Request for Proposals:

Drone Delivery of Health Products in the Democratic Republic of Congo

Contact point: Procurement@villagereach.org

Deadline for submitting questions: 23:59 PST, September 06, 2021

Final submission deadline: 23:59 PST, September 19, 2021

1. Organization Overview

VillageReach is an international, non-profit organization that is transforming the delivery of health care to reach everyone, so that everyone receives the health care they need to thrive. We develop solutions that improve equity and access to primary health care. This includes ensuring that products are available when and where they are needed and that primary health care services are provided to the most underserved. Radical collaboration with governments, the private sector and other partners strengthens our ability to evolve and sustain these solutions. VillageReach works to improve access to quality health care for 43 million people in sub-Saharan Africa.

VillageReach has extensive experience in the development and management of drone delivery programs, from feasibility studies to large-scale drone delivery operations. In partnership with government and several drone companies, VillageReach currently operates Drones for Health programs in the Democratic Republic of Congo (DRC), Malawi, Mozambique, and the Central African Republic.

2. Project overview

The Democratic Republic of Congo is located in the heart of Africa and is one of the largest countries on the continent. DRC is made up of 26 provinces which have complex geographies, immense river networks and poor road infrastructure which makes consistent distribution of health products difficult. In addition, there has been a resurgence of epidemics of vaccine-preventable diseases (measles, yellow fever, cVDPV2), low vaccination coverage (WHO-UNICEF estimate 2017: 81%), and vaccine stock-outs at all levels (8 stock-outs on average for 2017).

The Ministry of Health (MoH) and the Extended Immunization Program (EPI) are working to improve immunization equity for hard-to-reach populations through the consistent and reliable distribution of immunization products in several provinces. The MoH and EPI, supported by Gavi, and in collaboration with VillageReach, began testing the integration of drones into the health supply chain to support equitable access to immunization products. In 2019, the first phase (Phase 1) of the Drones for Health (D4H) program began in Equateur province by successfully demonstrating that a complementary drone transport system can lead to faster and more consistent product deliveries. Stakeholders expressed interest in a rapid scale-up to other health centers and provinces, working towards the ultimate goal of immunizing all children.

From 2020, Phase 2 focused on the "Routine use and validation" of drone transport in Equateur province. The overall goal of the Phase 2 is to increase access to essential health products, primarily immunization products, in some of the most remote or inaccessible communities throughout Equateur province. Since Late-December 2020, the drone network has served 29 health facilities, via 14 drone landing sites, with scale up continuing through 2021. Since then, more than 1000 flights have been completed, transporting over 50,000 vaccine doses, lab samples, medical reports, PPE, and essential medicines.

Building off the success of Phase 1 and Phase 2, the MoH and EPI are interested in expanding the D4H program to two additional provinces in 2022, henceforth referred to as Phase 3. The goal of Phase 3 is to expand D4H to reach an additional 75 hard-to-reach health facilities across Kinshasa

and Kongo Central Provinces to increase access to immunization and other health products and to improve the laboratory sample transportation systems through routine drone deliveries.

VillageReach is currently supporting the MoH, EPI and UNICEF to conduct a feasibility study to identify the 75 drone delivery sites, design the drone delivery networks and select a drone provider for the Phase 3 implementation.

3. Scopes of Work (SOW)

This RFP is broken down into two SOWs covering two periods, in which vendors are expected to submit a costed proposal for:

> Period 1: Phase 3 Set-Up (October – December 2021)

> Period 2: Phase 3 Operations (TBD 1+ year period starting in 2022, pending funding)

In Period 1, the supplier will work closely with VillageReach and the MoH, EPI and all relevant authorities on start-up activities to prepare for expansion of the D4H program to Kinshasa and Kongo Central provinces. The vendor will support the D4H team to identify drone take-off and landing sites, design the drone delivery network and flight routes, submit a flight and importation approval application, and prepare for aircraft and equipment shipping and importation. Thus, vendors should be available to remotely support the D4H team from October – December 2021. **A contract for the Period 1 SOW will be issued immediately upon vendor selection.**

Upon receipt of additional funding, additional contracts will be issued to the awarded vendor for activities under Period 2. The vendor's primary role under Period 2 is to deliver and collect medical commodities such as vaccines and medicines and to collect lab samples, reports and other products to and from 75 public health facilities in Kinshasa and Kongo Central provinces. The vendor will work closely with VillageReach, MoH, EPI and all relevant authorities to obtain the necessary approvals prior to flying and to ensure that aircraft safety regulations and requirements are met or exceeded at all times.

