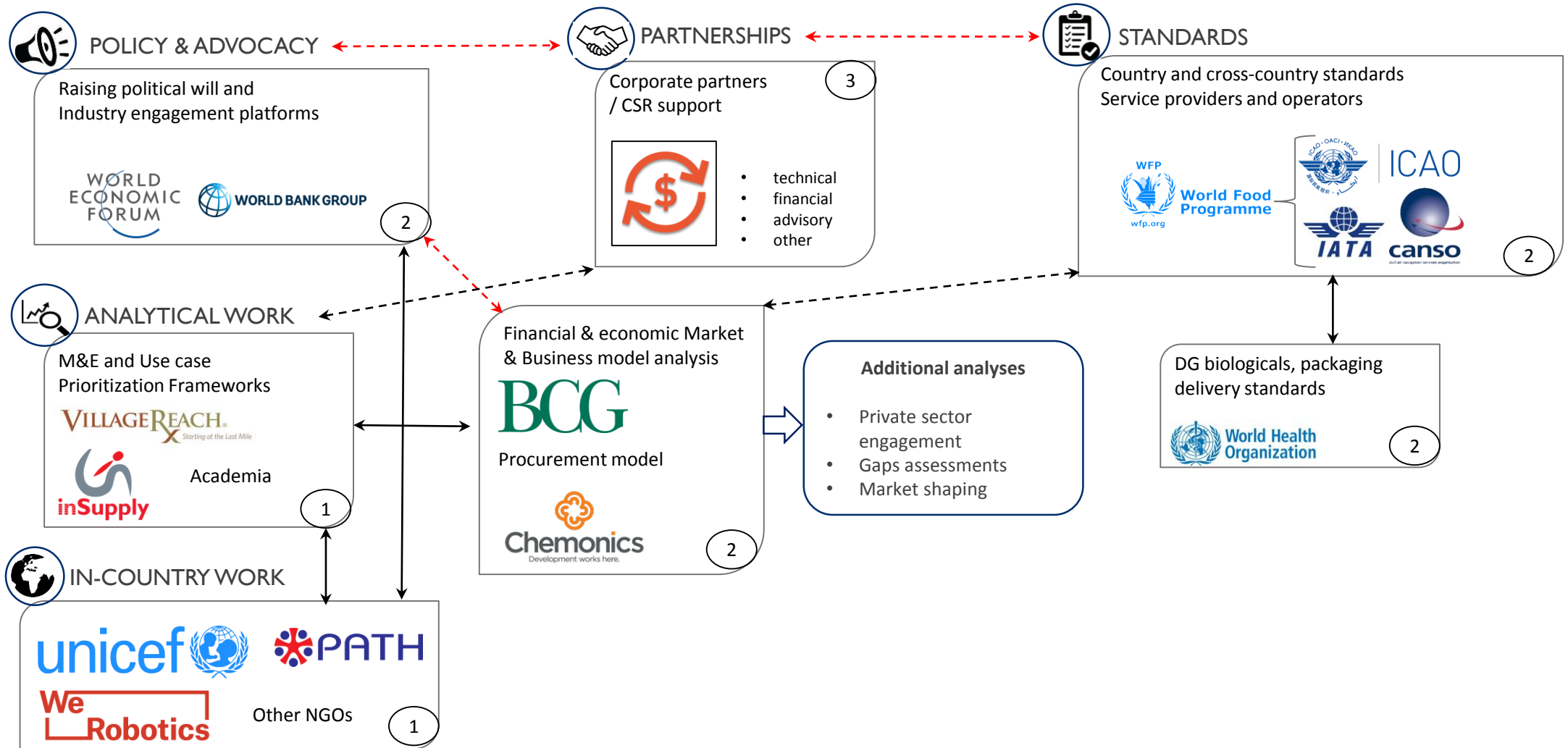
★ ISG member funded Drone projects 17.1 million USD

● Country requests to ISG > 7.3 million USD

16 AFRICAN COUNTRIES

8 REST OF THE WORLD

# ISG partner ecosystem and work efforts



# Key Performance Indicators

**Health Impact = lives saved**  
**i.e. one 5 lbs delivery parcel of vaccine vials**  
**can protect the life of about 100 children**

## Access

- reliable, fast access within 15-45 minutes to rural and remote health facilities

## Availability

- Reduce % stockouts due to delivery failure

## Local empowerment

- economic impact
- high quality supplies and business services



## Turnaround time

- Laboratory patient diagnosis and
- delivery of treatment

## Decreasing waste

- expiries and spoilage

## ISG efforts to harmonize

### **Establishing a collection of Toolkits for**

- implementations/ operations
- evidence generation Monitoring & Evaluation
- cost estimation

## Malawi ongoing work, June 2019

- USAID's GHSC-PSM is utilizing UAVs to transport and deliver health commodities and collect laboratory samples
  - ✓ Working in rural settings
  - ✓ Integrating into existing supply chain - not testing technology
  - ✓ Looking to improve health outcomes
  - ✓ Strong element of knowledge transfer
  - ✓ Close collaboration with the Malawi Ministry of Health and Department of Civil Aviation



