# RFP for Diagnostic Connectivity, Tajikistan

KNCV Tuberculosis Foundation Tajikistan as the implementing partner for two USAID funded projects: Challenge TB and TB Control Program is looking for Diagnostic Connectivity solutions for GeneXpert devices in 30 sites.

Challenge TB (CTB) Tajikistan is a five year project effective from January 2015-September 2019. implemented in partnership with Ministry of Health (MoH) and the National Tuberculosis Program (NTP).

The USAID TB Control Program is five-year program effective from September 2014-September 2019 and implemented by Project HOPE as lead partner and KNCV as sub-contractor to support implementation of objectives and activities set in National TB Strategy. The main goal of the program is to ensure more effective and more accessible TB diagnosis and treatment for population, including vulnerable, so as to reduce the burden of TB and the development of drug resistant tuberculosis (TB) in Tajikistan.

Tajikistan has currently implemented 46 Cepheid GeneXpert devices for the molecular diagnosis of tuberculosis (TB). This diagnostic device is capable of producing electronic test information but they currently work standalone and are not connected. Results are mostly reported via paper-based systems using manual transcription. This limits the potential to maximize patient care and program management.

**Objective of RFP**  
To implement diagnostic connectivity for 30 Cepheid GeneXpert devices in Tajikistan to facilitate the automatic transmission and utilization of diagnostic data for a variety of use(r)(s).

**Timeline of activities**

1st of June 2018 – 30th of September 2018.

The candidate should be capable to start activities within 1 month after contract signing.

**Published**

This RFP is published from 26th of April– 11th of May 2018 on the Challenge TB ([www.challengetb.org](http://www.challengetb.org)) and KNCV ([www.kncvtbc.org](http://www.kncvtbc.org)) website. Review and selection will take place from 14th of May – 18th of May 2018.

**Submission**

Proposals should be submitted to Natalia Andreeva via [natalia.andreeva@kncvtbc.org](mailto:natalia.andreeva@kncvtbc.org) and must be received by 23:59 CET on 11th of May 2018. Proposals received after this date and time shall be invalid and will be blocked from review. Proposals should be submitted in English.

**Selection**

Selection of the application will be based upon independent assessment of the proposals by a review committee consisting of in-country and external specialists. Applications will be scored based on technical, business, implementation, organizational and budget aspects for which both open-ended (descriptive) questions and core and secondary requirements are outlined in this document.

KNCV reserves the right to request further information during the RFP process.

Questions regarding requirements described in this RFP must be directed in writing via email to [natalia.andreeva@kncvtbc.org](mailto:natalia.andreeva@kncvtbc.org), Andrii.slyzkyi@kncvtbc.org before 3rd of May 2018 23:59 CET. Clarifications originating from such questions that improve the quality of the RFP will be included as clearly marked additions to the published and updated RFP.

# Background, assumptions and preferences

A short background, assumptions and preferences are described to provide interested candidates with an overview of non-functional requirements and preferences that describe key aspects of the envisioned solution.

1. The proposed data connectivity system must be able to automatically transmit all available / accessible data as interpreted by the Cepheid software of a connected GeneXpert device including device performance data and associated data (e.g. test request ID) inputted by the user and store and represent this information using reports or dashboards on a (remote) webserver. This is a knock-out requirement.
2. Solutions proposed by any candidate for this RFP must be physically available, working and installed in at least another site. Upon request, the candidate should provide a demonstrated installation of the solution. This is a knock-out requirement.
3. This RFP is designed for the purchase, configuration and implementation of the solution for the number of GeneXpert devices described under **Objective of RFP** only.
4. In the majority of GeneXpert sites (broadband) internet access is currently not available. The candidate should provide a clear pathway how GeneXpert devices will be connected. This could be done by customizing the existing LAN network in some sites and/or the use of mobile (broadband) internet. There are four mobile internet providers in the country which use different connectivity standards. Connectivity hardware recommended by the candidate should therefore be capable to allow the use of multiple networks (e.g. dual-sim capabilities) and/or wireless standards. If this infrastructure has no certification in Tajikistan, candidate should ensure certification according to country regulations. The recommended infrastructure must be described in detail under **Requirements 1.1** in the submitted proposal.
5. The candidate should be capable to provide support to local team during roll-out and installation of the diagnostic connectivity solution. Installation of the solution and first line technical support is preferably to be provided by local partner/team. Technical maintenance and troubleshooting should be available on demand.
6. Candidates should bid a data connectivity system package that mandatorily includes all of the following elements:
   1. A description of all hardware/software and support required for viable installation of diagnostic data system
   2. A description of customization and configuration of the (client) software and diagnostic connectivity server
   3. A description of available reports and dashboards on diagnostic data connectivity server
   4. A description of all training materials, guidance documents and provision training/workshops.
   5. One (1) year minimum of software maintenance (updates, patches, etc.).
   6. One (1) year minimum of software support (for user questions, troubleshooting, help desk, etc.).
   7. Plans and prices (per year and long term, e.g. 3 or 5 years plans) for the continuation of software maintenance and support.
   8. If applicable, costs associated with connecting additional GeneXpert devices beyond those included in this RFP.
   9. A comprehensive overview of all costs associated with technical support (not included with software maintenance and support).
   10. A comprehensive overview of all costs associated with training and software customization following initial installation.
   11. A comprehensive overview of all costs associated with 3rd party software licensing involved (if any) for initial installation and continuation.

