

Request for Quotation (RFQ) to facilitate incoming and outgoing interactions with adherence platform

KNCV Tuberculosis Foundation

KNCV Tuberculosis Foundation (KNCV) is an international non-profit organization dedicated to the fight against tuberculosis (TB), still the second most deadly infectious disease in the world. KNCV is an international center of expertise for TB control that promotes effective, efficient, innovative and sustainable TB control strategies in a national and international context. We are an organization of passionate TB professionals, including doctors, researchers, training experts, nurses and epidemiologists. We aim to stop the spread of the worldwide epidemic of TB and to prevent the further spread of drug-resistant TB.

The ASCENT project

ASCENT (Adherence Support Coalition to End TB) is a Unitaid funded project to help patients successfully complete their course of treatment through the use of digital adherence technologies and data-driven support interventions, utilizing tools such as smart pill boxes and other innovations. The project will be implemented from July 2019 until December 2022 and aims to reach nearly 70.000 patients in Ukraine, Ethiopia, Tanzania, South Africa and the Philippines. These digital adherence technologies empower patients to take their daily medication at a time and place that suits them best. Additionally they provide real-time information to the TB doctor or nurse, helping to determine the most appropriate treatment approach for each individual patient and by enabling focused efforts on those patients that require extra support.

To facilitate these data driven support interventions, patients log their dose on a daily basis so that their medication intake behavior is displayed in real-time (Android app and web dashboard) and health care providers can provide individual targeted care. In addition, outgoing communication (motivational / educational messages) can be triggered by the adherence platform as well.

Objective of RFQ

To implement and maintain the technical communication infrastructure to facilitate incoming and outgoing interactions with an adherence platform in multiple or selected countries that implement the ASCENT project.

Timeline

First contractual period will be from 1st of March 2020 – 1st of March 2021 with the possibility to extend. The candidate should be capable to start activities within 1 month after contract signing.

Published

This RFQ is published from 13th of January to 31st of January 2020 on the ASCENT (<http://www.digitaladherence.org>) and KNCV Tuberculosis website (<https://www.kncvtbc.org/en/downloads/>). Review and selection will take place from 1st of February – 14th of February 2020.

Submission

Proposals should be submitted via ascent@kncvtbc.org and must be received by 11:59 CET on 31st of January 2020. Proposals received after this date and time shall be invalid and will be blocked from review. Proposals should be submitted in English and each interested party shall submit only one quotation. The quotation needs to include the following documents:

1. Completed Requirements document
2. Completed Budget

Selection

Selection of the candidate(s) will be based upon independent assessment of the proposals by a review committee consisting of in-country and external specialists. KNCV will evaluate all quotations based on the following criteria:

1. **Overall suitability:** proposed solutions must meet the scope and be presented in a clear and organized manner.
2. **Organizational experience:** Organizations will be evaluated on their experience related to the scope of this RFQ.
3. **Value and cost:** Organizations will be evaluated on the cost of their solution(s) based on the work to be performed in accordance with the scope of this project.

Questions and contact

KNCV reserves the right to request further information during the RFQ process. Questions regarding requirements described in this RFQ must be directed in writing via email to ascend@kncvtbc.org before 24th of January 2020.

Responses to questions and/or clarifications originating from such questions that improve the quality of the RFQ will be published on the same websites. To ensure you receive modifications to the RFQ, send an email to ascend@kncvtbc.org to be put on the distribution list. Issuance of this quotation does not in any way constitute a commitment on the part of the ASCENT nor does it commit to pay for costs incurred in the preparation and submission of proposal.

Background

In this section, a short background, and technical overview of the proposed interactions are described to provide interested candidates with an overview of non-functional requirements and preferences that describe key aspects of the envisioned communication infrastructure. Patient to adherence platform interactions are defined as “incoming interactions” while adherence platform to user -patients and/or health care workers- interactions are defined as “outgoing interactions”. Both are described in more detail below.