The MoH and EPI have identified 150+ **hard-to-reach facilities** across both provinces, of which 75 will be selected during Period 1. Bi-directional drone deliveries will be conducted on a routine and on-demand/emergency bases (monthly, weekly or a combination of both) between drone hubs and these 75 hard-to-reach health facilities. A map of the pre-identified facilities can be found in Annex C. Kinshasa province will likely have around 25 delivery locations and Kongo Central will likely have around 50 delivery locations. Deliveries will likely originate from centralized hubs outside of Kinshasa City, Mbanza-Ngungu and Matadi or Boma. The furthest health facilities will be up to 100 km aerial distance from the drone hubs. Health facilities will not be able to recharge drone batteries, so, if necessary, battery recharging stops could likely be established at Zone Health Offices (equivalent to a District Health Office) to serve health facilities outside of the aircrafts range. Estimated details for Phase 3 operations can be found in Annex D. Many health facilities will have limited or no cellular connectivity, so alternative delivery notification systems will be established.

The medical cargo will be a minimum of 3 kgs and will need to be maintained at a controlled temperature between 2-8 degrees Celsius. More details on estimated delivery schedules can be found in Annex D.

The flights are planned to occur in reasonable weather conditions (not during periods of heavy rain or winds exceeding 10 metres per second). You can expect temperatures ranging between 20-32 degrees Celsius, high humidity, and up to 200mm of monthly rainfall[12].

Detailed Scopes of Work
Period 1 - Phase 3 Set-Up (October – December 2021)

a. Provide guidelines for drone take-off and landing site surveys including topographic requirements, infrastructure requirements, and geospatial data collection.

b. Participate remotely in required meetings for Phase 3 Set-Up including project design workshops in each province.

c. Design the drone delivery networks and flight routes, in preparation of submitting a full flight authorization application to the DRC Civil Aviation Authorities (CAA).

d. Prepare the flight authorization request and a safety package for DRC CAA.

e. In collaboration with VillageReach, prepare materials and submit all required documents to DRC customs authorities and CAA to receive approval to import aircraft, equipment, spare parts and any other necessary materials. If required, prepare and submit all documents required by the exporting country's customs authorities for timely arrival of equipment in DRC.

f. Obtain the necessary insurance, both for aircraft and for third party liability, to fly in the DRC in accordance with the requirements or guidelines of the CAA and VillageReach.

g. Discuss with VillageReach and EPI payload compartment requirements and make necessary adjustments to ensure the transport of required products under cold chain conditions.

h. Prepare an infrastructure and equipment list for each province to establish drone hubs for Phase 3 flight operations - Including but not limited to: drones, spare parts, maintenance materials, storage, security, landing-pads, fences, building materials, internet connectivity, furniture, cold chain equipment, etc.

i. Plan all logistics for travel to DRC for Phase 3 implementation including visas, security, and safety mitigation plans.

j. Prepare recruitment, hiring, and training plans for local drone operations staff to prepare for Phase 3 operations.

k. Provide revised (binding) budget for Phase 3 operations in Kinshasa and Kongo Central, after take-off and landing sites are finalized.

Period 2- Phase 3 flight operations (TBD 1+ year period starting in 2022, pending funding)

a. Travel to the DRC with a team of 2-4 international team members with all the necessary equipment to begin Phase 3 operations.

