Questions & Answers for :

Request for Proposal- Unmanned Aerial Vehicle (Drone) Demonstration Flights in Central African Republic

Contents

Questions and Answers

Security

1. **What arrangements would be made to ensure the security of personnel during all phases of the project?**
   The World Health Organization (WHO) in Central African Republic (CAR) will work with the selected drone service provider to provide safety and security measures while in CAR. WHO and VillageReach will provide detailed and up to date security briefing and travel instructions prior to and during travel to CAR. WHO will provide a list of safe accommodations and facilitate safe transportation while in country. WHO will receive the drone team at the airport and provide transport by armoured vehicle to the hotel.

   At the landing location, WHO staff will be assigned to support the demonstration flights and if needed, will coordinate security provisions from UN Peacekeeping Forces (MINUSCA). Need for MINUSCA services will be determined by WHO closer to the demonstration flights, as the security situation evolves daily. They will also be able to provide support for safe recovery of drones in the event of an unplanned landing, but recovery cannot be guaranteed.

   In view of the complex context of CAR, the presence of a drone could be interpreted as a means of searching for intelligence information. Prior to drone flights, VillageReach and WHO will coordinate a community perceptions study, at take-off and landing sites, in order to develop an in-depth community sensitization plan. WHO will coordinate with the national Civil Aviation Authority, CAR military and peacekeeping stakeholders, such as the Special Representative of the Secretary General of the United Nations, MINUSCA, Ministry of Defence, and Ministry of Security of Armed Groups in advance of the demonstration flights.

2. **How would the safe travel of personnel to and from the various stakeholders and project locations, and the safe retrieval of drones landed somewhere along the route (which is one of the possible drone safety scenarios during demo flights) be secured?**
   See question 1.

3. **What provisions are being provided for security and safety of staff, if any?**
   See question 1.

4. **What is your assessment of the feasibility of conducting such tasks within the suggested timeframe from a security standpoint?**
   The security situation in CAR sharply deteriorated since the last elections in December 2020. The second round of legislative elections are scheduled for mid-March and the inauguration of the president will follow in end-March 2021. It is recommended that all activities are planned after this inauguration, when the security situation is expected to

improve. As demonstration flights are planned for June or July 2021 (latest August), we are optimistic that the suggested timeframe will be sufficient but are discussing alternative scenarios – for example the location of the demonstration flights may be adjusted to be in a more secure area.

5. Can you elaborate on what is meant in the RFP by asking the applicant to describe to adhere to the security requirements? Other than agreeing, is there something more the RFP is looking for?
   You will not be required to submit a detailed safety and security plan at the time of application. If contracted, you will be required to work with VillageReach and WHO to develop a detailed safety and security plan. In your proposal, we recommend that you provide insight into how you may organize your operations and potentially make adjustments to your technology to minimize risk and accommodate the complex security situation. If you have experience with operating in other complex security environments, please describe this. This experience is not mandatory though.

6. Are applicants expected to develop and submit safety and security plans for personnel?
   See question 5.

7. If the security situation in the CAR prevents this opportunity from moving forward at this time, is there another country of operation where a similar concept can be proven?
   This is under consideration if security restrictions do not allow travel to CAR between June-August 2021, and it would be a neighboring country with similar flying conditions.

Technical Requirements

8. Are there any requirements for communication? Are we required to provide sat connection or is there any 3G infrastructure we can work with?
   You need to provide satellite comms capability, 3G will not be sufficient.

9. For satellite comms, is there an update rate that is mandatory or desirable?
   It depends upon the provider you choose, but a position update rate not longer than 5 minutes is recommended.

10. What sorts of comms are required?
    See questions 8 and 9.

11. Are you considering bigger but lighter package? (we have 50x30x30 cm cargo hold included)
    No, minimum payload requirement is 5 kg.

12. Can you provide examples of acceptable or unacceptable forms of payload bay locking?

Simple locking solutions are acceptable, such as a combination lock. If you propose to use a lock and key, we highly recommend planning for multiple copies of keys for both ends of transport. High-tech solutions are not required. We will discuss options with the finalists, WHO in CAR and the relevant government authorities to decide what is best.

13. **Is there a model of ADS-B recommended or required?**
No specific model recommended but ability for space based tracking would be a very positive choice.

Cold Chain & Product Packaging

14. **In order to transport the vaccines, it is indicated that they have to be temperature controlled. How are they packed? Do you have an approximate volume?**
The manner in which the vaccines are packed for flights and the amount transported will be influenced by the drone's payload capacity (volume and weight). Targets for the amount and volume of products to be transported will be determined after a UAV provider is selected.

There are no mandatory or desirable requirements for the payload compartment size/dimension/volume but larger compartments will be weighted more favourably.

Vaccines are typically packed in a WHO prequalified passive cooling cold box, with at least two ice packs, to maintain the temperature. Below are the specifications for cold boxes and ice packs typically used to transport vaccines.