Candidates are encouraged to describe any valuable additions to their bid.

# Requirements

**Instructions**

In this section, (I) technical, (II) business, (III) implementation, (IV) organizational and (V) budget requirements of the RFP are described. Candidates must provide a point-by-point response to each requirement. This Word document can be used to provide answers, otherwise ensure that the respective question number is mentioned when using your own document.

The description of the requirements can consist of general (open-ended) questions, requests for information or documentation and tables with **Core** and **Secondary** requirements. Core requirements are absolutely vital requirements for the diagnostic data connectivity system indicated for this project. Secondary requirements represent preferences for a data connectivity system.

For all Core requirements and Secondary requirements, please indicate whether the proposed data connectivity system “**Meets**”/ “**Does Not Meet**” / “**Requires Modification**” or an “**Alternative is Suggested**”. Notes and additional information to explain your choice can be put into the table.

**I Technical requirements**

1. **Infrastructure**
   1. Provide an overview of the minimum infrastructural requirements needed to support the proposed diagnostic data connectivity system implementation at the GeneXpert site.

Click or tap here to enter text.

* 1. Provide a comprehensive overview of the minimum server infrastructure requirements needed to support the proposed diagnostic data connectivity system implementation.

Click or tap here to enter text.

* 1. As outlined under the **Assumptions, requirements and preferences** section, in the majority of sites (broadband) internet access is currently not available. Please describe the approach and recommended infrastructure, both for sites that have access to internet via LAN and that do not have access to internet. Connectivity hardware should be capable of preventing non-authorized applications to use data, secure access to designated server(s) and to connect multiple Cepheid GeneXpert devices in the same room. Local partner should be involved in selecting and signing of mobile data contracts with selected providers.

Click or tap here to enter text.

* 1. List all peripheral hardware needed to support the proposed diagnostic connectivity solution implementation

Click or tap here to enter text.

1. **Client / Application**

To allow transmission of available / accessible data, including device performance data and associated data, a software client will need to be installed on all GeneXpert computers.

* 1. Describe the client application architecture and technologies used for its development

Click or tap here to enter text.

* 1. Describe the functionality of the software application

Click or tap here to enter text.

* 1. Describe how the client application interacts and receives results from the Cepheid Dx software

Click or tap here to enter text.

Application and system needs & requirements might change over time. Flexibility to enable (easy) updating and the expansion of functionality of the software application are important factors for consideration.

* 1. Describe the extent to which changes to the client/application on the GeneXpert computers can be made

Click or tap here to enter text.

* 1. Describe how the client/application can be updated (remotely) to address bugs or enhance its functionality

Click or tap here to enter text.