*Community Health Worker Elizabeth Pemba receives antimalarials and vaccines*

# Malawi ongoing work, June 2019



*Delivery Route: Nkhata Bay District Hospital to Likoma Island Hospital*

*Air distance: 76km (Range: 100 km)*

*Flying time: ~55 minutes, Battery Powered*

*Speeds: cruise 80 km/h max 160 km/h*

*Payload: up to 6 kg*

- Flights occur across Lake Malawi
- **Two types of boxes** → single use for drops only, → multi-use for delivery and collection
- **Cold chain capability** through use of a styrofoam box and temperature monitor
- UAS are a valuable asset to
  - reduce stock outs between regular distributions,
  - conduct emergency deliveries,
  - collect lab samples and
  - return diagnostic results to get patients on treatment sooner



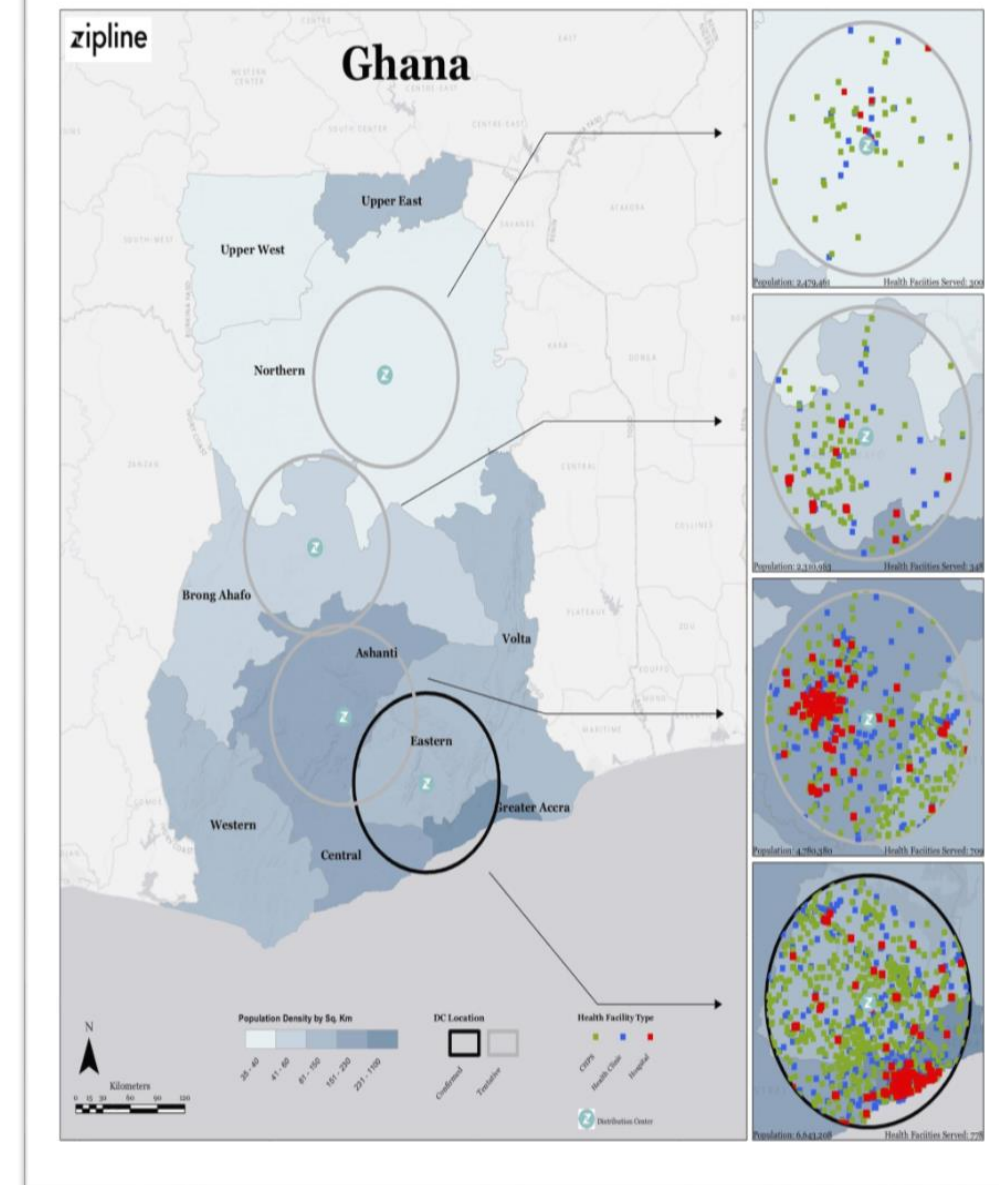
# Ghana ongoing work, April 2019

- ✓ 4 Distribution Centers
- ✓ 148 High Priority Products
- ✓ 2000 health centers serving 15M people
- ✓ 600 delivery flights/day

**Partners:** GAVI, Zipline, UPS Foundation, Pfizer, and Ghana MoH

- ✓ Contract value USD \$12.5 million over 4 years

World's largest vaccine drone delivery network



Flight Range: 160 km

Flying time: ~45 minutes, Battery Powered

Speeds: cruise 101 km/h max 128 km/h

Payload: up to 1.75 kg

# Capacity Building



# Roadmap to introducing UAS