Packaging Material	Weight (kg)	Length (cm)	Width (cm)	Height (cm)	Volume (L)
10 V cold box	2	27	27	30	21.87
Geostyle cold box	1	76	21	30	47.88
Blow king cold box	2	24	24	27	15.55
Ice pack	0.3	15	8.5	3	0.38
Ice pack	0.5	60	11.5	3	2.07
Ice pack	1	75	14	2	2.10

If the aircraft's payload compartment is large enough, a WHO prequalified cold box can be placed directly inside the payload compartment to transport vaccines. If not, the cargo box your provide or the payload compartment itself must be able to maintain a temperature of between 2° and 8° Celsius throughout the duration of the flight. Active cooling is not required. Ice packs will be provided by WHO for the demonstration flights.

15. **Who provides product package? Where can we find specs of it? Does it contain active cooling? How is it powered? If yes - what is the electromagnetic profile of package? Can**

you provide heat signatures for analysis? Is there any requirement on the size/dimensions/volume of the temperature-controlled cargo container?
See question 14.

16. What are the dimensions of the payload - and are there mandatory and/or desirable dimensions?
See question 14.

17. Will it be possible to install at the plane a medical Coleman freeze with internal battery and also electrically connected at the plane?
If you mean that you intend to fit a Coleman freeze with internal battery in the aircraft and want to connect it to a ground electrical supply while on the ground, that is acceptable, but you will potentially need to provide sufficient cabling. Although, active cooling is not required (See question 14). Please list what ground power supplies this would require (voltage/amps, etc.) in the vendor response template.

Operations & Logistics

18. Do we have to provide pilots as well, or do we have to provide training for local pilot?
For the demonstration flights, you will need to provide a pilot (we recommend two pilots, to have a back-up). For your response to Annex C for future routine operations, please indicate if you would be able transfer piloting duties to locally hired drone pilots (whom already have a drone pilot certification) and what training would be required to do so.

19. The document indicates a maximum daily flight time of 9 hours. Is it a must or an indication? Regarding also the day activity, there is any activity restriction for pilot operation at CAR? Do we have to follow ICAO restrictions?
This is an indication (suggestion), anticipated based on the distances to be flown and potential drone speed. There are no current Flight Time Limitations for crew rest and duty for drones in CAR, but you need to make a safe proposal.

20. Do all locations have to be supplied 5 times per week? Is it acceptable to deliver more cargo with less frequency?
For the *future* routine operations described in Annex C, all locations will need to be visited 5 times per week to *collect* laboratory samples. It is not acceptable to *collect* more cargo less frequently from these locations. Even for the drone demonstration flights planned over 1-2 weeks in mid-2021 you will need to be ready to fly every day.

21. In which bases there will be available 95 octanes gasoline?
All bases are anticipated to be able to supply this fuel.

22. Will there be a place to fit the Ground Control Station, like an office or a work shelter?

It is expected that this will be available, but you will need to tell us what space and services you require. The facilities will be minimal for the demonstration flights.

23. **Will there be internet available at the base?**
Internet will likely be available but we cannot guarantee a minimum speed or reliability. If your system requires high-speed internet connectivity to function, you should plan to provide your own internet access as a backup. You can include this in the budget.

24. **Which power supply (voltage, frequency and power) will be available at the base?**
Please tell us what you need as this resource varies between locations. The voltage in the Central African Republic is 220 volts and the frequency is 50 Hz.

25. **Is amount of refuelling points negotiable (we would need more stops) if no landing infrastructure needed? (we would require around 50m2, any field (grass, concrete, asphalt to land).**
No, refuelling points are not negotiable due to security reasons (we may not be able to guarantee the security of aircraft and people along the route).

26. **What sort of logistical support will be available to pre-position people, fuel, and supplies in the destination location (around 300km from takeoff) for the demo? Will flights be arranged / provided or is this something that the participants will have to arrange (and plan for financially)?**

We will provide logistical support to pre-position people, fuel, equipment and supplies (such as generators, tents, etc.) at the take-off and destination locations. If contracted, you will be required to submit a detailed list of all people, fuel, equipment and supplies necessary for operations prior to travel.

WHO and VillageReach will arrange all inter-CAR passenger flights, ground transportation and lodging for vendors, both in Bangui and at the destination location. You do not need to include transportation for people and equipment to/from the destination location in your budget.

27. **For aircraft that have a 300km range and then need to refuel, how will provisions be made to preposition to at the destination / remote location prior to flights commencing?**
See question 26.

28. **What will happen if in midyear border between EU countries and CAR will be closed because of the COVID-19? Will CAR provide some other schedule of events? Should we calculate possible quarantine time into calculation after travelling to CAR?**
In the event that contracted drone providers are not able to travel to CAR due to COVID-19, we would approach the donor and local stakeholders in CAR to coordinate rescheduling the demonstration flights.

When arriving in CAR, WHO will arrange for a COVID-19 test on arrival. You will be required to quarantine at the hotel until the results are returned, usually within 24-48 hours. If negative, travellers can go about their work. If positive, travellers will have to quarantine for 14 days. Please include the 48 hour quarantine into your travel calculations and budget. COVID testing requirements may change in the future, given ongoing COVID vaccinations, and WHO will inform you of any such changes in CAR. You will be responsible to check the requirements in your home country and any airports you will stop in on your way to CAR).