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[1] https://en.climate-data.org/africa/congo-kinshasa/kinshasa-1420/

[2] https://en.climate-data.org/africa/congo-kinshasa/kongo-central-1393/

b. Ensure the importation of aircraft, equipment, spare parts and any other necessary materials in collaboration with VillageReach.
c. Meet with all relevant authorities such as MoH, CAA, EPI etc. and VillageReach to ensure proper introduction and planning.
d. Work with VillageReach to obtain all necessary approvals for operations including; Submitting the flight authorization and safety package request to the CAA, the Ministry of the Interior and Security, the National Intelligence Agency (ANR), the National Police, and the Régie des Voies Aériennes (Airways Authorities); importation approval from CAA and Customs (Ministry of Finance); local drone pilot certification from CAA, and other technical aspects of aviation including but not limited to inspections of take-off and landing sites.
e. Hire and train local drone operations staff to operate the network. Ensure ongoing in-person or remote on-the-job training for locally hired staff.
f. Prepare international staff exit plans for transitioning to full local operations.
g. Set up drone hubs at designated take-off and landing sites.
h. Help develop an emergency protocol for operations in collaboration with VillageReach, EPI and the relevant aviation and security authorities.
i. Train MoH, EPI and VillageReach on required drone operational procedures, including emergency response. If requested, provide hands-on training and onboarding to health workers on protocols and standards related to drone transportation.
j. Conduct bi-directional routine and on-demand/emergency drone delivery of health products to hard-to-reach health facilities on a schedule according to the distribution protocols developed by MoH, EPI and VillageReach.
k. Ensure continuous availability and functionality of sufficient aircraft to service the network and all associated hardware and software, including regular maintenance and quick repairs, with minimal interruptions to product deliveries.
l. Provide all agreed-upon data and measurements in monthly and ad-hoc performance and safety reports including but not limited to: completed deliveries (on-time and in-full), number and quantity of products delivered to each location, emergency delivery request time, payload temperature before and after flights, payload weight, time to destination, distance traveled, weather and wind variables, problems encountered and resolutions, reasons for delivery disruption and detailed reports in the event of any adverse event.
m. Provide agreed-upon cost information as requested by VillageReach for a supply chain costing and cost-effectiveness analysis.
n. Propose solutions for all technological or operational constraints in order to minimize interruptions to health product deliveries.
o. Work closely with CAA to ensure that aircraft safety regulations and requirements are met or exceeded at all times.
p. Participate in press opportunities and debriefing meetings with the authorities.

4. Payment linked Deliverables

Period 1 - Phase 3 Set-Up (October – December 2021)

a. Guideline document site surveys
b. Drone delivery network and flight routes designed
c. Flight authorization request and a safety package prepared for DRC CAA

d. Importation authorization materials submitted to VillageReach and/or DRC Customs
       Authorities and CAA
   e. **Revised binding budget for 1 Phase 3 operations in Kinshasa and Kongo Central**

Period 2- Phase 3 flight operations (TBD 1+ year period starting in 2022, pending funding)

   a. Flight authorization request and safety package submitted to DRC CAA
   b. Flight authorization from CAA and all other relevant authorizations approved for all flight
       routes
   c. Aircraft and all required equipment, spare parts and any other necessary materials imported
       and transported to operations locations
   d. On-time and in-full deliveries of health products to 75 hard-to-reach health facilities
       according to the monthly distribution schedule.
   e. Monthly and ad-hoc performance and safety reports
   f. Cost data, as requested by VillageReach

5. Schedule of Events

VillageReach will evaluate all responses to this Request for Proposal (RFP) in collaboration with independent drone experts and an evaluation committee in DRC. The current estimated timetable for the selection process and activities is summarized below.

Milestone	Completion date and time
Release RFP publicly on VillageReach website, Join Us page	August 30, 2021
Interested vendors have the option to submit questions of clarification by emailing procurement@villagereach.org	September 06, 2021 23:59 PST
VillageReach will release an amendment to this RFP answering all questions received (anonymized) on the VillageReach website, Join Us page	September 08, 2021 23:59 PST
Vendors submit proposals to VillageReach via email: procurement@villagereach.org, **with subject: "DRC RFP – Name of lead company applying"**	September 19, 2021 23:59 PST
Interviews, in-person or virtual assessment by technical expert and reference check, followed by vendor selection	September 2021 (estimate)
Contract signature between VillageReach and drone service provider, joint application for flights, security and customs approvals and sharing of basic performance and cost data	October 2021 (estimate)

VillageReach may reach out with clarifying questions regarding application materials or proposed technology. There may be an in-person or virtual evaluation of technology capabilities and flights

by VillageReach and/or an independent technical expert, at which time the pre-selected vendor(s) may be expected to demonstrate aircraft specifications as described in this RFP.