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| Client / Application | | |  |
| **Indicate “Meets”, “Does Not Meet”, “Requires Modification” or “Alternative suggested”. If any of the latter two are indicated, please provide notes and/or further information.** | | | **Notes and further information** |
|  | **CORE Requirements** |  |  |
| 2.6 | Compatible with Windows XP, 7 and 10 | Choose an item. | Click or tap here to enter text. |
| 2.7 | Compatible with different versions of Cepheid Dx software | Choose an item. | Click or tap here to enter text. |
| 2.8 | Future compatibility of Cepheid Dx software | Choose an item. | Click or tap here to enter text. |
| 2.9 | Easy to perform one-click installation (no IT support required) | Choose an item. | Click or tap here to enter text. |
| 2.10 | Automatic update mechanism to allow new updates, bug fixes, customizations or improvements | Choose an item. | Click or tap here to enter text. |
| 2.11 | Able to authenticate users and identify GeneXpert device | Choose an item. | Click or tap here to enter text. |
| 2.12 | Able to receive test result data from Cepheid DX software platform | Choose an item. | Click or tap here to enter text. |
| 2.13 | Able to collect custom data fields prior, during or after a GeneXpert test runs, which can be linked to GeneXpert result   * These associated data fields should include (but are not limited to):   + Test request ID   + Laboratory ID   + Patient ID   + National ID | Choose an item. | Click or tap here to enter text. |
| 2.14 | Able to store results offline (on GeneXpert computer) when internet is not available or destination server is unreachable | Choose an item. | Click or tap here to enter text. |
| 2.15 | Robust and capable of recovering easily from failed transmissions | Choose an item. | Click or tap here to enter text. |
| 2.16 | Able to automatically report these results to diagnostic data connectivity server (real time, scheduled or manually prompted) once internet is available | Choose an item. | Click or tap here to enter text. |
| 2.17 | Ability to show connectivity status of GeneXpert device and number of test results successfully sent/failed (pending for transfer) | Choose an item. | Click or tap here to enter text. |
| 2.18 | Maintain log and session statistics files for analysis and troubleshooting | Choose an item. | Click or tap here to enter text. |
| 2.19 | Multi-language support (including English and Russian) | Choose an item. | Click or tap here to enter text. |

1. **Diagnostic data connectivity server**

The diagnostic data connectivity server is a web platform that will act as (diagnostic) data warehouse to:

* Collect, store and represent diagnostic data from the connected GeneXpert devices
* Supply rich data to other platforms to allow integration and exchange of information
* Manage flow of traffic of results to and from other platforms
  1. Describe the server application architecture and technologies used for its development

Click or tap here to enter text.

Collected data and the diagnostic data connectivity system should be hosted on in-country server(s).

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| Diagnostic data connectivity server | | | |  | |
| **Indicate “Meets”, “Does Not Meet”, “Requires Modification” or “Alternative suggested”. If any of the latter two are indicated, please provide notes and/or further information.** | | | | **Notes and further information** | |
|  | **CORE Requirements** |  |  | |
| 3.2 | Able to automatically receive the results from (connected) GeneXpert devices | Choose an item. | Click or tap here to enter text. | |
| 3.3 | Able to show connection status of GeneXpert devices | Choose an item. | Click or tap here to enter text. | |
| 3.4 | Able to show GeneXpert device information (e.g. where located) | Choose an item. | Click or tap here to enter text. | |
| 3.5 | Online accessible dashboard to provide overview of the facilities, devices and commodities | Choose an item. | Click or tap here to enter text. | |
| 3.6 | User permission and group management defining access and roles of certain user (groups) | Choose an item. | Click or tap here to enter text. | |
| 3.7 | Multiple language support (including English and Russian) | Choose an item. | Click or tap here to enter text. | |
| 3.8 | Able to host data and server in-country | Choose an item. | Click or tap here to enter text. | |
| 3.9 | System audit and logging functionality | Choose an item. | Click or tap here to enter text. | |

1. **Integrations**

Solutions must have the ability to create and transmit data files in internationally recognized formats such as HL7 2.x

* 1. Describe data formats and communication protocols used

Click or tap here to enter text.

* 1. Describe diagnostic data connectivity system readiness to integration(s)

Click or tap here to enter text.

* 1. Describe (readily) available API-end points to route and extract data to (multiple) other systems

Click or tap here to enter text.

* 1. (*Optional*) Provide examples how and where the data connectivity system has been linked to other (data) platforms.

Click or tap here to enter text.

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| Integrations | | |  |
| **Indicate “Meets”, “Does Not Meet”, “Requires Modification” or “Alternative suggested”. If any of the latter two are indicated, please provide notes and/or further information.** | | | **Notes and further information** |
|  | **CORE Requirements** |  |  |
| 4.5 | Able to integrate with other systems, including OpenMRS MIS | Choose an item. | Click or tap here to enter text. |
| 4.6 | List readily available APIs | Choose an item. | Click or tap here to enter text. |
| 4.7 | Data formats and communication protocols described | Choose an item. | Click or tap here to enter text. |
|  | **Secondary Requirements** |  |  |
| 4.8 | Examples of integration with other system(s) provided | Choose an item. | Click or tap here to enter text. |

1. **Data ownership, security arrangements and data access**

The proposed data connectivity system must be able to provide different access rights to users at different levels of the health care system to ensure optimal use of diagnostic data for intended purpose.