29. **How communication between Bangui airport and our system will be organised? Airport traffic control have to know if the drones are in close vicinity. Not to mention placing transponders can be used to track down drone while flying in unsafe areas (hence the risk of drone take-down).**
   This topic is under discussion with the authorities in CAR, but yes Air Traffic Control and relevant government agencies will need to be notified. VillageReach and WHO will work with you to make detailed plans and coordinate with the appropriate authorities before drone flights commence.

30. **Please state what acceptable insurance must cover - and what it does not need to cover.**
   Full insurance requirements will be detailed at the contracting stage but third party liability and loss of or damage to the UAS will likely be required.

31. **At all 8 destinations will be local personnel? Can they support in tasks such as: load or unload the UAV, refuelling, simple UAV operational tasks?**
   8 destinations refers to *future* routine drone flights. However, for the *demonstration* flights in mid-2021, there will only be 1 destination. Assuming you are asking about the *future* routine flights, yes it is possible that local personnel (which you hire the contracted drone operator hires) can fulfil support tasks. Please list which positions could be filled by trained local personnel and which would need to be international personnel. You would be responsible for training the local personnel in the future.

Regulations & Flight Approvals

32. **How can we obtain submission form ANAC?**
   WHO and VillageReach will liaise with the CAR national Civil Aviation Authority (ANAC) to obtain the requirements for submission and coordinate with the selected drone service provider to submit the application. A submission form is not available at this time.

33. **Which pilot and mechanic licence requirements are at CAR for drone operation (for MTOW of 4000 kg)?**

There are currently no licence requirements in CAR for a drone operation of this type. Your proposal should describe how your pilots and maintenance teams are suitably qualified on the basis of a safety case or SORA.

34. **Does the transport of the samples to be compliant with ICAO Annex 18 "Safe Transport of Dangerous Goods by Air"?**
Yes, transportation must be in compliance with ICAO Annex 18.

35. **In case of successful trials is ordering party required to buy drones if in the meantime we will not be compliant with BVLOS regulations (since there are none we must manage the risk of completing trials and in the end being unable to provide drones that will be locally compliant). Do CAR will be required to buy those drones?**
Successful demonstration flights over 1-2 weeks in mid-2021 do not bind VillageReach, WHO or any other party, within our outside of CAR, to purchase the drones or contract a drone logistics vendor for sustained operations. We currently do not have funding secured for *future* routine drone operations, only for the demonstration flights. The idea is that we must first demonstrate that drone technology is feasible for the CAR environment before more funding is committed. If a party is interested in purchasing aircraft or drone logistics services after the demonstration flights, we will work with you and the regulators to ensure that the drone is suitable for the regulatory environment before purchase or contracting.

36. **Are there any requirements for BVLOS in terms of city air traffic (we will be operating in urban area within Bangui)?**
This topic is under discussion with the authorities in CAR.

Evaluation Criteria & Eligibility

37. **Will there be any mechanism for evaluating a second-place applicant if the first one is not able to demonstrate / fulfill the mandatory criteria?**
Multiple applicants may move into the in-person/remote technical assessment stage, prior to contracting (see "Schedule of Events" in RFP and "Own country demonstrations" in the Vendor Response Template for more details). If the applicants are not able to demonstrate the mandatory criteria at this time, secondary applicants will be evaluated. If the contracted party is not able to successfully fly in CAR, there is currently no funding available to bring a second-place provider to conduct flights in CAR, but there might be in the future.

38. **Is the evaluation criteria weighted according to line items in the RFP - if so, how?**
Evaluation criteria will be weighted as follows:
- Technology Qualifications – 40%
- Operational Qualifications – 30%
- Team Qualifications – 30%

Please refer to this document for more details on scoring criteria: "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 and WeRobotics.

39. **Will companies that are selected be required to pass evaluation / performance testing prior to travel?**
Yes. Testing will take place virtually or at the vendors' location of choice, depending on location and COVID-19 travel restrictions. See Section 5 "Schedule of Events" in RFP and question titled "Own country demonstrations" in the Vendor Response Template for more details.

40. **If an organization has the technical capability but not the operational experience (and therefore lacks references for such a context) should it still consider applying?**
Yes, we still encourage you to apply in these instances but we recommend that you find a partner with suitable experience.

41. **Will there be separate tender process for drones or taking part in trials is considered to be a tender process?**
There is potential for a separate tender after the demonstration flights – this will be for the *future* routine flights. Successful demonstration flights in mid-2021 will increase the chances of securing funding for future long-term operations.

42. **In a single application, can one company apply for the upcoming proof-of-concept flights and another company be mentioned - even if they're not yet committed - to participating in the 14-month operational activities?**
Yes, this is encouraged in your technical and financial response to Annex C.

43. **Is it necessary for the team that's applying to be fluent in French? Or for the team that travels there to speak French?**
For the demonstration flights, it is not required that the team be fluent in French but it is desirable. VillageReach and WHO will be available to assist with translation while in CAR.