6. RFP Questions and Due Date

Questions regarding this RFP are encouraged and should be submitted by e-mail to the address listed below by 23:59 PST on 06 September, 2021. Should a prospective Vendor perceive any material ambiguity, conflict, discrepancy, omission, or other error in this RFP, the vendor should send a question to confirm or clarify the information in question.

VillageReach will release an amendment to this RFP answering all questions received (anonymized) on the VillageReach website, Join Us page, by 23:59 PST on 08 September, 2021.

Note: Applications can be submitted any time after the release of the RFP but no later than 23:59 PST 19 September, 2021, by emailing:

Email: procurement@villagereach.org

7. Evaluation Criteria

All proposals will be evaluated based on standardized criteria, summarized as follows[3] and described in further detail below:

- Technical capability of the drone platform: Capabilities and design of the drone, and required infrastructure, as it pertains to this project (see Vendor Response Template for requirements)
- Operational plan and feasibility of conducting health product deliveries in the given setting
- Organizational capability, experience, business model, sustainability, and shared values
    - o Experience: Vendor's proven experience operating in an environment similar to DRC
    - o Flexibility: Vendor's willingness and ability to meet project needs
    - o Staff availability: Vendor's availability to participate in the various phases of the project (regulatory approvals, export/import, set up, training, flight operations, etc.) within the required timeframe
    - o Level of service offered: Ability of Vendor's business model to assure long-term sustainability in future phases of implementation
    - o Shared values/social mission: Alignment of vendor's organizational missions, and values, and commitment with VillageReach's values.
    - o References: Positive assessment of previous work performance in a similar environment, backed by data and direct observation
- Budget to complete deliverables: Cost-effectiveness of proposed budget for services to complete RFP deliverables
- Future cost of services: Cost-effectiveness of proposed non-binding budget for 12 months of future operations in Phase 3 implementation

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[3] Evaluation criteria are primarily drawn from "How to select a drone service provider for transport of health products – lessons learned" a document published in 2020 by VillageReach in collaboration with Cyclops Air, WeRobotics and Swoop Aero.

8. Shared Value Requirements

VillageReach is taking particular precautions to ensure that the introductions of drones for medical product transport abide by VillageReach's organizational values and the Humanitarian UAV Code of Conduct[4]. Community trust is critical for the success of this project and the future use of drones in DRC. Drone operations can result in serious unintended consequences including loss of community trust in services, human rights violations or loss of life or property. To that end, bidders/potential vendors must agree:

a. To be sensitive to the complex nature of working in DRC and the effects of drone operations on local communities, including their prior history with or perceptions of drones;
b. To (1) establish protocols for adverse events and (2) record and report such incidents so they may be used as learning opportunities;
c. If the aircraft is fitted with a camera system, any on-board recording capability is to be removed or disabled, in order to respect community requests;
d. To follow VillageReach's external communication guidelines[5] for any and all publicity and media associated with this project, including avoiding use of military or intelligence community terminology in internal and external communications;
e. Comply with zero tolerance policy on the prevention of sexual abuse and exploitation
f. Not to share project data with any governmental entity, organization, or person that partakes in military, surveillance or peacekeeping activities; and
g. During the term of the project, not to work with or seek work from such entities, organizations, or persons in DRC.

9. Proposal Submission Instructions

A prospective vendor should prepare any offer simply and economically, giving a straightforward, concise picture of that vendor's ability to satisfy the requirements of the RFP.

Interested vendors are required to submit the following:

a. A completed **Vendor Response Template (Annex A),** which contains the technical requirements, with concrete descriptions of how the applicant will meet or exceed technical requirements and detailed responses for all other essential technical information.

b. **A narrative application, no more than ten pages**, which includes a concrete description of how the applicant will adhere to the Scopes of Work (Section 3) and any other information that responds to the requirements outlined in this RFP.

c. A completed **Vendor Budget Template (Annex B),** which must include:
   - **An itemized binding budget to meet** Period 1 - Phase 3 deliverables, **not to exceed $6,600**, as described in the Payment Linked Deliverables (Section 4).