Incoming interactions

- Trigger: Incoming interactions are all triggered by the user (patient)
- Direction: From patient to adherence platform
- Frequency: Daily or ad-hoc (depending on mode of interaction)
The interactions below are all triggered by the user (here, patient) and move from patient to platform.
- Types: Three different types of incoming user/platform interactions are requested:
 - (1) Incoming interaction via messaging
 - (2) Incoming interaction via phone call
 - (3) Incoming interaction via USSD
- Billing mode: Reverse billing

General requirements for each incoming interaction

To interact with the platform, patients will use a phone (number) that is registered to them on the web-based platform. At the backend of the adherence platform, all incoming interactions to the platform must be linked to patients. Your proposed solution, at minimum, should therefore be able to send [*patient phone number*], [*timestamp*] and [*message content*] for every incoming interaction to the adherence platform in real-time.

The ASCENT project aims to make adherence technologies available to as many patients as possible. Therefore, any of the proposed interactions below must be:

- a) As simple as possible – can be used by patients with low literacy and elderly patients
- b) Able to be performed from all types of phones (including feature phones)
- c) Completely free to the user and able to be performed even when user has no credit / airtime or has a negative balance
- d) Able to be performed from all Mobile Network Operators (MNOs) in country without a delay

The following incoming interactions are requested:

1. Incoming interaction via messaging

The preferred messaging type would be SMS text messaging but other messaging channels (WhatsApp, Viber etc.) can be considered as well. Messaging should be toll-free to the patient based on a reverse billing set up of a SMS short code, or any other means provided. For this type of interactions the frequency is either

- A. Daily- patients send a specific code and this automatically logs their medication intake. Codes are a 3- to 4-digit random sequence of at least 20 unique sequences. different 4 -digit codes.
- B. Ad-hoc – patients send messages (up to 160 characters) to the same number or channel they use to log their daily dose.

All messaging interactions received from the candidate will include at a minimum the [*patient phone-number*], [*timestamp*] and [*message content*].

2. Incoming interaction via phone calling

Alternatively, the incoming interaction can also happen via calling. In that case, the backend of the adherence platform is set up in such a way that it recognizes the phone number(s) registered to patients when they call the provided toll-free phone line(s). This daily interaction by calling is proposed to happen via two ways:

- A. Multiple (15-20) toll-free phone lines are set-up and maintained by the candidate. Each day, one of these toll free phone numbers is provided to the patient for them to call. After hearing a short (<5 seconds) confirmation message the call will be disconnected. Each call will then be logged and *[timestamp]* and *[patient phone number]* will be sent to the adherence platform. The adherence platform will link the phone number used to make the call and the patient's interaction is automatically logged on the web-based platform.
 - B. Only one (1) toll-free line is set up and maintained by the candidate. On a daily basis, patients call this toll-free phone number and after hearing a voice prompt they will enter a unique 3 to 4-digit code for the specific day. After this, the call is disconnected and the *[patient phone-number]*, *[timestamp]*, and *[code]* are sent to the platform.
3. Incoming interaction via USSD

On a daily basis, patients use USSD to automatically log their interaction on the adherence platform. The main requirement for the use of USSD interaction is as few steps as possible, ideally 3 or less. Examples might be

- *1502*05*[CODE]# -> "Thank you for registering your dose today" END SESSION
- *1502*05*08# -> Welcome to ASCENT. Type your code and press submit -> [CODE] -> "Thank you for registering your dose today" END SESSION

Outgoing interactions

Outgoing interactions move from the platform to users like patients or healthcare workers and are triggered by the adherence platform.

The default messaging channel for outgoing interactions is SMS, however other messaging channels (WhatsApp, Viber etc.) can be considered as well.

- Triggers: Outgoing interactions are triggered by pre-defined thresholds set up for notifications on the adherence platform
- Direction: From the adherence platform to user (patients or healthcare workers)
- Frequency: Specific times set up on the adherence platform or ad-hoc (immediately once the message is set up on the adherence platform)
- Billing mode: Messages are billed to the sending number

These outgoing messages should use the same SMS short code (or WhatsApp id) used for incoming interactions via messaging as a sender ID. This way, patients have the same channel for communications.

Requirements document

In this section, technical, organizational and budget requirements of the RFQ are described. Interested candidates should provide a point-by-point response to each requirement. The following pages can be used for answers or make sure that the respective question number is mentioned when using a different document.