A data usage agreement between the candidate and the MOH/NTP need to be set up that:

• Assigns ownership of all data to the MOH/NTP

• Describes in detail the planned storage and security of the data and any use of the data by the software provider, in compliance with respective privacy legislation in Tajikistan

• Ensures that data remains confidential and is not disclosed to unauthorized users or by the software provider outside of the agreement

* 1. Describe mechanisms to prevent interception of data

Click or tap here to enter text.

* 1. Describe how routine backups can be performed that have minimal impact on system availability

Click or tap here to enter text.

* 1. Describe how functionality of the server could be restored in case of software malfunction and/or hardware failure

Click or tap here to enter text.

* 1. *Optional* If available, provide an example of a data usage agreement

Click or tap here to enter text.

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| Data ownership, security arrangements and data access | | |  |
| **Indicate “Meets”, “Does Not Meet”, “Requires Modification” or “Alternative suggested”. If any of the latter two are indicated, please provide notes and/or further information.** | | | **Notes and further information** |
|  | **CORE Requirements** |  |  |
| 5.5 | Mechanism to prevent interception of data described | Meets | Click or tap here to enter text. |
| 5.6 | Data usage agreement available that clearly describes roles and responsibilities | Choose an item. | Click or tap here to enter text. |
| 5.7 | Data ownership assigned to MoH/NTP | Choose an item. | Click or tap here to enter text. |
| 5.8 | Routine backup plans described | Choose an item. | Click or tap here to enter text. |
| 5.9 | Procedure in place to restore server functionality after a software malfunction incident | Choose an item. | Click or tap here to enter text. |
| 5.10 | Procedure in place to restore server functionality after a hardware failure incident | Choose an item. | Click or tap here to enter text. |
|  | **SECONDARY Requirements** |  |  |
| 5.11 | Example of data usage agreement provided | Choose an item. | Click or tap here to enter text. |

**II. Business requirements**

Different types of data transmitted and stored by data connectivity systems provide an unprecedented opportunity to contribute to health system and disease control improvements.

To ensure that the diagnostic data connectivity system is able to contribute to informed decision making from start of implementation, candidates should demonstrate and provide information about built-in and/or customizable analysis, reporting and visualization functionalities of the solution.

1. **Business requirements** 
   1. Describe built-in reporting functionality of the proposed data connectivity system and list reports that can be generated automatically

Click or tap here to enter text.

* 1. Provide examples of reports that are or can be generated

Click or tap here to enter text.

* 1. Describe how customized reports can be created and if additional costs are associated

Click or tap here to enter text.

* 1. Describe built-in visualization (dashboard) functionality of the proposed data connectivity system

Click or tap here to enter text.

* 1. Describe built-in notification functionality of the proposed data connectivity system

Click or tap here to enter text.

* 1. Describe compatibility with other disease (cartridges), e.g. MTB Ultra, HIV Viral Load tested on the GeneXpert platform and/or compatibility of the platform with other diagnostic devices

Click or tap here to enter text.

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| Business requirements | |  | |
| **Indicate “Meets”, “Does Not Meet”, “Requires Modification” or Alternative suggested. If the latter two are Indicated, please provide notes and/or further information.** | | | **Notes and further information** |
|  | **CORE Requirements** |  |  |
| 1.6 | Able to aggregate data per district, state and national level | Choose an item. | Click or tap here to enter text. |
| 1.7 | Customized export of result reports in multiple file formats (e.g. CSV, XLS) | Choose an item. | Click or tap here to enter text. |
| 1.8 | Able to create individual reports based on user or stakeholder needs | Choose an item. | Click or tap here to enter text. |
| 1.9 | Able to create required national/state/ district (weekly/monthly/quarterly) reports (see examples below) | Choose an item. | Click or tap here to enter text. |
| 1.10 | (Online) accessible dashboard that provides overview of:   * Facilities, devices and commodities in the diagnostic network * test and error result information from all GeneXpert devices | Choose an item. | Click or tap here to enter text. |
| 1.11 | Capable of inventory management, e.g. showing cartridges at hand at site- and central level to be able to anticipate stock-out dates, support forecasting of cartridges and prevent expiry of cartridges | Choose an item. | Click or tap here to enter text. |
| 1.12 | Capable to record service, warranty and maintenance events and produce relevant alerts. Functionalities include monitoring and alerting on (mal)function of machines, planning of maintenance events and timely calibration | Choose an item. | Click or tap here to enter text. |
| 1.13 | Able to produce automatic report(s) or notifications based on triggers and/or conditions | Choose an item. | Click or tap here to enter text. |
| 1.14 | Compatible with multiple disease cartridges | Choose an item. | Click or tap here to enter text. |
|  | **Secondary Requirements** |  |  |
| 1.15 | Able to perform custom data selection and design of reports | Choose an item. | Click or tap here to enter text. |
| 1.16 | Able to collect results from other cartridges | Choose an item. | Click or tap here to enter text. |