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[4] Humanitarian UAV Code of Conduct: Fully Revised for 2020-2021
[5] VillageReach Communications Guidance and Preferences

- An itemized non-binding budget for to meet Period 2 – Phase 3 deliverables, as described in the <u>Payment Linked Deliverables (Section 4).</u> This budget should be broken down by province (Kinshasa and Kongo Central) and at minimum, include aircraft rental costs (if applicable), performance fees (if applicable), shipping, maintenance, operational costs, staff costs, and the estimated cost per flight hour. **There is no budget ceiling or range for the itemized non-binding budget to meet Period 2 – Phase 3 deliverables**, in an effort to realistically quantify the actual costs of implementing these flights in DRC, and to account for variations in the type of technology, business model and location of the vendor. **However, the total of the updated and itemized binding Period 2 budget – which is a Period 1 deliverable – may not vary from the total of the itemized non-binding budget Period 2 budget, submitted with this RFP, by more than 10%.**

d. A statement in the RFP submission that the entire document (including scope and prices set forth in the binding budget for Period 1 – Phase 3 Set-Up Payment Linked Deliverables contained in Annex B) are firm for not less than three months from the date of the quotation.

10.General Conditions

This RFP is not an offer to contract. The issuing of this RFP does not commit VillageReach to award a contract to any vendor, even if all requirements stated in this RFP are met, and will not limit our right to negotiate in our best interest.

VillageReach shall not be responsible or liable in any manner for any risks, costs, or expenses incurred by any prospective vendor in responding to this RFP, including but not limited to the selected vendor(s).

11. Reservation of Rights

a. VillageReach reserves the right to reject any and all offers for any reason or for no reason whatsoever, in whole or in part. Without limiting the generality of the foregoing, VillageReach may reject any offer that fails to follow the RFP Information outline; is submitted on forms that contain printed terms or stipulations; is conditional, qualified or incomplete in any manner; or contains any irregularities of any kind.
b. VillageReach reserves the right to withdraw this RFP at any time or to modify this RFP by one or more addenda issued through the same methods as the original RFP release to whom VillageReach issued this RFP. VillageReach shall incur no liability whatsoever to prospective vendors by reason of such withdrawal or modifications.
c. VillageReach reserves the right at any time to discontinue the RFP process, and enter into discussions and/or negotiations with any one vendor if such action is in our best interest.
d. VillageReach reserves the right to modify any estimated requirements prior to signing a contract with the selected vendor(s). No prospective vendor shall have a claim on VillageReach in the event any estimated requirements are modified for whatever reason.

e. This RFP will be sent to multiple vendors. VillageReach reserves the right to enter into separate contracts with multiple vendors if it desires to do so.

f. Vendors may apply as a consortium; however, VillageReach reserves the right to select any, all or none of the members of the consortium to provide services.

g. VillageReach reserves the right to withdraw, change the scope of work or schedule of events, or cancel the project at any time.

12. Confidentiality of Proposals

VillageReach routinely handles all information submitted in response to an RFP with care, uses it only for evaluation purposes, and restricts access to a minimum number of persons. Independently contracted technical experts involved in the RFP review process are bound to withhold all information submitted as confidential. VillageReach assumes no obligation and shall incur no liability regarding confidentiality of all or any portion of a quotation or any other material submitted in response to this RFP unless VillageReach has expressly agreed in writing to protect specifically identified information.

13. Prerequisites for Doing Business

Any vendor entering into a business partnership with VillageReach must:
a. Be stable and financially healthy.
b. Have adequate and qualified personnel to provide responsive service and quality maintenance and support.
c. Provide adequate warranties or other legal recourse upon product or service failure.
d. Agree that payment will be linked to performance according to achievement of project deliverables.

Annex A. Vendor Response Template

Annex B. Vendor budget template

Annex C. Map of potential hard-to-reach health facility delivery locations

If you are unable to access the Annex A and B linked files, please email procurement@villagereach.org for assistance.