Technical

1 Country or international bid

Select the country or countries for which you can perform the proposed work:

- Ethiopia
- Tanzania
- South Africa
- Ukraine
- Philippines

2 Infrastructure

2.1 Describe which of the proposed interaction approaches can be facilitated in the selected country or countries.

Incoming interactions

- Incoming interaction via messaging
 - SMS messaging
 - WhatsApp
 - Viber
 - Other
- Incoming interaction via phone call
 - Multiple toll-free phone lines
 - Single toll-free phone line
- Incoming interaction via USSD

Outgoing interactions

- Outgoing interaction via messaging
 - SMS messaging
 - WhatsApp
 - Viber
 - Other

2.2 Provide a brief overview of the infrastructure and configuration set-up to facilitate selected interaction(s). Make sure that these fit the “**General requirements for each incoming interaction**”

2.3 Describe the user experience for each selected interaction

2.4 Provide a timeline of activities needed to set-up and support the selected interaction(s), including regulatory processes if applicable

3 Specific questions for incoming and outgoing interaction via SMS messaging

Only answer if you have selected SMS messaging under 2.1

3.1 Do you offer shared or dedicated Toll Free SMS number?

3.2 Do you offer different or same Toll Free SMS number for each MNO?

3.3 Is it possible to send messages from a mobile phone with zero balance to a Toll Free SMS number?

3.4 Will outgoing messages use the same Toll free SMS number?

3.5 What are the uptimes, delays of incoming / outgoing SMS messages to and from mobile phone users on different MNOs?

3.6 What is the maximum guaranteed availability of a provisioned shortcode? In other words, for what period of time is the shortcode valid?

3.7 What usage reports are readily available on a monthly basis?

4 Specific questions for incoming interaction via phone call

Only answer if you have selected incoming interaction via phone call under 2.1

- 4.1 Do you offer different Toll Free phone lines numbers for each MNO or are the Toll Free phone line numbers the same across MNOs?
- 4.2 Is it possible to make a phone call from a mobile phone with zero balance to a Toll Free phoneline?
- 4.3 What are the maximum number of simultaneous callers per Toll-Free phoneline?
- 4.4 What usage reports are readily available on a monthly basis?

5 Specific questions for incoming interaction via USSD

Only answer if you have selected USSD under 2.1

- 5.1 Do you offer shared or dedicated USSD codes?
- 5.2 Do you offer different or same USSD codes for each MNO?
- 5.3 What is the duration of a USSD session?
- 5.4 What usage reports are readily available on a monthly basis?

Organizational

1. Provide proof of the expertise, capacity and experience in the successful execution of comparable works
2. Provide relevant technical documentation, for example API documents.

Budget

This RFQ is designed for to implement and maintain the technical communication infrastructure to facilitate incoming and outgoing interactions with an adherence platform for the number of patients and interactions described below in table 1 and 2 only. However, candidates are encouraged to offer sustainable proposals that will enable a continued use of the infrastructure with a clear transition plan for scale.

- Each submitted budget must provide details of all costs related to the implementation and maintenance of the communication infrastructure.
- Include a detailed breakdown in installation/setup fees, monthly management/maintenance (if any) and costs per incoming and outgoing interaction.
- Costs should be stated as one-time or non-recurring costs (NRC) or recurring costs (RC). Recurring costs can be further split into costs per interaction (e.g. message) and other costs (e.g. monthly support).

Table 1: Overall Expected interactions

| Interaction | Incoming (patient -> platform) | Outgoing (platform -> patient) |
|----------------------|------------------------------------|--|
| Messaging | 168 messages (1 per day / patient) | 200 messages (1 confirmation per day + reminders / education messages) |
| Phone calling | 168 calls (1 per day / patient) | 40 messages (reminders / education messages) |
| USSD | 168 sessions (1 per day / patient) | 40 messages (reminders / education messages) |

Table 2: Expected patients per year

| Users expected Tanzania | Users expected Ethiopia | Users expected South Africa | Users expected Ukraine | Users expected Philippines |
|----------------------------|----------------------------|--------------------------------|---------------------------|-------------------------------|
| 3000 | 3000 | 3000 | 3000 | 3000 |