**III Implementation and (technical) support**

1. **Implementation**

Local ownership and sustainability of the proposed data connectivity solution should be ensured from the beginning by building capacity during trainings and/or workshops for designated personnel at GeneXpert sites and at central level NTP/MOH. Candidate will be responsible to provide administrator, installation and day-to-day use training to designated users. Participants will be assigned by the NTP. Trainings should build capacity in user administration, configuration, installation and transfer the necessary knowledge to support installation and first line support to the in-country staff. Installation of the solution and first line technical support preferably to be provided by local partner/team.

A long term implementation and technical support plan is preferred.

* 1. Provide a timeline of proposed activities (procurement, configuration, etc) prior to field implementation

Click or tap here to enter text.

* 1. Identify what in-country personnel or other resources are required during the preparation phase

Click or tap here to enter text.

* 1. Describe training approach to develop the necessary skills for installation and use of the data connectivity solution

Click or tap here to enter text.

* 1. Describe in-country personnel required to install the data connectivity solution at GeneXpert sites

Click or tap here to enter text.

* 1. Describe (remote) support available and provided, prior and installation

Click or tap here to enter text.

* 1. Provide a timeline of activities during implementation (including roles and responsibilities)

Click or tap here to enter text.

* 1. Describe what documents and tools will be created (e.g. step by step installation instructions, user guide, standard operational procedure (SOP), bench aid, administrator guide and developer guide (API/integrations), online based training(s) (online or offline).

Click or tap here to enter text.

1. **(Technical) support**

The selected candidate will be expected to work closely with KNCV staff and the NTP to support the operation of the data connectivity system. (Remote) technical support should be available to ensure successful operation of the system and full transition to country-ownership.

* 1. Describe (remote) support and maintenance available and provided after installation

Click or tap here to enter text.

* 1. Describe proposed roles and responsibilities

Click or tap here to enter text.

* 1. Describe what activities are in- and out of scope of provision of technical support of the candidate

Click or tap here to enter text.

* 1. Describe how technical maintenance and support is available on demand

Click or tap here to enter text.

**IV Organizational**

1. **Organizational expertise** 
   1. Describe experiences of developing or implementing products or solutions that contain the ability to send electronic data from hardware (hardware generated and operator entered).

Click or tap here to enter text.

* 1. Provide proof of the expertise, capacity and experience of the candidate in the successful execution of comparable works

Click or tap here to enter text.

* 1. Provide a description of relevant experience of implementing digital solutions in the last 5 years.

Click or tap here to enter text.

* 1. Please provide information for the volumes, locations, usage and impact of technical solutions that were developed

Click or tap here to enter text.

* 1. Provide resumes of key personnel involved in the implementation
  2. Provide a list of clients, organizations or institutions and their contacts that can be used as references

Click or tap here to enter text.

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| Organizational | | |  |
| **Indicate “Meets”, “Does Not Meet”, “Requires Modification” or “Alternative suggested:. If any of the latter two are indicated, please provide notes and/or further information.** | | | **Notes and further information** |
|  | **CORE Requirements** |  |  |
| 1.7 | Solution must be physically available, working and installed in at least another site. | Choose an item. | Click or tap here to enter text. |
| 1.8 | Proof of expertise is provided | Choose an item. | Click or tap here to enter text. |

**V Budget**

This RFP is designed for the purchase, configuration and implementation of the solution for the number of GeneXpert devices described under **Objective of RFP** only. Due to a pending availability of funding the number of the GeneXpert instruments in this RFA could be reduced if proposed prices will exceed available funds. It is important to demonstrate split costs in the proposal by different categories (equipment, trainings, etc.) and/or by providing price per single connection/installation.

Candidates are encouraged to offer sustainable licensing proposals that will enable a continued use of the solution with a clear transition plan to NTP ownership.

1. **Budget**
   1. Provide details of all costs related to the implementation of the diagnostic data connectivity system
   2. Describe license approach that will enable continued use of the data connectivity system.

Click or tap here to enter text.