Annex D. Estimated Phase 3 Operations Details

As MoH, EPI and VillageReach are currently conducting a feasibility study to determine the scope of Phase 3 operations, we are unable to provide exact Phase 3 operations details at this stage. We understand that accurate budgets require confirmed take-off and landing locations in addition to the quantity and frequency of health products for delivery, so estimates and assumptions are listed below for vendors to completing the required **non-binding** budget for Period 2 – Phase 3 operations payment linked deliverables. As a part of the Period 1 payment linked deliverables, vendors will be required to submit an updated and itemized binding Period 2 budget for Phase 3 operations, after more Phase 3 operations details are confirmed. **Updated and itemized Period 2 budgets may not vary from the total of the itemized non-binding Period 2 budget, submitted with this RFP, by more than 10%.**

We understand that some costs may be unknown or highly variable, and as such, vendors are encouraged to submit questions about specific unit costs by September 06. Vendors should provide costs to the best of their ability and are encouraged to provide detailed explanations for assumptions made, particularly for items in which the local DRC costs are unknown or highly variable (such as fuel prices, rental vehicles, etc.). Vendors will not be penalized for listing a unit cost as $0, provided the number of units required and explanation is listed. VillageReach will work with vendors in the RFP review stage to provide unknown unit costs and finalize the non-binding budgets. *Vendors **are required** to budget for importation fees into DRC for all aircraft, equipment, spare parts and any other necessary materials. On average, importation fees are 40% of the total value of import.*

If a consortium of operators and manufacturers or drone service providers are applying, please submit a combined budget including all organizations.

Table 1: Estimated Phase 3 operations details for Period 2 – Phase 3 operations budget

Operating locations	Kinshasa Province	One drone hub outside of Kinshasa City (take-off location) ~25 delivery locations (hard-to-reach health facilities) If needed to accommodate vendors maximum range, up to two battery recharging sites ~100 km by air from the drone hub can be established (one in the north and one in the east)
	Kongo Central	Three drone hubs in (or outside of) Mbanza-Ngungu and Matadi and Boma (take-off locations) ~50 delivery locations (hard-to-reach health facilities) If needed to accommodate vendors maximum range, up to three battery recharging sites ~100 km by air from the drone hubs can be established (one per hub)

Delivery schedule	Kinshasa Province	Monthly or weekly deliveries of routine health products to each of the ~25 health facilities. Estimated ~250 flight hours/month to complete these deliveries. On-demand/emergency deliveries on an as needed basis. Estimated ~25 additional flight hours/month to complete these deliveries (10% of routine delivery flight hours).
	Kongo Central	Monthly or weekly deliveries of routine health products to each of the ~50 health facilities. Estimated ~500 flight hours/month to complete these deliveries. On-demand/emergency deliveries on an as needed basis. Estimated ~50 additional flight hours/month to complete these deliveries (10% of routine delivery flight hours).
Length of operations	24 total months of flight operations. Deliveries will begin progressively to new sites over the first 12 months until all 75 facilities are reached. Please estimate and list the number of months required to reach full scale over this 12 month period.	
Operating schedule	Weekdays - 5 days per week. Flights in daylight, subject to a maximum of 9 hour working day.	
Number of aircraft	Please estimate and list the number of aircraft you would need for each hub at any one time to support this operation. Including sufficient spare aircrafts and support equipment to avoid flight delays or cancellations and to meet serge capacity for on-demand/emergency deliveries.	
Fuel	If your aircraft is powered by fuel, estimate and list how many litres will you require per month to achieve the product deliveries (please show your calculations).	
Staff	Calculate and list the number of international and local staff that will be required for each province to: a. Staff to set up the operation (and for how long). b. Staff to manage the operation. c. Staff for routine operations at the hubs and battery recharging locations. Specify local vs. international staff and part-time vs. full-time.	
	With access to skilled staff (local technical university graduate), how long would it take you train such an individual to pilot and operate the drone delivery network in DRC? Training will need to be conducted in French. Please indicate which positions could be transferred to local staff and how many months into operations would it take to fully transition operations to these staff, eliminating the need for international staff.	